

**JOB SATISFACTION AND ITS SITUATIONAL
AND DISPOSITIONAL ANTECEDENTS: A STUDY
IN CHINA'S NORTHEAST**

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Doctor of Philosophy

2010

JOB SATISFACTION AND ITS SITUATIONAL AND
DISPOSITIONAL ANTECEDENTS: A STUDY IN
CHINA'S NORTHEAST

Submitted in fulfillment of the requirements for the degree of Doctor of Philosophy

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November 2010

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November 2010

ACKNOWLEDGEMENTS

I am grateful to my supervisors, my friends in China, Monash University, and my family members for their support in the completion of this thesis.

First, I would like to express special recognition to my supervisors, Associate Professor Margaret Lindorff, and Dr. Brian Cooper. They have spent a lot of their valuable time in giving me guidance in model formulation, selection of survey instruments, data analysis, and commenting on my manuscript. The completion of this thesis is inseparable from their guidance, patience, and encouragement. Professor Lindorff and Dr. Cooper are not only good mentors, but also good friends. They have also given me a lot of help when I met any difficulties. I appreciate their support not only with my thesis, but personally during everything that has happened to me in my study in Australia.

I would like to thank my friends in China for their help in the distribution of the survey questionnaire. I also want to express my thanks to the respondents who filled in the questionnaire for this research. Without their help, this research cannot proceed.

Sincere thanks also to Professor Russell Smyth and Ms Jeanette Smyth for all their help in solving many of the hardships during my journey toward completion of this PhD thesis.

Thanks also to Monash University in providing me with a scholarship for this research, which made the financial constraints more bearable.

Last, but not least, I would like to thank my wife Jingbo Bu, and my son Yubo Zhai for their love and consistent support of my endeavors.

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ABSTRACT

The aim of the current study was to investigate the influence of dispositions and work situations on job satisfaction, and the mediating role of perceptions of work situations on the relationship between dispositions and job satisfaction. Identifying the antecedents of job satisfaction is important both theoretically and practically, as job satisfaction is closely related to other organizational variables such as job performance, organizational citizenship behavior, absenteeism and turnover. Most of the extant studies on the antecedents of job satisfaction have focused on populations in economically developed countries. However, there are cultural and language differences between these countries and China, and it is unclear if findings in other countries can be generalized to the Chinese population. Furthermore, there are few comprehensive studies investigating a range of both situational and dispositional variables. The main contribution of the current study is to incorporate major dispositional and situational variables and investigate the mediating role of perceived work situations on the disposition and job satisfaction relationship in China.

A cross-sectional research design was used in the study. The sample was taken from employees in industrial and commercial organizations in China's northeast. All the measures were well-established, widely used multi-item measures developed in English-speaking countries. Confirmatory factor analysis and Cronbach's alpha demonstrated that the measures were of good validity and reliability and could be used for Chinese populations.

Regression analysis found that of the ten situational variables, seven had a

statistically significant relationship with job satisfaction: distributive justice, supervisor support, role conflict, autonomy, routinization, role ambiguity, and promotional chances. Of the seven situational variables, distributive justice had the largest effect on job satisfaction, followed by supervisor support, role conflict, autonomy, routinization, role ambiguity, and promotional chances. Three situational variables were not significantly related to job satisfaction: work overload, co-worker support, and pay level. The relationship between job satisfaction and positive affectivity and conscientiousness were partially mediated by perception of work situations, while the relationships between job satisfaction and negative affectivity and neuroticism were completely mediated by perception of work situations. Of the dispositional variables, positive affectivity had the strongest total effect on job satisfaction, much of it mediated by perceived work situations.

The findings of this research support the theory that job satisfaction has both a dispositional source and situational source. Disposition has an influence on job satisfaction both directly and indirectly through work situations. The research findings also suggest that most of the findings on the antecedents of job satisfaction reported in research undertaken in economically developed countries can be generalized to China. However, the finding of a non-significant relationship between work overload, co-worker support and job satisfaction could be country-specific. In a transitional country such as China, work overload may be linked to secure jobs, and as a result people may be not unhappy to work intensively for long hours. In terms of practical implications, the findings of this study provide managers in industrial and commercial enterprises with guidelines in establishing conditions for the creation and maintenance of high levels of

employee's job satisfaction.

CHAPTER 1: INTRODUCTION

This thesis reports on a study that investigates the situational and dispositional antecedents of job satisfaction with a sample of white-collar employees from industrial and commercial organizations in a city in China's northeast. First, this chapter identifies the broad research problem and the research questions that will be addressed by this study. Second, the rationale of the research is outlined. Third, the significance of this study is described. Finally, the chapter concludes with an overview of the structure of the thesis.

The Research Problem

Job satisfaction is one of the most important variables in organizational psychology research, as it is related to various work-related and organizational outcomes. It is well documented from research conducted in the western world that job satisfaction is associated (albeit modestly) with job performance (Hosie, Sevastos & Cooper, 2006; Judge, Thoresen, Bono & Patton, 2001b), organizational commitment (Meyer, Stanley, Herscovitch & Topolnytsky, 2002; Tett & Meyer, 1993), organizational citizenship behavior (Hulin & Judge, 2003; Johns, 2001; Spector, 1997; Warr, 1999), absenteeism (Johns, 2001), turnover intentions (Hellman, 1997; Tett & Meyer, 1993), turnover (Griffeth, Hom & Gaertner, 2000; Hom, Caranikas-Walker, Prussia & Griffeth, 1992; Tett & Meyer, 1993), and life satisfaction (Tait, Baldwin & Padgett, 1989). Studies in China have also found relationships between job satisfaction and turnover intentions (Chen & Li, 2009; Ye, Wang & Lin, 2005; Zhang, Zhang & Li, 2003a; Zhang & Zhao, 2007), organizational citizenship behavior (Wang

& Sun, 2005), and job performance (Hui, 2006).

In the past few decades, a great deal of attention has been given to the study of the antecedents of job satisfaction. The antecedents of job satisfaction consist of both work situations and dispositions. Work situations refer to the nature of one's job and other aspects of the work environment (Judge, Parker, Colbert, Heller & Ilies, 2001a). The situational antecedents of job satisfaction include the nature of job tasks; working conditions; job stressors; environmental clarity; relations with other people in the workplace; how people are treated; and rewarded (Locke, 1976; Price, 2001; Spector, 1997; Warr, 1999). A disposition is defined as an "enduring personal attribute" (Ledford, 1999, p. 30). The most widely studied dispositional antecedents of job satisfaction include personality traits such as positive and negative affectivity (PANAS), the "Big Five" personality traits, and core self-evaluation (John & Srivastava, 1999; Judge, Locke, Durham & Kluger, 1998; Watson, Clark & Tellegen, 1988).

Increased interest is also being given to the underlying mechanisms by which dispositions influence job satisfaction, including the mediating role of perceptions of work situations on the relationship between dispositions and job satisfaction (Cohrs, Abele & Delle, 2006; Judge, Bono & Locke, 2000). Studies on these mechanisms are important, as they are trying to explain how and why dispositions affect job satisfaction and to what extent theories such as affect event theory are supported empirically. There are some empirical studies exploring the mediating role of perceptions of work situations on the association between dispositions and job satisfaction (e.g. Boyar & Mosley, 2007; Duffy & Lent, 2009; Grant & Langan-Fox, 2007; Heller, Ferris, Brown & Watson, 2009; Judge et al., 2000; Judge et al., 1998; van den Berg & Feij, 2003). Dispositional variables such as Big Five (Cohrs et al.,

2006; Grant & Langan-Fox, 2007; Heller et al., 2009), core self-evaluation (Boyar & Mosley, 2007; Judge et al., 2000; Judge et al., 1998; Srivastava & Locke, 2006; Stumpp, Hülshager, Muck & Maier, 2008), work self-efficacy (van den Berg & Feij, 2003), positive affect (Duffy & Lent, 2009) have been investigated. Mediators such as perceived job characteristics, job complexity, work conditions, perceptions of social support, autonomy, participatory leadership, job future ambiguity, role ambiguity, role conflict and underutilization (Cohrs et al., 2006; Duffy & Lent, 2009; Grant & Langan-Fox, 2007; Judge et al., 2000; Judge et al., 1998), work-related Big Five factors, occupational self-efficacy, work-centrality, mastery goals (Cohrs et al., 2006; Heller et al., 2009) have been tested with survey data. However, even though theories such as affect event theory (Weiss & Cropanzano, 1996), the information processing model (Motowidlo, 1996) and the mechanisms of the dispositional influence model (Staw & Cohen-Charash, 2005) suggest that the relationship between dispositions and job satisfaction could be mediated by perceived work situations, there is a lack of an integrated theory driven model developed from the extant literature on the range of potential mediators such as job characteristics, role stressors, social support, work rewards, and organizational justice on the relationship between the Big Five factors, positive and negative affectivity and job satisfaction.

In addition, most of the existing research has examined job satisfaction and its dispositional and situational antecedents in economically developed countries such as the United States (e.g. Price, 2001), Germany (e.g. Cohrs et al., 2006), Australia (e.g. Iverson & Maguire, 2000) and Korea (e.g. Kim, 1999). There are few comprehensive studies examining the relationship between job satisfaction and its dispositional and situational sources in China. Because of the differences in culture, economic development level, and language, it is not clear how well the constructs of job

satisfaction and its situational and dispositional antecedents developed in the west and economically developed countries works in China. In the current study, a comprehensive approach incorporating dispositional and situational antecedents of job satisfaction will be examined in a Chinese context.

Statement of Research Questions

Having identified the broad research area, this study seeks to address the following research questions. These are:

1. What is the relationship between work situations and job satisfaction?
2. What is the relationship between dispositions and job satisfaction?
3. Do work situations mediate the relationship between dispositions and job satisfaction?

Rationale for the Study

There are several reasons for addressing the research questions posed for this study using a Chinese sample. First, literature in cross cultural management research suggests that it is imperative to conduct cross cultural studies on job satisfaction (Han & Kakabadse, 2009; Spector, 1997). For example, it can no longer be assumed that concepts and theories developed in the west transcend culture and national boundaries (e.g. Carpenter, 2000; Erez, 2010; Han & Kakabadse, 2009; Huang & Van de Vliert, 2004; Price, 2001; Taylor et al., 2004; Triandis & Suh, 2002; Zhang & Li, 2002). The cultural perspective suggests that people from a particular country are prone to different values irrespective of the economic development of a nation. Cultural

differences could lead to different relationships between job satisfaction and related constructs such as performance and commitment of organizational members (Han & Kakabadse, 2009). As China's national culture and societal values differ markedly from western countries (Hofstede, 2001), these cultural differences could express themselves in different relationships between job satisfaction and its antecedents than those found in western English-speaking countries.

Hofstede (1980a, p. 25) defined culture as "the collective programming of the mind which distinguishes the members of one human group from another". Hofstede (1980b; 1991; 1994) identified five dimensions of culture, collectivism versus individualism, power distance, femininity versus masculinity, uncertainty avoidance, and long-term orientation in life versus a short-term orientation. Collectivism and individualism are seen as two poles of one dimension. Individualism-collectivism is defined as "the degree to which people in a country prefer to act as individuals rather than as members of groups" (Hofstede, 1994, p. 6). In individualist cultures, people are encouraged to look after themselves and emphasize "I" conscientious, autonomy, emotional independence and individual initiative (Hofstede, 1991; Triandis, 1988). The individual is seen as more important than the group in individualist societies. Individualism emphasizes the importance of the individual and the individual's interest. Individuals in individualist cultures tend to be self-reliant, self-concerned, and self-motivated (Hofstede, 1991). Whereas in collectivist cultures, "we" conscientious, collective identity, emotional dependence are emphasized (Chen, Chen & Meindl, 1998; Hofstede, 1997; Triandis, 1988). Collectivism places more importance on the communal bonds of the society and culture in an attempt to keep social harmony.

According to Hui and Yee (1999), people in individualist countries value intrinsic

job characteristics more than do workers in collectivist countries. The individualist may value on autonomy and independence (Hui & Yee, 1999). In contrast, in collectivist countries, economic and social security is often considered more important to life than freedom and control in the work place (Kanungo, 1990), and economic as well as social goals are ranked higher than individual goals (Alpander & Carter, 1995; Nevis, 1983). In collectivist cultures the common good and being an accepted member of a group and preserving social harmony are more important than individual interest collectivist (Hofstede, 1980a; Hui & Yee, 1994; Hui & Yee, 1999; Kim, Triandis, Kagitcibasi, Choi & Yoon, 1994). For example, Li and Cropanzano (2009) noted that people in East Asian countries may not respond as strongly as North Americans to organizational justice because the former's concern for social harmony.

According to Huang and Van De Vliert (2003), workers in collectivist countries are more likely than workers in individualist countries to place emphasis on the extrinsic aspects of their jobs such as pay, fringe benefits, and working conditions. It has also been suggested that jobs which are mentally challenging and intrinsically motivating may be appreciated more by employees in individualist countries (Diener & Diener, 1995; Nevis, 1983) than in culturally collectivist countries. People in collectivist countries may be more focused on economic and social, rather than individual, goals. People in collectivist cultures are likely to behave in accordance with the group need, even at the expense of their own interests (Sagiv & Schwartz, 2007). These differences in cultural values could affect the relationship between job satisfaction and the perception of stressors, social support and extrinsic rewards.

Cultural dimensions that have been examined in relation to Chinese society are power distance, collectivism and individualism. Power distance refers to the extent to which a society accepts the unequal distribution of power within an organization or a

society. In high power distance countries, unequal power distribution is acceptable. Long-term orientation refers to future-oriented values such as persistence and thrift, while short-term orientation refers to past and present oriented values such as respect for tradition and fulfilling social obligation. Chinese culture is lower on individualism, and higher on power distance and long-term orientation (Connection, 1987; Hofstede, 1980a).

Overall, Chinese society is more collective, more acceptable in power distance, and more oriented to long-term orientation than western cultures. As a consequence, people in China may report their well-being such as job satisfaction differently to those in western countries. For instance, existing research on life satisfaction has shown that the Personal Well-being Index (PWI) in Chinese societies is about 10 points lower than in western countries on a 0 - 100 point scale (Lau, Cummins & McPherson, 2005). The most common reason given for this result is the existence of cultural bias (Lau et al., 2005). Chinese culture could similarly influence people's expression of emotions about work. Evidence suggests that when Chinese people meet negative and positive stimuli, they may not express strong feelings (Cheng, 2006; Wang & Cui, 2005). Specifically, Chinese people are less likely to rate themselves at either end of the scale due to cultural modesty (Chen & Davey, 2008).

Studies also demonstrate that culture moderates the relationship between job satisfaction and its antecedents. For instance, Huang and Vliert (2004) found that job level is positively related to job satisfaction in individualist countries but not in collectivist countries. In another study, Huang and Vliert (2003) found that the link between job satisfaction and intrinsic job characteristics such as challenging work, recognition, autonomy, and the work itself is stronger in more individualist countries. According to Mrez (2010), culture moderates the relationship between job

characteristics such as autonomy, feedback and work outcomes. Specifically, in collectivist cultures, positive feedback can mark a member of a group as different from the others, which can damage the harmony of a group. Negative feedback can also cause a member lose “face”, which can cause conflict within a group.

These cultural differences could also influence management practices, people’s concerns and values, and the relationship between variables in an organizational context. First, culture can have an effect on the practice of management. According to Erez (2010), in the 1970s and 1980s there were three kinds of job design models, the American model, the North European model and the Japanese model. Although they were developed at the same time and for the same purpose, they are different models. In the US model, job characteristics such as job autonomy, skill variety, task identity, task significance, and feedback at the individual level are emphasized. In the North European model, the same job characteristics were emphasized, but at the group level. In the Japanese model, quality control (QC) circles were adopted. The cultural bases for the American model are individualism, the European model collectivism, and the Japanese model collectivism and power distance.

The second rationale for this study is that a socio-economic perspective implies that the social and economic development of a nation could moderate the relationship between job satisfaction and its antecedents. People in rich countries with high standards of living have higher expectations of their workplace, work environment, jobs and careers (Veenhoven, 1991). According to Inglehart (1997), in economically developed countries people tend to take survival for granted. Such societies have experienced a gradual but phenomenal values change in the course of economic development. Over time, values related to economic achievement have become less important than values related to enhancing self-expression (Inglehart, 1997, p. 33).

For example, a large survey on life satisfaction in China (Xing, Zhang & Tang, 2001) found that while the living standard of people in coastal and developed regions was higher than that of people in inland regions, people's overall satisfaction with life in the developed regions was lower than those in inland areas. A possible reason is that the expectations of people living on the coastal seaboard are higher than those in the inland provinces. Similarly, people in rich countries may appreciate more mentally challenging and intrinsically motivating jobs (Diener, Diener & Diener, 1995; Inglehart, 1997; Veenhoven, 1991). People in richer countries with high standards of living may also attach more value to the intrinsic aspects of work and, therefore, may be motivated more by intrinsic rewards. In contrast, in economically less developed countries, economic and social security may be considered more important to life than freedom and control in the workplace, because the needs for food and money are still more important than needs such as self-esteem and self-actualization. Westwood and Lok (2003) reported that although Chinese in Hong Kong and in Beijing have in common some cultural characteristics, such as collectivism and "Guanxi" relationship, their values on work are different. Promotion and interesting work are among the top five work goals for Hong Kong people, but not for people in Beijing. In contrast, good relations and good working condition are among the top five for people in Beijing, but not for people from Hong Kong. There is empirical evidence on the moderation of economic development on the relationship between job satisfaction and its antecedents and consequences. For example, Huang and Van de Vliert's (2003) study of more than 107,000 workers across 49 countries demonstrated a stronger relationship between intrinsic motivation and job satisfaction in richer countries than in poorer countries. However, it is not clear whether these patterns reflect contemporary China.

This study will investigate the relationship between job satisfaction and its antecedents and compare the findings with those in other economically developed countries in general. Furthermore, China is a large country, with different regions showing different levels of economic development. Findings of existing studies in economically developed regions cannot be generalized to economically under-developed regions. Most existing studies examining the antecedents of job satisfaction in China are geographically specific, and focus on economically developed regions such as Jiangsu province (Chen, Long & Wang, 2005; Gu & Peng, 2007; Zhang & Zhao, 2007), or Zhejiang province (Leung, Smith, Wang & Sun, 1996) or large cities such as Xi'an (Zhang et al., 2003a), Beijing (Lu, While & Barriball, 2007), or provincial capital cities (Nielsen & Smyth, 2008). To the knowledge of the author, no research has been undertaken on job satisfaction for the urban population in China's northeast. In many ways, the northeast of China is different from economically developed regions. First, its economic development lags behind the national average. Second, there is heavy industrial pollution in the northeast because of the high concentration of heavy industry. Third, the state sector dominates the economy, which is characterized by old large and medium sized state-owned enterprises (SOEs). The working situations and expectations of employees in the northeast could thus be different from those in other regions in China. In other words, whether those research findings in other regions could be generalized to China's northeast needs to be tested.

Third, as China has the largest workforce in the world and plays an increasingly important role in the world economy, it is important to study China and so test the generalizability of concepts and theories developed in western English-speaking countries, and pinpoint the differences between China and these countries. Following

three decades of economic reform, the living of Chinese people has changed greatly. The workplace environment in China has greatly changed following labor market reform, management reform, and compensation reform (Cooke & Rowley, 2010; Smyth & Zhai, 2001, 2003; Smyth, Zhai & Hu, 2001a). It is important to investigate job satisfaction and examine its relationship with its situational and dispositional sources in this transitional economy. This study will provide an important benchmark against which future studies can determine the effects of dispositions and situations on Chinese citizens' job satisfaction.

Fourth, as many of the measures for organizational research developed in western English-speaking countries have not been tested in a Chinese context, there is a need to examine their suitability in a Chinese setting, and provide benchmarks for future studies on the use of these measures for job satisfaction and its antecedents in China. Although the majority of job satisfaction studies in China use well-established multi-item measures developed in western English-speaking countries (e.g. Chan & Wyatt, 2007; Chen, 2001; Chiu & Francesco, 2003a; Leung et al., 1996; Loscocco & Bose, 1998; Lu et al., 2007; Siu, 2002; Siu, Donald & Cooper, 1997; Xie, 1996; Yao & Sun, 2007; Zhang et al., 2003a; Zhang, Zhang & Yu, 2003b; Zhang, Yang, Xu & Che, 2006; Zhang & Zhao, 2007), there are many studies using both single-item and multi-item measures of unknown reliability and validity (e.g. Chen et al., 2005; Fan & Ding, 2007; Gu & Peng, 2007; Hui, 2007; Liu, Pan & Zhao, 2006a; Ma, Chen, Meng & Zhou, 2005; Nielsen & Smyth, 2008; Scott, 2003; Zhang, Li & Zhang, 2008). The use of single item measures has been particularly criticized on two grounds. First, a single-item indicator is typically less reliable than a multiple item measure. For example, Andrews and Whitley (1976) found a single-item indicator of personal well-being had relatively low reliability (test-retest correlation .40 - .66), even when

respondents were asked twice only one hour apart. The test-retest correlations for a multi-item personal well-being scale were much higher, ranging from .82 to .84 even when the time interval was up to ten weeks (Krueger & Schkade, 2007). Second, a single indicator cannot capture the multiple dimensions or facets of complex constructs such as job satisfaction (Krueger & Schkade, 2007).

The fifth reason for addressing the research questions with a Chinese sample is that although researchers have recommended comprehensive studies integrating situational and dispositional antecedents of job satisfaction (e.g. Cohrs et al., 2006; Oldham & Hackman, 2010; Robie, Ryan, Schmieder, Parra & Smith, 1998; Warr, 1999), there is little research using Chinese samples integrating these two kinds of antecedents of job satisfaction. For instance, Oldham and Hackman (2010) suggested that future studies on job characteristics and its consequences should incorporate other factors such as social attributes of jobs. Existing studies on job satisfaction in China are dominated by the situational approach (e.g. Chen, 2001; Fan & Ding, 2007; Leung et al., 1996; Loscocco & Bose, 1998; Lu et al., 2007; Ma et al., 2005; Nielsen & Smyth, 2008; Scott, 2003; Siu et al., 1997; Siu, Spector, Cooper, Lu & Yu, 2002; Wang, 2008; Xie, 1996; Yao & Sun, 2007; Zhang et al., 2003b; Zhang & Zhao, 2007). Few studies have adopted the dispositional approach (exceptions are Gu & Peng, 2007; Hou & Liu, 2009) or an integrative approach which looks at the influence of both situational and dispositional variables on job satisfaction (exceptions are Chen et al., 2005; Chiu & Francesco, 2003a; Liu, Yang & Zhao, 2006b; Zhang et al., 2003a; Zhang et al., 2006). Among the few studies using the integrative approach, two have used self-designed survey instruments (Chen et al., 2005; Liu et al., 2006b), leaving even fewer studies which have investigated the influence of both dispositions and work situations with well established measures. Furthermore, a literature search has

not found any study on the influence of the Big Five factor personality traits on job satisfaction within the Chinese population, although studies from the west consider them to be important antecedents of job satisfaction (Judge, Heller & Mount, 2002). Integration of work situations and dispositions would provide a more complete picture on the influences on job satisfaction.

Sixth, the brain drain has become a problem for many companies in the northeast of China. For instance, a study in Fushun city in the northeast (Smyth & Zhai, 2003) showed that many talented people have left the area for the more economically developed coastal areas. In addition, when the researcher of the current study interviewed officials of the local government, an official told the researcher that in 2005, the local government of Fushun city organized a large survey investigating the well-being of talented people for the purpose of retaining them in the area. As job satisfaction has been shown to be associated with turnover intentions and actual turnover (e.g. Price, 2001), research on job satisfaction may be helpful for understanding the causes of turnover intentions and the brain drain. In addition, there is also a shortage of talented people in Chinese enterprises. For instance, according to Cunningham and Rowley (2007), there is a shortage of skilled professionals and over-supply of unskilled labor. Therefore, this research will target white-collar workers, rather than workers in general.

The Significance of this Study

To summarize, the contributions of the current study to the extant literature are the following. The first contribution of this study is studying the research question on a Chinese population in the context of cross-cultural study testing whether findings

from western countries are convergent or divergent from those in China. The second contribution of this study is theoretical, and involves formulating a mediation model of work situations using an integrated model developed from the extant literature and testing the model for the first time in China. To the knowledge of the author, a comprehensive mediation model of work situations has not been empirically tested elsewhere in the world. The third contribution of this study is validation of the survey instruments in a Chinese context. Although all the survey instruments have been validated in English speaking countries, translation and cultural differences could make the measures developed in the west inappropriate for a Chinese context.

The fourth contribution of this study is that it can be of practical implication for management practice in China. For example, many of the studied variables in this study are relevant to understanding human resource management practices. Understanding the relationship between the studied variables and job satisfaction can help understand the impact of HR practices in China on job satisfaction. For instance, the HR practice of performance management could be related to people's income level and perceptions of distributive justice. Performance appraisals in China are linked to ordinary workers' wages and bonuses, and to professional and managers' bonus and promotions (Cooke, 2010). Some multinational companies (MNCs) and private companies introduced the Employee Assistance Programs (EAPs) to help employees to cope with stress (Cooke, 2010). This study incorporates work stressors, such as role ambiguity, role conflict, and work overload. In addition, the practice of mentoring has been adopted by some MNCs and large Chinese private companies (Cooke, 2010). In the mentoring system, both the professional development, personal growth of the mentee and those of the organizations are emphasized. The mentoring practice can be related to supervisor support in this study.

In summary, this research has several methodological strengths. First, as this study uses well-established survey instruments, incorporates a wide range of dispositional and situational variables, and analyses the data with advanced statistical methods, the research findings should be more internally valid. Second, as this study employs a sample from multiple industries in one particular city in northeast China, the sample is broader in scope than previous studies on the situational and dispositional sources of job satisfaction in China; thus the findings in this study may be more externally valid.

Overview of the Thesis

The thesis comprises five chapters including the current chapter. This chapter introduced the research problem by outlining the research questions and highlighting the significance of study on job satisfaction and its antecedents in China's northeast.

Chapter 2 presents an overview of theories and empirical studies on the situational and dispositional sources of job satisfaction. First, the conceptualization of job satisfaction is reviewed. Second, the chapter reviews the situational and dispositional antecedents of job satisfaction. Third, an integrative approach combining dispositional and situational antecedents of job satisfaction is presented. Fourth, hypotheses on the situational influences on job satisfaction are proposed. Fifth, hypotheses on the dispositional influences on job satisfaction are proposed. Sixth, hypotheses on the mediating role of perceptions of work situations on the relationship between dispositions and job satisfaction are proposed.

Chapter 3 presents a detailed discussion of the research design and the methodology used to conduct the investigation. It describes the sample, the survey instrument and measures, the statistical methods used for data analysis and the control

variables.

Chapter 4 presents the results of the statistical analyses. First, data screening and results of confirmatory factor analyses for validation of the measures are presented. Second, the results of the hypotheses testing are presented.

Chapter 5 discusses the research findings. First, findings on the relationship between perceptions of work situations and job satisfaction are discussed, followed by discussion of the findings relating to dispositions and job satisfaction. Third, theoretical and practical implications of the findings are presented. Fourth, the limitations of the study are discussed. The chapter concludes with recommendations for future research and the conclusion of the study.

Summary

This study will investigate the antecedents of job satisfaction of white-collar employees in industrial and commercial enterprises in China's northeast. Specifically, the effect of the antecedents on job satisfaction, and the mediating role of work situations on the relationship between dispositions and job satisfaction are investigated. This study will attempt to address several limitations of previous research, such as the limitations of many studies conducted in China which have used poorly validated survey instruments, or tested only situational or dispositional antecedents on job satisfaction, or studied only employees in a specific industry or in an economically developed region. The main contributions of the current study include: validating established measures developed in English-speaking countries in a Chinese context, conducting a comprehensive study integrating a wide range of dispositional and situational variables, incorporating both affectivity and the Big Five

factor framework of disposition in a single study, testing the mediating role of perception of work situations on the relationship between dispositions and job satisfaction, and targeting a white-collar working population in an economically less developed geographical region in China.

The next chapter will present a review of the literature related to the construct of job satisfaction and its situational and dispositional antecedents. A discussion of the theoretical framework and the main findings from job satisfaction studies on the hypothesized relationships will also be provided.

CHAPTER 2: LITERATURE REVIEW AND THE CONCEPTUAL FRAMEWORK

This chapter reviews the literature concerning the antecedents of job satisfaction and formulates a model of the relationship between job satisfaction and its antecedents. The chapter is set out as follows. First, the chapter provides a review of the existing construct definitions of job satisfaction. Second, the situational and dispositional antecedents of job satisfaction are reviewed. Third, an integrative approach to probe the influences of the dispositional and situational variables on job satisfaction is described. Fourth, the influences of situational variables on job satisfaction are reviewed. Fifth, the influences of dispositional variables on job satisfaction are presented. Sixth, the possible mediation of perception of work situations on the relationship between dispositions and job satisfaction is proposed. Finally, a summary of this chapter is presented.

Concept of Job Satisfaction

Definition of Job Satisfaction

Before exploring the relationship between job satisfaction and its antecedents, it is appropriate to discuss the conceptualization of job satisfaction.

Over the past decades, researchers have defined job satisfaction from different perspectives. Some researchers have focused on the affective (emotional) components of job satisfaction. For instance, Smith, Kendall and Hulin (1969) defined job satisfaction as “the feelings a worker has about his job”. Similarly, Spector (1997, p. 2) defined job satisfaction as “simply how people feel about their jobs and the different aspects of their jobs”.

Other researchers have focused on both the affective and cognitive components of job satisfaction. For instance, Locke (1976, p. 1300) defined job satisfaction as “a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experience”. Brief (1998, p. 10) defined job satisfaction as “an internal state that is expressed by affectively and/or cognitively evaluating an experienced job with some degree of favor or disfavor”. Weiss (2002, p. 175) defined job satisfaction as “a positive (or negative) evaluative judgment one makes about one’s job or job situation”. The cognitive component is the fulfilment of one’s need, etc., and the affective component is feeling that accompanies the cognition. As Judge and Larsen (2001) argued, the cognitive and affective components are not independent of each other. When people think, they have feelings; and people’s feelings influence their thinking. So there is some consensus between the two kinds of definitions. Cranny, Smith and Stone (1992, p. 1) in their review of job satisfaction stated that there was a general agreement that job satisfaction is “an affective (that is, emotional) reaction to a job, which results from the incumbent’s comparison of actual outcomes with those that are desired (expected, deserved, and so on)”.

In summary, there is a general agreement that job satisfaction has both cognitive (thoughts, or beliefs), and affective components. Locke’s (1976) classical definition tackled both the affective and cognitive components of job satisfaction, and is widely used. In this study, with Locke’s definition, job satisfaction is defined as a pleasurable or positive emotional state resulting from the cognitive appraisal of one’s job or job experience.

Dimensionality of Job Satisfaction

Researchers have distinguished between global job satisfaction and facet job

satisfaction. Global or overall job satisfaction is focused upon an overall evaluation of the whole work experience, while facet or domain job satisfaction is based on specific aspects of the job, such as pay, supervision, promotion, co-worker, or elements of the job itself (Fields, 2002).

In the current study, global job satisfaction rather than facet job satisfactions will be investigated. There are two reasons for this. First, although facet job satisfaction can provide a more complete picture on which parts of the job produce satisfaction or dissatisfaction, when the relationship between facet job satisfaction and work situations is studied there can be some confusion conceptually as there may be some overlap between the definition and measurement of facet job satisfaction and work situations. For instance, work overload and promotional chances are commonly used as situational antecedents of global job satisfaction (Price, 2001). However, the same item used to measure satisfaction with working procedures in Spector's (1985) Job Satisfaction Survey has been used in another scale to measure work overload (that of House, Wells, Landerman, McMichael & Kaplan, 1979). The same item used to measure satisfaction with promotion in Spector's (1985) Job Satisfaction Survey has also been used in another scale to measure promotional chances (Price, 1997). This is both an empirical and conceptual confound. Second, if facet job satisfactions are used as antecedents of global job satisfaction, the logic may also be confusing. According to Smith (1992), people may have general feelings that are related to how they will react to what happens. In other words, global job satisfaction may be a source of dimensions of job satisfaction. Empirically, global job satisfaction has been studied as a higher order construct of dimensions of job satisfaction in India (Takalkar & Coovert, 1994) and China (Zhang et al., 2008), implying global job satisfaction to be a cause of dimensions of job satisfaction.

As to whether job satisfaction and dissatisfaction should be regarded as one dimension or two dimensions, there is general agreement that job satisfaction and dissatisfaction are the two polar ends of one construct, rather than two separate constructs. According to Herzberg, Mausner and Snyderman (1959), job satisfaction is caused by motivators, while job dissatisfaction is caused by hygiene factors, suggesting that job satisfaction and dissatisfaction are two separate constructs. However, empirical evidence does not support Herzberg's two factor theory (Hulin & Judge, 2003). In this study, job satisfaction and dissatisfaction are placed on single continuum, rather than being conceptualized as two separate concepts.

In summary, global job satisfaction is a unidimensional construct which has both affective and cognitive components, and these components may be linked to both dispositions and work situations. In the next section, the situational and dispositional antecedents of job satisfaction will be reviewed.

Antecedents of Job Satisfaction

Both theory and empirical evidence suggest that job satisfaction may have both situational and individual dispositional sources.

Situational Antecedents of Job Satisfaction

Judge et al. (2001a) noted that job satisfaction could result from the nature of one's job or other aspects of the environment. This situational approach is based on the implicit assumption that all persons have similar needs and are therefore satisfied by the same job characteristics.

Many theories suggest that work situations may lead to job satisfaction. Heavily

researched theories on the situational sources of job satisfaction include the job characteristics model (JCM) (Hackman & Lawler, 1971; Hackman & Oldham, 1976), affective theory (Locke, 1976), and the Cornell integrative model (Hulin, Roznowski & Hachiya, 1985). According to the JCM, five core job characteristics (skill variety, task identity, task significance, autonomy, and job feedback) generally lead people to be motivated and satisfied at work. Similarly, affective theory states that job satisfaction is determined by the discrepancies between what people want and what they have, and the value of the discrepancy. The Cornell integrative model proposes that job satisfaction is a function of the balance between role inputs and outputs. The role inputs include things like training, experience, time, and effort; while the output includes things like pay, status, working conditions, and intrinsic factors. The more outcomes received relative to role input, the higher the predicted job satisfaction. These theories have in common their argument that some objective work situations can influence job satisfaction.

Numerous possible situational antecedents of job satisfaction have been examined in individual studies and followed through in meta-analyses (e.g. Fried & Ferris, 1987; Gaertner & Robinson, 1999; Humphrey, Nahrgang & Morgeson, 2007; Jackson & Schuler, 1985; Li & Cropanzano, 2009; Loher, Noe, Moeller & Fitzgerald, 1985; Ng & Sorensen, 2008) and other reviews of the predictors of job satisfaction (e.g. Locke, 1976; Price, 2001; Spector, 1997; Warr, 1999). Situational antecedents examined in these studies include the nature of job tasks (such as autonomy, skill variety, task variety, routinization, task identity, task significance, job feedback, job enrichment, complexity, work difficulty, work responsibility, opportunity for new learning, job demand, normative requirements, meaningfulness of job); working conditions (such as absence of danger, temperature, humidity, ventilation, lighting, and noise); job

stressors (role ambiguity, role conflict, work overload, inadequacy of resources, work-family conflict, non-arbitrary pressure from performance); how people are treated (such as distributive justice, procedural justice, interactional justice); relations with other people in the workplace (such as effective leadership, supervisor support, co-worker support, subordinate support, interpersonal conflicts, quantity and quality of interaction); environmental clarity (absence of job insecurity); and rewards (pay, promotional chances, verbal recognition, valued social positions). Those selected for inclusion in this study will be reviewed below.

Dispositional Antecedents of Job Satisfaction

Judge and Bono (2001) stated that people have innate dispositions that cause them to have certain levels of job satisfaction, regardless of their job. i.e. dispositions lead to job satisfaction.

There are several theories suggesting that dispositions may lead to job satisfaction. These theories include the affect infusion model (AIM) (Forgas, 1995), the affect event theory (AET) (Weiss & Cropanzano, 1996), the information processing model (Motowidlo, 1996), and the mechanisms of dispositional influence model (Staw & Cohen-Charash, 2005).

According to the AIM (Forgas, 1995), affect exerts a notable influence on information processing. Especially in complicated and unanticipated situations, affect becomes influential in driving evaluations and responses. In other words, affect “infuses” or colors one’s cognitive processing to form evaluations of the attitude object in question.

The AET model (Weiss & Cropanzano, 1996) suggests that individuals’ affectivities substantively influence job-related events, which in turn, substantively

influence job attitudes such as job satisfaction.

Similarly the information processing model (Motowidlo, 1996) and the mechanisms of the disposition influence model (Staw & Cohen-Charash, 2005) suggest that the influence of dispositions on situations can occur in four ways. First, dispositions could influence the objective nature of an individual's work situation by either the organization's or the individual's self-selection of work, or the individual's active shaping or manipulation of the work situation. Second, dispositions could influence attention to, and memory of, work-related stimuli. The attention to particular work situations and the subsequent memories of these situations are unlikely to be representative of all the stimuli to which the person is exposed, and are likely to be biased by their disposition. Third, the interpretation or perception of the same work situation could be different for individuals with different dispositions. Dispositions may also influence an individual's expression of job satisfaction. These theories have in common their argument that personality can influence job satisfaction either directly or indirectly via its influence on an individual's perception of work situations.

There is also direct empirical evidence to support the role of dispositional sources of job satisfaction. Numerous meta-analyses (e.g. Bruk-Lee, Khoury, Nixon, Goh & Spector, 2009; Connolly & Viswesvaran, 2000; Judge & Bono, 2001; Judge et al., 2002; Kaplan, Luchman, Haynes & Bradley, 2009; Ng & Sorensen, 2009; Thoresen, Kaplan, Barsky, Warren & de Chermont, 2003) have found that dispositions such as affectivity (positive affectivity and negative affectivity), the Big Five factor personality traits (extraversion, neuroticism, conscientiousness, agreeableness, and openness to experience), and core self evaluation (self-esteem, generalized self-efficacy, locus of control, and emotional stability) are significantly correlated

with job satisfaction.

In addition, there is also indirect evidence supporting dispositions as a source of job satisfaction. Indirect evidence includes the stability of job satisfaction across both time and situation (Dormann & Zapf, 2001; Gerhart, 1987; Staw & Ross, 1985) and the similarity of job satisfaction among identical twins (Arvey, Bouchard, Segal & Abraham, 1989). A meta-analysis by Dormann and Zapf (2001) found that the test-retest correlation coefficient of job satisfaction was .50 across 60 samples with a sample size of 14,944 cases for an average sample-weighted time-lag of 35.89 months. However, stability alone does not provide definitive evidence of dispositional effects (Davis-Blake & Pfeffer, 1989; Gerhart, 1987; Gerhart, 2005). Job satisfaction might be stable as a result of stability in work situations. When an individual changes his/her job, his/her job quality and characteristics may remain the same. Individuals who are able to secure a good, high quality job at one time are likely to do the same later, even after a change in job.

To rule out the possibility that the stability of job satisfaction is caused by job situations, rather by dispositions, researchers have studied the stability of job satisfaction while controlling for work situations. A longitudinal study by Staw and Ross (1985) using a sample of over 5000 men in the US found that individuals' job satisfaction was reasonably stable over a period of five years. Even when individuals changed both employers and occupations, job satisfaction was still stable, with a test-retest correlation over a five-year period of .19. Furthermore, they found that even when changes in pay and status were controlled, job satisfaction five years previous was still a predictor of current satisfaction. Consistently, Gerhart (1987) studied the stability of job satisfaction whilst controlling for situational variables in a large sample of 12,686 US men and women. The authors tested many different

combinations of the determinants of current job satisfaction, such as prior job satisfaction, previous pay, previous job complexity, current pay, current objective job complexity, and current subjective job complexity. They found that prior job satisfaction was consistently a stable predictor of current job satisfaction for the various combinations of predictors, displaying the stability of job satisfaction across time and situations.

According to Bowling, Beehr, Wagner and Libkuman (2005), stability of job satisfaction can be a reflection of the dispositional sources of job satisfaction. Disposition can influence job satisfaction in three ways. First, dispositions can influence an employee's equilibrium or adaptation level of job satisfaction. Second, dispositions can influence an employee's sensitivity to workplace events. Third, dispositions can influence the speed at which job satisfaction returns to equilibrium after one is exposed to a negative workplace event.

Another piece of indirect evidence of the influence of dispositions on job satisfaction is that the determinants of job satisfaction may be genetically inherited. Arvey et al. (1989) found significant consistency in job satisfaction levels in 34 pairs of identical twins reared apart. The intra-class correlation of global job satisfaction scores of the twin pairs was .31. However, it could be argued that the similarity of job satisfaction of identical twins could be caused by situations, rather than by disposition. For instance, twins with similar dispositions could select similar situations or were selected into similar situations by organizations because of genetic influences on abilities. To rule out this explanation, Arvey et al. (1989) controlled for job level, using the Dictionary of Occupational Titles (DOT) to classify jobs on four dimensions, and found that there was only a little change of the intra-class correlation of job satisfaction of the twin pairs ($r = .29$). The implication of the study is that individuals

are born with dispositions that predispose them to be satisfied with a job.

In reviews of the dispositional antecedents of job satisfaction, researchers have listed numerous possible antecedents. The possible dispositional antecedents of job satisfaction include positive affectivity, negative affectivity, extraversion, neuroticism, conscientiousness, agreeableness, openness to experience, self-esteem, generalized self-efficacy, locus of control, and emotional stability, Type A personality, trait anger, narcissism, and Machiavellianism (e.g. Bruk-Lee et al., 2009; Spector, 1997). Rottinghaus, Hees and Conrath (2009) have examined the person-work environment fit explanation of how disposition-type factor influence job satisfaction. Those selected for inclusion in this study will be reviewed below.

An Integrative Approach to Job Satisfaction

As job satisfaction has both situational and dispositional antecedents, it is imperative to study job satisfaction considering both kinds of antecedents so that a complete picture of the sources of job satisfaction can be given. Researchers have thus suggested integrating the situational approach and dispositional approaches (e.g. House, Shane & Herold, 1996; Judge & Hulin, 1993; Lent & Brown, 2006; Staw & Cohen-Charash, 2005). There are several reasons for this integration.

First, as dispositions and situations could have unique additive effects on job satisfaction, any study which does not investigate the role of both dispositions and situations may miss important predictors of job satisfaction. In particular, empirical studies have found additive effects for dispositions and situations (e.g. Agho, Muller & Price, 1993; Crede, Chernyshenko, Stark, Dalal & Bashshur, 2007; Iverson & Maguire, 2000; Judge & Hulin, 1993; Kim, 1999; Kim, Price, Mueller & Watson,

1996; Levin & Stokes, 1989; McCalister, Dolbier, Webster, Mallon & Steinhardt, 2006; Simons & Jankowski, 2007; Watson & Slack, 1993). For instance, in a longitudinal study Watson and Slack (1993) found that both dispositional variables (negative and positive affectivity) and situational variables (occupational variables and perceived changes in job characteristics) predicted job satisfaction. Similarly, in a cross-sectional study Kim (1999) found unique dispositional effects (positive affectivity and negative affectivity) and situational effects (e.g. autonomy, routinization, role ambiguity, role conflict, supervisor support, and distributive justice) on job satisfaction.

Second, as dispositional factors may be a common source of both situations (e.g. Barsky & Kaplan, 2007; Ng & Sorensen, 2009) and job satisfaction (e.g. Connolly & Viswesvaran, 2000; Judge et al., 2002), when the relationship between situations and job satisfaction is studied without controlling for dispositions, the relationship between work situations and job satisfaction could be spurious.

Third, the mechanism of how dispositions influence job satisfaction can be better explained when situational variables are included. Specifically, it is possible that dispositions have an influence on perceptions of work situations, which in turn influence job satisfaction. In other words, the relationship between dispositions and job satisfaction could be mediated by perceived work situations. In such cases, dispositions have an indirect effect on job satisfaction. There is also empirical evidence of the mediating role of situations on the relationship between dispositions and job satisfaction (e.g. Cohrs et al., 2006; Grant & Langan-Fox, 2007; Judge et al., 2000; Judge et al., 1998; Srivastava & Locke, 2006; Stumpp et al., 2008). For instance, Judge et al. (1998) found that core self-evaluations have an indirect effect on job satisfaction through perceived job characteristics. Similarly, Cohrs et al. (2006) found

that social support and autonomy mediate the relationship between the Big Five personality factors and job satisfaction.

Fourth, as the interactions of situations and dispositions could have an effect on job satisfaction, i.e. moderation of dispositions on the relationship between situations and job satisfaction, any study which does not consider both kinds of factors means that the moderation cannot be examined. In other words, the influence of job situations on job satisfaction may depend on individual dispositions, and for different individuals, different situations drive job satisfaction. For instance, Hackman and Oldham (1976) stated that the effect of job characteristics (task identity, task significance, skill variety, autonomy, and feedback) on job satisfaction depends on an individual's growth need strength (GNS). Job characteristics lead to greater job satisfaction the more an individual strives for autonomy, feedback, participation, and goal attainment. Similarly, Locke (1976) assumed that job satisfaction depends on whether important job-related values, goals, and needs are fulfilled or how the job compares to a personal standard. There is also empirical evidence to support the moderation of dispositions on the relationship between work situations and job satisfaction. For instance, a meta-analysis by Loher et al. (1985) found a mean correlation of .68 between the Job Characteristic Index and job satisfaction for individuals high in GNS using a sample of 427 cases, and a mean correlation of .38 for individuals low in GNS using a sample of 424 cases. They concluded that GNS moderated the relationship between job characteristics and job satisfaction.

As the integrative approach can provide a more complete and more accurate picture on the influence of situations and dispositions on job satisfaction, the integrative approach will be adopted in the present study.

In the subsequent section, the hypothesized relationships between job satisfaction

and its situational and dispositional antecedents, and the mediating role of perceived work situations on the relationship between dispositions and job satisfaction will be presented.

Situational Influences on Job Satisfaction

As it is impractical to test all the situational variables mentioned above in the current study, ten situational variables were selected based on their significant relationship with job satisfaction in other studies. These situational variables are autonomy, routinization, role ambiguity, role conflict, work overload, supervisor support, co-worker support, promotional chances, pay level and distributive justice. The influence of these ten situational variables on job satisfaction has been widely studied in previous research (e.g. Gaertner & Robinson, 1999; Iverson & Maguire, 2000; Iverson & Roy, 1994; Kim, 1999; Kim et al., 1996; Price, 2001; Zhang et al., 2003a; Zhang, Zhang & Wang, 2002; Zhang et al., 2003b). The importance of these variables in predicting job satisfaction and their anticipated relationship with job satisfaction are reviewed in the subsequent hypothesis generation.

The Influence of Job Characteristics on Job Satisfaction: Autonomy and Routinization

The two most important job characteristics variables studied are autonomy and routinization. Autonomy refers to the extent to which a job allows freedom, independence, and discretion to schedule work, make decisions, and choose the methods used to perform tasks (Morgeson & Humphrey, 2006). Scheduling is about the extent to which individuals feel they can control the sequencing of their work activities. Decision making is about the degree to which workers have the ability to

choose the criteria used for evaluating their performance. Methods are about the procedures individuals utilize in going about their work.

There are several reasons to expect that individuals with more job autonomy are more likely to be happy with their job. First, according to the Job Characteristics Model (JCM) (Hackman & Oldham, 1976), in autonomous jobs employees feel more responsibility for their work outcomes, which can provide them with a sense of self-competence and thus satisfactory. Second, according to Humphrey et al. (2007), autonomy in pursuing cherished goals, and flexibility in the selection of approach for goal completion can bring people meaningfulness of work, which in turn operates to contribute to their positive affective responses. Third, according to Loscocco and Roschelle (1991) flexibility with a job will facilitate satisfaction of needs in the non-work environment, so people with more flexible schedules are likely to view their jobs more favorably.

Meta-analyses (Fried & Ferris, 1987; Gaertner & Robinson, 1999; Humphrey et al., 2007; Loher et al., 1985; Zangaro & Soeken, 2007) and multivariate analyses (Chan, Pan & Lee, 2004; Cohrs et al., 2006; Hundley, 2001; Kim, 1999; Kim et al., 1996; Verhofstadt, De Witte & Omey, 2007; Zhang & Zhao, 2007) have consistently found evidence of a moderate to strong positive relationship between autonomy and job satisfaction. For instance, Loher et al. (1985) found a mean corrected correlation of .46 with a sample size of 15,524. Fried and Ferris (1987) found a mean corrected correlation of .48 across 20 samples with a sample size of 7,861. Gaertner and Robinson (1999) found a mean uncorrected correlation of .37 between autonomy and job satisfaction with a sample size of 7,040. Humphrey et al. (2007) found a mean corrected correlation of .48 across 175 studies with a sample size of 75,364. Multivariate analysis on professionals in Germany (Cohrs et al., 2006), on automobile

workers in Korea (Kim, 1999), on military physicians in the United States (Kim et al., 1996), on the general population in Belgium (Verhofstadt et al., 2007), on intellectuals in Jiangsu, China (Zhang & Zhao, 2007), and on journalists in China (Chan et al., 2004) also found that autonomy and job satisfaction were positively related. A comparative study on self-employed and those working in organizations in the US by Hundley (2001) found that the higher job satisfaction of the self-employed could be attributed to their high autonomy. Therefore, the following hypothesis is proposed in relation to the influence of autonomy on job satisfaction:

H1.1: Autonomy will be positively related to job satisfaction.

Routinization is defined as the degree of repetitiveness of a job (Price, 1997). Similar labels for routinization are low variety and low task variability (Price, 1997). The concept of routinization in the current study covers both low task variety and low skill variety. Task variety refers to the degree to which a job requires employees to perform a wide range of tasks on the job (Morgeson & Humphrey, 2006). Skill variety refers to the extent to which a job requires an individual to use a variety of different skills to complete the work (Morgeson & Humphrey, 2006). Individuals with jobs of high routinization are expected to have lower job satisfaction. Jobs involving the performance of a number of different work activities (Sims, Szilagyi & Keller, 1976) and multiple skills (Morgeson & Humphrey, 2006) are likely to be more interesting, and enjoyable to perform and thus enhance meaningfulness of the work, which in turn increases job satisfaction (Hackman & Oldham, 1975, 1976; Morrison, Cordery, Girardy & Payne, 2005). In contrast, in situations of over-reduction or constraints on the use of skills, individuals may find their jobs lack challenge and thus become

frustrated with their inability to use valued skills, which in turn may cause lower job satisfaction (2001).

Existing meta-analyses (Fried & Ferris, 1987; Gaertner & Robinson, 1999; Humphrey et al., 2007; Loher et al., 1985) and multivariate analyses (Agho et al., 1993; Iverson & Maguire, 2000; Kim, 1999; Seo, Ko & Price, 2004; Simons & Jankowski, 2007) have consistently found evidence of a negative relationship between routinization and job satisfaction. For instance, Loher et al. (1985) found a mean corrected correlation of .41 between skill variety and job satisfaction across 15 studies with a sample size of 15,542, and Fried and Ferris (1987) found a mean corrected correlation of .45 between skill variety and job satisfaction across 22 studies with a sample size of 18,035. Another meta-analysis by Gaertner and Robinson (1999) reported a mean uncorrected correlation of -.44 between routinization and job satisfaction across eight studies with a sample size of 7,040 cases. Humphrey et al. (2007) found a mean corrected correlation of .42 between skill variety and job satisfaction across 111 studies with a sample size of 48,795. The meta-analysis by Humphrey et al. (2007) also reported a mean corrected correlation of .46 between task variety and job satisfaction across 27 studies with a sample size of 8,480 cases.

Multivariate analyses on nurses in the US (Simons & Jankowski, 2007), on employees in a US hospital (Agho et al., 1993), on mining workers in Australia (Iverson & Maguire, 2000), on workers in Korean automobile companies (Kim, 1999), and on nurses in Korea (Seo et al., 2004) have also all reported a negative relationship between routinization and job satisfaction. Therefore, the following hypothesis is proposed in relation to the influence of routinization on job satisfaction:

H1.2: Routinization will be negatively related to job satisfaction

The Influence of Role Stressors on Job Satisfaction: Role Ambiguity, Role Conflict and Work Overload

The role stressors investigated are role ambiguity, role conflict and work overload. A role is most typically defined as a set of expectations about behaviour for a position in a social structure (Rizzo, House & Lirtzman, 1970). The most studied role characteristics are role ambiguity, role conflict, and work overload. Role ambiguity refers to uncertainty about relationship with others, authority in allocation of time, expectations associated with tasks and information for carrying out the tasks (such as guides, directives, policies), and the inability to predict sanctions as outcomes of behaviour (Fields, 2002; Rizzo et al., 1970). Role conflict refers to incompatibility between the expectations of parties or between aspects of a single role (Fields, 2002). Role conflict results from a) doing tasks that are not perceived to be part of a job, b) being involved with a job that conflicts with personal values or beliefs, or c) the inability to meet various expectations or demands. Role conflict occurs, for instance, when a supervisor expects a subordinate to carry out a specific task, while at the same time forbidding the use of the only way that would allow the subordinate to do so. For another instance, role conflict occurs when expectations of two different role senders towards the role incumbent are incompatible. Such role sender conflicts are likely to occur if the principle of unity of command is violated and employees are expected to follow instructions from, and report to, two or more superiors who have differing agendas. Work overload is also termed “workload” and involves a perceived excessive amount of time and effort required to undertake a job role (Price, 1997).

According to Rizzo et al. (1970), role ambiguity violates classical organization theory and role theory. Classical organization theory requires an individual to have

specified tasks or responsibilities, and role theory requires an individual to have the necessary information for a given position. As to role conflict, classical organization theory asks for “unity of command”. The principle of unity of command requires that individuals should report to a single supervisor, so that they can avoid “being caught” in the crossfire of incompatible orders or incompatible expectations from more than one superior. Role theory requires that there should be a consistent expectation of an individual’s behavior. Role theory predicts that violation of these two principles decreases employee job satisfaction.

Existing meta-analyses (Fisher & Gitelson, 1983; Gaertner & Robinson, 1999; Jackson & Schuler, 1985) and multivariate analyses (Gaertner & Robinson, 1999; Lu et al., 2007; Sullivan & Bhagat, 1992; Zhang et al., 2003a) have consistently found evidence of a negative relationship between role ambiguity and job satisfaction. For instance, a meta-analysis by Jackson and Schuler (1985) found a mean corrected correlation of $-.46$ between role ambiguity and job satisfaction across 56 studies with a sample size of 10,489 cases. Gaertner and Robinson (1999) found a mean uncorrected correlation of $-.31$ between role ambiguity and job satisfaction across eight studies with a sample of 7,040 cases. A review by Sullivan and Bhagat (1992) also found that studies in the US and Israel have consistently reported that role ambiguity is negatively related to job satisfaction. In China, research on nurses (Lu et al., 2007; Wu & Norman, 2006) has found that role ambiguity is negatively correlated to job satisfaction. Therefore, the following hypothesis is proposed in relation to the influence of role ambiguity on job satisfaction:

H1.3: Role ambiguity will have a negative relationship with job satisfaction.

Existing meta-analyses (Fisher & Gitelson, 1983; Gaertner & Robinson, 1999; Jackson & Schuler, 1985) and multivariate analyses (Gaertner & Robinson, 1999; Lu et al., 2007; Sullivan & Bhagat, 1992; Zhang et al., 2003a) have also consistently found a negative relationship between role conflict and job satisfaction. For instance, Jackson and Schuler (1985) found a mean corrected correlation of $-.48$ between role conflict and job satisfaction across 37 studies with a sample size of 6,314 cases. Another meta-analysis by Gaertner and Robinson (1999) found a mean uncorrected correlation of $-.21$ between role conflict and job satisfaction across eight studies in different countries and different industries with a sample size of 7,040. In China, research on nurses (Lu et al., 2007; Wu & Norman, 2006) has found that role conflict is negatively correlated to job satisfaction. Therefore, the following hypothesis is proposed in relation to the influence of role conflict on job satisfaction:

H1.4: Role conflict will have a negative relationship with job satisfaction.

With respect to work overload, Mulki, Lassk and Jaramillo (2008) argued that based on the psychological contract notion, organizations set various demands on and have expectations of employees in terms of what they are required to do and refrain from doing at work. Meanwhile employees also have multiple expectations about what the firm should provide to them. Excessive workloads are likely to be perceived by employees as a violation of the psychological contract. There is empirical evidence that breach of psychological contract can have a negative effect on job satisfaction (Bal, De Lange, Jansen & Van der Velde, 2008; Topa Cantisano, Morales Dominguez & Depolo, 2008; Zhao, Wayne, Glibkowski & Bravo, 2007). In consequence, an individual's perception of work overload could lead to lower job satisfaction.

There is also empirical evidence supporting the negative relationship between work overload and job satisfaction. For instance, Gaertner and Robinson (1999) found a mean uncorrected correlation of $-.17$ between work overload and job satisfaction across eight studies with a sample of 7,040 cases. Multivariate analyses outside mainland China (Chen, Chen, Tsai & Lo, 2007; Gaertner & Robinson, 1999) have also found a negative relationship between work overload and job satisfaction. Therefore, the following hypothesis is proposed in relation to the influence of work overload on job satisfaction:

H1.5: Work overload will have a negative relationship with job satisfaction.

*The Influence of Social Support on Job Satisfaction: Supervisor Support and
Co-worker Support*

The two most relevant social support variables in organizational settings are supervisor support and co-worker support. Supervisor support and co-worker support refer respectively to an employee's perception regarding the extent to which supervisors and co-workers provide work-related instrumental and emotional assistance (Ng & Sorensen, 2008; Thoits, 1985). Examples of instrumental assistance are task-directed helping (Caplan, Cobb, French, Harrison, & Pinneau, 1975), coworker and supervisor mentoring (Baral & Bhargava, 2010; Ensher, Thomas & Murphy, 2001; Scandura & Williams, 2004). Examples of emotional assistance are friendliness or positive affect (Morgeson & Humphrey, 2006). Although the instrumental component and emotional component can be distinguished conceptually, they are not usually independent, as provision of instrumental assistance is likely to be a sign of concern. In that sense, instrumental assistance can also be a kind of

emotional assistance (Cohen & Wills, 1985; House, 1981).

As the relative effect of supervisor support and co-worker support on job satisfaction could be different in this study, supervisor support and coworker support are treated as two separate constructs, rather than one construct. Ng and Sorensen (2008) argued that supervisor support should have a stronger relationship to job satisfaction than co-worker support for two reasons. First, supervisor support could be of higher quality and be more stable than co-worker support. Supervisor support is also more likely to help individuals achieve better performance than co-worker support, because supervisors are more experienced than co-workers in providing support. Furthermore, supervisor support should be a more stable resource than co-worker support. For instance, supervisors could be expected to answer employees' questions, give suggestions, guide career development, and listen to concerns and complaints, and assist in various other ways. When individuals rate their job satisfaction, they are thus more likely to recall supervisors' supportive actions. Second, supervisor support and co-worker support may be interpreted differently. Co-worker support may be susceptible to negative interpretations. Co-workers' behaviors may be viewed as political or self-enhancing, and may not always be associated with favorable work attitudes. In contrast, supervisor support may be less likely to be interpreted as political in nature. As political behaviors are less likely to be downward focused, employees should be less likely to think of supervisor support as a manifestation of politics. Furthermore, accepting support from co-workers may suggest incompetence. Specifically, because co-workers are generally regarded as equal, support from co-workers may suggest a lack of ability or independence. This perceived threat to self-esteem may negatively influence work attitudes. In contrast, supervisor support may be less likely to threaten self-esteem because employees

expect to be helped by supervisors. Thus, supervisor support may be more likely to lead to positive work attitudes than co-worker support.

There are two models which suggest that social support may have a positive effect on job satisfaction. These two models are the resource model (Taylor et al., 2004) and the symbolic model (Ng & Sorensen, 2008). Schwarzer and Knoll (2007) stated that social support is an important resource for employees to cope with stress. According to Taylor et al. (2004), social support is a kind of resource for people to deal with stressful situations. When an individual is in a stressful situation, he/she knows that someone care for him/her itself may be helpful and comforting. Perception of the existence of social support can be more stress reducing than actually making use of one's connections for specific help. Although actual help can help to cope with specific stressors, it also has its negative side, as seeking help from others can be a cause of distress. According to Ng and Sorensen (2008), social support is not solely an act of giving or receiving help. It comprises a series of social interactions that generate interpretations and have meaning by which employees develop a new understanding of their social reality and identity.

Meta-analyses (Gaertner & Robinson, 1999; Ng & Sorensen, 2008) and multivariate analyses (De Jonge et al., 2001; Doest & Jan, 2006; Gaertner & Robinson, 1999; Price, 2001) have consistently found evidence of a moderate to strong positive relationship between supervisor support and job satisfaction. For instance, a meta-analysis by Gaertner and Robinson (1999) found a mean uncorrected correlation of .36 between immediate supervisor support and job satisfaction across eight studies with a sample size of 7,040 cases. Similarly, a recent meta-analysis by Ng and Sorensen (2008) found a mean corrected correlation of .52 between supervisor support and job satisfaction across 59 studies with a sample size of 32,339 cases. A

review of multivariate studies by Price (2001) and a multivariate analysis combining data of several previous studies (Gaertner & Robinson, 1999) also found that supervisor support is positively related to job satisfaction. A longitudinal study of health care workers in the Netherlands also found that social support was positively related to job satisfaction measured one and two years later (De Jonge et al., 2001; Doest & Jan, 2006). Therefore, the following hypothesis is proposed in relation to the influence of supervisor support on job satisfaction:

H1.6: Supervisor support will be positively related to job satisfaction.

Meta-analyses (Gaertner & Robinson, 1999; Ng & Sorensen, 2008) and multivariate analyses (De Jonge et al., 2001; Doest & Jan, 2006; Gaertner & Robinson, 1999; Price, 2001) have also consistently found evidence of a positive relationship between co-worker support and job satisfaction. For instance, a meta-analysis by Gaertner and Robinson (1999) found a mean uncorrected correlation of .22 between co-worker support and job satisfaction across eight studies with a sample size of 7,040 cases. Similarly, a recent meta-analysis by Ng and Sorensen (2008) found a mean corrected correlation of .37 between co-worker support and job satisfaction across 52 studies with a sample size of 28,997 cases. A review of multivariate studies (Price, 2001) and a multivariate analysis combining data of several previous studies (Gaertner & Robinson, 1999) also found that co-worker support is positively related to job satisfaction. Therefore, the following hypothesis is proposed in relation to the influence of co-worker support on job satisfaction:

H1.7: Co-worker support will be positively related to job satisfaction, but not as

strongly as the relationship between supervisor support and job satisfaction.

The Influence of Extrinsic Rewards on Job Satisfaction: Promotional Chances and Pay Level

The two extrinsic reward variables investigated are promotional chances and pay level. Promotional chances or promotional opportunity refers to “the movement between different status levels within an organization” (Price, 1997, p. 408). Kim (1999) noted that promotional chances typically foster affective responses by encouraging internal careers and thereby guaranteeing job security and other favorable long-term future rewards (e.g., income, power, and status) to employees. The affective responses in turn increase employee job satisfaction.

Meta-analysis (Gaertner & Robinson, 1999) and multivariate analyses (Iverson & Maguire, 2000; Iverson & Roy, 1994; Kim et al., 1996) have found evidence of a positive relationship between promotional chances and job satisfaction. A meta-analysis by Gaertner and Robinson (1999) found a mean uncorrected correlation of .33 between promotional chances and job satisfaction across eight studies with a sample size of 7,040 cases. Multivariate analysis on a sample of US military physicians (Kim et al., 1996), and on blue-collar workers in Australia (Iverson & Roy, 1994), and on employees from a coal mining company in Australia (Iverson & Maguire, 2000) have all found a positive relationship between promotional chances and job satisfaction. Therefore, the following hypothesis is proposed in relation to promotional chances on job satisfaction:

H1.8: Promotional chances will be positively related to job satisfaction.

Pay is defined as “money and its equivalent which employees receive for their services to the employer” (Price, 2001, p. 606). Pay is an essential job reward, and it works as a strong inducement to compensate for an employee’s contributions to the organization. Pay should therefore be important in accounting for an individual’s affective response, and is likely to be positively related to job satisfaction. In support of this, a meta-analysis by Gaertner and Robinson (1999) found a mean uncorrected positive correlation of .11 between pay level and job satisfaction across eight studies with a sample size of 7,040. Therefore, the following hypothesis is proposed in relation to the effect of pay level on job satisfaction:

H1.9: Pay level will be positively related to job satisfaction.

The Influence of Distributive Justice on Job Satisfaction

In recent decades, organizational justice has emerged as an important predictor of job satisfaction (Cohen-Charash & Spector, 2001; Colquitt, Wesson, Porter, Conlon & Ng, 2001; Li & Cropanzano, 2009; Nowakowski & Conlon, 2005). Organizational justice may be partitioned into three dimensions: distributive justice, procedural justice, and interactional justice (Cohen-Charash & Spector, 2001). Distributive justice refers to the perceived fairness of the outcome distribution.

Procedural justice refers to the perceived fairness of the procedures used to determine outcome distribution. Interactional justice refers to the fairness of the interpersonal treatment and communication by managers to employees. The most studied forms of organizational justice elements are distributive justice and procedural justice (Cohen-Charash & Spector, 2001; Colquitt et al., 2001; Li & Cropanzano, 2009). In this study, only distributive justice will be studied. There are three reasons

for using only distributive justice rather than other components of organizational justice.

First, distributive justice and procedural justice are known to be highly correlated. Meta-analyses (Cohen-Charash & Spector, 2001; Colquitt et al., 2001) have demonstrated that distributive justice and procedural justice are highly correlated. Individuals who perceive distributive justice may believe the procedure to be fair, and the fairness of the procedure could lead to fairness in distribution. Second, in theory distributive justice should be closely linked to evaluations of specific personal relevant outcomes such as job satisfaction, while procedural justice should be closely linked to evaluation of systems, leaders, and institutions, such as organizational commitment (Martin & Bennett, 1996). Empirically, although both distributive justice and procedural justice are of similar strength in terms of bivariate correlation with job satisfaction (Acuna, Gomez & Juristo, 2009; Colquitt et al., 2001), multivariate analysis with both of them has demonstrated that distributive justice tends to be a much stronger predictor of job satisfaction than procedural justice (Martin & Bennett, 1996; McFarlin & Sweeney, 1992).

In discussing distributive justice, Adams (1965) argued that what people are really concerned about is not the absolute level of outcomes, but the fairness of the outcomes. Adams suggested that individuals determine whether they have been treated fairly by comparing their ratio of input and output with the same ratio of a comparison other. According to Hulin (1991), the input can be contributions (performance) or specific inputs (training, experiences, time and efforts), and the outputs can be pay, status, working conditions, or recognition of people's work. The source of comparison may be other people, a generalized other or one's own past rewards.

Social exchange theory suggests that distributive justice can have a positive effect on job satisfaction through instrumental and relational channels (Li & Cropanzano, 2009). Social exchange theory implies that people engage in interactions with other people because they are motivated by the expectations of receiving inducements in return from the other party (Gouldner, 1960). According to the instrumental model, individuals' pursuit of justice is motivated by economic interest. When a particular outcome is perceived to be unfair, it should affect their emotions and cognitions, and thus affect their work attitudes (Cohen-Charash & Spector, 2001). The relational model focuses on individuals' concerns about interpersonal relationships in a group. Fair outcome distribution communicates symbolic messages that individuals are valued members of a group, thus enhancing their self-esteem and fostering positive relationships with others in the group. Employees, in turn, reciprocate this goodwill gesture by displaying positive work attitudes.

The concept of psychological contract can also be used to understand organizational justice. The psychological contract refers to employees' beliefs concerning mutual obligations between themselves and their organization (Rousseau, 1989). Psychological contract breach is the employee's perception regarding the extent to which the organization has failed to fulfill its promises or obligations (Robinson & Rousseau, 1994). Breach of psychological contract causes negative emotional reactions, and these negative emotions in turn color the cognitive evaluations of the job, and cause negative job attitudes (Zhao et al., 2007).

Meta-analyses (Colquitt et al., 2001; Gaertner & Robinson, 1999; Li & Cropanzano, 2009), a large survey in the US (Witt & Nye, 1992) and multivariate analyses (Leung et al., 1996; McFarlin & Sweeney, 1992; Price, 2001; Rifai, 2005; Schappe, 1998) have consistently found evidence of a moderate to strong positive

relationship between distributive justice and job satisfaction. For example, a meta-analysis by Gaertner and Robinson (1999) reported a mean uncorrected correlation of .37 between distributive justice and job satisfaction across eight studies with a sample size of 7,040 cases. Another meta-analysis by Colquitt et al. (2001) reported a mean corrected correlation of .56 between distributive justice and job satisfaction across 24 studies with a sample size of 57,515 cases. Li and Cropanzano (2009) found a mean corrected correlation of .53 between distributive justice and job satisfaction across 12 studies with a sample size of 3,603 cases in six east Asian countries or regions, China, South Korea, Japan, Hong Kong, Taiwan, and Singapore. A large survey of over 10,000 employees across industries in the US (Witt & Nye, 1992) found a correlation of .28 between pay fairness and job satisfaction, and .43 between promotional fairness and job satisfaction. A review of multivariate analyses by Price (2001), and multivariate analysis of employees from banks in the United States (McFarlin & Sweeney, 1992), on employees from insurance companies in the United States (Schappe, 1998), on nurses in Indonesia (Rifai, 2005), and on hotel managers in joint ventures in China (Leung et al., 1996) also found positive relationships between distributive justice and job satisfaction. Therefore, the following hypothesis is proposed in relation to the influence of distributive justice on job satisfaction:

H1.10: Distributive justice will be positively related to job satisfaction.

Dispositional Influences on Job Satisfaction

As it is impractical to test all the dispositional variables mentioned previously in

this chapter, only positive and negative affectivity and the elements of the Big Five factor model of personality traits (extraversion, neuroticism, conscientiousness, agreeableness, and openness to experience) have been selected and their expected relationships with job satisfaction reviewed below. There are several reasons to select these dispositional frameworks and to integrate them into the study.

The reason for selection of these two frameworks is because affectivity (positive affectivity and negative affectivity) and the framework of the Big Five factor model (FFM) of personality are the two most frequently used personality taxonomies in job satisfaction research. Several meta-analyses have found that affectivity (Bruk-Lee et al., 2009; Connolly & Viswesvaran, 2000; Ng & Sorensen, 2009; Thoresen et al., 2003) and the components of the FFM (Bruk-Lee et al., 2009; Judge et al., 2002; Thoresen et al., 2003) are correlated with job satisfaction.

There are two reasons to integrate the affectivity framework and FFM models together and investigate their joint effect on job satisfaction in one model. First, none of the elements in affectivity is redundant in the framework of the FFM. Although extraversion and positive affectivity (PA), and neuroticism and negative affectivity (NA) have been combined in previous meta-analyses (Connolly & Viswesvaran, 2000; Judge et al., 2002) because of the high correlations between PA and extraversion (Watson, Wiese, Vaidya & Tellegen, 1999) and between NA and neuroticism, theoretically PA and extraversion are distinct constructs and should not be combined (Barsky & Kaplan, 2007; Bruk-Lee et al., 2009). Similarly, NA and neuroticism are also two separate constructs and should not be combined. Extraversion is broader than PA, and neuroticism is broader than NA (Barsky & Kaplan, 2007; Bruk-Lee et al., 2009). There is also empirical evidence (Barsky & Kaplan, 2007; Bruk-Lee et al., 2009; Connolly & Viswesvaran, 2000; Zimmerman, 2008) that the relationship

between PA and other variables is different from the relationship between extraversion and other variables. For instance, meta-analyses (Bruk-Lee et al., 2009; Connolly & Viswesvaran, 2000) found the correlation between PA and job satisfaction was stronger than the correlation between extraversion and job satisfaction. Similarly, a meta-analysis by Barsky and Kaplan (2007) found that the correlation between PA and distributive justice is stronger than the correlation between extraversion and distributive justice. A meta-analysis by Zimmerman (2008) also found that the correlation between PA and intention to quit is stronger than the correlation between extraversion and intention to quit.

As to the relationship between NA and neuroticism, there is also empirical evidence (Barsky & Kaplan, 2007; Thoresen et al., 2003; Zimmerman, 2008) to show that the relationship between NA and other variables is different from the relationship between neuroticism and other variables. For instance, a meta-analysis by Thoresen et al. (2003) found a stronger correlation between NA and job satisfaction than the correlation between neuroticism and job satisfaction. Similarly a meta-analysis by Barsky and Kaplan (2007) found that the correlation between NA and distributive justice is stronger than the correlation between neuroticism and distributive justice. A meta-analysis by Zimmerman (2008) also found that the correlation between NA and intention to quit is stronger than the correlation between neuroticism and intention to quit. Thus, it appears that neither positive nor negative affectivity is redundant with the FFM framework.

The second reason to include both affectivity and the FFM in the study is that they may have an additive effect in explaining the variance in job satisfaction. For example, in a previous empirical study Judge et al. (2008) found that integration of the PA/NA framework and FFM framework explained more variance in job

satisfaction than using only PA/NA or the FFM.

Definition of Positive and Negative Affectivity

Positive and negative affectivity refers to stable dispositional tendencies to experience pleasant and unpleasant emotions respectively over time and across a wide variety of situations (Barsade & Gibson, 2007; Price, 1997; Watson & Clark, 1984). Emotions such as enthusiastic, alert, active, and energetic are indicative of PA. Individuals high in PA are characterized by full concentration, high energy, enthusiasm, and pleasurable engagement, whereas individuals low in PA are characterized by sadness and lethargy (Watson et al., 1988).

In contrast, emotions such as anger, guilt, fear, and nervousness are indicative of NA (Watson & Clark, 1984; Watson et al., 1988). Individuals high in NA are characterized by tension, nervousness, and stress, whereas individuals low in NA are characterized by calmness, relaxation, and contentedness (Barsade & Gibson, 2007). It has been suggested that individuals high in PA tend to perceive their environment and themselves through a “pink lens”, while individuals high in NA tend to perceive their environment and themselves through a “black lens” (Barsade & Gibson, 2007; Watson & Clark, 1984). For instance, individuals high in NA tend to view themselves, others, their environments and the world in general negatively, while individuals low in NA tend to be relatively content and satisfied with themselves (Watson & Clark, 1984).

In terms of the dimensionality of affectivity, it is generally believed that PA and NA are two separate constructs, rather than two poles of the same construct. Figure 2.1 displays the relationship between PA and NA (Barsade & Gibson, 2007). It can be seen in Figure 2.1 that high PA indicates the level of arousal and pleasantness, while

high NA indicates the level of arousal and misery.

There is also empirical evidence supporting the conceptualization of two separate constructs of PA and NA. First, the absence of a strong correlation between PA and NA and the clearly separate structure of PA and NA in factor analysis supports the two-factor structure.

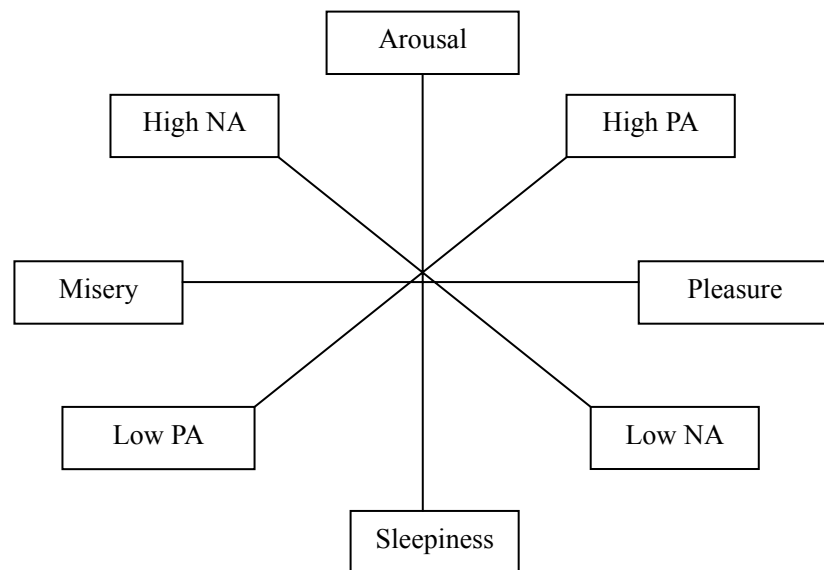


Figure 2.1 Relationship between positive affectivity and negative affectivity

Extant exploratory factor analyses (Huang, Yang & Ji, 2003; Zhang, Diao & Schick, 2004) and confirmatory factor analyses (Agho, Price & Mueller, 1992; Crawford & Henry, 2004; Wang, Li, Liu & Du, 2007) also support the two factor structure of PA and NA. In addition, a meta-analysis by Thoresen et al. (2003) reported a correlation of $-.36$ between PA and NA across 76 studies with a sample of 24,361 cases, suggesting that although PA and NA are not entirely distinct they are not redundant with each other. Second, another meta-analysis (Ng & Sorensen, 2009) demonstrated that the variables linked to PA and the variables linked to NA are

different, also suggesting they are two separate constructs.

Definition of the Big Five Personality Traits

The Big Five personality traits represent five dimensions of human personality. These five factors are not based on a unifying theory, but are found by studying a taxonomy of the language used to describe people's personality. There is some consensus on the five factors used to describe human personality with people of different culture and different languages (McCrae & John, 1992; Schmitt et al., 2007; Thompson, 2008). The five factors are extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. These five traits are not completely independent, but are inter-correlated.

Extraversion consists of sociability, dominance, ambition, positive emotionality, and excitement-seeking (Barrick, Mount & Judge, 2001). Extraversion is associated with characteristics such as being sociable, talkative, assertive, active, energetic, and enthusiastic (Pervin & John, 1999).

Agreeableness consists of cooperation, trustfulness, compliance and affability (Barrick et al., 2001). Agreeableness is associated with such characteristics as being good-natured, courteous, soft-hearted, helpful, generous, caring, forgiving, tolerant, trusting, and cooperative (Pervin & John, 1999).

Conscientiousness consists of dependability, achievement striving and planfulness (Barrick et al., 2001). Conscientiousness is associated with characteristics such as being careful, thorough, responsible, organized, efficient, persevering, hard working, and achievement oriented (Pervin & John, 1999).

Neuroticism is the opposite of emotional stability or emotional resilience. Neuroticism consists of anxiety, hostility, depression and personal insecurity (Barrick

et al., 2001). Neuroticism is associated with characteristics such as being moody, anxious, nervous, worried, tense, sad, upset, stressful, and depressed (Pervin & John, 1999).

Openness to experience consists of intelligence, creativity, unconventionality, and broad-mindedness (Barrick et al., 2001). Openness to experience is associated with characteristics such as an appreciation for art, originality, unusual ideas, imagination, curiosity, and a repeated variety of experiences (Pervin & John, 1999).

The Influence of Positive Affectivity on Job Satisfaction

Individuals high in PA are expected to have higher job satisfaction than their low PA counterparts irrespective of their work situations. Individuals high in PA have a general tendency of being positive with their work irrespective of the work situation (Watson, 2000), which should directly influence the affective component of job satisfaction (Bruk-Lee et al., 2009; Ng & Sorensen, 2009).

Meta-analyses (Bruk-Lee et al., 2009; Connolly & Viswesvaran, 2000; Ng & Sorensen, 2009; Thoresen et al., 2003), longitudinal studies (Bruk-Lee et al., 2009; Watson & Slack, 1993) and multivariate analyses (Chiu & Francesco, 2003b; Chiu & Kosinski, 1997; Gu & Peng, 2007; Iverson & Maguire, 2000; Kim, 1999; Kim et al., 1996; Zhang et al., 2003a) have consistently found evidence of a moderate to strong positive relationship between PA and job satisfaction. A meta-analysis by Connolly and Viswesvaran (2000) found a mean corrected correlation of .49 between PA and job satisfaction across 15 studies with a sample size of 3,326. A later meta-analysis by Thoresen et al. (2003) reported a mean corrected correlation of .34 between PA and job satisfaction across 79 studies with a sample size of 23,419 cases. Ng and Sorensen (2009) found a mean corrected correlation of .49 between PA and job satisfaction

across 49 studies with a sample size of 15,389 cases. Bruk-Lee et al. (2009) reported a mean uncorrected correlation of .41 between PA and job satisfaction across 30 cross-sectional studies with a sample size of 6,595 cases. With regard to evidence from longitudinal studies, Bruk-Lee et al. (2009) found a mean uncorrected correlation of .31 between PA and job satisfaction across two longitudinal studies with a sample size of 115 cases. Similarly, in a longitudinal study of university employees Watson and Slack (1993) found that PA was significantly correlated with overall job satisfaction measured about two years later ($r = .33$). Multivariate analysis in the US (Kim et al., 1996), in Korea (Kim, 1999), in Australia (Iverson & Maguire, 2000), in Hong Kong (Chiu & Kosinski, 1997), and in China (Chiu & Francesco, 2003b; Gu & Peng, 2007; Hou & Liu, 2009; Zhang et al., 2003a) also found that PA was positively related to job satisfaction even when perceptions of work situations were controlled. Therefore, the following hypothesis is proposed in relation to the influence of PA on job satisfaction:

H2.1: Positive Affectivity will be positively related to job satisfaction.

The Influence of Negative Affectivity on Job Satisfaction

NA is expected to be negatively related to job satisfaction. First, individuals high in NA have a general tendency of being negative with their work irrespective of the work situation (Watson, 2000), which should directly influence the affective component of job satisfaction (Bruk-Lee et al., 2009; Ng & Sorensen, 2009). Second, according to Bruk-Lee et al. (2009), individuals high in NA are less likely to quit unpleasant work situations, thus leaving disproportional numbers high-NA individuals compared with low-NA individuals in jobs with which they are dissatisfied.

Meta-analyses (Bruk-Lee et al., 2009; Connolly & Viswesvaran, 2000; Ng & Sorensen, 2009; Thoresen et al., 2003), at least one longitudinal study (Bruk-Lee et al., 2009), and multivariate analyses (Chan & Wyatt, 2007; Chiu & Kosinski, 1997; Gu & Peng, 2007; Iverson & Maguire, 2000; Kim, 1999; Zhang et al., 2003a) have consistently found evidence of a negative relationship between NA and job satisfaction. A meta-analysis by Connolly and Viswesvaran (2000) found a mean corrected correlation of -.33 between NA and job satisfaction across 27 studies with a sample size of 6,233 cases. A later meta-analysis by Thoresen et al. (2003) reported a mean corrected correlation of -.33 between NA and job satisfaction across 176 studies with a sample size of 59,733 cases. More recently, Ng and Sorensen (2009) found a mean corrected correlation of -.35 between NA and job satisfaction across 109 studies with a sample size of 39,105 cases. With regard to evidence from longitudinal studies, Bruk-Lee et al. (2009) found a mean uncorrected correlation of -.18 between NA and job satisfaction across six longitudinal studies with a sample size of 905 cases. Multivariate analyses in Australia (Iverson & Maguire, 2000), in Korea (Kim, 1999), and in China (Chan & Wyatt, 2007; Chiu & Kosinski, 1997; Gu & Peng, 2007; Hou & Liu, 2009; Zhang et al., 2003a) also found that NA was negatively related to job satisfaction even when perceptions of work situations were controlled. Therefore, the following hypothesis is proposed in relation to the influence of NA on job satisfaction:

H2.2: Negative affectivity will be negatively related to job satisfaction.

The Influence of Extraversion on Job Satisfaction

Individuals high in extraversion are more likely to have higher job satisfaction for two reasons. First, as individuals high in extraversion are more sensitive to

pleasurable stimuli (Larsen & Ketelaar, 1989), they are predisposed to experience positive affect (Chang, 1997; Rusting & Larsen, 1997; Uziel, 2006; 1997), which will lead to higher job satisfaction. Second, according to Judge et al. (2002), extraverts engage in more social activities, and they would be expected to perceive these interpersonal interactions as rewarding. When these activities happen in the work place, extraverts will find their jobs more satisfactory.

Meta-analyses (Bruk-Lee et al., 2009; Judge et al., 2002; Thoresen et al., 2003), longitudinal studies (Berg & Feij, 2003; Bruk-Lee et al., 2009; Judge et al., 2008) and at least one multivariate analysis (Judge et al., 2002) have also found evidence of a positive relationship between extraversion and job satisfaction. Judge et al. (2002) found a mean corrected correlation of .25 between extraversion and job satisfaction across 75 studies with a sample size of 20,184 cases. Thoresen et al. (2003) found a mean corrected correlation of .22 between extraversion and job satisfaction across 37 studies with a sample size of 12,023 cases. In a more recent meta-analysis, Bruk-Lee et al. (2009) reported a mean uncorrected correlation of .12 between extraversion and job satisfaction across 25 cross-sectional studies with a sample size of 9,003 cases. In addition, meta-analysis by Bruk-Lee et al. (2009) found a correlation of .13 between extraversion and job satisfaction across two longitudinal studies with a sample size of 326 cases. Similarly, a longitudinal study in the Netherlands (Berg & Feij, 2003) found a correlation of .21 between extraversion and job satisfaction measured one and half years later. A recent longitudinal study in the United States (Judge et al., 2008) also found a correlation of .24 between extraversion and self-reported job satisfaction measured six months later. Multivariate analysis by Judge et al. (2002) also found that even when the other four factors of the Big Five factors were controlled, extraversion was still positively related ($\beta=.21$) to job satisfaction.

Therefore, the following hypothesis is proposed in relation to the influence of extraversion on job satisfaction:

H2.3: Extraversion will be positively related to job satisfaction.

The Influence of Neuroticism on Job Satisfaction

Individuals high in neuroticism are more sensitive to unpleasurable stimuli (Larsen & Ketelaar, 1989), they are predisposed to experience negative affect (Chang, 1997; Rusting & Larsen, 1997; Uziel, 2006; 1997) and may let their negative mood affect their level of job satisfaction, and thus they may be less happy with their jobs than their low-neuroticism counterparts (Bruk-Lee et al., 2009).

Meta-analyses (Bruk-Lee et al., 2009; Judge et al., 2002; Thoresen et al., 2003), longitudinal studies (Berg & Feij, 2003; Bruk-Lee et al., 2009; Judge et al., 2008) and another multivariate analysis (Judge et al., 2002) have consistently found evidence of a negative relationship between neuroticism and job satisfaction. For instance, a meta-analysis by Judge et al. (2002) found a mean corrected correlation of $-.29$ between neuroticism and job satisfaction across 92 studies with a sample of 24,527 cases. Another meta-analysis by Thoresen et al. (2003) found a mean corrected correlation of $-.28$ between neuroticism and job satisfaction across 42 studies with a sample size of 13,500 cases. A recent meta-analysis by Bruk-Lee et al. (2009) found an mean uncorrected correlation of $-.25$ between neuroticism and job satisfaction across 24 cross-sectional studies with a sample size of 9,183 cases. With regard to evidence from longitudinal studies, the same meta-analysis by Bruk-Lee et al. (2009) also found a mean uncorrected correlation of $-.17$ between neuroticism and job satisfaction across six longitudinal studies with a sample size of 1,799 cases. Similarly,

a longitudinal study in the Netherlands (Berg & Feij, 2003) found a negative correlation of -.18 between neuroticism and job satisfaction measured one and half years later. Another longitudinal study in the United States (Judge et al., 2008) found a correlation of -.34 between neuroticism and job satisfaction measured six months later. Multivariate analysis by Judge et al. (2002) also found that even when the other four factors of the Big Five were controlled, neuroticism was still negatively related ($\beta = -.20$) to job satisfaction. Therefore, the following hypothesis is proposed in relation to the influence of neuroticism on job satisfaction:

H2.4: Neuroticism will be negatively related to job satisfaction.

The Influence of Conscientiousness on Job Satisfaction

According to Bruk-Lee et al. (2009), as individuals high in conscientiousness put a great deal of effort and time into their job, they are likely to evaluate their job as satisfying to rationalize their conscientious work behavior.

Meta-analyses (Bruk-Lee et al., 2009; Judge et al., 2002), longitudinal studies (Bruk-Lee et al., 2009; Judge et al., 2008) and multivariate analyses (Cohrs et al., 2006; Judge et al., 2002) have also reported a positive relationship between conscientiousness and job satisfaction. A meta-analysis by Judge et al. (2002) found a mean corrected correlation of .26 between conscientiousness and job satisfaction across 79 studies with a sample size of 21,719 cases. Similarly, another meta-analysis by Bruk-Lee et al. (2009) reported a mean uncorrected correlation of .16 between conscientiousness and job satisfaction across 16 cross-sectional studies with a sample size of 7,630 cases. In addition, in the same meta-analysis Bruk-Lee et al. (2009) found a mean uncorrected correlation of .15 between conscientiousness and job

satisfaction across two longitudinal studies with a sample size of 702 cases. A recent longitudinal study on university employees in the US (Judge et al., 2008) found a correlation of .22 between conscientiousness and self-reported job satisfaction six months later. Multivariate analysis by Judge et al. (2002) also found that when the other four factors of the Big Five were controlled, conscientiousness was still related to job satisfaction. Similarly, multivariate analysis of professionals in Germany (Cohrs et al., 2006) also found that conscientiousness was positively related to job satisfaction. Therefore, the following hypothesis is proposed in relation to the influence of conscientiousness on job satisfaction:

H2.5: Conscientiousness will be positively related to job satisfaction.

The Influence of Agreeableness on Job Satisfaction

According to McCrae and Costa (1991), individuals high in agreeableness should be happier because they have greater motivation to achieve interpersonal intimacy, which may lead to higher well-being. For the same reason, the same process may operate with respect to job satisfaction. Meta-analyses (Bruk-Lee et al., 2009; Judge et al., 2002) have consistently found a significant positive correlation between agreeableness and job satisfaction, although the magnitude of the association is relatively weak. A meta-analysis by Judge et al. (2002) found a mean corrected correlation of .17 between agreeableness and job satisfaction across 38 studies with a sample size of 11,856 cases. Similarly, another meta-analysis by Bruk-Lee et al. (2009) reported a mean uncorrected correlation of .13 between agreeableness and job satisfaction across 10 cross-sectional studies with a sample size of 4,800 cases. In addition, Bruk-Lee et al. (2009) reported a correlation of .11 between agreeableness

and job satisfaction in a longitudinal study with a sample size of 603 cases. Therefore, the following hypothesis is proposed on the relationship between agreeableness and job satisfaction:

H2.6: Agreeableness will be positively related to job satisfaction.

The Relationship between Openness to Experience and Job Satisfaction

Theoretically, the relationship between openness to experience and job satisfaction is not clear. According to Judge et al. (2002), none of the components of openness (scientific and artistic creativity, divergent thinking, low religiosity) is directly related to job satisfaction. However, according to Bruk-Lee et al. (2009), openness to experience might play a role in person–job fit, in that individuals with high openness to experience would be happier with jobs allowing new experiences than their low-openness counterparts in similar jobs.

Existing empirical studies have also reported mixed results on the relationship between openness to experience and job satisfaction. Meta-analyses have found a weak relationship between openness to experience and job satisfaction. For instance, a meta-analysis by Judge et al. (2002) found a mean corrected correlation of .02 between openness to experience and job satisfaction across 50 studies with a sample size of 15,196 cases. Similarly, a recent meta-analysis by Bruk-Lee et al. (2009) found a weak mean uncorrected correlation of -.02 between openness to experience and job satisfaction across eight cross-sectional studies with a sample of 4,311 cases. However, a longitudinal study by Judge et al. (2008) using a sample of US university employees found a moderate correlation of -.23 between openness to experience and significant other's report of job satisfaction measured concurrently and a correlation of -.20

between openness to experience and self-reported job satisfaction measured half a year later. Multivariate analysis of three samples of professionals in Germany (Cohrs et al., 2006) also found mixed results. Cohrs et al. (2006) found that in one of the three samples, openness to experience was positively related to job satisfaction, while for the other two samples, openness to experience was not related to job satisfaction. As the relationship between openness to experience and job satisfaction is not clear, no hypothesis will be proposed in relation to openness to experience. However, as openness to experience is correlated with the other four factors in the Big Five, it will be controlled in the present research.

Table 2.1 summarizes the meta-analyses on the relationship between job satisfaction and its dispositional and situational antecedents.

Table 2.1 Summary of previous meta-analyses on the correlation between job satisfaction and its antecedents

Variables	<i>r</i>	Sources
Work situations		
Autonomy	.46	(Loher et al., 1985)
	.48	(Fried & Ferris, 1987)
	.37	(Gaertner & Robinson, 1999)
	.48	(Humphrey et al., 2007)
Routinization		
Skill variety	.41	(Loher et al., 1985)
Skill variety	.45	(Fried & Ferris, 1987)
Routinization	-.44	(Gaertner & Robinson, 1999)
Skill variety	.42	(Humphrey et al., 2007)
Task variety	.46	(Humphrey et al., 2007)
Role ambiguity		
	-.46	(Jackson & Schuler, 1985)
	-.31	(Gaertner & Robinson, 1999)
Role conflict		
	-.48	(Jackson & Schuler, 1985)
	-.21	(Gaertner & Robinson, 1999)
Work overload		
	-.17	(Gaertner & Robinson, 1999)

(To be continued)

Table 2.1 Summary of previous meta-analyses on the correlation between job satisfaction and its antecedents (continued)

Variables	<i>r</i>	Sources
Supervisor support	.36	(Gaertner & Robinson, 1999)
	.52	(Ng & Sorensen, 2008)
Co-worker support	.22	(Gaertner & Robinson, 1999)
	.37	(Ng & Sorensen, 2008)
Promotional chances	.33	(Gaertner & Robinson, 1999)
Pay	.11	(Gaertner & Robinson, 1999)
Distributive justice	.37	(Gaertner & Robinson, 1999)
	.56	(Colquitt et al., 2001)
	.53	(Li & Cropanzano, 2009)
Disposition		
Positive affectivity	.49	(Connolly & Viswesvaran, 2000)
	.34	(Thoresen et al., 2003)
	.49	(Ng & Sorensen, 2009)
	.41	(Bruk-Lee et al., 2009)
Negative affectivity	-.33	(Connolly & Viswesvaran, 2000)
	-.33	(Thoresen et al., 2003)
	-.35	(Ng & Sorensen, 2009)
Extraversion	.25	(Judge et al., 2002)
	.22	(Thoresen et al., 2003)
	.12	(Bruk-Lee et al., 2009)
Neuroticism	-.29	(Judge et al., 2002)
	-.28	(Thoresen et al., 2003)
	-.25	(Bruk-Lee et al., 2009)
Conscientiousness	.26	(Judge et al., 2002)
	.16	(Bruk-Lee et al., 2009)
Agreeableness	.17	(Judge et al., 2002)
	.13	(Bruk-Lee et al., 2009)
Openness to experience	.02	(Judge et al., 2002)
	-.02	(Bruk-Lee et al., 2009)

The Mediating role of Work Situations on the Relationship between Dispositions and Job Satisfaction

Mediation presumes a causal chain. In general, a given variable may be said to function as a mediator to the extent that it accounts for the relation between the predictor and the criterion (Kenny, 2005). To put it another way, if variable X causes M, and M in turn causes Y, the variable M is said to mediate the X to Y relationship (Kenny, 2005). Mediators explains how and why a certain variable has an effect on another variable (Baron & Kenny, 1986).

The relationship between dispositions and job satisfaction could be fully or partially mediated by perceived work situations. Theories such as affect event theory (Weiss & Cropanzano, 1996), the information processing model (Motowidlo, 1996) and the mechanisms of the dispositional influence model (Staw & Cohen-Charash, 2005) suggest that the relationship between dispositions and job satisfaction could be mediated by perceived work situations. Specially, dispositions could influence an individual's perception of work situations and individual's selection of job, manipulation of work situations, staying or leaving an unpleasant work situation, and perception of the actual work situation (Bruk-Lee et al., 2009; Judge & Church, 2000; Staw & Cohen-Charash, 2005; Warr, 1999). Empirical studies (Cohrs et al., 2006; Judge et al., 2000) have found mediation of some situational variables on the relationship between dispositions and job satisfaction. However, a literature search has not found a comprehensive study which incorporates many situational and dispositional variables and investigates the mediating role of perception of work situations on the relationship between dispositions and job satisfaction.

In the current study, a comprehensive model including ten situational variables

and seven dispositional variables will be used to investigate the mediating role of work situations on the relationship between dispositions and job satisfaction. Specifically, hypotheses on the mediating role of work situations on the relationship between six dispositional variables (PA, NA, extraversion, neuroticism, conscientiousness, and agreeableness) and job satisfaction are proposed. As the hypothesized relationship between work situations and job satisfaction has been proposed in the previous sections, in this section the focus will be on the hypothesized relationship between dispositions and work situations.

The Mediating Role of Work Situations on the Relationship between PA and Job Satisfaction

PA and Job Characteristics: Autonomy and Routinization

Individuals high in PA are more likely to report favorable perceived job characteristics. First, individuals high in PA are more likely to get more complex jobs with more autonomy and less routinization because of organizational employee selection and the individual's self-selection (Staw & Cohen-Charash, 2005). Second, individuals high in PA could perceive their job characteristics more favorably because of their positively selected memory, retrieval, and interpretation of information (Bruk-Lee et al., 2009; Staw & Cohen-Charash, 2005). Third, individuals with high PA could report their job characteristics more favorably because of their positive nature (Staw & Cohen-Charash, 2005). In support of this, a meta-analysis by Ng and Sorensen (2009) found a mean corrected correlation of .31 between PA and autonomy across 14 studies with a sample size of 7,564 cases. In the same study, they found a mean corrected correlation of .33 between PA and skill variety across eight studies with a sample size of 3,709 cases. Therefore, the following hypotheses are proposed

in relation to the mediating role of autonomy and routinization on the relationship between PA and job satisfaction:

H3.1: Autonomy will mediate the relationship between PA and job satisfaction;

H3.2: Routinization will mediate the relationship between PA and job satisfaction.

PA and Role Variables: Role Ambiguity, Role Conflict and Work Overload

Role ambiguity is expected to be negatively related to PA, but the relationships between PA and role conflict, and PA and work overload are not clear. Individuals high in PA are more attractive to others (Staw, Sutton & Pelled, 1994), and thus are likely to have better communications with others in their workplace, and thus experience less role ambiguity. One meta-analysis (Ng & Sorensen, 2009) found a negative relationship between PA and role ambiguity, but a weak relationship between PA and role conflict and work overload. Specifically, a meta-analysis by Ng and Sorensen (2009) found a mean corrected correlation of $-.20$ between PA and role ambiguity across eight studies with a sample size of 2,697 cases, while the same study (2009) found a small mean corrected correlation of $-.01$ between PA and role conflict across five studies with a sample size of 2,091 cases, and $-.03$ between PA and work overload across 10 studies with a sample size of 5,183 cases. Therefore, the following hypothesis is proposed in relation to the mediating role of role ambiguity on the relationship between PA and job satisfaction, but no hypothesis is given in relation to the mediating role of role conflict and work overload:

H3.3: Role ambiguity will mediate the relationship between PA and job satisfaction.

PA and Social Support: Supervisor Support and Co-worker Support

Supervisor support and co-worker support are expected to be positively related to PA for two reasons. First, PA could be a support-generating mechanism at work (Staw et al., 1994; Vinokur, Schul & Capien, 1987). Individuals high in PA have the tendency to be in a good mood. Individuals in a good mood are generally attractive to others, tend to be rated by others favorably, and are likely to have more influence on others. As a result they are likely to get more support from their supervisors and co-workers. Second, high-PA individuals are more likely to see work events in a positive way and thus to perceive their work environment more positively (Barsky & Kaplan, 2007). In support of this, meta-analysis (Ng & Sorensen, 2009) and a longitudinal study (Staw et al., 1994) have found evidence of a positive relationship between PA and both supervisor support and co-worker support. For instance, the meta-analysis by Ng and Sorensen (2009) found a mean corrected correlation of .26 between PA and supervisor support across eight studies with a sample size of 4,827 cases; and a mean corrected correlation of .31 between PA and co-worker support across nine studies with a sample size of 5,357 cases. A longitudinal study by Staw et al. (1994) also found in a US sample a correlation of .32 between positive emotion and supervisor support measured one and half years later, and a correlation of .14 between positive emotions and co-worker support measured one and half years later. Therefore, the following hypotheses are proposed in relation to the mediating role of supervisor and co-worker support on the relationship between PA and job satisfaction:

H3.4: Supervisor support will mediate the relationship between PA and job satisfaction;

H3.5: Co-worker support will mediate the relationship between PA and job

satisfaction.

PA and Extrinsic Rewards: Promotional Chances and Pay Level

According to Turner (1960), there are two theories on upward mobility in society: contest mobility and sponsored mobility. The contest-mobility perspective suggests that what makes the greatest difference in getting ahead in an organization is performing on the job and adding value to the company. In contrast, the sponsored-mobility perspective suggests that established elites pay special attention to those members who are deemed to have high potential and then provide sponsoring activities to them to help them win the competition. Both theories suggest that high PA individuals are likely to have more promotional chances. First, as high-PA individuals are better task performers (Kaplan et al., 2009; Ng & Sorensen, 2009), the better performance of high PA individuals is likely to provide them with more chances for success in the competition for promotion. Second, as individuals high in PA are more likeable (Staw & Cohen-Charash, 2005), and are evaluated more favorably by their supervisors (1994), they are more likely to get support from the established elite to win the competition for promotion. This positive relationship between PA and promotional chances is supported by findings in meta-analysis. For example, a meta-analysis by Ng and Sorensen (2009) found a mean corrected correlation of .23 between PA and promotional chances across six studies with a sample size of 2,914 cases.

In terms of the relationship between PA and pay level, the better performance of high PA individuals (Kaplan et al., 2009; Ng & Sorensen, 2009) is likely to provide them with more monetary rewards. Existing studies also provide support for a positive relationship between PA and pay level, although the magnitude of the correlation is

relatively weak. For instance, Chiu and Francesco (2003a) found a positive correlation of .13 between PA and pay level using a sample of 279 Chinese managers. Therefore, the following hypotheses are proposed in relation to the mediating role of promotional chances and pay level on the relationship between PA and job satisfaction:

H3.6: Promotional chances will mediate the relationship between PA and job satisfaction;

H3.7: Pay level will mediate the relationship between PA and job satisfaction

PA and Distributive Justice

Individuals high in PA are expected to perceive more distributive justice for two reasons. First, individuals high in PA are more likely to get favorable treatment in their work place, such as better supervisory ratings on performance (Kaplan et al., 2009) and more promotional chances (Ng & Sorensen, 2009). Second, they are more likely to see their work events in a positive and non-threatening way and to react in an especially favorable manner to treatment that they regard as just irrespective of their objective work situations (Barsky & Kaplan, 2007).

The positive relationship between PA and distributive justice is supported by meta-analyses (Barsky & Kaplan, 2007; Ng & Sorensen, 2009), although the magnitude of the correlation is relatively weak. For instance, Ng and Sorensen (2009) found a mean corrected correlation of .13 between PA and distributive justice across 11 studies with a sample size of 5,088 cases. Similarly, Barsky and Kaplan (2007) found a mean corrected correlation of .12 between PA and distributive justice across 10 studies with a sample of 3,099 cases. Therefore, the following hypothesis is proposed in relation to the mediating role of distributive justice on the relationship

between PA and job satisfaction:

H3.8: Distributive justice will mediate the relationship between PA and job satisfaction.

The Mediating Role of Work Situations on the Relationship between NA and Job Satisfaction

NA and Job Characteristics: Autonomy and Routinization

Individuals high in NA are more likely to perceive their jobs to have lower autonomy and higher routinization for several reasons. First, according to Spector, Jex & Chen (1995) personality in general might influence an organization's selection and placement of people and people's choice of jobs. When high-NA individuals apply and are interviewed for a higher scope, complex job, they are likely to appear nervous and do less well than low NA or anxious people. Thus, they are less likely to select or be selected to jobs with objectively more complexity, with higher autonomy and lower routinization. Secondly, high-NA individuals could be hesitant to seek a challenging job, and therefore would be likely to stay in lower level or less complex jobs (Bruk-Lee et al., 2009). Third, high-NA individuals could perceive job characteristics more negatively irrespective of the actual situation because of their general tendency to view things negatively (Bruk-Lee et al., 2009).

Meta-analysis (Ng & Sorensen, 2009) has provided support for a negative relationship between NA and autonomy, and a positive relationship between NA and routinization. Ng and Sorensen (2009) found a mean corrected correlation of -.19 between NA and autonomy across 16 studies with a sample size of 18,167 cases. The same study found a mean corrected correlation of -.22 between NA and skill variety

across 21 studies with a sample size of 8,889 cases. Therefore, the following hypotheses are proposed in relation to the mediating role of job characteristics on the relationship between NA and job satisfaction:

H4.1: Autonomy will mediate the relationship between NA and job satisfaction:

H4.2: Routinization will mediate the relationship between NA and job satisfaction.

NA and Role Stressors: Role Ambiguity, Role Conflict and Work Overload

NA is expected to be related to role stressors (role ambiguity, role conflict and work overload) for two reasons. First, according to Bruk-Lee et al. (2009) individuals high in NA could select or create situations which are more stressful. Second, as NA reflects an individual's tendency to see the world in a negative way, high-NA individuals could tend to perceive their jobs as having high levels of stressors, independent of objective job features (Spector, Zapf, Chen & Frese, 2000b; Watson et al., 1999).

Meta-analysis (Ng & Sorensen, 2009) and longitudinal studies (Spector & O'Connell, 1994; Spector, Chen & O'Connell, 2000a) have provided support for a relationship between NA and role stressors. For instance, a meta-analysis by Ng and Sorensen (2009) found a mean corrected correlation of .25 between NA and role ambiguity across 33 studies with a sample size of 9,321 cases. In a longitudinal study, Spector and O'Connell (1994) found a correlation of .20 between NA and role ambiguity measured about one year later. Similarly, in another longitudinal study, Spector et al. (2000a) found a correlation of .19 between NA and role ambiguity measured about one year later.

In regards to role conflict, a meta-analysis by Ng and Sorensen (2009) found a

mean corrected correlation of .28 between NA and role conflict across 26 studies with a sample size of 6,878 cases. In a longitudinal study, Spector and O'Connell (1994) found a correlation of .24 between NA and role conflict measured about one year later. Consistently, in another longitudinal study, Spector et al. (2000a) found a correlation of .24 between NA and role conflict measured about one year later. These longitudinal studies provide stronger support for the role of NA in determining role stressors, as they can rule out both the possibility of the influence of job stressors on affectivity and the possibility of inflation of the perception of job stress because of negative affectivity.

In terms of work overload, a meta-analysis by Ng and Sorensen (2009) found a mean corrected correlation of .20 between NA and work overload across 51 studies with a sample size of 16,958 cases. Therefore, the following hypotheses are proposed on the mediating role of role ambiguity, role conflict, and work overload on the relationship between NA and job satisfaction:

H4.3: Role ambiguity will mediate the relationship between NA and job satisfaction:

H4.4: Role conflict will mediate the relationship between NA and job satisfaction:

H4.5: Work overload will mediate the relationship between NA and job satisfaction.

NA and Social Support: Supervisor Support and Co-worker Support

Individuals high in NA are expected to get less social support for two reasons. First, they are more likely to be in objectively less supportive environments, as they may be less attractive to others (Watson et al., 1988), and tend to have more interpersonal conflict with others (Agho et al., 1992; 1994). Second, because their tendency is to see the world in a negative way, they could perceive less support from

their supervisors and co-workers independent of the actual support provided or work situation (Bruk-Lee et al., 2009).

Meta-analysis has provided evidence for a negative relationship between NA and social support. For instance, a meta-analysis by Ng and Sorensen (2009) found a mean corrected correlation of $-.18$ between NA and supervisor support across 17 studies with a sample size of 5,735 cases. The same study found a mean corrected correlation of $-.19$ between NA and co-worker support. Therefore, the following hypotheses are proposed in relation to the mediating role of supervisor support and co-worker support on the relationship between NA and job satisfaction:

H4.6: Supervisor support will mediate the relationship between NA and job satisfaction;

H4.7: Co-worker support will mediate the relationship between NA and job satisfaction.

NA and Extrinsic Rewards: Promotional Chances and Pay Level

Both contest mobility theory and sponsored mobility theory on upward mobility in society suggest that individuals high in NA are more likely to have fewer promotional chances. First, as individuals high in NA tend to achieve poorer performance (Kaplan et al., 2009; Ng & Sorensen, 2009), their poorer performance could lead to fewer promotional chances. Second, high NA individuals are likely to be less attractive to established elites, thus are more likely to get less support in their competition for promotion (Staw & Cohen-Charash, 2005; Staw et al., 1994). Third, their negative emotion can make them unsuited to higher level jobs that are more complex and stressful (Moutafi, Furnham & Crump, 2007). In support of these

predictions, a meta-analysis by Ng and Sorensen (2009) found a mean corrected correlation of $-.12$ between NA and promotional chances across eight studies with a sample size of 4,044 cases.

In terms of pay level, the poor work performance of individuals high in NA (Kaplan et al., 2009) is more likely to lead them to get less pay. Therefore, the following hypotheses are proposed on the mediating role of promotional chances and pay level on the relationship between NA and job satisfaction:

H4.8: Promotional chances will mediate the relationship between NA and job satisfaction;

H4.9: Pay level will mediate the relationship between NA and job satisfaction.

NA and Distributive Justice

Individuals high in NA are expected to perceive less distributive justice. First, individuals high in NA are more likely to get unfavorable treatment in their work place, such as poorer supervisory ratings on performance (Kaplan et al., 2009), and less promotional chances (Ng & Sorensen, 2009), they may view this as unfair. Second, high-NA individuals are more likely to see their work events in a negative way irrespective of their objective work situations (Barsky & Kaplan, 2007). This theoretical relationship is supported by meta-analyses (Barsky & Kaplan, 2007; Ng & Sorensen, 2009). For example, Barsky and Kaplan (2007) found a mean corrected correlation of $-.16$ between NA and distributive justice across 25 studies with a sample of 7,702 cases. Similarly, another meta-analysis by Ng and Sorensen (2009) found a mean corrected correlation of $-.18$ between NA and distributive justice across 19 studies with a sample size of 7,335 cases. Therefore, the following hypothesis is

proposed in relation to the mediating role of distributive justice on the relationship between NA and job satisfaction:

H4.10: Distributive justice will mediate the relationship between NA and job satisfaction.

The Mediating Role of Work Situations on the Relationship between Extraversion and Job Satisfaction

Extraversion and Job Characteristics: Autonomy and Routinization

Extraversion is expected to be positively related with autonomy and negatively related to routinization. First, individuals high in extraversion are more likely to have high PA (Watson et al., 1999), and experience positive emotions, as positive emotionality is an important component of extraversion (Barrick et al., 2001; 1997). Similar to PA, the high-extraversion individuals are expected to perceive their jobs as having more autonomy and less routinization. Meta-analysis (Zimmerman, 2008) has found evidence for a positive relationship between extraversion and job complexity. For instance, Zimmerman (2008) found a mean corrected correlation of .12 between extraversion and job complexity across six studies with a sample size of 4,886 cases. Therefore, the following hypotheses are proposed in relation to the mediating role of autonomy and routinization on the relationship between extraversion and job satisfaction:

H5.1: Autonomy will mediate the relationship between extraversion and job satisfaction;

H5.2: Routinization will mediate the relationship between extraversion and job

satisfaction.

Extraversion and Role Stressors: Role Ambiguity, Role Conflict and Work Overload

Individuals high in extraversion are expected to perceive less role ambiguity, but the relationship between extraversion and role conflict and extraversion and work overload are not clear. First, because extraversion consists of a component of sociability (Barrick et al., 2001) individuals high in extraversion are more likely to have better interpersonal skills and better communications with others in their workplace, and as a result should experience less role ambiguity. In support of this, empirical studies have also found evidence of a negative relationship between extraversion and role ambiguity. For instance, a study on managers in Australia (Grant & Langan-Fox, 2007) found a negative correlation of $-.19$ between extraversion and role ambiguity. However, studies (Grant & Langan-Fox, 2007; Nasurdin, Ramayah & Kumaresan, 2004) have found mixed results on the relationship between extraversion and role conflict. For instance, the study by Grant and Langan-Fox (2007) found a non-significant relationship between extraversion and role conflict, while a study on Malaysian managers (Nasurdin et al., 2004) found a negative correlation of $-.14$ between extraversion and role conflict. A literature search found no report on the relationship between extraversion and work overload. Therefore, the following hypothesis is proposed in relation to the mediation of role ambiguity on the relationship between extraversion and job satisfaction, but no hypothesis is given in relation to the mediation of role conflict or work overload on the relationship between extraversion and job satisfaction:

H5.3: Role ambiguity will mediate the relationship between extraversion and job

satisfaction.

Extraversion and Social Support: Supervisor Support and Co-worker Support

Extraversion is expected to be positively related to supervisor support and co-worker support. First, as extraversion consists of a component of sociability (Barrick et al., 2001), individuals high in extraversion are more likely to have larger social networks and better interpersonal skills, thus getting more support from their supervisors and co-workers. Second, because individuals high in extraversion are more likely to experience positive emotions (Barrick et al., 2001), they are more likely to perceive more supervisor support and co-worker support independent of the actual support given. In support of this theory, meta-analysis (Connor-Smith & Flachsbart, 2007) has found evidence of a positive relationship between extraversion and social support. Specifically, Connor-Smith and Flachsbart (2007) found a mean corrected correlation of .22 between extraversion and instrumental social support across 12 studies with a sample of 2,237 cases; a mean corrected correlation of .25 between extraversion and emotional social support across 11 studies with a sample of 1,936 cases; and a mean corrected correlation of .24 between extraversion and a mixture of instrumental and emotional support across 35 studies with a sample of 10,533 cases. Therefore, the following hypotheses are proposed in relation to the mediating role of supervisor support and co-worker support on the relationship between extraversion and job satisfaction:

H5.4: Supervisor support will mediate the relationship between extraversion and job satisfaction;

H5.5: Co-worker support will mediate the relationship between extraversion and job

satisfaction.

Extraversion and Extrinsic Rewards: Promotional Chances and Pay Level

The relationship between extraversion and promotional chances is not clear. Neither contest mobility theory nor sponsored mobility theory on upward mobility in society (Turner, 1960) suggests that extraversion will be linked with promotional chances. Meta-analysis has also found a non-significant relationship between extraversion and objective work performance and supervisor rated performance (Barrick et al., 2001).

Surveys with large samples (Moutafi et al., 2007), meta-analyses (Barrick & Mount, 1991; Ng, Eby, Sorensen & Feldman, 2005; Zhao & Seibert, 2006) and longitudinal studies (Judge, Higgins, Thoresen & Barrick, 1999; Sutin, JR, Miech & Eaton, 2009) have found mixed results on the relationship between extraversion and promotional chances or job status. Both positive relationships (Moutafi et al., 2007; Ng et al., 2005) and non-significant relationships (Barrick & Mount, 1991; Judge et al., 1999; Sutin et al., 2009; Zhao & Seibert, 2006) have been reported. For instance, Ng et al. (2005) found a mean corrected correlation of .18 between extraversion and number of promotions across four studies with a sample size of 4,428 cases. However, Barrick and Mount (1991) found a non-significant relationship between extraversion and status change across 15 studies with a sample size of 4,374 cases. In a longitudinal study, Judge et al. (1999) found no support for a relationship between occupational status and extraversion measured at childhood or adulthood.

In terms of pay level, its relationship with extraversion is also not clear. Existing meta-analyses (Barrick & Mount, 1991; Ng et al., 2005) and multivariate analyses (Gelissen & Graaf, 2006; Judge et al., 1999; Nyhus & Pons, 2005) have found mixed

results between extraversion and pay level. Positive relationships (Gelissen & Graaf, 2006; Judge et al., 1999), negative relationships (Nyhus & Pons, 2005), and no relationship (Barrick & Mount, 1991) have been reported. For instance, a meta-analysis by Ng et al. (2005) found a mean corrected correlation of .10 between extraversion and salary across seven studies with a sample size of 6,610 cases, while Barrick and Mount (1991) found a non-significant relationship between extraversion and salary across four studies with a sample size of 666. Therefore, no hypothesis is proposed on the mediation of promotional chances and pay level on the relationship between extraversion and job satisfaction.

Extraversion and Distributive Justice

The relationship between extraversion and distributive justice is also not clear. Existing meta-analyses have found neither a relationship between extraversion and performance (Barrick et al., 2001) nor a relationship between extraversion and favourable work outcomes such as supervisor rated working performance, salary, and status changes (Barrick & Mount, 1991; Barrick et al., 2001).

Meta-analysis on the relationship between extraversion and distributive justice also reported a weak relationship between these two variables. Specifically, a meta-analysis by Barsky and Kaplan (2007) found a weak mean corrected correlation of -.06 between extraversion and distributive justice across three studies with a sample of 520 cases. Therefore, no hypothesis is proposed in relation to the mediating role of distributive justice on the relationship between extraversion and job satisfaction.

The Mediating Role of Work Situations on the Relationship between Neuroticism and Job Satisfaction

Neuroticism and Job Characteristics: Autonomy and Routinization

The relationship between neuroticism and job characteristics is also not clear. Individuals high in neuroticism are more likely to experience negative affect (Judge et al., 2002; Nemanick & Munz, 1997; Watson & Clark, 1984), thus they could perceive their job characteristics unfavorably because of their negative affect. However, as neuroticism is broader than NA, the relationship between neuroticism and job characteristics should be weaker than the relationship between NA and job characteristics.

Extant studies have found mixed results on the relationship between neuroticism and job characteristics. Specifically, a meta-analysis by Zimmerman (2008) found a weak mean corrected correlation of $-.06$ between neuroticism and job complexity across nine studies with a sample size of 5,520 cases. A multivariate analysis by Cohrs et al. (2006) found a non-significant relationship between neuroticism and the perception of autonomy for two of three samples. In a longitudinal study of employees from companies in the Netherlands, Berg and Feij (2003) found a non-significant relationship between neuroticism and skill variety and autonomy measured one and a half years later. Nevertheless, there is also empirical evidence of a negative correlation between neuroticism and job characteristics (Jones, Smith & Johnston, 2005; Tai & Liu, 2007). Therefore, no hypotheses are proposed in relation to the mediating role of autonomy and routinization on the relationship between neuroticism and job satisfaction.

Neuroticism and Role Stressors: Role Ambiguity, Role Conflict and Work Overload

As individuals high in neuroticism tend to experience negative affect (Judge et al., 2002; Nemanick & Munz, 1997; Watson & Clark, 1984), it is expected that this

negative emotion will lead to high perception of role stressors (Bruk-Lee et al., 2009; Spector et al., 2000b; Watson et al., 1999). Empirical studies have also consistently found evidence of a relationship between neuroticism and role ambiguity, role conflict, and work overload.

In terms of role ambiguity, studies in Scotland (Jones et al., 2005), in Singapore (Ferris, Brown & Heller, 2009), and in Australia (Miller, Griffin & Hart, 1999) have found a positive correlation between neuroticism and role ambiguity. For instance, Jones et al. (2005) found a correlation of $-.36$ between neuroticism and role clarity using a student sample in Scotland. Similarly, Miller et al. (1999) demonstrated a correlation of $-.37$ between neuroticism and role clarity using a sample of public sector workers in Australia.

In regards to role conflict, studies in Singapore (Ferris et al., 2009), in Australia (Grant & Langan-Fox, 2007), and in Malaysia (Nasurdin et al., 2004) have consistently found a positive correlation between neuroticism and role conflict. For instance, Grant and Langan-Fox (2007) found a correlation of $.31$ for managers in Australia, and Nasurdin et al. (2004) reported a correlation of $.38$ for managers in Malaysia.

As to work overload, Miller et al. (1999) demonstrated a correlation of $.21$ between neuroticism and work overload using a sample of public sector workers in Australia. Therefore, the following hypotheses are proposed in relation to the mediating role of role ambiguity, role conflict, and work overload on the relationship between neuroticism and job satisfaction:

H6.1: Role ambiguity will mediate the relationship between neuroticism and job satisfaction;

H6.2: Role conflict will mediate the relationship between neuroticism and job satisfaction;

H6.3: Work overload will mediate the relationship between neuroticism and job satisfaction.

Neuroticism and Social Support: Supervisor Support and Co-worker Support

Because individuals high in neuroticism tend to experience negative affect (Judge et al., 2002; Nemanick & Munz, 1997; Watson & Clark, 1984), it is expected that their negative emotion will lead to lower perceptions of social support. Empirical studies (Chay, 1993; Cohrs et al., 2006; Jones et al., 2005) have supported this negative relationship between neuroticism and social support. For instance, Chay (1993) found a negative correlation of $-.22$ between neuroticism and social support for a sample of 117 employees from England. Similarly, Jones et al. (2005) found a correlation of $-.20$ between neuroticism and supervisor support using student samples in Scotland. Multivariate analysis on German samples found that in two of three samples, neuroticism was negatively related to social support (Cohrs et al., 2006). Therefore, the following hypotheses are proposed in relation to the mediating role of supervisor support and co-worker support on the relationship between neuroticism and job satisfaction:

H6.4: Supervisor support will mediate the relationship between neuroticism and job satisfaction;

H6.5: Co-worker support will mediate the relationship between neuroticism and job satisfaction.

Neuroticism and Extrinsic Rewards: Promotional Chances and Pay

Both contest mobility theory and sponsored mobility theory on upward mobility in society (Turner, 1960) suggest that individuals high in neuroticism are more likely to have fewer promotional chances in the same way that those with higher NA have fewer promotional chances. First, individuals high in neuroticism tend to experience higher levels of negative affect (Judge et al., 2002; Nemanick & Munz, 1997; Watson & Clark, 1984), and this negative emotion can make them unsuited to higher level jobs that are more complex and stressful (Moutafi et al., 2007). Second, individuals high in neuroticism tend to achieve poorer performance (Barrick & Mount, 1991; Barrick et al., 2001; Judge & Bono, 2001), and so are unlikely to be successful in their competition for promotion. Third, the negative nature of individuals high in neuroticism can make them less attractive to established elites, and thus they are more likely to get less support in their competition for promotion.

Meta-analysis (Barrick & Mount, 1991), large surveys (Moutafi et al., 2007; Ng et al., 2005) and multivariate analysis (Judge et al., 1999) provide support for the negative relationship between neuroticism and promotional chances, although the magnitude of the correlation is relatively weak. For instance, Ng et al. (2005) found a mean corrected correlation of $-.11$ between neuroticism and the number of promotions across five studies with a sample size of 4,575 cases. In a longitudinal study Judge et al. (1999) found that childhood neuroticism is a negative predictor of extrinsic career success.

In terms of pay, the poorer performance of individuals high in neuroticism (Barrick & Mount, 1991; Barrick et al., 2001; Judge & Bono, 2001) is likely to provide them with less monetary rewards. Existing studies have provided support for the theory of a negative relationship between neuroticism and pay level (Gelissen &

Graaf, 2006; Judge et al., 1999; Ng et al., 2005; Nyhus & Pons, 2005; Sutin et al., 2009). For instance, a meta-analysis by Ng et al. (2005) found a mean corrected correlation of -.12 between neuroticism and salary across seven studies with a sample size of 6,433. Therefore, the following hypotheses are proposed on the mediating role of promotional chances and pay level on the relationship between neuroticism and job satisfaction:

H6.6: Promotional chances will mediate the relationship between neuroticism and job satisfaction;

H6.7: Pay level will mediate the relationship between neuroticism and job satisfaction.

Neuroticism and Distributive Justice

Individuals high in neuroticism are expected to perceive less distributive justice. First, they tend to get fewer rewards from their work and receive more unfavorable performance evaluations (Barrick et al., 2001), and fewer promotional chances (Judge et al., 1999; Moutafi et al., 2007). Second, they tend to experience more negative affect (Judge et al., 2002; Nemanick & Munz, 1997; Watson & Clark, 1984), and thus perceive lower level of distributive justice (Barsky & Kaplan, 2007). There is also empirical evidence to support the theory of a negative relationship between neuroticism and distributive justice (Barsky & Kaplan, 2007). For example, Bernerth, Field, Giles and Cole (2006) found a statistically significant correlation between neuroticism and distributive justice ($r = -.23$) with a US undergraduate sample. Therefore, the following hypothesis is proposed in relation to the mediating role of distributive justice on the relationship between neuroticism and job satisfaction:

H6.8: Distributive justice will mediate the relationship between neuroticism and job satisfaction.

The Mediating role of Work Situations on the Relationship between Conscientiousness and Job Satisfaction

Conscientiousness and Job Characteristics: Autonomy and Routinization

As conscientiousness is associated with dependability, achievement striving, and planfulness (Barrick et al., 2001), it would appear that individuals high in conscientiousness are more likely to be assigned jobs with more autonomy. In support of this, empirical studies on Canadian government officials (Gellatly & Irving, 2001) and on military staff in Singapore (Ng, Ang & Chan, 2008) have found a positive correlation between conscientiousness and autonomy of .25 and .18 respectively. However, there is no empirical evidence on the relationship between conscientiousness and routinization. Therefore, the following hypothesis is proposed on the mediating role of autonomy on the relationship between conscientiousness and job satisfaction:

H7.1: Autonomy will mediate the relationship between conscientiousness and job satisfaction.

Conscientiousness and Role Stressors: Role Ambiguity, Role Conflict and Work Overload

Conscientiousness is expected to be negatively related to role ambiguity, but its relationship with role conflict and work overload is not clear. As individuals high in

conscientiousness are characterized by being careful, well-organized, self-regulating, committed, methodical, and motivated (Barrick et al., 2001; Grant & Langan-Fox, 2007), and as all these characteristics are likely to lead to role clarity, individuals high in conscientiousness are likely to have less role ambiguity. In support of this, studies on managers in Australia (Grant & Langan-Fox, 2007), and on alumni of a university in Singapore (Ferris et al., 2009) have found a negative correlation between conscientiousness and role ambiguity. Specifically, Grant and Langan-Fox (2007) found a negative correlation of $-.30$ between conscientiousness and role ambiguity.

In terms of role conflict, its relationship with conscientiousness is not clear. Studies on managers in Australia (Grant & Langan-Fox, 2007), on managers in Malaysia (Nasurdin et al., 2004) and in the US (Ferris et al., 2009) did not find a significant relationship between conscientiousness and role conflict. As to work overload, a search of the literature did not find reports on the relationship between conscientiousness and work overload. Therefore, the following hypothesis is proposed in relation to the mediating role of role ambiguity on the relationship between conscientiousness and job satisfaction, but no hypothesis is given on the mediating role of role conflict and work overload on the relationship between conscientiousness and job satisfaction:

H7.2: Role ambiguity will mediate the relationship between conscientiousness and job satisfaction.

Conscientiousness and Social Support: Supervisor Support and Co-worker Support

The relationship between conscientiousness and social support is not clear. None of the characteristics of conscientiousness seem to be related to social support. For

instance, a meta-analysis by Connor-Smith and Flachsbart (2007) found a weak mean uncorrected correlation of .06 between conscientiousness and instrumental support, a weak mean uncorrected correlation of .09 between conscientiousness and emotional support, and a weak mean uncorrected correlation of .08 between mixed social support and conscientiousness. A multivariate analysis of German employees found a non-significant relationship between conscientiousness and social support (Cohrs et al., 2006). As the relationship between conscientiousness and social support is not clear, no hypothesis is proposed in relation to the mediating role of supervisor support and co-worker support on the relationship between conscientiousness and social support.

Conscientiousness and Extrinsic Rewards: Promotional Chances and Pay Level

Both contest mobility theory and sponsored mobility theory on upward mobility in society (Turner, 1960) suggest that individuals high in conscientiousness are more likely to have more promotional chances. First, conscientiousness has been shown to be related to performance across performance measures and occupations (Barrick & Mount, 1991; Barrick et al., 2001; Salgado, 2003; Salgado & Rumbos, 1997). Individuals high in conscientiousness are thus more likely to have more promotional chances because of better performance. Second, according to Moutafi et al. (2007), individuals high in conscientiousness could get more support in their competition for promotion as their characteristics of achievement orientation (hardworking and persistent), dependability (responsible and careful), and orderliness (planful and organized) may make people believe they are more suitable for more complex and prestigious jobs. Meta-analyses (Barrick & Mount, 1991; Ng et al., 2005), a large sample survey (Moutafi et al., 2007), and a longitudinal study (Judge et al., 1999)

have all found empirical evidence to support the positive relationship between conscientiousness and promotional chances. Barrick and Mount (1991) found a mean corrected correlation of .15 between conscientiousness and status change across eight studies with a sample of 2,698 cases. Similarly, a longitudinal study by Judge et al. (1999) found that childhood conscientiousness is a predictor of extrinsic career success.

In terms of the relationship between conscientiousness and pay level, as individuals high in conscientiousness are more likely to achieve better performance irrespective of performance measures and occupations (Barrick & Mount, 1991; Barrick et al., 2001; Salgado, 2003; Salgado & Rumbos, 1997) it is expected they will receive better pay. In support of this theory, meta-analyses (Judge et al., 1999; Ng et al., 2005) and longitudinal studies (Judge et al., 1999; Sutin et al., 2009) have found that conscientiousness is positively related to salary. For instance, Barrick and Mount (1991) found a mean corrected correlation of .17 between conscientiousness and salary across five studies with a sample of 718 cases. Therefore, the following hypotheses are proposed on the mediating role of promotional chances and pay level on the relationship between conscientiousness and job satisfaction:

H7.3: Promotional chances will mediate the relationship between conscientiousness and job satisfaction;

H7.4: Pay level will mediate the relationship between conscientiousness and job satisfaction.

Conscientiousness and Distributive Justice

As individuals high in conscientiousness get more rewards such as better salary

and more status changes (Barrick & Mount, 1991; Barrick et al., 2001), it is expected they will also be more likely to perceive the distribution of benefits in the workplace as fair. In support of this, a meta-analysis by Cohen-Charash and Spector (2001) found a mean uncorrected correlation of .20 between conscientiousness and distributive justice across three studies with a sample of 644 cases. Therefore, the following hypothesis is proposed in relation to the mediating role of distributive justice on the relationship between conscientiousness and distributive justice:

H7.5: Distributive justice will mediate the relationship between conscientiousness and job satisfaction.

The Mediating Role of Work Situations on the Relationship between Agreeableness and Job Satisfaction

Agreeableness and Job Characteristics: Autonomy and Routinization

The relationship between agreeableness and job characteristics is not clear. Agreeableness is about cooperation, trustfulness, compliance and affability (Barrick et al., 2001), and none of these facets seems to be related to job characteristics. Furthermore, empirical studies have not found a relationship between agreeableness and job characteristics. For instance, a meta-analysis by Zimmerman (2008) found only a weak mean corrected correlation of -.07 between agreeableness and job complexity across four studies with a sample of 4,078 cases. As the relationship between agreeableness and autonomy and routinization is not clear, no hypothesis is proposed in relation to mediating role of autonomy and routinization.

Agreeableness and Role Stressors: Role Ambiguity, Role Conflict and Work Overload

Agreeableness is expected to be positively related to role ambiguity, but its relationship with role conflict and work overload is not clear. As individuals high in agreeableness are likely to get along well with their co-workers and supervisors (Bruk-Lee et al., 2009; Judge et al., 2002), and have better communication with other people, they are thus more likely to experience lower role ambiguity. Extant studies also provide support for a negative relationship between agreeableness and role ambiguity. For instance, a study of managers in Australia (Grant & Langan-Fox, 2007) found a correlation of $-.17$ between agreeableness and role ambiguity. In terms of role conflict, the same study by Grant and Langan-Fox (2007) found a non-significant relationship between agreeableness and role conflict. A literature search has not found any studies reporting the relationship between agreeableness and work overload. Therefore, the following hypothesis is proposed in relation to the mediating role of role ambiguity on the relationship between agreeableness and role ambiguity, but no hypothesis is proposed in relation to the mediating role of role conflict and work overload on the relationship between agreeableness and job satisfaction:

H8.1: Role ambiguity will mediate the relationship between agreeableness and job satisfaction.

Agreeableness and Social Support: Supervisor Support and Co-worker Support

Individuals high in agreeableness are likely to get along well with their co-workers and supervisors (Bruk-Lee et al., 2009; Judge et al., 2002), and thus it is expected that they will be more likely to attract support from their supervisors and co-workers in the workplace. This theory is supported by meta-analysis (Connor-Smith & Flachsbart, 2007) and multivariate analysis (Cohrs et al., 2006). For

instance, Connor-Smith and Flachsbart (2007) found a mean uncorrected correlation of .08, .12, and .11 between agreeableness and instrumental support, emotional support, and mixed support. Cohrs et al. (2006) found that agreeableness was positively related to social support for three German samples. Therefore, the following hypotheses are proposed in relation to the mediating role of supervisor support and co-worker support on the relationship between agreeableness and job satisfaction:

H8.2: Supervisor support will mediate the relationship between agreeableness and job satisfaction;

H8.3: Co-worker support will mediate the relationship between agreeableness and job satisfaction.

Agreeableness and Extrinsic Rewards: Promotional Chances and Pay Level

The relationship between agreeableness and promotional chances is not clear. Neither contest mobility theory nor sponsored mobility theory on upward mobility in society suggests that agreeableness will be linked with promotional chances. Similarly, a meta-analysis (Barrick et al., 2001) found a non-significant relationship between agreeableness and overall job performance. In addition, the effect of agreeableness on promotional chances through its effect on interpersonal relationships is not clear. As Ng et al. (2005) argued, on the one hand individuals high in agreeableness may be advantaged in getting support for promotion from elites because of their better relationships with these elites. However, on the other hand highly agreeable individuals may receive less sponsorship as a result of being regarded as docile and easily manipulated. Meta-analysis (Barrick & Mount, 1991), a large sample survey

(Moutafi et al., 2007), longitudinal studies (Judge et al., 1999; Sutin et al., 2009) and a multivariate analysis (Seibert & Kraimer, 1999) have all found a weak relationship between agreeableness and promotional chances. For instance, Ng et al. (2005) found a mean corrected correlation of -.05 between agreeableness and promotion across four studies with a sample of 4,428 cases.

In terms of pay level, its relationship with agreeableness is also not clear. Meta-analysis (Barrick & Mount, 1991), large survey (Gelissen & Graaf, 2006), and multivariate analyses (Judge et al., 1999; Nyhus & Pons, 2005; Seibert & Kraimer, 1999; Sutin et al., 2009) have found mixed results on the relationship between agreeableness and pay level or external career success. Both non-significant relationships (Barrick & Mount, 1991; Gelissen & Graaf, 2006; Judge et al., 1999) and negative relationship (Nyhus & Pons, 2005; Seibert & Kraimer, 1999; Sutin et al., 2009) between agreeableness and pay level have been reported. Therefore, no hypothesis is proposed on the mediating role of promotional chances and pay level on the relationship between agreeableness and job satisfaction.

Agreeableness and Distributive Justice

The relationship between distributive justice and agreeableness is not clear. Distributive justice is about work input and output. None of the components of agreeableness appears related to work input and output. Empirically, meta-analyses (Barrick & Mount, 1991; Barrick et al., 2001) have found a non-significant relationship between agreeableness and performance, and between agreeableness and outcomes such as status change or salary. Therefore, no hypothesis is proposed in relation to the mediation of distributive justice on the relationship between agreeableness and job satisfaction.

In summary, the model of the hypothesized relationship between job satisfaction and its situational and dispositional sources are presented in Figure 2.2.

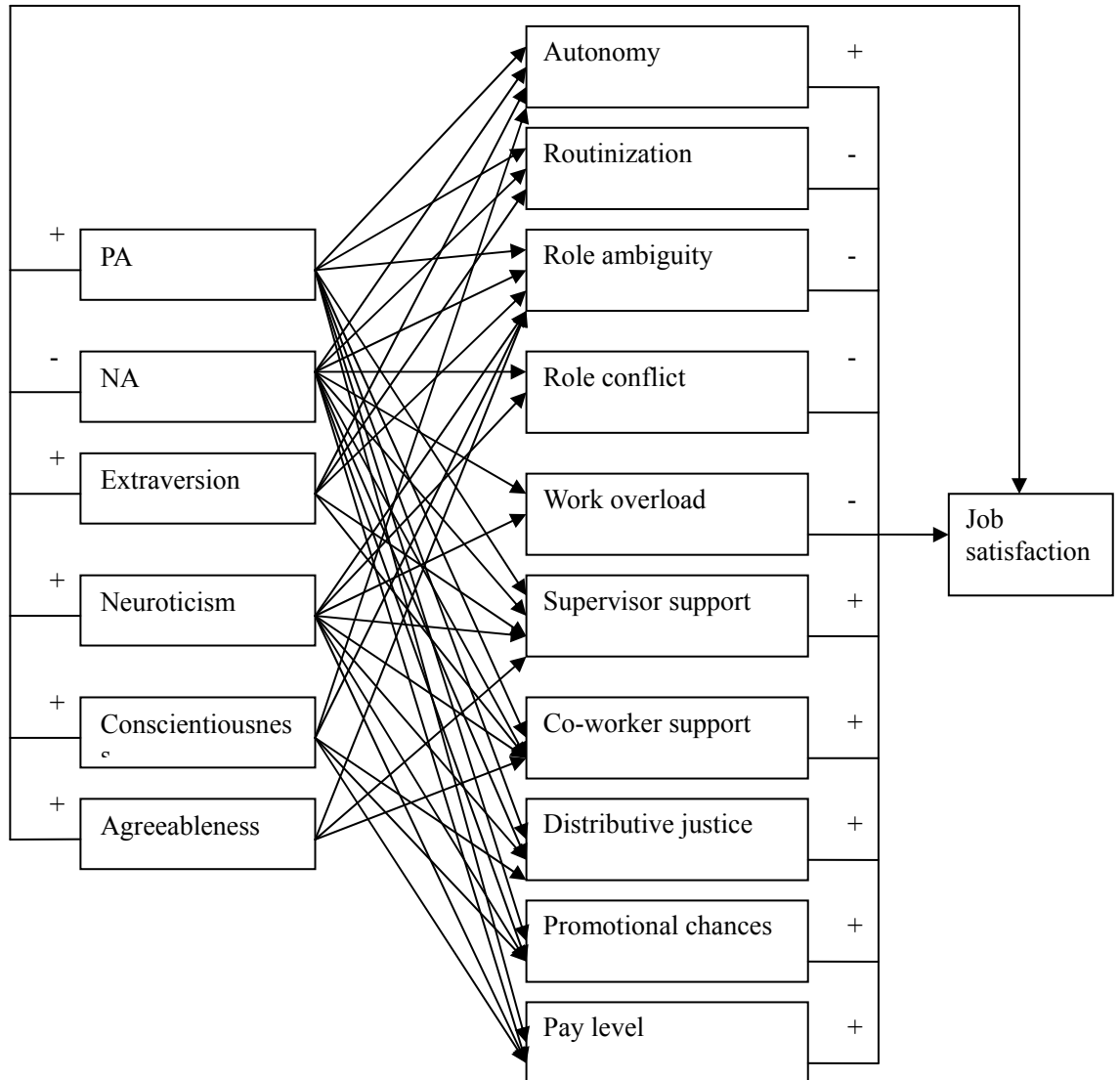


Figure 2.2 The hypothesized relationship between the variables

Summary

In this chapter, a review of the literature on job satisfaction in relation to its definition and dimensionality was presented first. With considerable research attention

given to job satisfaction over the past few decades (Judge & Larsen, 2001), researchers have reached a consensus that job satisfaction contains both cognitive and affective components. In the current study, using Locke's (1976, p. 1300) classical definition, job satisfaction is defined as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience".

The dispositional and situational sources of job satisfaction have long been recognized (Judge & Larsen, 2001; Staw & Cohen-Charash, 2005). As mentioned in chapter one, a literature search found few comprehensive studies incorporating many situational and dispositional variables, or investigating multi-mediations of situations on the relationship between dispositions and job satisfaction. Comprehensive studies on the antecedents of job satisfaction in China are similarly sparse. This study therefore seeks to make a contribution to the job satisfaction literature by carrying out a comprehensive examination of the antecedents of job satisfaction in China, a society culturally different from the west where most of the research has taken place.

Antecedent variables of job satisfaction were selected based on theoretical grounds and evidence from existing empirical studies. For the dispositional antecedents of job satisfaction, both the framework of affectivity and the FFM were integrated in the study. Even though positive affectivity and negative affectivity in the affectivity framework are correlated with extraversion and neuroticism in the Big Five personality trait model, they are theoretically different personality traits and integrating these two frameworks can give a clearer view of dispositional influences on job satisfaction.

Also included in the study are the most important situational antecedents of job satisfaction: autonomy, routinization, role ambiguity, role conflict, work overload, supervisor support, co-worker support, promotional chances, pay level, and

distributive justice. Furthermore, the influence of situational and dispositional antecedents on job satisfaction is not independent. Therefore, mediations of work situations on the relationship between dispositions and job satisfaction will also be investigated. As a result of the literature review, 16 hypotheses on the direct influence of the situational and dispositional variables on job satisfaction were hypothesized. Thirty-nine hypotheses on the mediating role of situations on the relationship between dispositions and job satisfaction were also developed and presented.

In the next chapter, details on the methodology and research design adopted in the current study will be presented.

CHAPTER 3: RESEARCH METHOD

The preceding chapter reviewed the extant literature and presented the theoretical framework for this study. In this chapter, the research methodology for the study is outlined. This includes an outline of the research design, the sample and data collection, the measurement of the study variables, the methods of analysis used to establish the reliability and validity of the measures, and the analytical method undertaken to test the research hypotheses.

Research Design

A cross-sectional survey was used in the study. In a cross-sectional design, data are collected at a single point in time (Bryman & Bell, 2007). A cross-sectional survey design was selected as it is economical, time-saving, and can have good external validity or generalizability. Furthermore, according to Peat, Mellis, Williams, and Xuan (2001), a cross-sectional survey is ideal for collecting initial information about ideas of relationships among variables, or for making an initial investigation into hypotheses about causal pathways. As the study of job satisfaction in China is at an early stage, a cross-sectional study is considered appropriate. The cross-sectional design has several advantages over other kinds of research design (Bryman & Bell, 2007; Gravetter & Forzano, 2009). Cross-sectional research is time-saving and cost-saving compared to longitudinal studies. In addition, researchers need not worry about participants dropping out during the course of the study, as there is no need for long-term cooperation between the researcher and the participants. However, cross-sectional designs also have weaknesses (Bryman & Bell, 2007; Gravetter &

Forzano, 2009). The main limitation of a cross-sectional study is that it can not identify the causal relationship between two variables (Gravetter & Forzano, 2009; Tharenou, Donohue & Cooper, 2007). Further discussion on the limitations of the research design will be presented in chapter 5.

This study used a quantitative survey design. A quantitative design has several advantages over other kinds of research design (Bryman & Bell, 2007; Gravetter & Forzano, 2009). First, unlike qualitative studies, quantitative studies facilitate the comparability of results with those of other published quantitative studies. Specifically, a quantitative approach allows comparison with the variables, strength of associations, and the levels of statistical significance reported in other studies.

Before the fieldwork started, the research was approved by the standing Committee on Ethics in Research Involving Humans (SCERH) of Monash University (see Appendix A).

Sample and Data Collection

The target population for the current study was white-collar (non-manual) workers from industrial and commercial enterprises in Fushun city, Liaoning province, P. R. China. The city is about 45km away from Shenyang, the capital city of Liaoning province. There are about 2 million urban residents. Fushun is a typical old industrial city in China. The city is characterised by heavy pollution and state domination of the economy. The industry is highly diversified, with one of the largest subsidiaries of China National Petrochemical Company (CNPC), plus a coal mining company, China's first aluminium company, and two steel companies. The state economy accounts for more than half of the output of the regional economy.

Data was collected from April 2008 to June 2008. The sample was drawn from multiple industries covering both the state sector and non-state sector. Employees of four State-owned Enterprises (SOEs) and two private-owned enterprises (POEs) were surveyed. The four SOEs are Fushun CNPC, Fushun Power Generation Company, Fushun Motor Manufacturing Company, and Fushun Insurance Company. The two POEs are Fushun Excavation Company and Fushun New Steel Company. Except for Fushun Insurance Company, all the other five companies were in the energy, material and manufacturing industries.

Convenience sampling was used to recruit respondents for the survey. In this form of sampling, people are selected because they are most conveniently available (Bryman & Bell, 2007; Zikmund, 2003). As its name suggests, convenience sampling is convenient, economical, and less time-consuming relative to other sampling techniques (Singleton, Straits & Straits, 1993). The major disadvantage of convenience sampling is the possible selection bias, as it may select a less representative sample of the population, which could limit generalizability of the findings (Bryman, 2001; Zikmund, 2003). However, according to Bryman and Bell (2007), in the field of organizational studies convenience sampling is very commonly used and is more prominent than probability sampling, which involves access to detailed information on the target population, which was not available in the present study.

Initially, the researcher contacted representatives of each organization targeted and asked them to distribute the questionnaire to their colleagues and then collect and return the questionnaires to the researcher. To make the sample as representative as possible, two measures were taken. First for each of the organizations more than one representative was selected. For instance, in Fushun CNPC more than 10

representatives were selected from its subsidiaries and divisions. The purpose of diversification of the enterprises and divisions investigated was to minimize the shortcomings of convenience sampling and reduce the effect of individual distributor bias. Second, the representatives were told to select respondents as representative as possible of all employees in terms of age, gender, educational level, and occupational level. Instructions related to the distribution and collection of the questionnaire were given to those representatives. The instructions in the questionnaire outlined the nature of the research and assured respondents of voluntary participation, confidentiality and anonymity.

Originally 426 cases were collected by those representatives, and 21 cases were discarded because of too much missing data, leaving 405 usable cases. Specifically, if any of the following things happened, the questionnaire was deemed as unusable. First, a respondent selected the same answer for almost all the questions. Second, there was a lot of missing data. Third, the respondent selected two answers for one question and such errors happened more than once. The collected questionnaires were examined case by case with the above described criteria. Table 3.1 summarizes the respondent characteristics.

Table 3.1 indicates that roughly equal numbers of men and women were included in the sample. Of the 405 respondents 54.3% were male and 45.7% female. The majority of respondents were young, with only 18% over the age of 45. Most of them were married, with only 18.3% single persons. The sample was relatively well-educated, with 45.3 % with four years higher education or more. The majority of the respondents earned 1500 to 3000 RMB per month. The relative youth and better education of the respondents could be related to enterprise restructuring. For instance, during the restructuring of CNPC, many old and not well-educated employees were encouraged to retire early or cut ties with the company (Smyth et al., 2001a).

Unfortunately, there is no general information about the population of white-collar workers in Fushun. However, compared with a previous study in Xi'an of technicians and managerial staffs (Zhang et al., 2003a), the respondents in the current study are older and educational levels are lower. In the sample of the study of Zhang et al. (2003), the average age was 28 years and 75% had four year higher education or more.

Table 3.1 Profile of the survey respondents

Variables	N	%
Gender		
Male	215	54.3
Female	181	45.7
Age (years)		
<25	21	5.2
26-30	63	15.7
31-35	61	15.2
36-40	107	26.7
41-45	77	19.2
46-50	38	9.5
51-55	28	7.0
56-60	6	1.5
Marital status		
Single	73	18.3
Married	325	81.7
Education		
Junior secondary	13	3.2
Senior secondary	61	15.2
Polytechnic	145	36.2
Bachelor	165	41.1
Master or PHD	17	4.2
Income RMB		
<500	9	2.3
501-1000	39	9.8
1001-1500	47	11.8
1501-2000	58	14.6
2001-2500	82	20.7
2501-3000	93	23.4
3001-3500	42	10.6
3501-4000	12	3.0
4001-4500	5	1.3
4501-5000	5	1.3
Over 5000	5	1.3
Position		
Ordinary employee	313	79
Cadre	83	21

Measures

The questionnaire comprised measures of the independent, dependent, and control variables. Except for pay, all the independent and dependent variables were measured by multi-item, rather than single-item scales for improved content and construct validity and reliability (Hinkin, 1995). Moreover, all the measures employed in the current study were existing measures with reported evidence of reliability and construct validity.

As the current study was conducted in a Chinese-speaking context, and all the multi-item measures were developed and validated in English, the survey instrument was translated from English into Chinese following the procedure recommended by Brislin (1993). First the researcher translated the original English survey instruments into Chinese. Second, the Chinese translation was back-translated into English by an expert in the Arts Faculty of Monash University. The back-translated text was then compared with the original text. If discrepancies existed between those two versions, the Chinese version and the original English version were examined again, and if necessary some change on the translation was made. This translation procedure was used to examine and ensure translation equivalence in both versions.

Despite the employment of a standard translation procedure, translated survey instruments may, however, not always be suitable for their intended purpose because of cultural and language differences. Translation of very short items such as single adjectives may be particularly problematic. Even though measures with short items such as single adjectives have the advantage of brevity over items with phrases or sentences, the meaning of single adjectives is more likely to be ambiguous for respondents (John & Srivastava, 1999). When a brief measure is translated into

another language, there may be no adjectives with exactly the same meaning suitable for the intended purpose. In the current study, when the measures were translated both the literal meaning and the intentions of the items in the constructs was considered. For instance, when the single-item adjectives of the dispositional measures were translated from English into Chinese, some single English adjectives were expressed with two or three similar Chinese adjectives, while for some items the most appropriate word for the construct was selected to make sure the literal meaning was correct and the items fitted the intentions of that particular word in the construct.

Job Satisfaction

The dependent variable in the current research was job satisfaction. Job satisfaction was measured with a six-item short version of the job satisfaction scale developed by Brayfield and Rothe (see Fields, 2002). This scale has been used by many researchers in multiple industries and has well-established psychometric properties (Fields, 2002; Price, 1997). In addition, the six-item scale (Chiu & Francesco, 2003b; Zhang & Zhao, 2007) and its adaptations (Chan & Wyatt, 2007; Chen, 2001; Zhang & Li, 2002; Zhang et al., 2003a; Zhang et al., 2003b) have been used in previous studies in China. The six items are presented in Appendix B. The response format was a five-point Likert scale where 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree.

In terms of reliability, previous research has reported Cronbach's alphas ranging from .83 to .90 (Fields, 2002). In China, research reported alphas ranging from .85 to .87 for the six-item scale (Chiu & Francesco, 2003b; Zhang & Zhao, 2007), and alphas ranging from .67 to .86 for the adapted scale (Chan & Wyatt, 2007; Chen, 2001; Zhang & Li, 2002; Zhang et al., 2003a; Zhang et al., 2003b) .

With regard to discriminant validity, confirmatory factor analysis has found that this scale is empirically distinct from measures of organizational commitment and job involvement (Brooke, Russell & Price, 1988). Another confirmatory factor analysis (Agho et al., 1992) found the scale to be empirically distinct from positive affectivity and negative affectivity. As to convergent validity, the scale correlated with other measures in the expected direction. For example, it was moderately positively correlated with autonomy, distributive justice, supervisory support, task significance, sensitivity to equity, employee perceptions of performance, and job involvement; and negatively correlated with family-work conflict, work routinization, role ambiguity, role conflict, quitting, and intention to quit (Fields, 2002; Price, 1997).

Independent Variables

The independent variables in the current study include the situational and dispositional variables described in chapter two.

Job Characteristics: Autonomy and Routinization

Autonomy was measured with the six-item scale developed by Sims et al. (1976). The scale measures the extent to which employees have a major say in scheduling their work, selecting the equipment, and deciding on procedures to be followed. The six items are presented in Appendix B. The response format is a five-point Likert-type scale where 1 = very little, 2 = a little, 3 = a moderate amount, 4 = much, 5 = very much.

In terms of reliability, Sims et al. (1976) reported a Cronbach's alpha of .84. In regard to discriminant validity, a principal component analysis (Pierce & Dunham, 1978) indicated that the scale was clearly distinct from variety, feedback and identity.

As to convergent validity, Fields (2002) noted that previous research has shown that autonomy is positively correlated with satisfaction with growth and with supervision, and negatively correlated with specialization. In regards to convergent validity, Pierce and Dunham (1978) found a correlation of .68 between autonomy as measured by this scale and the autonomy scale of the Job Diagnostic Survey scale (Hackman & Oldham, 1975). In addition, Dodd and Ganster (1996) found that autonomy as measured by this scale correlated positively with objective measures of job characteristics. Specifically, Dodd and Ganster (1996) found a correlation of .84 between objective autonomy and perception of autonomy.

Routinization was measured with the five-item scale developed by Price and Mueller (see 1997). This scale measures both task variety and skill variety. The five items and responses for these items are presented in Appendix B. Four items are positively worded and reverse scored. The response format is a five-point Likert-type scale. This scale and its adapted version have been used by many researchers, and has good psychometric properties (Price, 1997).

In terms of reliability, Price and Mueller (1986) reported a Cronbach's alpha of .78. In regards to unidimensionality of the scale, a principal component analysis with 12 other variables by Price and Mueller (1986) reported that the five items for routinization loaded on one factor. As to construct validity, routinization has been shown to be negatively associated with job satisfaction (Price, 1997).

Role Stressors: Role Ambiguity, Role Conflict and Work Overload

Role ambiguity was measured with the six-item scale taken from the Job-Related Strain Index developed by Rizzo et al. (1970). These items assess the degree of uncertainty respondents feel about what actions to take to fulfil a work role. The items

are presented in Appendix B. The response format is a seven-point Likert scale ranging from 1 = strongly disagree through to 7 = strongly agree. This scale has been used extensively by researchers and its reliability and validity have been supported (see, Fields, 2002). Furthermore, the six-item scale (Lu et al., 2007), and its adaptations (Zhang et al., 2002; Zhang et al., 2003b) have been used in other studies in China.

In terms of reliability, previous research has reported Cronbach's alphas ranging from .71 to .95 (Fields, 2002). In China, studies have reported a Cronbach's alpha of .85 for the six-item scale (Lu et al., 2007). In regard to discriminant validity, principal component analysis showed that role ambiguity and role conflict were distinct measures (Schuler, Aldag & Brief, 1977). As to convergent validity, the relationships between role ambiguity and other variables were in the expected direction. For example, the scale was found to be negatively related to measures of satisfaction, performance, and task characteristics (Schuler et al., 1977).

Role conflict was measured with the eight-item scale taken from the Job-Related Strain Index developed by Rizzo et al. (1970). These eight items assess the degree of incompatibility of roles as defined by supervisors or other members. The eight items are presented in Appendix B. The response format is a seven-point Likert scale ranging from 1 = strongly disagree through to 7 = strongly agree. The measure has been extensively used by researchers, and its reliability and validity has been supported in previous research (Fields, 2002). Furthermore, the eight-item scale (Lu et al., 2007) and its adaptations (Zhang et al., 2003a; Zhang et al., 2002; Zhang et al., 2003b) have been used in studies in China.

In terms of reliability, previous research has reported Cronbach's alphas ranging from .71 to .87 (Fields, 2002). In China, research has reported an alpha of .81 for the

eight-item role conflict scale, and alphas ranging from .70 to .79 for an adapted three-item and two-item scale (Zhang et al., 2003a; Zhang et al., 2002; Zhang et al., 2003b). In regard to validity, the study of Schuler et al. (1977) on role ambiguity also investigated role conflict and results supported both the discriminant and convergent validity of the measure.

Work overload was measured with the three-item scale taken from the Occupational Stress Scale developed by House et al. (1979). The three items are presented in Appendix B. The response format is a five-point Likert-type scale where 0 = never, 1 = rarely, 2 = sometimes, 3 = fairly often, and 4 = very often. The three-item scale has been used in previous studies in China (Zhang et al., 2003a; Zhang et al., 2002; Zhang et al., 2003b).

In terms of reliability, research has reported Cronbach's alphas ranging from .73 to .74 (House et al., 1979; Kim et al., 1996). In China, research reported alphas ranging from .73 to .76 (Zhang et al., 2003a; Zhang et al., 2002; Zhang et al., 2003b). As to discriminant validity, principal component analysis of this measure together with 21 other measures such as autonomy, routinization, role ambiguity, role conflict, supervisor support, co-worker cohesion, distributive justice and promotional chances (Kim et al., 1996; Price, 1997) found that this measure was distinct from the other measures. In regard to convergent validity, Fields (2002) noted that in previous research work overload was moderately negatively correlated with social support at work, internal locus of control, job satisfaction, and intrinsic job rewards; positively correlated with role ambiguity, role conflict, personal discrimination, and employee Type A personality. Kim et al. (1996) also reported that work overload was negatively correlated with job satisfaction and organizational commitment.

Social Support: Supervisor Support and Co-worker Support

Supervisor support and co-worker support were each measured with a four-item scale developed by Caplan, Cobb, French, Van Harrison and Pinneau (see Fields, 2002). The items assess both emotional and instrumental support. The items comprising the scale are presented in Appendix B. The response format is a five-point Likert-type scale, where 0 = don't have such a person, 1 = not at all, 2 = a little, 3 = somewhat, 4 = very much. Caplan et al.'s (1975) social support measure has been widely used and has remained one of the most established scales used to measure social support in a job (Fields, 2002).

In terms of reliability, previous research has reported Cronbach's alphas ranging from .86 to .91 for supervisor support, and a Cronbach's alpha of .79 for co-worker support (Fields, 2002). In regards to discriminant validity, confirmatory factor analysis (1995) found that social support was distinct from measures of other constructs including positive stressors and negative stressors. As to convergent validity, both co-worker support and supervisor support have been correlated with other organizational variables in the expected direction. For example, research has found that supervisor support and co-worker support were positively correlated with overall job satisfaction and work group cohesiveness, and negatively correlated with job insecurity, job dissatisfaction, and noncompliant job behaviors (Fields, 2002).

Extrinsic Rewards: Promotional Chances and Pay Level

Promotional chances was measured with three items adapted from the six-item scale developed by Iverson and Roy (see 1997). The scale measures the movement between different status levels within an organization. The three items are presented in Appendix B. The response format is a five-point Likert scale where 1 = strongly

disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree. The three-item scale has been used in previous studies in China (Zhang et al., 2003a; Zhang et al., 2002; Zhang et al., 2003b).

In terms of reliability, studies outside China have reported an alpha of .86 for the 6-item promotional chances scale (1994). Kim (1999) reported a Cronbach's alpha of .79 for a Korean sample using three items adapted from the instrument. In China, studies have reported a Cronbach's alpha ranging from .68 to .71 for an adapted scale with three items (Zhang et al., 2003a; Zhang et al., 2002; Zhang et al., 2003b). In regard to validity, Iverson and Roy (1994) found that this measure was correlated in the expected direction with other organizational variables such as affective organizational commitment and job satisfaction.

Pay level was measured with a single item scale asking the monthly average income of the respondents. Single item indicators are commonly used for measuring pay (Price, 2001). The response is an 11-point scale where 1= below 500 RMB, 2= 501 to 1000 RMB, 3= 1001 to 1500 RMB, 4= 1501 to 2000 RMB, 5= 2001 to 2500 RMB, 6=2501 to 3000 RMB, 7= 3001 to 3500 RMB, 8=3501 to 4000 RMB, 9= 4001 to 4500 RMB, 10 = 4501 to 5000 RMB, 11= 5000 RMB or above.

Distributive Justice

Distributive justice was measured with the three-item scale developed by Kim et al. (1996) (see, Price, 1997). The scale measures the perception of justice in broad sense including both monetary and non-monetary rewards. The three items are presented in Appendix B. The response format is a five-point Likert scale, where 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree. In terms of reliability, Kim et al. (1996) reported a Cronbach's alpha

of .85 in a US sample. In a Korean study, Kim (1999) reported a Cronbach's alpha of .91 with two items adapted from the scale. In regards to construct validity, principal component analysis and the correlation of this instrument with other variables has shown that the scale has discriminant and convergent validity (Price, 1997).

Positive Affectivity and Negative Affectivity

Positive affectivity and negative affectivity were measured with a 10-item scale adapted from the 20 item PANAS scale developed by Watson et al. (1988). As suggested by Thompson (2007), the 10-item scale has the advantage of brevity over the original 20-item scale. The 10 items are presented in Appendix B. In the 10-item scale, five items represent positive affectivity and five items negative affectivity. The response format was a five-point Likert-type scale where 1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always.

In terms of the psychometric properties of the 20-item scale, extensive research (see, Thompson, 2007; Price, 1997) has shown that the scale is both reliable and valid. Research in China (Huang et al., 2003; Wang et al., 2007; Zhang et al., 2004) also supports the use of the 20-item scale for Chinese populations. Research has reported Cronbach's alphas ranging from .85 to .90 for PA, and Cronbach's alphas ranging from .79 to .83 for NA (Huang et al., 2003; Zhang et al., 2004). Principal component analysis has found that the 20 items fall into their expected factors (Huang et al., 2003; Zhang et al., 2004). Confirmatory factor analysis (Crawford & Henry, 2004; Wang et al., 2007) also supports the discriminant validity of the two-factor structure of affectivity.

As to the psychometric properties of the 10-item scale, Thompson (2007) validated the 10-item scale with several multinational samples. Cronbach's alphas

ranged from .73 to .78 for PA, and from .72 to .76 for NA. The test-retest reliability of PA and NA were both .84 ($p < .01$) with an eight week interval. Principal component analysis of the 10 items for each of the samples generated a clear two-factor structure, supporting the discriminant validity of the two measures. PA was moderately positively related to subjective well-being and happiness, while NA was negatively related to subjective well-being and happiness, supporting convergent validity.

Even though the PANAS scale has been shown to have good psychometric properties in various previous studies, studies in China have shown that some of the items may not work well when they are translated into Chinese. For instance, in previous studies attempting to validate the 20-item PANAS scale for Chinese populations, researchers have consistently found that one item cross-loads onto both PA and NA. Specifically, Zhang et al. (2004) found that “alert” cross-loaded onto both positive affectivity and negative affectivity, with a factor loading of .38 and .48 on PA and NA, respectively. Similarly, another study by Huang et al. (2003) found that “alert” cross-loaded .40 and .29 on PA and NA respectively. One possible reason for the cross-loading is that the Chinese translation had a negative connotation, and was closer to “wary” than “alert”, thus implying a lack of trust in other people. The direct Chinese translation of “alert” thus may not fit the positive conceptualization for items on a PA scale. In the current study, special attention was paid to the translation of the PANAS.

The word “alert” was translated into three Chinese words “jing jue, min rui, and guan cha li qiang”. The most commonly used corresponding Chinese word is the first one, but it could have a negative connotation of indicating strong distrust. The second and third Chinese words are positive words. When the three Chinese adjectives are used together, it creates a more accurate indication of the intended word “alert” with

its positive connotation. Similarly, “Hostile” was translated as “unfriendly”, rather than “hostile”, as the latter is an extremely strong Chinese word. The translation into “unfriendly” fitted the construction better, as in the 20-item PANAS instrument, there is a word “irritable, and these two words “irritable”, and “hostile” are normally classified into one group.

Big Five Factors of Personality

The 44-item Big Five Inventory (BFI) (John & Srivastava, 1999) was used to measure the Big Five factors. The main advantage of the BFI compared with other measure of the Big Five factor personality model is its brevity. The scale is a multi-factor instrument, with eight items for extraversion, nine items for agreeableness, nine items for conscientiousness, eight items for neuroticism, and ten items for openness to experience. The 44 items are presented in Appendix B. The response format is a five-point Likert scale where 1 = disagree strongly, 2 = disagree a little, 3 = neither agree nor disagree, 4 = agree a little, 5 = agree strongly. This instrument has been used in large surveys in the US and Canada (Soto, John, Gosling & Potter, 2008), in a cross-language (28 languages) and cross-cultural studies (56 nations) (Schmitt et al., 2007), with Dutch speaking people (Denissen, Geenen, Aken, Gosling & Potter, 2008), and in Spain (Benet-Martinez and John, 1998). In all cases, the BFI scales have displayed high reliability and validity.

In terms of reliability, previous research (Denissen et al., 2008; Schmitt et al., 2007) has demonstrated Cronbach’s alphas ranging from .77 to .86 for extraversion; a Cronbach’s alpha of .79 for neuroticism, alphas ranging from .78 to .83 for conscientiousness; alphas ranging from .70 to .84 for agreeableness and alphas ranging from .73 to .76 for openness for experience. As to the validity of the scale,

there has been substantial agreement between self- and peer-reports of the five factors (e.g. DeYoung, 2006). In terms of discriminant validity, principal component analysis demonstrated a clear five-factor structure (e.g. Benet-Martinez & John, 1998; Schmitt et al., 2007). The BFI displays strong convergence with longer Big Five measures (Benet-Martinez & John, 1998; John & Srivastava, 1999). For instance, the correlation between the corresponding five factors in the BFI and those in a 100-item Trait Descriptive Adjectives (TDA) ranged from .75 to .90 (John & Srivastava, 1999).

Method of Analysis

Method of Analysis for Validating Measures

Even though the measures used have been validated in previous studies, it does not mean that they will work in the Chinese culture and in Chinese translation. To further ensure validity and reliability of the scales, the measures were subjected to confirmatory factor analysis (CFA) to assess their construct validity. According to Harris and Schaubroeck (1990, p. 338), confirmatory factor analysis is “most appropriate for use with variables about which there has been a great deal of past empirical research and theory development”. Similarly, Kelloway (1998) suggested that exploratory factor analysis (EFA) is used in the initial stages of scale development, followed by confirmatory factor analysis on established measures. As all the multi-item scales in the present study were established measures, it is appropriate to use CFA to test their validity.

CFA has several advantages over EFA. First, CFA allows more precision than EFA in evaluating the measurement model (Hinkin, 1995). Second, CFA provides more flexibility than EFA, such as allowing variation in the independence of error

terms (DeVellis, 2003). As discussed in the next chapter, following Agho et al. (1992), the PANAS and job satisfaction measures were put together and subjected to confirmatory factor analysis. The BFI scale and all the measures for situational variables were subjected to CFA respectively.

The maximum likelihood estimation (MLE) method using AMOS 17 was used to perform the CFA. MLE is a procedure that iteratively improves parameter estimates to minimize a specified fit function (Hair, Black, Babin, Anderson & Tatbam, 2006). MLE is an alternative to the ordinary least squares method used in multiple regression, and is the most widely used approach in CFA and performs reasonably well under a variety of less than optimal analytic conditions (including small sample size and moderate non-normality) (Hair et al., 2006; Hoyle & Panter, 1995).

As noted by Medsker, Williams and Holahan (1994), a variety of fit measures have been reported in the organizational behavior and human resources management literature. Hair et al. (2006) recommend that multiple fit indices should be used to assess a model's goodness-of-fit and should include: 1) The chi-square value and the related degrees of freedom (*df*); 2) one absolute fit index (i.e., GFI, RMSEA, or SRMR); 3) one incremental fit index (i.e., CFI or TLI); 4) one goodness-of-fit index (GFI, CFI, TLI etc.); 5) one badness-of-fit index (RMSEA, SRMR, etc). In the current study, chi-square, *df*, CFI, and RMSEA are reported.

The chi-square statistic measures the difference between the observed and estimated covariance matrices (Hair et al., 2006). Although chi-square is sensitive to sample size and degree of freedom (Hair et al., 2006), it is useful for evaluating the relative fit of nested models.

The comparative fit index (CFI) is an incremental fit index that is an improved version of the normed fit index (NFI), when NFI is a ratio of the difference in the

chi-square value for the fitted model and the null model divided by the chi-square value for the null model (Hair et al., 2006). CFI has many desirable properties including its relative, but not complete, insensitivity to model complexity. The possible range of CFI values is 0 to 1, and values greater than .90 represent reasonably good fit of the model to the data (Hair et al., 2006).

The Root Mean Square Error of Approximation (RMSEA) takes the error of approximation in the population into consideration. It attempts to correct for the tendency of the chi-square goodness of fit test statistic to reject models with large samples or a large number of observed variables (Hair et al., 2006). Lower RMSEA values indicate better model fit. Browne and Cudeck (1993) asserted that RMSEA value at .05 or less indicate a close model fit, values between .05 and .08 signify a reasonable fit, and values greater than .10 indicate poor fit.

In the current analysis, a factor loading of .40 or above was used as the criterion for keeping an item in a scale because it is commonly considered “significant” in defining a factor (Ford, MacCallum & Tait, 1986, p. 296; Hair, Anderson, Tatham & Black, 1998; Hinkin, 1995). For instance, Hair et al. (1998) suggested that in order to obtain a power level of 80% at a .05 significant level, a factor loading of .40 or greater is required for significance when a sample size is 200. Zikmund (2003, p. 588) stated that a factor loading is “a measure of the importance of the variable in measuring each factor” and provides “a means for interpreting and labelling the factors”.

In terms of assessing the reliability of multi-item measures, Cronbach’s alpha coefficient of internal consistency was used. According to Nunnally (1978), an alpha of .70 or above is required of established scales. However, Sekaran (1992) suggested that a Cronbach’s alpha of .60 or better is acceptable for hypothesis testing. In the current study, an alpha of .60 was used as a cut-off point for keeping a measure for

further analysis. Following the CFAs and the reliability analyses, composite scale scores were created by averaging items that loaded .40 or above for each factor. These scales were then used in regression analyses to test the study hypotheses.

Method of Analysis for Testing the Influence of the Antecedents on Job Satisfaction

Hierarchical multiple regression was used to test the hypothesized influence of dispositions and situations on job satisfaction. Hierarchical regression is useful to test whether the integration of the situational and dispositional frameworks is better than using the situational or dispositional framework alone. In hierarchical regression, independent variables (IVs) enter the regression equation in sequence. Each set of IVs is assigned the variability beyond that explained by previously entered variables (Tabachnick and Fidell, 2007). As noted by Stevens (1996), multiple regression is one of the most popular and flexible multivariate techniques used in management research. Multiple regression can explore the relationship between two or more independent variables with a dependent variable, taking into account of other variables, especially control variables. Multiple regression is also suitable for testing the effects of an individual variable on job satisfaction. It matched the requirement of this study.

*Method of Analysis for Mediation of Situations on the Relationship between
Dispositions and Job Satisfaction*

The most commonly used method for testing mediation is the causal approach proposed by Baron and Kenny (1986). According to Baron and Kenny (1986), four preconditions are required to support a mediation of a third variable on the relationship between an independent variable and a dependent variable. First, the independent variable should be a predictor of the dependent variable. Second, the

independent variable should be a predictor of the hypothesized mediator variable. Third, the mediator variable should be a predictor of the dependent variable when the independent variable is under control. Fourth, the relationship between the independent variable and the dependent variable in the first step should be stronger than the relationship between the independent variable and the dependent variable in the third step (Baron & Kenny, 1986). Perfect mediation holds if an independent variable has no statistically significant direct effect or is reduced to zero when the mediator is controlled. Partial mediation holds if the independent variable has an effect on the dependent variable both directly and indirectly through the mediator (Baron & Kenny, 1986).

Recently, researchers (e.g. 2009) have pointed out several limitations of the causal steps approach. First, the ability of the causal approach to detect mediated effects has been empirically found to be very weak. Second, the causal step approach does not provide a numerical value for the strength of the indirect or mediated effect. Third, the step of the test of the effect between the independent variable and the dependent variable in the causal step can be fallible in testing for mediation. To address these problems, Mackinnon, Lockwood, Williams (2004) recommended the use of the distribution of the product confidence limits for the indirect effect (PRODCLIN) instead of the causal steps approach. The former has been found to have greater statistical power than the latter does (MacKinnon et al., 2004).

To use PRODCLIN, there are three steps (MacKinnon, Fairchild & Fritz, 2007; MacKinnon & Fritz, 2007; MacKinnon et al., 2004). In step 1, the hypothesized mediator variable is regressed on the independent variable. In step 2, the dependent variable is regressed on the mediator variable with the independent variable under control. In step 3, the regression coefficients and standard errors from the first two

steps are used to calculate a 95% confidence interval for the indirect effect. The indirect effect quantifies the magnitude of the mediation effect and is calculated as the product of the regression coefficients from the two steps outlined above. PRODCLIN allows the researcher to obtain more accurate confidence intervals for the indirect effect compared to other tests, such as the Sobel test (MacKinnon et al., 2004). To establish mediation, the 95% confidence interval for the indirect effect should be exclusive of zero.

In the current study, there were multiple mediators. In the present study, a multiple mediation model was used where the dependent variable was regressed on all the potential mediators, rather than one potential mediator each time. According to Preacher and Hayes (2008), the multiple mediation model has several advantages over separate simple mediation models. First, the mediating effect of a particular mediator can be determined with the presence of other mediators in the model. Second, the likelihood of parameter bias due to omitted variables is reduced when all the mediators are included in a single model. Third, when all the mediators are included in a single model, the relative magnitudes of the specific indirect effects associated with all mediators can be determined.

Specifically, to test for the mediating role of the situational variables on the relationship between dispositional variables and job satisfaction, the following procedure was followed. In step one, each of the mediator variables (a particular situational variable) was regressed on the dispositions and demographic variables. In step two, job satisfaction was regressed on all the mediators (situational variables), dispositional and demographic variables. In step three, the 95% confidence interval for the indirect effect was calculated using PRODCLIN. To establish evidence of mediation, the 95% confidence interval for the indirect effect should not contain the

value of zero. Perfect mediation holds if a dispositional variable has no statistically significant direct effect when the mediators are controlled. Otherwise, a situational variable partially mediates the relationship between a dispositional variable and job satisfaction. A total effect was also calculated as the sum of the direct (unmediated) and indirect (mediated) effect. In the present study, the total effect is analogous to a partial correlation between the dispositional variables and job satisfaction with the situational and demographic variables under control.

Control variables

Previous research has suggested that several demographic variables may be related to job satisfaction. To rule out alternative explanations for the relationship between the hypothesized antecedents and job satisfaction, a number of demographic characteristics were used as control variables. Those control variables included gender, age, marital status, and educational level.

Gender

Gender is expected to be related to job satisfaction, but the direction of its relationship with job satisfaction is not clear. According to Clark (1996), women may have higher job satisfaction for several reasons. First, women could expect less from their jobs than men as traditionally women held poorer positions in the labor market. Specifically, men could compare their jobs with those of other men, while women could compare their jobs to those of other women or toward jobs that they have held or unpaid work in the home. Second, women may differ from men in terms of work-related values. Third, there could be a sample selection problem. In situations

where a woman is the second bread-winner they may find it easier to leave the labor market. Thus more women who are satisfied at work would be working compared to women who are dissatisfied. In support of this theory, some empirical studies have found that women have higher job satisfaction than men. For instance, Clark (1996) with a sample of about 5,000 UK employees found that women had higher job satisfaction than men even though their job quality was lower than their male counterparts.

Another view is that males could have a higher job satisfaction than females because of better working conditions (Ting, 1997). There has also been empirical support for the higher job satisfaction of men. For instance, Mason (1995) using a sample of 13,000 US employees found that clerical males were happier with their jobs than their female counterparts. Similarly, Ting (1997) using a sample of 30,838 US government employees found that males had higher job satisfaction than females.

A third view is that men and women have the same level of job satisfaction, even though women have inferior jobs to men (Spector, 1997). There are many empirical studies in which no significant difference between men and women's job satisfaction has been found. For example, Brush, Moch and Pooyan (1987) found no difference in men and women's job satisfaction cross 21 studies with a sample size of 7,242 cases. A large-scale survey in the United States (Warr, 1999) reported no gender difference in job satisfaction. Mason's (1995) large survey in the US found no difference on job satisfaction for managerial man and woman. Similarly, Ting (1997) found that the difference of job satisfaction between male and female employees disappeared when job situations were under control. In China, studies in Tianjin (Loscocco & Bose, 1998), in Xi'an (Zhang et al., 2003b) and 32 Chinese provincial and autonomous cities (Nielsen & Smyth, 2008) did not find gender differences in job satisfaction.

Similarly, Spector et al. (2004) using a sample of over 700 Chinese managers also found no differences in job satisfaction for men and women.

Despite the lack of consensus in previous research, some studies have demonstrated a potential relationship between gender and job satisfaction. Hence, gender is controlled for in this study because of its potential association with job satisfaction.

Age

Age is expected to be related to job satisfaction, but there is a lack of consensus on the relationship. There are two suggestions on the relationship: a U-shaped relationship and a positive linear relationship (Jayaratne, 1993; Spector, 1997; Warr, 1999). The U-shaped relationship proposes that job satisfaction is high at a young age, then decreases, and starts to increase again at a certain age.

There are several reasons to expect that job satisfaction could be positively related to age. First older employees could expect less from their jobs. According to the “cohort” effect described by Mottaz (1987), the emphases of the younger generation and the older generation are different, and each has different expectations of work. Younger employees place more emphasis than older employees on intrinsic work rewards such as having an interesting and challenging job. Furthermore, the “ageing” effect (Mottaz, 1987; Wright & Hamilton, 1978) suggests that older people could have lower and more realistic expectations as they have adjusted their expectations to a more realistic level over their past years’ employment. Work rewards such as money, interesting work, autonomy and promotions may therefore be less important to older employees. Second, older employees could get more from their work than their younger counterparts. According to the “ageing” effect, older

employees are more likely than younger employees to have built up considerably more seniority and work experience and so have an objectively better job. Because older employees could expect less and get more than younger people from their jobs, the discrepancy between their expectation and the reality will be smaller than that for younger people, whose expectation will be higher than the reality. Consequently, the job satisfaction of older people would be higher than that of younger people. Third, older employees may have limited alternative employment opportunities and greater costs than do younger employee if they want to leave their current jobs (Lewis & Shorten, 1991). They are thus more likely to cognitively justify remaining in the organization and develop more positive attitudes toward their jobs. Fourth, there could be a selection bias for Chinese employees, as in the marketization of China's economy large numbers of workers have been laid off and it is more difficult for older workers to obtain reemployment than it is for younger workers. As a result those older workers with a job may place more value on a secure job than would young workers, and thus as a result would have higher job satisfaction (Smyth, Zhai & Wang, 2001b).

There has also been empirical evidence on the positive relationship between age and job satisfaction. For instance, Brush et al. (1987) reported a mean correlation of .22 between age and job satisfaction across 19 studies with a sample of 6,485 cases. In China, multivariate research reported by Zhang et al. (2003) and Nielsen and Smyth (2008) support the view that older people have higher job satisfaction than younger people.

Nevertheless, there is also theory suggesting that the relationship between job satisfaction and age could be U-shaped. According to affect theory (Locke, 1976), when people start to work, they do not have many skills and their expectations are expected to be low. Even though they don't receive a high level of reward, the

discrepancy between the reality and the expectation may not be large. As a result their job satisfaction is high. When people get a little older, however, they obtain more skills. Their expectations may then outweigh what they receive, and as a result, the discrepancy becomes bigger and their job satisfaction becomes lower. As a result of this reality check, when people get older again, they adjust their expectations, and the discrepancy becomes smaller. Then their job satisfaction will increase again. There has also been evidence which supports a U-shaped relationship between age and job satisfaction, particularly among men (Spector, 1997).

In summary, despite the lack of consensus on the relationship between age and job satisfaction, some studies have demonstrated an association. Therefore, age is controlled for in this study.

Marital Status

Marital status could be related to job satisfaction, but the direction of its relationship is not clear. On the one hand, married individuals could have higher job satisfaction than single people for two reasons. First according to Nielsen and Smyth (2008) the dual incomes of married people could allow them to be more selective in taking jobs that they like, while individuals who are single are more likely to be forced to take and remain in jobs which they do not enjoy. Second, according to Parasuraman, Greenhaus and Granrose (1992) married individuals could have spouse support, which in turn could increase job satisfaction. On the other hand, married employees could be more likely to experience family/work conflict (Grandey, Cordeiro & Crouter, 2005), which in turn could lower job satisfaction. Meta-analysis (Yin & Yang, 2002), a large survey (Clark, Oswald & Warr, 1996; Florit & Lladosa, 2007) and multivariate analyses (Nielsen & Smyth, 2008; Zhang et al., 2003b) have

found mixed results on the relationship between marital status and job satisfaction. For instance, a meta-analysis by Yin and Yang (2002) using a sample of 3,003 respondents found that in Taiwan married nurses were more satisfied with their jobs than single nurses; however another study with a large sample of Spanish employees (2007) found a non-significant relationship between marital status and job satisfaction. Multiple regression on a sample of technicians in IT companies in Xi'an (Zhang et al., 2003b) and on urban residents in 32 Chinese cities (Nielsen & Smyth, 2008) also found no significant effect of marital status on job satisfaction.

Marital status is included in the current study as a control variable because of its possible association with employees' job satisfaction.

Educational Level

Educational level may be related to job satisfaction, but its relationship with job satisfaction is similarly unclear. On the one hand, better education could lead to higher job satisfaction, as better educated individuals generally have a better job, better pay, and more opportunities for promotion than less educated people (Nielsen & Smyth, 2008). On the other hand, better education could also lead to lower job satisfaction for several reasons (Loscocco & Bose, 1998; Nielsen & Smyth, 2008). First, better educated individuals could have higher expectations of a job. Specifically, their comparator could be different from their less educated counterparts. If education raises people's expectations to an extent that is not matched by intrinsic work rewards (for instance, challenging and interesting jobs) or extrinsic work rewards (income and fringe benefits), it is expected their job satisfaction will decrease (Clark et al., 1996; Clark, 1996; Loscocco & Bose, 1998; Ting, 1997). Second, as individuals with better education have more opportunities for changing jobs or leaving employers, they are

less likely to develop great affection toward their job and organization.

Meta-analysis, large scale surveys (Clark, 1996; Fan & Ding, 2007) and multivariate analyses (Loscocco & Bose, 1998; Nielsen & Smyth, 2008; Ting, 1997; Verhofstadt et al., 2007; Wang, 2008; Zhang et al., 2003b) have found mixed results on the relationship between educational level and job satisfaction. Negative relationships (Clark, 1996; Loscocco & Bose, 1998; Nielsen & Smyth, 2008; Ting, 1997; Verhofstadt et al., 2007; Wang, 2008), a non-significant relationship (Ting, 1997) and positive relationships (Fan & Ding, 2007) have been reported. For instance, a large scale survey in the UK (Clark, 1996) found that the average job satisfaction of better educated employees was lower than that of less well educated individuals. Similarly, studies in Belgium (Verhofstadt et al., 2007), in Tianjin (Loscocco & Bose, 1998), in 32 Chinese provincial cities (Nielsen & Smyth, 2008), and in Guangdong (Wang, 2008) found a negative relationship between job satisfaction and educational level. Nevertheless, a multivariate study of US employees (Ting, 1997) found a non-significant relationship between educational level and job satisfaction, and Fan and Ding (2007) found a positive relationship between educational level and job satisfaction with a sample of 5,476 Chinese employees. Although the relationship is not clear, educational level was controlled for in the current study because of its possible association with employee job satisfaction.

Summary

This chapter detailed the research methodology employed in the current study, which used a cross-sectional survey design to test the hypothesized relationships. Data were collected via convenience sampling for 405 white-collar workers employed in

industrial and commercial enterprises in a city in China's northeast. The survey instrument was derived from previous validated measures. Back-translation was used to ensure the equivalence of the original English and the Chinese version of the scales used. Confirmatory factor analysis was used to assess construct validity and Cronbach's alpha coefficient was calculated to evaluate the reliability of the measures. Hierarchical regression was used to assess the relationship between dispositions, situations and job satisfaction. The distribution of the product confidence limits for the indirect effect was used to test the mediating role of situations on the relationship between dispositions and job satisfaction. To rule out alternative explanations for the relationship between the studied variables and job satisfaction, four demographic variables were controlled: gender, age, marital status, and educational level. The following chapter will present the results of the data analytic procedure undertaken to address the hypotheses specified in chapter 2.

CHAPTER 4: RESULTS

This chapter investigates the hypothesized relationships between job satisfaction and its antecedent variables as depicted in chapter 2. The first section of this chapter presents findings on the evaluation of the survey measures in terms of their validity and reliability. The second section presents findings on the relationship between job satisfaction and its antecedents. The third section looks at the mediating role of perceptions of work situations on the relationship between dispositions and job satisfaction.

Confirmatory Factor Analysis and Reliability of the Measures

Confirmatory factor analysis (CFA) was used to test the discriminant validity of all the multi-item measures. Following Agho et al. (1992), the measures of job satisfaction and positive and negative affectivity were put together and subjected to CFA. There are two reasons to run a CFA of the job satisfaction and PANAS scale together (Agho et al., 1992). First, positively worded items in the job satisfaction scale may measure positive affectivity, while negatively worded items in the scale of job satisfaction may measure negative affectivity. Second, all the items in the job satisfaction and PANAS scales may measure a single construct of affectivity. After the CFA of the job satisfaction and affectivity scales, the multi-dimensional BFI scale was subjected to CFA. Finally, all the multi-item measures of work situations were subjected to CFA.

Data Screening for Confirmatory Factor Analysis

Prior to undertaking a CFA on the measures, preliminary data screening procedures were conducted to investigate the accuracy of the data. An examination of the data displayed no out of range data. All the observed variables were also screened for compatibility with the assumptions required for CFA. The assumptions included adequate sample size, absence of missing data, normality of the observed variables, absence of outliers, and linearity between the observed variables (Tabachnick & Fidell, 2007). These are discussed below.

Sample Size

CFA is a large sample technique (Kline, 2005). However, there are no strict rules for sample size for CFA (MacCallum, Widaman, Zhang & Hong, 1999). Tabachnick and Fidell (2007) recommended a minimum sample size of no less than 300 cases. Kelloway (1996) reported that in management studies the mean sample size for latent variable studies was 278. As to the ratio of number of cases to observable variables, Cattell (1978) recommended no less than 3 to 6, whereas Everitt (1975) recommended no less than 10. There were 405 cases in the current study. The case to observed variable ratio was 25 when the 16 observed variables on job satisfaction and PANAS were factor analyzed. The case to observable variable ratio was nine and 10 respectively when the 44 item BFI measure and all the multi-item situational measures were factor analyzed. The sample size thus appears to be adequate for subsequent factor analysis.

Missing Data

According to Harrington (2009), missing data can threaten the results of CFA in

two ways. First, missing data can result in an under-powered study and non-significant results. Second, non-random missing data may result in misleading results in the data analysis. However, there are no guidelines on how much missing data is too much. Tabachnick and Fidell (2007) suggested that for a large dataset, if less than 5% of the data is missing at random it is unlikely there will be a serious problem, and it can be handled with any method for dealing with missing data. In the current study, there were no observed variables with more than 5% of the data missing. Furthermore there was no pattern to the missing data. For the six items on job satisfaction, the missing values ranged from 0 to 1 (0%). For the 42 items on the situational variables, the missing data ranged from 0 to 5 (1%). The missing data for the 54 items on dispositional antecedents ranged from 1 to 16 (4%).

In dealing with the missing data for the CFA, full information maximum likelihood estimation (FIML) was used. With FIML, all available information about the observed data is used. FIML is a superior technique for handling missing data and generally outperforms conventional methods such as listwise deletion, yielding parameter estimates with less bias in large samples (Schafer & Graham, 2002; Tabachnick & Fidell, 2007). According to Little and Rubin (1990), one advantage of FIML is that it often reduces bias due to non-response even when the missing-at-random assumption has not strictly been met.

Normality

Normality of the observed variables was checked with skewness and kurtosis, as suggested by Looney (1995). Tharenou et al. (2007) suggested that absolute values of skewness should not approach 2 and absolute values of kurtosis should not be greater than 5. The dataset displayed a maximum skewness of 1.13 and a maximum kurtosis

of 3.65 for the observed variables, which were in the range of the recommended value. This result suggested that the observed variables do not show significant non-normality.

Multivariate Outliers

Outliers refer to observations which appear to be inconsistent with the remainder of the sample (Barnett & Lewis, 1994). A multivariate outlier is a combination of scores on two or more variables that are deviant from other cases (Tabachnick & Fidell, 2007). Multivariate outliers can distort the results of CFA (Bollen, 1987). They were checked using the χ^2 distribution, specifically by comparing the actual Mahalanobis distance and the critical value of the distance. If the actual distance of a case is larger than the critical distance, then the case is a multivariate outlier. The critical value of Mahalanobis distance was determined by consulting the χ^2 Table with an alpha level of .001 (Tabachnick & Fidell, 2007). For the 16 terms measuring PANAS and job satisfaction, 15 cases were identified as multivariate outliers. In terms of the 44 items BFI scale, 26 cases were detected as multivariate outliers. For the 42 items measuring the situational antecedents of job satisfaction, 20 cases were identified as multivariate outliers. According to Kline (2005), CFA can be executed on the data including and excluding outliers, and if the results are dramatically different then both sets of findings should be reported. In the current study, CFA was run both with and without the multivariate outliers. Specifically, for the measures of job satisfaction and PANAS, CFA was run on the data with all the cases and the data excluding the 15 outliers respectively. For the BFI scale, CFA was also run with data with all the cases and without the 26 outliers respectively. For all the situational variables, CFA was run with the data with all the cases and data without the 20

multivariate outliers. Only the results with the outliers were reported, as there were no dramatic differences in the results with and without outliers.

Linearity

Linearity among pairs of observed variables was assessed by inspection of bivariate scatterplots (Tabachnick & Fidell, 2007). All the resulting scatterplots were generally oval-shaped, indicating no violation of the assumptions of linearity.

In summary, the screening of the data demonstrated that the dataset satisfied the requirements on sample size, missing data, normality, outliers, and linearity. This indicated that it was appropriate to proceed with further analysis by CFA.

Results of Confirmatory Factor Analysis on PANAS and Job Satisfaction

Following Agho et al. (1992), CFA was used to determine whether the scales of job satisfaction and positive and negative affectivity measure distinct constructs. Four models were tested. Model one was a one-factor model, in which all the items measuring job satisfaction, PA and NA loaded on a single factor. Model two was a two-factor model, in which all the positively worded items on job satisfaction and PA loaded on one factor, while all the negatively worded items on job satisfaction and items on NA loaded on a second factor. According to Agho et al. (1992), it is possible the positively worded items on job satisfaction may measure positive affectivity, while the negatively worded items on job satisfaction may measure negative affectivity. Model three was also a two-factor model, in which items on job satisfaction loaded on one factor, and items on PA and NA loaded on a second factor. Model four was a three-factor model, in which items on job satisfaction, PA, and NA loaded on three factors.

The four models on the job satisfaction and PANAS measures are nested models.

According to Hair et al. (2006), nested models are models that contain the same constructs but differ in terms of the number or type of relationships represented. Nested models can be compared by subtracting the chi-square values in two models and comparing this value to the critical value corresponding to the difference in degrees of freedom. If the obtained chi-square difference statistic reveals a significant difference between the two models being compared (i.e., the chi-square difference exceeds the critical value), then the researcher should conclude that the less restricted model provides a better model fit to the data. Specifically, in this study chi-square difference statistics (and the related degree of freedom) were calculated using model four as a baseline to determine if the more constrained models (i.e., the one factor or the two factor model) had superior fit.

The fit statistics for each of the models in the group of PANAS and job satisfaction measures, as well as results of chi-square difference tests used to compare alternative models with the three-factor model are presented in Table 4.1.

Table 4.1 Comparison of alternative CFA models of job satisfaction and PANAS

Model	χ^2	<i>df</i>	χ^2_{diff}	χ^2/df	CFI	RMSEA	LO90	HI90
Model 1	944	104	594	9.08	.63	.14	.13	.15
Model 2	877	103	528	8.52	.65	.14	.13	.15
Model 3	571	103	222	5.55	.79	.11	.10	.12
Model 4	349	101	-	3.45	.89	.08	.07	.09

Note: $N = 405$; χ^2_{diff} = the difference in χ^2 compared with the three-factor model; CFI = comparative fit index;

RMSEA = root-mean-square error of approximation.

Model 1: the model in which all the items in job satisfaction, PA, and NA loaded on one factor;

Model 2: the model in which all the positively worded items on job satisfaction and items on PA loaded on one factor, while the negatively worded items on job satisfaction and items on NA loaded on a second factor;

Model 3: the model in which items on job satisfaction loaded on one factor, and items on PA and NA loaded on a second factor;

Model 4: the model in which job satisfaction PA and NA loaded on three separate factors.

As shown in Table 4.1, the chi-square changes of model one, model two, and model three were 594, 528, and 222 respectively. The chi-square changes of the three models were larger than the critical chi-square value of 9.21 with two degrees of freedom ($p < .01$) and the chi-square value of 11.34 with three degrees of freedom ($p < .01$). Therefore, the three-factor model was the best model of the four. The CFI of the three-factor model was .89 which is only marginally lower than the recommended acceptable level of .90. Importantly, the RMSEA value of the three-factor model fell in the accepted range of .08 for reasonable fit.

The standardized factor loadings for the three factor model of job satisfaction and affectivity are presented in Table 4.2.

Table 4.2 Factor loadings of the three-factor model of job satisfaction and affectivity

Item	NA	PA	JS
Upset	.57		
Hostile	.56		
Ashamed	.55		
Nervous	.49		
Afraid	.66		
Alert		.42	
Inspired		.57	
Determined		.74	
Attentive		.74	
Active		.74	
I find real enjoyment in my job.			.74
I like my job better than the average person.			.76
I am often bored with my job.			.68
I would not consider taking another kind of job.			.79
Most days I am enthusiastic about my job.			.64
I feel fairly well satisfied with my job.			.82

Note: Bold indicates that the factor loading is over .40.

As shown in Table 4.2, all the standardized factor loadings were over .40, which indicated that the PA, NA, and job satisfaction items loaded appropriately on the three factors. In summary, the factor analysis results provided support for the argument that the scales of PA, NA, and job satisfaction measured different constructs. This evidence of the distinction between PA, NA, and job satisfaction measures conforms to results of CFA reported in previous research (Agho et al., 1992). The finding of the distinction between PA and NA measures also aligns with findings in previous CFA of PANAS (Crawford & Henry, 2004; Wang et al., 2007).

Job Satisfaction

The result of the CFA suggests that job satisfaction was separate to PA and NA. The factor loadings of the six job satisfaction items ranged from .64 to .82, with an average factor loading of .74. The Cronbach's alpha was .88, indicating good reliability. The mean score on the measure of job satisfaction was 3.36 out of 5 (SD = 0.73), which is similar to previous studies in China. For example, using the same measure for job satisfaction, a study in Jiangsu (Zhang & Zhao, 2007) found a mean value of 3.47, a study in Xi'an (Zhang et al., 2003b) found a mean value of 3.45, and a study in Beijing (Zhang & Zhang, 2006) found a mean value of 3.10.

Positive Affectivity

The result of the CFA suggests that PA was separate to job satisfaction and NA. The factor loadings of the five items ranged from .42 to .74, with an average factor loading of .64. The Cronbach's alpha was .78 indicating good reliability.

Negative Affectivity

The result of CFA suggests that NA was separate to job satisfaction and PA. The

factor loadings of the five items ranged from .49 to .66, with an average factor loading of .57. The Cronbach's alpha was .70 indicating good reliability.

Results of Confirmatory Factor Analysis of the Big Five Index (BFI)

Four models of the BFI scale were compared with CFA. Model one was the original measurement model proposed by John and Srivastava (1999), in which all 44 items were included. Several empirical studies with multinational samples using principal component analysis have found that the 44 items of the BFI fall into the required five distinct components (e.g. Denissen et al., 2008; Schmitt et al., 2007; Soto et al., 2008). Model two was the model in which all the items with a factor loading of less than .40 in model one were dropped. Model three was a competing model to model one, in which 16 negatively worded (reverse scored) items in model one were dropped from the factors of extraversion, neuroticism, conscientiousness, agreeableness, and openness to experience. There are two reasons for the proposition of model three. First, according to Devellis (2003, p. 70), "The disadvantage of items worded in an opposite direction outweigh any benefits". There is also empirical evidence to support the poor performance of the reverse ordered items. For example, the 15-item organizational commitment measure (Mowday, Steers & Porter, 1979) intended to measure affective organizational commitment was often found to be split into two factors, rather than one factor, with positively worded items into one factor, and negatively worded items into another factor (Price, 1997). Second, in organizational research it is common for researchers to use a short version measure without any negatively worded items to replace the version with all the items. For instance, Mowday, Steers and Porter's (1979) short version Organizational Commitment scale with nine positively worded items has been often used by researchers to replace the 15-item full scale (see Fields, 2002). Model four was the

model in which all the items with a factor loading less than .40 in model three were dropped.

These four models were not nested models, as they contained different items. The fit statistics for the four models of the BFI scale are presented in Table 4.3.

As shown in Table 4.3, model one demonstrated a poor model fit. The CFI of model one was .62, which was far less than the hurdle of .90 for CFI, and there were 13 items with factor loadings less than .40. After these 13 items were dropped, the CFI in model two increased to .80, which was still far less than the acceptable level of .90. Furthermore the factor loadings of two more observed variables dropped to less than .40. Model three was much better than both model one and model two in terms of model fit. CFI of model three was .85, which was still lower than the hurdle of .90. As shown in Table 4.4, there were five items with factor loadings lower than .40. After these five items were dropped from model three, 23 items were left. The CFI of the 23 items in model four increased to .90. In addition, the RMSEA value of .06 fell in the accepted range of .08 for reasonable fit. The factor loadings of the items from model three are presented in Table 4.4.

Table 4.3 Comparison of alternative CFA models of the BFI

Model	χ^2	<i>df</i>	χ^2/df	CFI	RMSEA	LO90	HI90
Model 1	2713	892	3.04	.62	.07	.07	.07
Model 2	1040	424	2.45	.80	.06	.06	.07
Model 3	802	340	2.36	.85	.06	.05	.06
Model 4	513	220	2.33	.90	.06	.05	.06

Note: *N*= 405;

CFI = comparative fit index;

RMSEA = root-mean-square error of approximation.

Model 1: the model in which all the 44 items of the BFI were included;

Model 2: the model in which items with a factor loading of less than .40 in model one were dropped;

Model 3: the model in which negatively worded items in model one were dropped;

Model 4: the model in which items with a factor loading of less than .40 in model 3 were dropped.

Table 4.4 Factor loadings of the 28-item BFI items from model three

Item	Ex	Ag	Con	Neu	Op
Is talkative	.50				
Is full of energy	.66				
Generates a lot of enthusiasm	.67				
Has an assertive personality	.61				
Is outgoing, sociable	.51				
Is helpful and unselfish with others		.68			
Has a forgiving nature		.58			
Is generally trusting		.25			
Is considerate and kind to almost everyone		.64			
Likes to cooperate with others		.43			
Does a thorough job			.58		
Is a reliable worker			.56		
Perseveres until the task is finished			.58		
Does things efficiently			.72		
Makes plans and follows through with them			.59		
Is depressed, blue				.58	
Can be tense				.69	
Worries a lot				.63	
Can be moody				.22	
Gets nervous easily				.68	
Is original, comes up with new ideas					.74
Is curious about many different things					.35
Is ingenious, a deep thinker					.74
Has an active imagination					.66
Is inventive					.78
Values artistic, aesthetic experiences					.38
Likes to reflect, play with ideas					.54
Is sophisticated in art, music, or literature					.35

Note: Bold indicates that the factor loading is over .40.

Ex: extraversion; Ag: agreeableness; Con: conscientiousness; Neu: neuroticism; Op: openness to experience

As shown in Table 4.4, there was one item in the measure of agreeableness, one item in neuroticism, and three items in openness to experience with factor loadings less than .40. In agreeableness, the item “I see myself as someone who is generally trusting” had a factor loading of .25. In neuroticism, the item “I see myself as someone who can be moody” had a factor loading of .22. In openness to experience, the three items “is curious about many different things”, “value artistic, aesthetic

experiences”, and “is sophisticated in art, music, or literature” had factor loadings less than .40. There are two plausible explanations for the low factor loadings of these five items. First, despite the employment of a standard translation procedure, it neither guarantees that items have equivalent connotative meaning (Brislin, 1993; Lee, Allen, Meyer & Rhee, 2001) nor prevents culturally specific misunderstandings (Andolssek & Sstebe, 2004). According to Tayyeb and Riaz (2004), it is not always easy to retain the true meaning of items when they are expressed in a language other than that in which the instrument was originally created. Thus, it is possible that the Chinese translation failed to take account of all possible nuances in the English language, causing the Chinese participants to interpret the items differently to what was expected. For instance, in Chinese a person who generally trusts others could be interpreted as one who could be easily taken advantage of by others, or someone who is not alert enough. The word “moody” could also have a strong negative connotation in Chinese; thus few people would be likely to claim that they are moody. Second, the three items with a low factor loading in openness to experience may imply that the structure of Chinese personality is not the same as that of western countries. However, the CFA results provide support for the argument that the 23 items of the revised BFI measure the five “Big Five” constructs.

Extraversion

The CFA provided evidence that extraversion was separate to the other four factors in the Big Five. The factor loadings of the five items ranged from .50 to .67, with an average factor loading of .59. The Cronbach’s alpha was .74 indicating good internal reliability.

Neuroticism

The CFA also provided evidence that neuroticism was separate to the other four factors in the Big Five. The factor loadings of the four items ranged from .58 to .69, with an average factor loading of .65. The Cronbach's alpha of .65 in the current study was lower than the cut off point of .70 for established scales (Nunnally, 1978). However, as this measure has not been used previously in China study and the alpha was still higher than the hurdle of .60 for hypothesis testing suggested by Sekaran (1992), the measure was kept for subsequent hypothesis testing.

Conscientiousness

Conscientiousness was also shown in the CFA to be separable to the other four factors in the Big Five. The factor loadings of the five items ranged from .56 to .72, with an average factor loading of .61. The Cronbach's alpha was .74 indicating good internal reliability.

Agreeableness

The CFA also demonstrated that agreeableness was separable to the other four factors in the Big Five. The factor loadings of the four items ranged from .43 to .68, with an average factor loading of .58. The Cronbach's alpha was .73 indicating good internal reliability.

Openness to Experience

The CFA also showed that openness to experience was separable to the other four factors in the Big Five. The factor loadings of the five items ranged from .54 to .78, with an average factor loading of .69. The Cronbach's alpha was .82 indicating good internal reliability.

Results of Confirmatory Factor Analysis of the Situational Variables

Two models using the measures of the situational variables were compared with CFA. In model one, all the items in the nine multi-item measures of work situations were put together and subjected to a CFA. There were 42 items in total: six items for autonomy, five items for routinization, six items for role ambiguity, eight items for role conflict, three items for work overload, four items for supervisor support, four items for co-worker support, three items for distributive justice, and three items for promotional chances. In model two, items with a factor loading of less than .40 in model one were dropped. The model fit statistics for the two models are presented in Table 4.5.

Table 4.5 demonstrates that the CFI of the model with all the 42 items was .79, which was lower than the hurdle of .90. After deletion of items with factor loadings lower than .40, the 37-item model had a CFI of .84, and a RMSEA of .06. The RMSEA was in the range for good model fit of .08, but the CFI was still lower than the hurdle of .90. The slightly lower CFI could have been caused by the large number of observed variables in the model. Tharenou et al. (2007) noted that the result of having too many observed variables is that an adequate fit is not easily be obtained. The factor loadings of model one are displayed in Table 4.6.

Table 4.5 Comparison of alternative CFA models of the situational variables

Model	χ^2	Df	χ^2/df	CFI	RMSEA	LO90	HI90
Model 1	1805	783	2.31	.79	.06	.05	.06
Model 2	1334	593	2.25	.84	.06	.05	.06

Note: $N=405$;

CFI = comparative fit index;

RMSEA = root-mean-square error of approximation.

Model 1: the model in which all the 42 items in the measures of situational variables were included;

Model 2: the model in which items with factor loadings less than .40 in model 1 were dropped, leaving 37 items in the model.

Table 4.6 Factor loadings of the 42-item situational variables from model one

Item	AU	WL	RO	RA	RC	SS	CS	DJ	PC
How much are you left on your own to do your own work?	.80								
To what extent are you able to act independently of your supervisor in performing your job function?	.77								
To what extent are you able to do your job independent of others?	.78								
The freedom to do pretty much what I want on my job	.65								
The opportunity for independent thought and action	.41								
The control I have over the pace of my work	.17								
How often does your job require you to work very fast?		.58							
How often does your job require you to work very hard?		.74							
How often does your job leave you with little time to get everything done?		.22							
To what extent does your job require that you keep learning new things? (R)			.74						
How often do you get to do a number of different things on your job? (R)			.54						
To what extent does your job require that you do the same things over and over again?			.20						
To what extent does your job require a high level of skill? (R)			.59						
How creative does your job require that you be? (R)			.67						
I feel certain about how much authority I have. (R)				.40					
Clear, planned goals and objectives exist for my job. (R)				.64					
I know that I have divided my time properly. (R)				.59					
I know what my responsibilities are. (R)				.68					
I know exactly what is expected of me. (R)				.54					

To be continued

Table 4.6 Factor loadings of the 42-item situational variables from model one
(continued)

Item	AU	WL	RO	RA	RC	SS	CS	DJ	PC
Explanation is clear of what has to be done. (R)				.56					
I have to do things that should be done differently.					.44				
I receive an assignment without the manpower to complete it.					.61				
I have to buck a rule or policy in order to carry out an assignment.					.68				
I work with two or more groups who operate quite differently.					.44				
I receive incompatible requests from two or more people.					.57				
I do things that are apt to be accepted by one person and not accepted by others.					.45				
I receive an assignment without adequate resources and materials to execute it.					.63				
I work on unnecessary things.					.56				
How much does your supervisor go out of their way to do things to make your work life easier for you?						.72			
How easy is it to talk with your supervisor?						.72			
How much can your supervisor be relied on when things get tough at work?						.66			
How much is your supervisor willing to listen to your personal problems?						.67			
How much does your co-worker go out of their way to do things to make your work life easier for you?							.73		
How easy is it to talk with your co-worker?							.68		
How much can your co-worker be relied on when things get tough at work?							.70		

To be continued

Table 4.6 Factor loadings of the 42-item situational variables from model one
(continued)

Item	AU	WL	RO	RA	RC	SS	CS	DJ	PC
How much is your co-worker willing to listen to your personal problems?							.67		
I am rewarded fairly for the amount of effort that I put in (Money and recognition are examples of rewards.).								.94	
I am rewarded fairly considering the responsibilities I have.								.88	
I am not rewarded fairly in view of my experience. (R)								.01	
Promotions are regular.									.65
Promotions are infrequent.									.31
There is a good chance to get ahead.									.71

Note: Bold indicates that the factor loading is over .40. R = reversed item.

AU: autonomy; WL: work overload; RO: routinization; RA: role ambiguity; RC: role conflict; SS: supervisor support; CS: co-worker support; DJ: distributive justice; PC: promotional chances

Table 4.6 demonstrates there were five items with factor loadings lower than .40 that were dropped. There may be two reasons for the low loadings. First, because of cultural and language differences, the Chinese participants may understand the items differently to westerners. For instance, one item in autonomy had a factor loading of .17. The item asked about the extent of control that an employee has on their pace of work. The results indicated that this item was different from the other five items. Employees may work independently of their supervisor and their co-worker and may select the time and method to do tasks, but this may not mean they can control the pace of their work. A second item with a factor loading of .22 was in the measure of work overload. The item asked the respondents about the frequency of lack of enough time to finish their jobs, while the other items on work overload asked about working

hard and fast. One may need to work fast and hard, but it does not necessarily mean that one does not have enough time to finish one's work. It is likely that the respondents sometimes need to work hard and fast, but still have enough time to finish their work. Second, the low factor loadings on some items may be caused by the negative wording of the items. One item in the measure of routinization had a factor loading of .20. The item asked respondents of the extent of doing the same things over and over again. This item was negatively worded compared with the other four positively worded and reverse scored indicators for routinization. Another item with a low factor loading of .31 was in the measure of promotional chances. The item asked if promotions are infrequent. This item was also negatively worded. A fifth item with a factor loading of .01 was in the measure of distributive justice. The item was on the unfairness on rewards in view of their experience. The item was also negatively worded. The finding of a lower factor loading of these negatively worded items supports the argument of Devellis (2003) that negatively worded items in a scale may perform worse than other items.

In model two, there were only two items for the measures of each of work overload, distributive justice, and promotional chances. According to Kelloway (1996), with respect to CFA, at least three observed variables for each latent variable is the most commonly cited rule and researchers tend to estimate measurement models with this rule. The two-item measures of the three constructs may be a limitation in the current study. However, as the 37 items demonstrated reasonable factor structure and adequate factor loadings, they were used for further analysis.

Autonomy

The CFA provided evidence that autonomy was separate to the other eight

situational constructs. The factor loadings of the five items ranged from .41 to .80, with an average factor loading of .68. The Cronbach's alpha of .81 indicated good internal reliability.

Routinization

The CFA indicated that routinization was separate to the other eight situational constructs. The factor loadings of the four items ranged from .54 to .74, with an average factor loading of .66. The Cronbach's alpha of .73 indicated good internal reliability.

Role Ambiguity

The CFA showed that role ambiguity was separate to the other eight situational constructs. The factor loadings of the six items ranged from .40 to .68, with an average factor loading of .56. Cronbach's alpha of .73 indicated good internal reliability.

Role Conflict

The CFA demonstrated that role conflict was separate to the other eight situational constructs. The factor loadings of the six items ranged from .44 to .68, with an average factor loading of .55. The Cronbach's alpha of .77 indicated good internal reliability.

Work Overload

The CFA displayed that work overload was separate to the other eight situational constructs. The factor loadings of the two items were .58 and .74. The Cronbach's

alpha was .59, which is lower than the cut off point of .70 for established scales (Nunnally, 1978), and the hurdle of .60 for hypothesis testing suggested by Sekaran (1992). However, it was kept for hypothesis testing for three reasons. First, previous research in China have reported alphas ranging from .73 to .76 (Zhang et al., 2003a; Zhang et al., 2002; Zhang et al., 2003b), indicating the relatively lower alpha in the current study may be sample-specific. Second, the alpha of work overload was only marginally lower than .60. Third, as alpha increases with the number of observed items used to measure a construct, an alpha value of .59 for a construct with two items is reasonably high.

Supervisor Support

The CFA indicated that supervisor support was separate to the other eight situational constructs. The factor loadings of the four items ranged from .66 to .72, with an average factor loading of .69. The Cronbach's alpha of .79 indicated good internal reliability.

Co-worker Support

Co-worker support was also separate to the other eight situational constructs. The factor loadings of the four items ranged from .67 to .73, with an average factor loading of .70. The Cronbach's alpha of .79 indicated good internal reliability.

Promotional Chances

The CFA also showed that promotional chances were separate to the other eight situational constructs. The factor loadings of the two items ranged from .65 to .71, with an average factor loading of .68. The Cronbach's alpha of .62 in the current study

was lower than the cut off point of .70 for established scales (Nunnally, 1978). However, this measure was still kept for subsequent hypothesis testing for two reasons. First, the alpha in the current study was still higher than the hurdle of .60 for hypothesis testing suggested by Sekaran (1992). Second, the alpha was similar to those in previous Chinese studies, where values ranging from .68 to .71 suggest this measure is stable in that general population (Zhang et al., 2003a; Zhang et al., 2002; Zhang et al., 2003b).

Distributive Justice

Finally, the result of the CFA also indicated that distributive justice was separate to the other eight situational constructs. The factor loadings of the two items ranged from .88 to .94, with an average factor loading of .91. The Cronbach's alpha of .91 indicated good internal reliability.

Summary of Measures

The internal consistency alphas of the final measures are presented in Table 4.7.

As shown in Table 4.7, except for work overload, promotional chances, and neuroticism, Cronbach's alphas of all the measures were larger than .70, which is the cut off point for established scales (Nunnally, 1978). The alpha of promotional chances, and neuroticism were larger than .60, which is the hurdle for hypothesis testing suggested by Sekaran (1992). The alpha of .59 for work overload was only marginally lower than .60.

Table 4.7 Internal consistency (Cronbach's alphas) of the measures

Variable	No of items	Alpha
Job satisfaction	6	.88
Autonomy	5	.81
Routinization	4	.73
Role ambiguity	6	.73
Role conflict	8	.77
Work overload	2	.59
Supervisor support	4	.79
Co-worker support	4	.79
Distributive justice	2	.91
Promotional chances	2	.62
Positive affectivity	5	.78
Negative affectivity	5	.70
Extraversion	5	.74
Neuroticism	4	.65
Conscientiousness	5	.74
Agreeableness	4	.73
Openness to experience	5	.82

In summary, the factor structure and internal consistency coefficients showed that the original 6-item job satisfaction scale, 6-item role ambiguity scale, the 8-item role conflict scale, the 4-item supervisor support scale, the 4-item co-worker support scale, the 10-item PANAS scale, and the adapted 5-item autonomy scale, the adapted 4-item routinization scale, the adapted 2-item work overload scale, the adapted 2-item distributive justice scale, the adapted 2-item promotional chances scale, and the adapted 23-item BFF scales demonstrated discriminant validity and good internal consistency. These scales were used in the subsequent analysis.

Common Method Variance

Although self-report questionnaires provide inexpensive access to large numbers of respondents in a short period (Mangione, 1995), this data collection method is open to potential common method variance (Chang, 2010; Podsakoff, MacKenzie, Lee &

Podsakoff, 2003; Podsakoff & Organ, 1986; Spector, 2006). Common method variance (CMV) refers to the erroneous relationship caused by collecting data by the same method (Podsakoff et al., 2003; Tharenou et al., 2007). CMV may inflate or deflate the strength of the relationships between job satisfaction and its antecedents.

To address potential CMV, Chang (2010) suggested several approaches. One common approach is to measure dependent and independent variables from different sources. This strategy is appropriate where the variables are behavioral in nature or can be directly observed. However, as most of variables in this study are inherently subjective or intra-psychic in nature, gathering data from another source for these variables is not appropriate. A second approach at the design stage is to use a longitudinal study. However, there are also some major disadvantages of longitudinal design, such as problems with anonymity and reduced sample size due to attrition.

To strengthen the thesis with regard to the risk of CMV, a statistical method known as Harman's single-factor test (Chang, 2010) was adopted. It is a commonly used test (Chang, 2010; Malhotra, Kim & Patil, 2006; Podsakoff et al., 2003). If CMV is present, Harman's test should reveal a single dominant factor. As required for this test, a principal component analysis (PCA) was undertaken using all the variables in the study. Specifically, the measures of job satisfaction, autonomy, routinization, role ambiguity, role conflict, work overload, supervisor support, co-worker support, promotional chances, distributive justice, positive affectivity, negative affectivity, extraversion, conscientiousness, neuroticism, agreeableness, and openness to experience were subjected to a principal component analysis (PCA). The PCA results without rotation are shown in Table 4.8.

Table 4.8 PCA results of the measures used in the study

Component	Eigenvalues	% of Variance	Cumulative %
1	12.93	12.67	12.67
2	6.06	5.94	18.61
3	4.61	4.52	23.14
4	3.78	3.71	26.84
5	3.29	3.22	30.06
6	2.82	2.76	32.83
7	2.59	2.54	35.37
8	2.47	2.42	37.79
9	2.27	2.23	40.01
10	2.02	1.98	42.00
11	1.91	1.87	43.86
12	1.78	1.75	45.61
13	1.73	1.69	47.30
14	1.68	1.65	48.95
15	1.61	1.58	50.53
16	1.48	1.45	51.98
17	1.42	1.39	53.37
18	1.36	1.33	54.71
19	1.33	1.30	56.01
20	1.27	1.24	57.25
21	1.26	1.23	58.48
22	1.23	1.20	59.69
23	1.19	1.16	60.85
24	1.16	1.14	61.98
25	1.11	1.09	63.07
26	1.10	1.08	64.15
27	1.03	1.01	65.15
28	1.01	.992	66.15

Table 4.8 shows 28 factors with eigenvalues greater than one, which explain 66% of the total variance. The first factor explains only 12.3% of the total variance. Although not a definitive test, it is concluded from the evidence of the Harman's test that CMV does not appear to be a serious threat to the study.

Relationship between Job Satisfaction and its Antecedents Using Regression

Prior to performing multiple regression to test the hypothesized relationships, all variables in the regression model were screened for compatibility with the assumptions required for the technique. These assumptions include adequate sample

size, absence of missing data, absence of multivariate outliers, normality of the dependent variable, linearity of the relationship between dependent variable and each independent variable, homoscedasticity between the dependent variables and each independent variables, and absence of multicollinearity among the independent variables (Tabachnick & Fidell, 2007; Tharenou et al., 2007).

Data Screening for the Assumptions of Multiple Regression

Sample Size

In multiple regression, the case to independent variable (IV) ratio has to be substantial or the estimates will be subject to too much sampling error. The simplest rules of thumb are $N \geq 50 + 8m$ (m is the number of IVs) for testing the multiple correlation and $N \geq 104 + m$ for testing a medium effect size for the individual predictors (Tabachnick & Fidell, 2007). Stevens (1996) recommended that at least 15 cases per independent variable are needed. In the current study, a series of regressions were run. The maximum number of IVs used in a series of regressions in this study was 21 variables, with 4 demographic variables, 10 situational variables, and 7 dispositional variables. The minimum requirement for cases with 21 IVs was 125 ($104+21$) for testing individual predictors in standard multiple regression and 218 for testing the multiple correlation, and 315 cases based on the rule of 15 cases per independent variable. Therefore, 405 cases in the current study were well above the minimum requirement for sample size. Indeed, the present sample has in excess of .80 power (at $p = .05$) to detect a small effect for a single predictor using Cohen's f^2 measure of effect size for multiple regression (Maxwell, 2000).

Missing Data

Missing data can be problematic in multiple regression. Missing values scattered non-randomly through a data matrix can pose serious problems because they can affect the generalizability of results (Tabachnick & Fidell, 2007). Tabachnick and Fidell (2007) recommended no more than 5% missing data. In the current study, there was only one variable with missing data marginally over 5%. For the dependent variable, there were two (0.5%) missing data points for job satisfaction. For the demographic variables, missing data ranged from four (1.0%) to nine (2.2%). Specifically, there were nine (2.2%) for gender, four (1.0%) for age, seven (1.7%) for marital status, and four (1.0%) for educational level. In terms of the situational variables, missing data ranged from one (0.2%) to eight (2.0%). There were five (1.2%) for autonomy, one (0.2%) for work overload, one (0.2%) for routinization, five (1.2%) for supervisor support, two (0.5%) for co-worker support, one (0.2%) for distributive justice, two (0.5%) for promotional chances, one (0.2%) for role ambiguity, eight (2.0%) for role conflict, and three (0.7%) for pay level. In regards to dispositional variables, missing data ranged from 1.2 % to 5.2%. There were five (1.2%) for PA, eight (2.0%) for NA, 15 (3.7%) for extraversion, 17 (4.2%) for agreeableness, 21 (5.2%) for conscientiousness, 19 (4.7%) for neuroticism, and 15 (3.7%) for openness to experience. As there was no pattern to the missing data, all the variables were retained for subsequent analyses.

In dealing with missing data for regression there are two main options: pairwise, and listwise. Pairwise deletion of cases was adopted in this study. Pairwise only deletes cases with missing values of variables in use. In other words, all available non-missing pairs of values were used to calculate the statistics. Pairwise has the advantage over listwise deletion of removing fewer cases while still acknowledging

the missing data, thus biasing less, and provides more accurate estimates than mean substitution (Tharenou et al., 2007).

Outliers

Multivariate outliers were checked by inspecting the Mahalanobis distances that were produced by the multiple regression program. To check whether the outliers had any undue influence on the regression model, Cook's distance was consulted. According to Tabachnick and Fidell (2007), cases with Cook's value larger than one are a potential problem in regression. In the regression of job satisfaction on the demographic, situational, and dispositional variables, there were seven multivariate outliers with a maximum Cook's distance of .05. When the work situational variables were regressed on demographic variables and dispositional variables, three multivariate outliers were found, and the maximum Cook's distance was .07. As the maximum Cook's distance was far less than 1, multivariate outliers were not a concern in the current study. Multivariate outliers were thus kept in the dataset for the subsequent analysis.

Normality of Dependent Variables

The assumption of normality is that the dependent variable should be normally distributed (Tharenou et al., 2007). Normality was checked with skewness and kurtosis. In a series of regressions, job satisfaction and all the situational variables were used as dependent variables. Descriptive information on these variables is shown in Table 4.9. The maximum absolute value of the skewness and kurtosis of all the dependent variables was .55 and .81 respectively, which is much less than the critical value of 2 for skewness and 5 for kurtosis (Tharenou et al., 2007), so none of the variables showed significant non-normality.

Table 4.9 Descriptive information for all the dependent variables in regression

Variables	N	<i>M</i>	<i>SD.</i>	Skewness	Kurtosis
Job Satisfaction	403	3.36	0.73	-0.39	0.11
Autonomy	400	3.10	0.73	0.02	0.24
Routinization	404	2.93	0.58	0.41	0.49
Role ambiguity	404	2.70	0.72	0.45	0.44
Role conflict	397	4.02	0.87	0.17	0.12
Work overload	404	2.58	0.69	-0.39	0.31
Supervisor support	400	2.79	0.68	-0.28	-0.39
Co-worker support	403	2.99	0.60	-0.55	0.81
Promotional chances	403	2.32	0.81	0.05	-0.55
Pay level	397	4.96	1.94	0.31	0.40
Distributive justice	404	3.00	0.90	-0.20	-0.49

Linearity and Homoscedasticity

Linearity refers to the linear relationship between dependent variable and independent variable or combinations of the independent variables. The assumption of homoscedasticity refers to how dependent variable(s) exhibit equal levels of variance across the range of independent variable(s) (Hair et al., 2006). The shape of the plot thus should roughly conform to an oval or cigar shape (Tharenou et al., 2007). Heteroscedasticity, the failure of homoscedasticity, is typically caused either by nonnormality of one of the variables or by the fact that one variable is related to some transformation of the other (Tabachnick & Fidell, 2007). Linearity and homoscedasticity among pairs of variables were assessed by inspection of bivariate scatterplots with independent variable on one axis and the dependent variable on another axis. If the resulting scatterplots were generally oval-shaped, there was no violation of the assumptions of linearity and homoscedasticity.

First job satisfaction was used as the dependent variable, and dispositions and work situations were used as independent variables. Later in the mediated regression analyses work situations were used as the dependent variable, and dispositions were used as independent variables. All the scatterplots were roughly rectangularly

distributed, with most of the scores concentrated in the centre, which indicated that the assumptions of homoscedasticity and linearity were not violated.

Furthermore, the assumptions of the normality, linearity and homoscedasticity were assessed simultaneously with checking of the residuals against the prediction in regression. If the three assumptions were satisfied, the scatterplot of residuals against prediction showed a rectangular shape (Tabachnick & Fidell, 2007). First job satisfaction was used as the DV, and all the situational, dispositional, and demographic variables were used as IVs and control variables. Second, situational variables were used as DVs, and dispositional variables and demographic variables were used as IVs and control variables. In all these regressions, the scatterplots of the residuals were roughly rectangularly distributed, with most of the scores concentrated in the centre, which indicated that the assumptions of normality, linearity, and homoscedasticity were not violated.

Multicollinearity

Multicollinearity refers to the presence of large correlations between two or more independent variables (Hair et al., 2006; Schwab, 2005). The consequences of multicollinearity are inflated standard errors and unstable regression coefficient estimates (Dielman, 2001). According to Stevens (1996), multicollinearity also makes determining the importance of a given independent variable difficult because the effects of the independent variable are confounded due to the correlations among IVs. To detect multicollinearity, the Pearson correlation matrix among all the independent variables and the tolerance of independent variables were examined. Tabachnick and Fidell (2007) suggested that multicollinearity is problematic when bivariate correlations are greater than .70. The correlation matrix is presented in Table 4.9 and

demonstrates that there were no correlations between independent variables larger than .70. The largest correlation between independent variables was that between NA and neuroticism, with a value of .54.

In addition to examining the Pearson correlation coefficients, Cohen, Cohen, West and Aiken (2003) suggested that multicollinearity should be detected through examination of tolerance levels. Tolerance refers to the amount of variability of the selected independent variable not explained by the other independent variables (Hair et al., 2006). A small tolerance value indicates that the variable is redundant in the context of other variables in the dataset and multicollinearity may be a concern. Cohen et al. (2003) suggested that a cut-off point of .10 for tolerance should be adopted. The minimum tolerance was .54 when job satisfaction was regressed on the four demographic variables, 10 situational variables, and the seven dispositional variables. As there was no tolerance less than .10, multicollinearity was not a concern in the current study.

In summary, the results of evaluation of an absence of outliers, normality, linearity, homoscedasticity, and an absence of multicollinearity were satisfactory. This indicated that it was appropriate to proceed with further analysis of the data.

Table 4.10 Means, Standard Deviation, and Correlation Coefficients between Variables

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1 Female	0.46	0.50																					
2 Age	4.03	1.64	-.15																				
3 Married	0.82	0.39	-.04	.52																			
4 Education	3.28	0.89	-.15	-.15	-.06																		
5 PA	3.58	0.55	-.11	.09	.03	.05																	
6 NA	2.35	0.51	-.09	-.10	-.10	-.02	-.24																
7 Ex	3.43	0.60	-.06	.05	-.04	.04	.48	-.23															
8 Ag	3.88	0.49	.07	.05	.07	-.01	.35	-.30	.40														
9 Con	3.88	0.46	-.05	.10	.11	.05	.45	-.23	.39	.51													
10 Neu	2.68	0.65	-.07	-.04	-.07	-.18	-.26	.54	-.29	-.13	-.12												
11 Op	3.52	0.57	-.25	-.03	-.04	.14	.49	-.14	.53	.38	.49	-.08											
12 AU	3.10	0.73	-.02	.09	.05	.19	.31	-.16	.20	.13	.18	-.14	.21										
13 RO	2.93	0.58	.06	-.10	-.12	-.14	-.44	.17	-.27	-.19	-.22	.13	-.22	-.30									
14 RA	2.70	0.72	-.03	-.07	-.09	-.05	-.38	.24	-.25	-.23	-.38	.10	-.26	-.24	.28								
15 RC	4.02	0.87	-.16	.09	.00	.01	.08	.20	.15	.04	.11	.19	.18	-.01	.03	.03							
16 WL	2.58	0.69	-.05	.03	.06	.01	.32	-.11	.16	.19	.32	-.04	.17	.16	-.27	-.29	.00						
17 SS	2.79	0.68	-.05	-.07	-.03	.11	.16	-.16	.13	.14	.11	-.07	.10	.07	-.24	-.21	-.08	.14					
18 CS	2.99	0.60	-.03	-.02	-.02	.00	.09	-.18	.11	.18	.11	-.04	.07	.07	-.10	-.21	-.12	.09	.47				
19 DJ	3.00	0.90	.05	-.03	-.01	.03	.10	-.11	.06	.04	-.07	-.01	-.01	.19	-.19	-.16	-.17	-.03	.36	.28			
20 PC	2.32	0.81	-.07	.06	.06	-.01	.27	-.09	.14	.09	.10	-.07	.12	.26	-.34	-.07	-.11	.07	.17	.19	.32		
21 PAY	4.96	1.94	-.25	.23	.19	.38	.11	-.12	.04	.02	-.01	-.13	.09	.14	-.11	-.02	.06	-.16	.03	.05	.10	-.05	
22 JS	3.36	0.73	-.03	.07	.09	-.03	.41	-.24	.32	.22	.25	-.20	.16	.35	-.43	-.35	-.20	.18	.37	.21	.43	.38	.02

$p < .01$ for $r > .14$; $p < .05$ for $r > .10$

NB: For gender, 0 = male, 1 = female; For marital status, 0 = single, 1 = married; For education, ranging from 1 = junior secondary to 5 = master or PhD; Ex: extraversion; Ag: agreeableness; Con: conscientiousness; Neu: neuroticism; Op: openness to experience; Au: autonomy; RO: routinization; RA: role ambiguity; RC: role conflict; WL: work overload; SS: supervisor support; CS: co-worker support; PC: promotional chances; DJ: distributive justice; JS: job satisfaction

*Regression Results on the Relationship between Job Satisfaction and its Situational
and Dispositional Antecedents*

The aim of the following analysis is to compare the variance in job satisfaction explained by the model with situational variables and the model combining the situational and all the dispositional variables, and to find the ability of each variable in predicting job satisfaction. Table 4.11 presents the regression results on the relationship between job satisfaction and its dispositional and situational antecedents.

The results in Table 4.10 demonstrated that model two (with controls and only situational variables included) explained 44.6% of the variance in job satisfaction, and model three (with only controls and dispositional variables included) explained 22.6% of the variance in job satisfaction. Model four significantly increased the percentage of variance in job satisfaction explained than model two or model three, suggesting that integrating dispositional and situational variables to predict job satisfaction is more predictive than using either dispositions or perceptions of work situations alone. Taken together, the results from the fourth model show that about 50% of the variance in job satisfaction is explained by the independent variables.

The results of the fourth model demonstrate that of the 10 situational variables, seven were statistically significant predictors of job satisfaction. Of the seven variables, four were positively related to job satisfaction: autonomy ($\beta = .15$), supervisor support ($\beta = .18$), promotional chances ($\beta = .10$), and distributive justice ($\beta = .24$). Of the seven variables, three were negatively related to job satisfaction: routinization ($\beta = -.14$), role ambiguity ($\beta = -.10$) and role conflict ($\beta = -.16$). Hence, hypothesis 1.1 on the relationship between autonomy and job satisfaction, hypothesis 1.2 on the relationship between routinization and job satisfaction, hypothesis 1.3 on

the relationship between role ambiguity and job satisfaction, hypothesis 1.4 on the relationship between role conflict and job satisfaction, hypothesis 1.6 on the relationship between supervisor support and job satisfaction, hypothesis 1.8 on the relationship between promotional chances and job satisfaction and hypothesis 1.10 on the relationship between distributive justice and job satisfaction were supported.

The results of the fourth model indicate that of the 10 situational variables, three were non-significantly related to job satisfaction: work overload, co-worker support, and pay level. Thus hypothesis 1.5 on the relationship between work overload and job satisfaction, hypothesis 1.7 on the relationship between co-worker support and job satisfaction, hypothesis 1.9 on the relationship between pay level and job satisfaction were not supported.

The results of the fourth model also demonstrated that of the six hypothesized relationships between dispositions and job satisfaction, three were statistically significant: PA, extraversion, and conscientiousness. PA was positively related to job satisfaction ($\beta = .13$), supporting hypothesis 2.1. Extraversion was positively related to job satisfaction ($\beta = .16$), supporting hypothesis 2.3. Conscientiousness was positively related to job satisfaction ($\beta = .10$), supporting hypothesis 2.5.

The results of the fourth model also demonstrated that three of the hypothesized relationships between dispositional variables and job satisfaction were non-significant. The relationship between NA and job satisfaction was non-significant. Hence, hypothesis 2.2 was not supported. The relationship between neuroticism and job satisfaction was also non-significant. Hence, hypothesis 2.4 was not supported. The relationship between agreeableness and job satisfaction was also non-significant. Hence, hypothesis 2.6 was not supported.

Table 4.11 Hierarchical regression results predicting job satisfaction

Variables	Model 1	Model 2	Model 3	Model 4
	β	β	β	β
Demographic variables				
Female	-.03	-.05	-.04	-.07
Age	.02	-.00	-.05	-.03
Married	.08	.03	.08	.05
Education	-.02	-.13**	-.04	-.12**
Situational variables				
Autonomy		.18**		.15**
Routinization		-.20**		-.14**
Role ambiguity		-.17**		-.10*
Role conflict		-.14**		-.16**
Work overload		.02		-.02
Supervisor support		.20**		.18**
Co-worker support		-.06		-.07
Promotional chances		.14**		.10*
Pay level		.00		-.02
Distributive justice		.21**		.24**
Affectivity				
PA		-	.33**	.13*
NA		-	-.13*	.00
Big five factors				
Extraversion		-	.19**	.16**
Neuroticism		-	.02	.01
Conscientiousness		-	.06	.10*
Agreeableness		-	.00	-.04
Openness to Experience		-	-.15*	-.12*
R ²	.01	.446	.226	.498
ΔR^2		.436**	.215**	.052*

* $p < .05$; ** $p < .01$

Note: Standardized coefficients reported.

Model 1: the model in which only demographic variables were used as predictors of job satisfaction.

Model 2: the model in which only demographic and situational variables were used as predictors of job satisfaction;

Model 3: the model in which only demographic and dispositional variables were used as predictors of job satisfaction;

Model 4: the model in which situational, positive and negative affectivity, Big Five factors, and demographic variables were used as predictors of job satisfaction.

The R square change under model 2 is that between model 2 and model 1; the R square change under model 3 is that between model 3 and model 1; and the R square change under model 4 is that between model 4 and model 2.

In summary, the regression results showed that as hypothesized, autonomy, supervisor support, distributive justice, promotional chances, PA, extraversion and conscientiousness were positively related to job satisfaction; and routinization, role

ambiguity and role conflict were negatively related to job satisfaction. However, work overload, co-worker support, pay level, NA, neuroticism and agreeableness were not significantly related to job satisfaction. Thus, among the 16 hypotheses, 10 hypotheses were supported, while the other six hypotheses were not supported. Across the full set of independent variables, distributive justice was the strongest predictor of job satisfaction.

Mediating Role of Work Situations on the Relationship between Dispositions and Job Satisfaction

The mediating role of perceptions of work situations on the relationship between disposition and job satisfaction was tested with the distribution of the product confidence limits for the indirect effect as outlined in chapter 3 (MacKinnon et al., 2007; MacKinnon & Fritz, 2007). Specifically, the mediating role of work situation on the relationship between PA, NA, extraversion, neuroticism, conscientiousness, and agreeableness were tested. The results are summarized below.

Results on the Mediating Role of Work Situations on the Relationship between Positive Affectivity and Job Satisfaction

Results of the mediating role of situations on the relationship between PA and job satisfaction are presented in Table 4.12.

As shown in Table 4.12, PA had a statistically significant direct effect of .13 on job satisfaction, and a statistically significant indirect effect of .21. The total effect of PA on job satisfaction was .34. Hence, the relationship between PA and job satisfaction was partially mediated by work situations.

Table 4.12 Mediating role of work situations on the PA - job satisfaction relationship

Mediator	Effect of PA on work situation	Effect of work situations on job satisfaction	Indirect Effect of PA on job satisfaction	Direct effect of PA on job satisfaction	Total effect of PA on job satisfaction
	β	β	β	β	β
Autonomy	.25**	.15**	.04*		
Routinization	-.42**	-.14**	.06*		
Role ambiguity	-.26**	-.10*	.03*		
Supervisor Support	.12**	.18**	.02*		
Co-worker Support	.01	-.07	.00		
Promotional chances	.29**	.10*	.03*		
Pay level	.09	-.02	.00		
Distributive justice	.14**	.24**	.03*		
PA			.21*	.13*	.34*

* $p < .05$; ** $p < .01$

Note: Standardized coefficients reported.

Gender, age, marital status, and educational level were controlled.

The results in Table 4.12 demonstrate that of the eight hypothesized mediators, six were statistically significant: autonomy, routinization, role ambiguity, supervisor support, promotional chances, and distributive justice. Hence, hypotheses on the mediation of work situations on the PA and job satisfaction relationship via these six situational variables were supported. Specifically hypothesis 3.1 on mediation via autonomy, hypothesis 3.2 on mediation via routinization hypothesis 3.3 on mediation via role ambiguity, hypothesis 3.4 on mediation via supervisor support, hypothesis 3.6 on mediation via promotional chances, hypothesis 3.8 on mediation via distributive justice were supported.

The results in Table 4.12 also demonstrate that of the eight hypothesized mediators, two were not statistically significant: co-worker support, and pay level. So hypothesis 3.5 on the mediating role of co-worker support on the relationship between

PA and job satisfaction, and hypothesis 3.8 on the mediating role of pay level on the relationship between PA and job satisfaction were not supported.

In summary, the relationship between PA and job satisfaction was partially mediated through six situational variables: autonomy, routinization, role ambiguity, supervisor support, distributive justice and promotional chances. However, PA was not found to have an indirect effect on job satisfaction through co-worker support and pay level.

Results on the Mediating Role of Work Situations on the Relationship between Negative Affectivity and Job Satisfaction

Results on the mediating role of work situations on the relationship between NA and job satisfaction are presented in Table 4.13.

Table 4.13 Mediating role of work situations on the NA - job satisfaction relationship

Mediator	Effect of NA on work situation	Effect of work situations on job satisfaction	Indirect Effect of NA on job satisfaction	Direct effect of NA on job satisfaction	Total effect of NA on job satisfaction
	β	β	β	β	β
Autonomy	-.08	.15**	-.01		
Routinization	.08	-.14**	-.01		
Role ambiguity	.17**	-.10*	-.02*		
Role conflict	.18**	-.16**	-.03*		
Work overload	-.05	-.02	.00		
Supervisor support	-.16*	.18**	-.03*		
Co-worker support	-.18**	-.07	.01		
Promotional chances	-.04	.10*	.00		
Pay level	-.10	-.02	.00		
Distributive justice	-.16*	.24**	-.04*		
NA			-.12*	.00	-.12*

* $p < .05$; ** $p < .01$

Note: Standardized coefficients reported.

Gender, age, marital status, and educational level were controlled.

As shown in Table 4.13, NA had a statistically significant indirect effect of -.12 on job satisfaction, but no evidence of a direct effect on job satisfaction. The total effect of NA on job satisfaction was -.12. Hence, the relationship between NA and job satisfaction was fully mediated by work situations.

Table 4.13 also demonstrates that of the 10 hypothesized mediators, four were statistically significant: role ambiguity, role conflict, supervisor support, and distributive justice. Hence, hypothesis 4.3 on the mediation of role ambiguity, hypothesis 4.4 on the mediation via role conflict, hypothesis 4.6 on the mediation via supervisor support, and hypothesis 4.10 on mediation via distributive justice were supported.

Table 4.13 also indicates that of the 10 hypothesized mediators, six were statistically non-significant: autonomy, routinization, work overload, co-worker support, promotional chances, and pay level. Therefore, hypothesis 4.1 on the mediation via autonomy, hypothesis 4.2 on the mediation via routinization, hypothesis 4.5 on the mediation via work overload, hypothesis 4.7 on mediation via co-worker support, hypothesis 4.8 on mediation via promotional chances, and hypothesis 4.9 on mediation via pay level were not supported.

In summary, the relationship between NA and job satisfaction was fully mediated through four situational variables: role ambiguity, role conflict, supervisor support, and distributive justice. However, the relationship between NA and job satisfaction was not found to be mediated by the other six situational variables: autonomy, routinization, work overload, co-worker support, promotional chances, and pay level.

Results on the Mediating Role of Work Situations on the Relationship between

Extraversion and Job Satisfaction

The results on the mediating role of work situations on the relationship between extraversion and job satisfaction are presented in Table 4.14.

As shown in Table 4.14, extraversion had a statistically significant direct effect of .16 on job satisfaction, but no statistically significant indirect effect on job satisfaction. The total effect of extraversion on job satisfaction was .16. It is concluded that the relationship between extraversion and job satisfaction was not mediated by work situations.

Specifically, the results in Table 4.14 demonstrate that the relationship between extraversion and job satisfaction was not mediated by any of the five situational variables: autonomy, routinization, role ambiguity, supervisor support and co-worker support. Specifically, hypothesis 5.1 on the mediation via autonomy, hypothesis 5.2 on the mediation via routinization, hypothesis 5.3 on the mediation via role ambiguity, hypothesis 5.4 on the mediation via supervisor support, and hypothesis 5.5 on the mediation via co-worker support were not supported.

Table 4.14 Mediating role of work situations on the extraversion - job satisfaction relationship

Mediator	Effect of extraversion on work situation β	Effect of work situations on job satisfaction β	Indirect Effect of extraversion on job satisfaction β	Direct effect of extraversion on job satisfaction β	Total effect of extraversion on job satisfaction β
Autonomy	.04	.15**	.01		
Routinization	-.11	-.14**	.02		
Role ambiguity	-.05	-.10*	.01		
Supervisor support	.05	.18**	.01		
Co-worker support	.05	-.07	.00		
Extraversion			.00	.16*	.16*

* $p < .05$; ** $p < .01$

Note: Standardized coefficients reported.

Gender, age, marital status, and educational level were controlled.

*Results on the Mediating Role of Work Situations on the Relationship between
Neuroticism and Job Satisfaction*

The results on the mediating role of situations on the relationship between neuroticism and job satisfaction are presented in Table 4.15.

Neuroticism had a statistically significant but relatively small indirect effect of -.03 on job satisfaction, but no evidence of a direct effect on job satisfaction. The total effect of neuroticism on job satisfaction was -.02. Hence, the relationship between neuroticism and job satisfaction was found to be fully mediated by situations.

Table 4.15 Mediating role of work situations on the neuroticism - job satisfaction relationship

Mediator	Effect of Neuroticism on work situation β	Effect of work situations on job satisfaction β	Indirect Effect of Neuroticism on job satisfaction β	Direct effect of Neuroticism on job satisfaction β	Total effect of Neuroticism on job satisfaction β
Role ambiguity	-.12*	-.10*	.01		
Role conflict	.16*	-.16**	-.03*		
Work overload	.08	-.02	.00		
Supervisor support	.08	.18**	.01		
Co-worker support	.02	-.07	-.01		
Promotional chances	.03	.10*	.00		
Pay level	.00	-.02	.00		
Distributive justice	.13*	.24**	.03*		
Neuroticism			-.03*	.01	-.02

* $p < .05$; ** $p < .01$

Note: Standardized coefficients reported.

Gender, age, marital status, and educational level were controlled.

The results in Table 4.15 demonstrate that role conflict was found to mediate the relationship between neuroticism and job satisfaction, supporting hypothesis 6.2.

Although neuroticism was also found to have a statistically significant indirect effect via distributive justice, the sign is in the opposite direction as hypothesized. Therefore, hypothesis 6.8 on the mediating role of distributive justice on the relationship between neuroticism was not supported. This statistically significant effect may result from a suppression effect. Specifically, the relationship between neuroticism and distributive justice may be caused by suppression. The signs of the relationship between neuroticism and distributive justice in the zero-order correlation (Table 4.10) and regression (Table 4.15) were in the opposite direction, suggesting suppression in the regression. Tabachnick and Fidell (2007) suggested that if the relationship between two variables in a zero order correlation and standardized regression coefficient are of opposite sign, or the absolute value of the zero-order correlation between two variables is substantially smaller than the beta weight for the independent variable in regression, then there is evidence of statistical suppression.

The research found non-significant mediation on the relationship between neuroticism and job satisfaction via the other six situational variables: role ambiguity, work overload, supervisor support, co-worker support, promotional chance and pay. Hence, hypothesis 6.1 on mediation via role ambiguity, hypothesis 6.3 on the mediation via work overload, hypothesis 6.4 on mediation via supervisor support, hypothesis 6.5 on mediation via co-worker support, hypothesis 6.6 on mediation via promotional chances, and hypothesis 6.7 on mediation via pay level were not supported.

Results on the Mediating Role of Work Situations on the Relationship between

Conscientiousness and Job Satisfaction

The results on the mediating role of situations on the relationship between conscientiousness and job satisfaction are presented in Table 4.16.

As shown in Table 4.16, conscientiousness had a statistically significant but relatively small indirect effect of .02 on job satisfaction, and a statistically significant direct effect of .10 on job satisfaction. The total effect of conscientiousness on job satisfaction was .12. The relationship between conscientiousness and job satisfaction was therefore partially mediated by perception of work situations.

Table 4.16 Mediating role of work situations on the conscientiousness - job satisfaction relationship

Mediator	Effect of Conscientiousness on work situation β	Effect of work situations on job satisfaction β	Indirect Effect of Conscientiousness on job satisfaction β	Direct effect of Conscientiousness on job satisfaction β	Total effect of Conscientiousness on job satisfaction β
Autonomy	.01	.15**	.00		
Role ambiguity	-.23**	-.10*	.02*		
Promotional chances	-.04	.10*	.00		
Pay level	-.15**	-.02	.00		
Distributive justice	-.18**	.24**	-.04*		
Conscientiousness			.02*	.10*	.12*

* $p < .05$; ** $p < .01$

Note: Standardized coefficients reported.

Gender, age, marital status, and educational level were controlled.

Table 4.16 demonstrates that of the five hypothesized mediators, only one situational variable was found to mediate the relationship between conscientiousness

and job satisfaction. Role ambiguity mediates the relationship between conscientiousness and job satisfaction, supporting hypothesis 7.3.

Although the effect of conscientiousness on job satisfaction via distributive justice was also found to be statistically significant, the direction of the relationship was in the opposite direction as that hypothesized, therefore hypothesis 7.5 was not supported. As noted above, this statistically significant effect of conscientiousness on job satisfaction via distributive justice may be caused by suppression.

Conscientiousness was found to have a non-significant effect on job satisfaction through the other three situational variables: autonomy, promotional chances and pay level, so hypotheses on the mediation of situational variables on the relationship between conscientiousness and job satisfaction via these three variables were not supported. Specifically, hypothesis 7.1 on the mediation via autonomy, hypothesis 7.3 on the mediation of promotional chances, and hypothesis 7.4 on the mediation via pay level were not supported.

Results on the Mediating Role of Work Situations on the Relationship between Agreeableness and Job Satisfaction

The results on the mediating role of situations on the relationship between agreeableness and job satisfaction are presented in Table 4.17.

The research found neither a statistically significant direct effect nor an indirect effect of agreeableness on job satisfaction. As shown in Table 4.17, the research did not find support for the mediating role of the three work situational variable on the relationship between agreeableness and job satisfaction: role ambiguity, supervisor support, and co-worker support. Therefore, hypothesis 8.1 on the mediation via role ambiguity, hypothesis 8.2 on the mediation via supervisor support and hypothesis 8.3 on the mediation via co-worker support were not supported.

Table 4.17 Mediating role of work situations on the agreeableness - job satisfaction relationship

Mediator	Effect of agreeableness on work situation	Effect of work situations on job satisfaction	Indirect Effect of agreeableness on job satisfaction	Direct effect of agreeableness on job satisfaction	Total effect of agreeableness on job satisfaction
	β	β	β	β	β
Role ambiguity ^a	.05	-.10*	.01		
Supervisor support	.07	.18**	.01		
Co-worker support	.14*	-.07	-.01		
Agreeableness			.00	-.04	-.04

* $p < .05$; ** $p < .01$

Note: Standardized coefficients reported.

Gender, age, marital status, and educational level were controlled.

A summary of the research results on the relationship between job satisfaction and its dispositional and situational antecedents is presented in Table 4.18 and Figure 4.1. It can be seen in Fig 4.1, the relationship between PA and job satisfaction and the relationship between conscientiousness and job satisfaction were partially mediated by work situations, while the relationship between NA and job satisfaction, and the relationship between neuroticism and job satisfaction were completely mediated by work situations. Extraversion had a direct effect on job satisfaction, but there was no evidence of mediation on the relationship between extraversion and job satisfaction. Among the six dispositional variables hypothesized to be related to job satisfaction, PA had the strongest total effect on job satisfaction, extraversion the second, and NA and conscientiousness the third. Neuroticism and agreeableness had little or no effect on job satisfaction

Table 4.18 List of hypotheses and their outcomes from the regression results

Hypotheses	Finding
H1.1: Autonomy will be positively related to job satisfaction.	✓
H1.2: Routinization will be negatively related to job satisfaction	✓
H1.3: Role ambiguity will have a negative relationship with job satisfaction.	✓
H1.4: Role conflict will have a negative relationship with job satisfaction.	✓
H1.5: Work overload will have a negative relationship with job satisfaction.	×
H1.6: Supervisor support will be positively related to job satisfaction.	✓
H1.7: Co-worker support will be positively related to job satisfaction, but not as strongly as the relationship between supervisor support and job satisfaction.	×
H1.8: Promotional chances will be positively related to job satisfaction.	✓
H1.9: Pay level will be positively related to job satisfaction.	×
H1.10: Distributive justice will be positively related to job satisfaction.	✓
H2.1: Positive Affectivity will be positively related to job satisfaction.	✓
H2.2: Negative affectivity will be negatively related to job satisfaction.	×
H2.3: Extraversion will be positively related to job satisfaction.	✓
H2.4: Neuroticism will be negatively related to job satisfaction.	×
H2.5: Conscientiousness will be positively related to job satisfaction.	✓
H2.6: Agreeableness will be positively related to job satisfaction.	×
H3.1: Autonomy will mediate the relationship between PA and job satisfaction;	✓
H3.2: Routinization will mediate the relationship between PA and job satisfaction.	✓
H3.3: Role ambiguity will mediate the relationship between PA and job satisfaction.	✓
H3.4: Supervisor support will mediate the relationship between PA and job satisfaction.	✓
H3.5: Co-worker support will mediate the relationship between PA and job satisfaction.	×
H3.6: Promotional chances will mediate the relationship between PA and job satisfaction.	✓
H3.7: Pay level will mediate the relationship between PA and job satisfaction	×
H3.8: Distributive justice will mediate the relationship between PA and job satisfaction.	✓
H4.1: Autonomy will mediate the relationship between NA and job satisfaction.	×
H4.2: Routinization will mediate the relationship between NA and job satisfaction.	×
H4.3: Role ambiguity will mediate the relationship between NA and job satisfaction.	✓

Note: “✓” hypothesis supported; “×” hypothesis not supported. (To be continued)

Table 4.18 List of Hypotheses and their outcomes from the regression results
(Continued)

Hypotheses	Finding
H4.4: Role conflict will mediate the relationship between NA and job satisfaction.	✓
H4.5: Work overload will mediate the relationship between NA and job satisfaction.	×
H4.6: Supervisor support will mediate the relationship between NA and job satisfaction;	×
H4.7: Co-worker support will mediate the relationship between NA and job satisfaction.	×
H4.8: Promotional chances will mediate the relationship between NA and job satisfaction;	×
H4.9: Pay level will mediate the relationship between NA and job satisfaction.	×
H4.10: Distributive justice will mediate the relationship between NA and job satisfaction.	✓
H5.1: Autonomy will mediate the relationship between extraversion and job satisfaction;	×
H5.2: Routinization will mediate the relationship between extraversion and job satisfaction.	×
H5.3: Role ambiguity will mediate the relationship between extraversion and job satisfaction.	×
H5.4: Supervisor support will mediate the relationship between extraversion and job satisfaction;	×
H5.5: Co-worker support will mediate the relationship between extraversion and job satisfaction.	×
H6.1: Role ambiguity will mediate the relationship between neuroticism and job satisfaction;	×
H6.2: Role conflict will mediate the relationship between neuroticism and job satisfaction;	✓
H6.3: Work overload will mediate the relationship between neuroticism and job satisfaction.	×
H6.4: Supervisor support will mediate the relationship between neuroticism and job satisfaction;	×
H6.5: Co-worker support will mediate the relationship between neuroticism and job satisfaction.	×
H6.6: Promotional chances will mediate the relationship between neuroticism and job satisfaction;	×
H6.7: Pay level will mediate the relationship between neuroticism and job satisfaction.	×
H6.8: Distributive justice will mediate the relationship between neuroticism and job satisfaction.	×
H7.1: Autonomy will mediate the relationship between conscientiousness and job satisfaction.	×
H7.2: Role ambiguity will mediate the relationship between conscientiousness and job satisfaction.	✓

Note: “✓” hypothesis supported; “×” hypothesis not supported. (To be continued)

Table 4.18 List of Hypotheses and their outcomes from the regression results (Continued)

Hypotheses	Finding
H7.3: Promotional chances will mediate the relationship between conscientiousness and job satisfaction;	×
H7.4: Pay level will mediate the relationship between conscientiousness and job satisfaction.	×
H7.5: Distributive justice will mediate the relationship between conscientiousness and job satisfaction.	×
H8.1: Role ambiguity will mediate the relationship between agreeableness and job satisfaction.	×
H8.2: Supervisor support will mediate the relationship between agreeableness and job satisfaction;	×
H8.3: Co-worker support will mediate the relationship between agreeableness and job satisfaction	×

Note: “√” hypothesis supported; “×” hypothesis not supported.

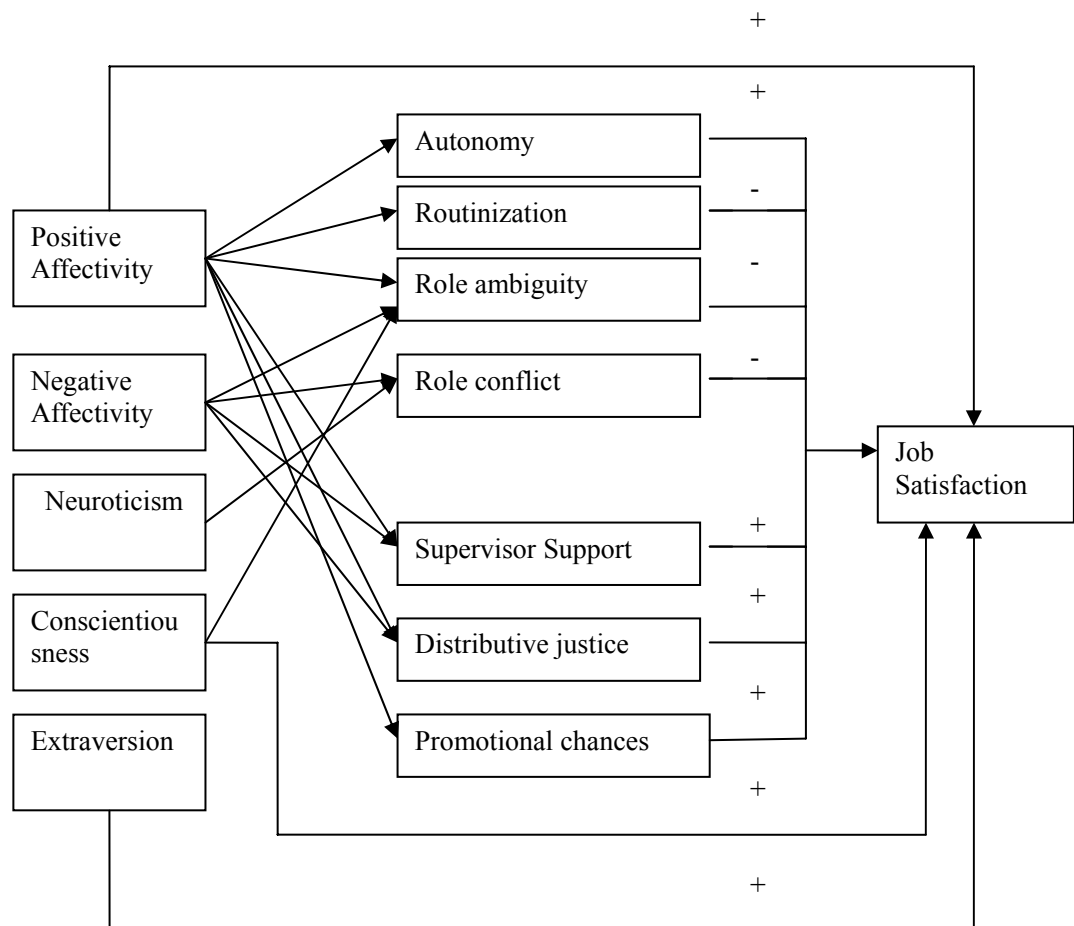


Figure 4.1 Relationship between job satisfaction and its dispositional and situational antecedents.

Summary

This chapter presented the findings of data analyses which were conducted in two distinct phases: CFA and reliability analyses of the measures used in this study, and multiple regression analysis and mediation analyses to test the hypotheses. Results of CFA displayed that the measures were distinct from each other and reliability tests demonstrated the scale scores were internally reliable.

Of the 16 hypotheses concerning antecedents tested in the current study, 10 were supported. Specifically, autonomy, routinization, role ambiguity, role conflict, supervisor support, promotional chances, distributive justice, PA, extraversion and conscientiousness were found to be related to job satisfaction.

Finally, the chapter presented the results of the mediating role of situations on the relationship between dispositions and job satisfaction. Of the 39 hypotheses on the mediating role of situations on the relationship between dispositions and job satisfaction, 12 were supported. Specifically, the relationship between PA and job satisfaction were mediated by six situational variables: autonomy, routinization, role ambiguity, supervisor support, distributive justice, and promotional chances. The relationship between NA and job satisfaction were mediated by four situational variables: role ambiguity, role conflict, supervisor support, and distributive justice. The relationship between neuroticism and job satisfaction was mediated by role conflict; and the relationship between conscientiousness and job satisfaction was mediated by role ambiguity. However, hypotheses on the mediation on the relationship between PA and job satisfaction via co-worker support, and pay; hypotheses on the mediation on the relationship between NA and job satisfaction via autonomy, routinization, work overload, co-worker support, distributive justice, and

promotional chances; mediation on the relationship between extraversion and job satisfaction through autonomy, routinization, role ambiguity, supervisor support, co-worker support; mediation on the relationship between neuroticism and job satisfaction via role ambiguity, work overload, supervisor support, co-worker support, distributive justice, promotional chances, and pay level; mediation on the relationship between conscientiousness and job satisfaction via autonomy, distributive justice, promotional chances, and pay level; and mediation on the relationship between agreeableness and job satisfaction via role ambiguity, supervisor support, and co-worker support were not supported.

The next chapter will discuss the theoretical and practical implication, limitations of the current study and directions for future study.

CHAPTER 5: DISCUSSION AND CONCLUSION

To recap, this study sought to address three research questions: 1) What is the relationship between work situations and job satisfaction? 2) What is the relationship between dispositions and job satisfaction? And 3) Do work situations mediate the relationship between dispositions and job satisfaction?

The thesis has argued that identification of antecedents that are of particular importance to the job satisfaction of white-collar employees in Chinese industrial and commercial enterprises is crucial for managers of these enterprises, given job satisfaction's demonstrated linkage in the west with such outcomes as organizational commitment, organizational citizenship behavior, absenteeism, turnover intentions, turnover and job performance (Griffeth et al., 2000; Hellman, 1997; Hom et al., 1992; Hulin & Judge, 2003; Johns, 2001; Judge et al., 2001b; Meyer et al., 2002; Spector, 1997; Tett & Meyer, 1993; Warr, 1999). Studies in China have also found relationships between job satisfaction and turnover intentions (Chen & Li, 2009; Ye et al., 2005; Zhang et al., 2003a; Zhang & Zhao, 2007), organizational citizenship behavior (Wang & Sun, 2005), and job performance (Hui, 2006).

Based on the literature review, the hypothesized antecedents of job satisfaction chosen for study were autonomy, routinization, role ambiguity, role conflict, work overload, supervisor support, co-worker support, promotional chances, pay level, distributive justice, positive affectivity, negative affectivity, extraversion, neuroticism, conscientiousness, and agreeableness. In order to examine the relationship of these variables with job satisfaction, and to understand the mechanism of the influence of dispositions on job satisfaction, both the direct effect of these variables and the mediating role of perceived work situations on the relationship between dispositions and job satisfaction were investigated.

In this final chapter, the findings from the data analyses presented in the previous chapter in relation to these research questions are discussed and compared with theory and existing research. The theoretical contributions to academic knowledge arising from this study are highlighted and the practical usefulness of these findings is also outlined in a discussion of the managerial implications. Limitations of the study are then explained. Finally, relevant directions for future research are outlined.

The Effect of Work Situations on Job Satisfaction

The effects of the situational variables on job satisfaction from the multiple regression analyses reported in chapter 4 are summarized in Table 5.1.

As shown in Table 5.1, of the 10 situational variables, seven were statistically significant as predictors of job satisfaction in the regression analysis: distributive justice, supervisor support, role conflict, autonomy, routinization, role ambiguity, and promotional chances. They were all related to job satisfaction in the expected direction according to extant theory. As discussed below, these results are consistent with findings in western English-speaking countries, suggesting that research from western English-speaking countries on the relationship between these seven variables and job satisfaction may be generalized to Chinese employees. Distributive justice was the strongest predictor of job satisfaction, followed by supervisor support, role conflict, autonomy, routinization, role ambiguity and promotional chances.

As discussed below, work overload, pay level and co-worker support were found to have a non-significant effect on job satisfaction. The findings suggest that there may be some cultural differences between western English-speaking countries and China, and findings on the relationship between these three variables and job satisfaction in other countries may not be able to be generalized to China.

Table 5.1 The effect of situational variables on job satisfaction

Ranking	Variables	β
1	Distributive justice	.24**
2	Supervisor support	.18**
3	Role conflict	-.16**
4	Autonomy	.15**
5	Routinization	-.14**
6	Role ambiguity	-.10*
6	Promotional chances	.10*
8	Co-worker support	-.07
9	Work overload	-.02
10	Pay level	-.02

* $p < .05$; ** $p < .01$.

The following section summarizes the major findings in relation to the situational predictors of job satisfaction.

The Effect of Distributive Justice on Job Satisfaction

One of the most important situational variables identified in the literature on job satisfaction is distributive justice (Leung et al., 1996). Of the 10 situational variables examined in this study, distributive justice had the largest effect on job satisfaction. The above finding supports the instrumental model and the relational model (Li & Cropanzano, 2009), which suggest that individuals who perceived fair treatment in outcome distribution may get their economic needs satisfied and feel that they are valued members of an organization. Specifically, fair rewards can satisfy people's economic interest, which in turn can affect their emotions and cognitions, and thus affect their attitude. In addition, fair reward can make people feel that they are valued members of the firm, thus fostering positive relations with others, and causing them to display positive attitudes.

The finding of the positive relationship between distributive justice and job satisfaction is consistent with previous meta-analyses (e.g. Cohen-Charash & Spector, 2001; Colquitt et al., 2001; Gaertner & Robinson, 1999; Li & Cropanzano, 2009), and

multivariate analyses (e.g. Agho et al., 1993; Kim, 1999; Kim et al., 1996; McFarlin & Sweeney, 1992; Rifai, 2005; Schappe, 1998). In addition, Li and Cropanzano's (2009) meta-analysis found no difference on the relationship between distributive justice and job satisfaction in East Asian countries and North America. So the findings in the current study support Li and Cropanzano's (2009) idea that employees, regardless of their cultural backgrounds, do care about fair treatment and respond positively to workplace fairness.

The above findings of a strongest influence of distributive justice on job satisfaction than other situational factors are also consistent with findings in the west. One may assume that the strongest influence of distributive justice should be found in collectivist countries such as China, while in individualist countries autonomy should have a stronger effect on job satisfaction than distributive justice. However, a literature review of the meta-analyses (e.g. Cohen-Charash & Spector, 2001; Colquitt et al., 2001; Fried & Ferris, 1987; Gaertner & Robinson, 1999; Humphrey et al., 2007; Jackson & Schuler, 1985; Li & Cropanzano, 2009) also reported that of the situational variables, distributive justice is the one which has the strongest relationship with job satisfaction (stronger than the relationship between autonomy and job satisfaction in western countries). These findings suggest that it could be universal to value distributive justice rather than an effect of culture in individualist or collectivist countries.

The above finding of a positive relationship between distributive justice and job satisfaction can also be explained in the context of the vast literature on psychological contract. The psychological contract suggests that employees have expectations in the areas of promotion, pay, training, job security, career development and support with personal problems, while the employer expects the employee to be loyal and be good

organizational citizens (Knights & Kennedy, 2005). When an employee perceives a discrepancy in the reciprocal promises made between the employee and the organization, their response may manifest as job dissatisfaction. Existing studies in western countries have provided empirical support for a significant role of psychological contract on job satisfaction (e.g. Bal et al., 2008; Topa Cantisano et al., 2008; Zhao et al., 2007). The current research finding indicates that people expect to be treated fairly, and unfair treatment brings dissatisfaction with their job.

The importance of distributive justice in China can also be explained with the concept of “Face” (mianzi) in Chinese culture. According to Cunningham and Rowley (2007), “Face” is of particular importance as a critical element in harmony. Injustice in distribution can make Chinese feel to be not valued by a group and make to have lost “Face”.

The Effect of Supervisor Support on Job Satisfaction

Supervisor support had the second largest effect on job satisfaction among the 10 situational variables. The finding of a significant relationship between supervisor support and job satisfaction is consistent with previous meta-analyses (Gaertner & Robinson, 1999; Ng & Sorensen, 2008), and multivariate analyses reviewed by Price (2001), and a study on white-collar workers at different job levels from enterprises in China (Zhang et al., 2003a). The research finding of a positive relationship between supervisor support and job satisfaction supports the resource model (Taylor et al., 2004) and the symbolic model (Ng & Sorensen, 2008). The finding suggests that individuals who perceived more supervisor support may have more resources to cope with job stressors and at the same time have a good feeling about their identity in an organization, which in turn, leads to greater satisfaction (Kim, 1999; Ng & Sorensen,

2008). The above finding of a positive relationship between supervisor support and job satisfaction can also be explained in the context of the literature of psychological contract. The psychological contract perspective suggests that an employee has expectations in the areas of support with personal problems (Knights & Kennedy, 2005). When an employee perceives a discrepancy in the reciprocal promises made between the employee and the organization, their response may manifest as job dissatisfaction.

The finding of supervisor support to be one of the most strongest predictors of job satisfaction is also convergent with findings in previous meta-analyses (Fried & Ferris, 1987; Gaertner & Robinson, 1999; Jackson & Schuler, 1985; Ng & Sorensen, 2008). In addition, a meta-analysis by Humphrey et al. (2007) found that the relationship between supervisor support and job satisfaction is stronger than the relationships between job satisfaction and autonomy or routinization, and skill variety. Although the findings in individual and collectivist countries are convergent, the mechanism may be different. In individualist countries, people are more concerned about “I”, and supervisor support may emphasize their uniqueness and position in the company, and so leads to them having a good feeling about their workplace. Alternatively, in collectivist countries people are more concerned about the interest of the group, rather than individuals. In that sense, support from supervisors should be less important in China. However, as China is a high power distance society, support from supervisor may mean much to them, as a result supervisor support can play an important role in influencing people’s work attitude.

The positive relationship between supervisor support and job satisfaction could also be explained with the concept of Guanxi in Chinese culture. Cook and Rowley (2010) noted that Chinese people have acquired sophisticated skills to develop

interpersonal relationships. These skills are used in the management of organizations. Guanxi plays an important role in the management of Chinese organizations (Cheung, Wu, Chan & Wong, 2009), and China is a high power distance society. Supervisor support may thus mean much more to individuals than co-worker support. According to the theory of leader member exchange (Wayne & Liden, 1994; Wayne, Shore & Liden, 1997), leaders may have special relationships with an inner circle of employees, the “in-group”. The in-group members usually are loyal and committed to their leaders and have a higher level of choice or influence. It is possible that those who perceive higher supervisor support are in a better position in an organization, and thus are happier with their jobs.

The present research found a stronger zero-order correlation between supervisor support and job satisfaction than that between co-worker support and job satisfaction. This is consistent with a previous meta-analysis (Buk-Lee et al., 2009). The stronger effect of supervisor support than co-worker support on job satisfaction could be explained by the greater importance placed upon the interpersonal relationships between employees and their supervisors than between employees and their co-workers.

Interestingly, co-worker support was found to have a non-significant effect on job satisfaction when job satisfaction was regressed on co-worker support with other situational, dispositional and demographic variables under control. The finding of a non-significant relationship between co-worker support and job satisfaction in regression is not consistent with the findings of previous meta-analyses (Gaertner & Robinson, 1999; Ng & Sorensen, 2008) and multivariate analyses (Gaertner & Robinson, 1999; Price, 2001). However, the finding of this non-significant effect of co-worker support on job satisfaction is consistent with a study on white-collar

workers at different job levels from two enterprises in China (Zhang & Zhang, 2006), and a study on technicians in IT companies in China (Zhang et al., 2003a). One plausible explanation is that as China is a high power distance country compared with most western countries, support from supervisors means much more to employees than support from co-workers. Another explanation for the divergence of findings on the relationship between the current study and studies in the west are cultural differences. In western individualist cultures, there is an emphasis on “I”, and an individual may expect other people around to provide support. In contrast China as a collectivist society, “we” is emphasized, and an individual may consider more about the group’s interests than their own. Consequently, people may expect less on support from colleagues in collectivist cultures, and as a result co-worker support will not be predictive of job satisfaction.

The Effect of Role Conflict on Job Satisfaction

Role conflict had the third largest influence on job satisfaction among the 10 situational variables. The finding of a negative relationship between role conflict and job satisfaction aligns with meta-analyses (e.g. Gaertner & Robinson, 1999; Jackson & Schuler, 1985) and reviews of multivariate analyses (e.g. Price, 2001; Sullivan & Bhagat, 1992), and studies in China (e.g. Lu et al., 2007; Wu & Norman, 2006; Zhang et al., 2003a).

This finding supports role theory and classical organizational theory, where role conflict is predicted to be negatively related to job satisfaction (Rizzo et al., 1970). It suggests that employees with conflicting role expectations from different parties, and inadequacy of resources to finish the role are less happy than those with less role conflict. One explanation for the negative relationship between role conflict and job

satisfaction is that work with role conflict may be stressful for employees and make employees less happy with their job.

Comparing the relative influence of role conflict on job satisfaction with studies in the west, the above finding displayed a stronger effect of role conflict on job satisfaction than the relationship between job satisfaction and job characteristics. For instance, Gaertner and Robinson's (1999) meta-analysis demonstrated a stronger effect of job characteristics than role conflict on job satisfaction. The difference on the relative strength of role conflict with other situational variables could be explained by the characteristics of China's high power distance, high collectivism culture. As a high power distance society, conflicting instructions from different supervisors could be more stressful to employees than in western countries. In a high collectivist society, harmony in an organization is valued (Cunningham & Rowley, 2007). Role conflict could damage this harmony.

The Effect of Autonomy on Job Satisfaction

Autonomy had the fourth largest influence on job satisfaction among the 10 situational variables. The finding of a positive relationship between autonomy and job satisfaction aligns with previous meta-analyses (e.g. Fried & Ferris, 1987; Gaertner & Robinson, 1999; Humphrey et al., 2007; Loher et al., 1985) and multivariate analysis in Germany (Cohrs et al., 2006), in the United States (Kim et al., 1996), in Korea (Kim, 1999), and in China (Chan et al., 2004; Zhang & Zhang, 2006; Zhang & Zhao, 2007). The above finding suggests that employees with more freedom in deciding their work tasks, in selecting the method for the task, managing the time for the task, and working independent of their supervisor and co-workers are happier than those with less freedom.

The finding supports Hackman and Oldham's (1976) job characteristics theory, where autonomy is predicted to be positively related to job satisfaction. As discussed in chapter 2, there could be several explanations for the positive relationship between autonomy and job satisfaction. First, autonomous jobs could be a sign of trust of one's ability by the supervisor, and so provide employees with a sense of self-competence and an intrinsically rewarding work environment, which in turn operates to contribute to employees' affective response (Hackman & Oldham, 1976; Zhang & Zhao, 2007). Second, flexibility in work could facilitate satisfaction of needs in the non-work environment (Loscocco & Roschelle, 1991), thus making the job more satisfactory.

In terms of the relative influence of autonomy on job satisfaction compared with other situational factors, the current research found that its effect on job satisfaction is weaker than those of distributive justice, supervisor support, and role conflict, but stronger than the other factors such as routinization, role ambiguity, promotional chances, co-worker support, work overload, and pay level. Previous meta-analyses also demonstrated that in general, the effect of autonomy on job satisfaction is weaker than those of distributive justice, supervisor support, but stronger than those of promotional chances, work overload, co-worker support, and pay level (Gaertner & Robinson, 1999; Humphrey et al., 2007; Li & Cropanzano, 2009; Ng & Sorensen, 2008). The finding suggests that there is a convergence between this study and studies conducted in the west. The explanation for this finding could be that although China is a collectivist society, because more and more women are joining the white-collar workforce, people's family and work roles may be changing, people may need more autonomy to balance needs from their family and work place.

The Effect of Routinization on Job Satisfaction

Routinization had the fifth largest influence on job satisfaction among the 10 situational variables. The findings of a negative relationship between routinization and job satisfaction aligns with previous meta-analyses (e.g. Fried & Ferris, 1987; Gaertner & Robinson, 1999; Humphrey et al., 2007; Loher et al., 1985) and multivariate analyses in the United States (Kim et al., 1996), in Korea (Kim, 1999), in Australia (Iverson & Maguire, 2000), and in China (Zhang & Zhang, 2006). The above finding suggests that providing employees with opportunities to do new things, and use their various skills can increase their job satisfaction.

The finding supports Hackman and Oldham's (1976) job characteristics theory, where routinization is predicted to be negatively related to job satisfaction. In this model, repetitive work lacking task variety, and skill variety could be less interesting to workers, leading to lower job satisfaction. Furthermore, according to Hundley (2001), in situations of over-reduction or constraints on the use of skills individuals find their jobs lack challenge and they become frustrated with their inability to use valued skills, which in turn can cause lower job satisfaction. Routinization could hinder an individual's development of their skills; as a result this may hinder their future development in their career and so lessen their job satisfaction.

From the perspective of cross-cultural studies, the finding of a weaker effect of routinization on job satisfaction than interpersonal factors such as distributive justice and supervisor support is consistent with findings in previous meta-analyses (Colquitt et al., 2001; Humphrey et al., 2007; Li & Cropanzano, 2009; Ng & Sorensen, 2008). This finding supports the argument of Oldham and Hackman (2010) that future research on job satisfaction should incorporate both job characteristics and other inter-personal social factors.

The Effect of Role Ambiguity on Job Satisfaction

Role ambiguity had an equal sixth largest influence on job satisfaction among the 10 situational variables. The finding of a negative relationship between role ambiguity and job satisfaction also aligns with meta-analyses (e.g. Gaertner & Robinson, 1999; Jackson & Schuler, 1985) and reviews of previous multivariate analyses (e.g. Price, 2001; Sullivan & Bhagat, 1992), and studies in China (e.g. Wu & Norman, 2006; Zhang et al., 2003a). The above findings indicated a convergence between this study and existing research findings in the western countries. The research findings support the classical organizational theory and role theory. The classical organizational theory requires an individual to have specific tasks or responsibilities, and role theory requires an individual to have the necessary information for a given position (Rizzo et al., 1970).

The Effect of Promotional Chances on Job Satisfaction

Promotional chances also had an equal sixth largest effect on job satisfaction among the 10 situational variables. The findings of a positive relationship between promotional chances and job satisfaction aligns with a previous meta-analysis (Gaertner & Robinson, 1999) and with previous multivariate analyses on military physicians in the US (Kim et al., 1996), and on mining workers in Australia (Iverson & Maguire, 2000). The finding suggests that employees who get more chances of development within an organization are happier than those with less promotional chances.

Kim (1999) has argued that the positive relationship between promotional chances and job satisfaction is because encouraging internal careers and thereby

guaranteeing job security and other favorable long-term future rewards to employees, results in positive affective responses, which in turn increase employee job satisfaction.

The Effect of Work Overload on Job Satisfaction

Work overload was found to have a non-significant effect on job satisfaction when job satisfaction was regressed on work overload with other situational, dispositional and demographic variables under control. The finding of a non-significant relationship between work overload and job satisfaction is inconsistent with a meta-analysis (Gaertner & Robinson, 1999), review of previous multivariate analysis (Price, 2001), and studies on nurses in Taiwan (Chen et al., 2007). However, the finding of a non-significant effect of work overload on job satisfaction in the regression aligns with findings in several multivariate analysis in China (e.g. Zhang & Zhang, 2006; Zhang et al., 2003a), where a non-significant relationship between these two constructs was found.

There could be several explanations for the non-significant relationship between work overload and job satisfaction. According to Warr (1999), the relationship between workload and job satisfaction is curvilinear: job satisfaction could be low with least demand (that is, underload is stressful and unsatisfying), increases with moderate demand (when work is challenging and satisfying and not over stressful), and then declines again at particular high levels of demand (when overload is stressful and unsatisfying). The negative relationship between work overload and satisfaction may only have been found for overload, and the positive relationship for the under-load dimension. The findings in this study suggest that moderate work overload could be in neither end of the dimension, so no overall linear relationship is found

between job satisfaction and work overload. Another plausible explanation is that in a transitional economy such as China, individuals with a high workload could have a more secure job and get better rewards from their job; as a result, workload could be associated with greater job satisfaction.

The Effect of Pay Level on Job Satisfaction

Pay level was found to have a non-significant effect on job satisfaction when job satisfaction was regressed on pay level with other situational, dispositional and demographic variables under control. The finding of a non-significant relationship between pay level and job satisfaction is in contradiction with a meta-analysis (Gaertner & Robinson, 1999), but aligns with findings in previous multivariate analysis on military physicians in the US (Kim et al., 1996), a study on employees of automobile manufacturing companies in Korea (Kim, 1999), a study on employees of mining companies in Australia (Iverson & Maguire, 2000), and studies in China (Loscocco & Bose, 1998; Zhang & Zhang, 2006; Zhang et al., 2003a). Even though pay level had a non-significant relationship with job satisfaction, it does not imply that pay is not important in influencing job satisfaction, as pay could be an important component in distributive justice (Spector, 1997). The finding of a non-significant relationship between pay level and job satisfaction may imply that cross organizational pay differences may not be important for employees, but within organization pay differences are important. In other words, the non-significant relationship could be a consequence of sampling respondents from enterprises in multiple industries. Some companies could pay much more for the same work than other companies. One would expect that respondents working in the organizations which pay less would compare their pay to those doing the same job in the higher

paying companies, and would as a consequence be less satisfied. However, this did not occur, suggesting that they may not compare with employees outside their own company. This supports Spector's (1997) argument that the relationship between pay level and job satisfaction in studies across organizations could be weak.

The next section will discuss the effect of dispositions on job satisfaction.

The Effect of Dispositions on Job Satisfaction

The direct, indirect and total effects of dispositional variables on job satisfaction are summarized in Table 5.2.

In regards to the indirect effect of dispositions on job satisfaction, of the six dispositional variables whose relationship with job satisfaction were hypothesized to be mediated by perceptions of work situations, four were found to have an indirect effect on job satisfaction: PA, NA, conscientiousness and neuroticism.

In terms of the direct effect of dispositions on job satisfaction, three were found to be related to job satisfaction: PA, extraversion and conscientiousness. These provide evidence of partial mediation for PA and conscientiousness and are discussed below.

Table 5.2 The direct, indirect and total effects of hypothesized dispositional factors on job satisfaction

Ranking	Variables	Direct effect	Total Indirect Effect	Total effect
1	PA	.13*	.21*	.34*
2	Extraversion	.16**	.00	.16*
3	NA	.00	-.12*	-.12*
3	Conscientiousness	.10*	.02*	.12*
5	Neuroticism	.01	-.03*	-.02
6	Agreeableness	-.04	.00	-.04

* $p < .05$; ** $p < .01$.

As to the overall or total effect of dispositional variables on job satisfaction, of the six variables, four had a statistically significant effect on job satisfaction: PA, extraversion, conscientiousness, and NA. The relationship between these four dispositional variables and job satisfaction are in the expected direction according to extant theory. PA had the largest effect on job satisfaction, followed by extraversion, NA, and conscientiousness.

In the subsequent discussion, each of the dispositional variables which were found to have a statistically significantly direct or indirect effect on job satisfaction will be discussed. When the mediating role of perceived work situations on the relationship between dispositions and job satisfaction is discussed, the focus will be on the effect of dispositions on work situations. The reasoning of doing this is as follows. The mediating role of work situations on the disposition and job satisfaction relationship is a causal chain, which is dependent on both the relationship between dispositions and work situations, and the relationship between work situations and job satisfaction. As the relationship between work situations and job satisfaction has been discussed in the previous section, it will not be repeated.

The Effect of Positive Affectivity on Job Satisfaction

Of the hypothesized dispositional variables, PA had the largest total effect on job satisfaction. PA had both a direct and an indirect effect on job satisfaction. Hence, the relationship between PA and job satisfaction was partially mediated by perceived work situations. The finding of a positive relationship between PA and job satisfaction aligns with previous meta-analyses (e.g. Bruk-Lee et al., 2009; Connolly & Viswesvaran, 2000; Ng & Sorensen, 2009; Thoresen et al., 2003) and multivariate analysis on military physicians in the US (Kim et al., 1996), on employees in

automobile manufacturing factory in Korea (Kim, 1999), on employees in mining companies in Australia (Iverson & Maguire, 2000), on nurses and teachers in Hong Kong (Chiu & Kosinski, 1997), and managers and technicians in China (Chiu & Francesco, 2003a). The finding suggests that high-PA individuals are happier than their low-PA counterparts.

The finding of the strongest effect of PA on job satisfaction among all the studied seven dispositional variables is also consistent with findings of previous meta-analyses on the relationship between dispositions and job satisfaction (see table in chapter 2). PA not only has the strongest effect on job satisfaction, but also has some indirect effect through most of the situational variables. Of the eight hypothesized situational mediators on the relationship between PA and job satisfaction, six were found to mediate the relationship between PA and job satisfaction: autonomy, routinization, role ambiguity, supervisor support, promotional chances, and distributive justice. The finding that these six situational variables were mediators suggests that PA influences an individual's perceptions of their surroundings, which in turn influence job satisfaction.

According to the literature, the major explanation for the finding of a direct effect of PA on job satisfaction is that individuals high in PA are predisposed to experience positive emotions, which generalize to job satisfaction (Bruk-Lee et al., 2009; Ng & Sorensen, 2009). This finding supports the theory of the affect infusion model (Forgas, 1995), where PA is assumed to be positively related to job satisfaction.

The finding of a mediating role of these six situational variables on the relationship between PA and job satisfaction also supports affect event theory (Weiss & Cropanzano, 1996), the information processing model (Motowidlo, 1996) and the argument by Bruk-Lee et al. (2009) that PA could influence job satisfaction via its

influence on perceptions of work situations. All these theories have argued that dispositions can influence people's perception of work situations by selection, manipulation of surroundings, sensitivity to work stimuli, and reporting of the perception of these situations, which in turn influences job satisfaction.

Turning to the specific indirect effects, autonomy was found to mediate the relationship between PA and job satisfaction. This finding is consistent with the findings of a study in the US by Judge et al. (2000), where job characteristics were found to mediate the relationship between core self-evaluation and job satisfaction. In addition, the finding of a positive relationship between PA and autonomy is consistent with findings in a previous meta-analysis (Ng & Sorensen, 2009). As discussed in Chapter 2, there are two explanations for the significant relationship between PA and autonomy. First, high-PA individuals could be in jobs with objectively more autonomy because of individual and organizational selection and the individuals' manipulation of their work environment, which lead to them being placed in objectively better positions. Second, they could perceive their jobs have more autonomy because of their positive view of their environment (Bruck-Lee et al., 2009; Staw & Cohen-Charash, 2005).

Routinization was found to mediate the relationship between PA and job satisfaction. This finding also aligns with the findings of a study in the US by Judge et al. (2000), where job characteristics were found to mediate the relationship between core self-evaluation and job satisfaction. In addition, the findings of a negative relationship between PA and routinization is consistent with findings in a previous meta-analysis (Ng & Sorensen, 2009). The statistically significant relationship between PA and routinization could be explained by the same two reasons given for autonomy.

Role ambiguity was found to mediate the relationship between PA and job satisfaction. In addition, the finding of a negative relationship between PA and role ambiguity aligns with findings in a previous meta-analysis (Ng & Sorensen, 2009). Because individuals high in PA are more likely to have better relationships with others, they thus have better communication with others, which lead to less role ambiguity.

Supervisor support was also found to mediate the relationship between PA and job satisfaction. The positive relationship between PA and supervisor support is consistent with findings in a previous meta-analysis (Ng & Sorensen, 2009). One explanation for the positive relationship between supervisor support and PA is that supervisor support is likely to be valued more than co-worker support by individuals; employees will compete for supervisor support, and high-PA individuals are more likely to get more supervisor support than their low-PA counterparts because they are more likely to be more attractive than their low-PA counterparts. The higher supervisor support of the high-PA individuals thus leads to their higher job satisfaction.

Promotional chances were also found to mediate the relationship between PA and job satisfaction. In addition, the finding of a positive relationship between PA and promotional chances is consistent with findings in a previous meta-analysis (Ng & Sorensen, 2009). The positive relationship could be explained by the idea that as individuals high in PA are more likely to achieve better performance and get more support from the elite for promotion, they could perceive there are more chances for their promotion, which leads to higher job satisfaction.

Finally, distributive justice was found to mediate the relationship between PA and job satisfaction. In addition, the finding of a positive relationship between PA and distributive justice is consistent with previous meta-analyses (Barsky & Kaplan, 2007;

Ng & Sorensen, 2009). As individuals high in PA are more likeable and could be better performers, they could get more rewards from their jobs, thus feel more distributive justice.

In summary, high PA individuals are in a better position in terms of autonomy, routinization, role ambiguity, supervisor support, promotional chances, and distribution, which in turn result in their higher job satisfaction. The importance of PA can be explained by the focus on “harmony” and “connections” in Chinese culture (Cunningham & Rowley, 2007). In a harmonious environment, people keep good interpersonal relationships with reciprocal obligations and duties. Individuals high in PA are more likely to have good interpersonal skills and so be in a harmonious situation with their supervisors and co-workers, and have more connections than low PA people, as a result they can get tasks with more autonomy, less routinization, more support from supervisors, more chances for promotion, better communication, and feeling more fairness in the workplace.

The finding of the strongest effect on job satisfaction and the relationship between PA and job satisfaction implies that PA is important in many domains, not only job satisfaction, but also work situations. According to Lyubomirsky, King and Diener (2005), positive affect is important as not only success can bring positive affect, but also positive affect can bring success. The research suggests that the importance of PA can be universal.

The Effect of Extraversion on Job Satisfaction

Of the hypothesized dispositional variables, extraversion had the second largest total effect on job satisfaction. Extraversion had a direct effect on job satisfaction, but no indirect effect. Hence, no evidence of mediation of work situations on job

satisfaction was found. The finding of a positive relationship between extraversion and job satisfaction aligns with previous meta-analyses (Bruk-Lee et al., 2009; Judge et al., 2002) and regression analysis (Judge et al., 2002). The finding is consistent with the idea that individuals high in extraversion are happier than their counterparts low in extraversion irrespective of their perception of work situations. The positive relationship between job satisfaction and extraversion could be explained by the higher positive emotions of individuals high in extraversion. According to Judge et al. (2002), extraverts are predisposed to experience positive emotions, and these could generalize to job satisfaction. The statistically significant direct effect of extraversion on job satisfaction also indicates that extraversion is not redundant as a predictor of job satisfaction when PA is under control. In other words, extraversion explains extra variance in job satisfaction above and beyond PA.

The Effect of Negative Affectivity on Job Satisfaction

Of the hypothesized dispositional factors, negative affectivity was found to have the third largest total effect on job satisfaction. The research finding of a statistically significant total effect of NA on job satisfaction is consistent with findings in previous meta-analyses (e.g. Bruk-Lee et al., 2009; Connolly & Viswesvaran, 2000; Ng & Sorensen, 2009; Thoresen et al., 2003). The research found no direct effect of NA on job satisfaction, but did find an indirect effect. Hence, the influence of NA on job satisfaction was completely mediated through its influence on perception of work situations.

The finding of a non-significant direct effect of NA on job satisfaction is consistent with previous multivariate analyses of US military physicians (Kim et al., 1996), managers and technical professionals in China (Chiu & Francesco, 2003a), and

teachers and nurses in Hong Kong (Chiu & Kosinski, 1997). However, the finding of no direct effect of NA on job satisfaction is in contradiction with multivariate studies on automobile factory workers in Korea (Kim, 1999), employees from mining companies in Australia (Iverson & Maguire, 2000), and technicians in Xi'an (Zhang et al., 2003a).

Of the 10 hypothesized situational mediators on the relationship between NA and job satisfaction, four were found to mediate the relationship between NA and job satisfaction: role ambiguity, role conflict, supervisor support and distributive justice. This indicates that NA has an effect on these four situational variables, which in turn have an effect on job satisfaction. The finding of mediating role of these four situational variables on the relationship between NA and job satisfaction supports the argument by Bruk-Lee et al. (2009) that NA influences job satisfaction via its influence on perceptions of work situations. However, hypotheses on the mediation of the other six situational variables (i.e. autonomy, routinization, work overload, co-worker support, promotional chances and pay level) were not supported.

Firstly, role ambiguity and role conflict were found to mediate the relationship between NA and job satisfaction. In addition, the research also found a positive relationship between NA and role ambiguity, and NA and role conflict, which are consistent with findings in previous meta-analysis (Ng & Sorensen, 2009). There are two plausible explanations for the effect of NA on role ambiguity and role conflict. First, according to Bruk-Lee et al. (2009), individuals high in NA are more likely to put themselves into stressful situations, and thus in situations objectively with more role ambiguity and role conflict. Second, because of the negative nature of individuals high in NA, they are more likely to perceive their work situations more negatively.

Secondly, supervisor support was found to mediate the relationship between NA

and job satisfaction. Furthermore, findings of a negative relationship between NA and supervisor support is consistent with findings in previous meta-analysis (Ng & Sorensen, 2009). One explanation for the negative effect of NA on supervisor support is that because of the negative nature of high NA individuals, they are likely to have a negative view of themselves and others. Thus they are less likable. When they compete with low NA individuals for supervisor support, they are likely to be in a disadvantaged position, and as a result get less supervisor support, leading to lower job satisfaction.

Distributive justice was also found to mediate the relationship between NA and job satisfaction. Furthermore, the finding of a negative relationship between NA and distributive justice is consistent with findings in previous meta-analyses (Barsky & Kaplan, 2007; Ng & Sorensen, 2009). The finding of a negative relationship between NA and distributive justice supports the theory that individuals high in NA are more likely to put themselves into unfavorable situations (Barsky & Kaplan, 2007; Bruk-Lee et al., 2009), and perceive unfair treatment in the workplace, leading to lower job satisfaction.

In summary, high NA individuals are in an unfavourable position in terms of role ambiguity, role conflict, supervisor support, distributive justice, which in turn influences their job satisfaction. The indirect influence of NA on job satisfaction via these situational variables can also be explained by the elements of “harmony” and “connections” in Chinese culture (Cunningham & Rowley, 2007). Role conflict and role ambiguity can be related with communications with other people. Perceptions on supervisor support and distributive justice can be linked with interpersonal relationships with one’s supervisors. In other words, all the four variables can be related to interpersonal relationships in the workplace. Because of the negative nature

of high NA individuals, they are more likely to have poor interpersonal relationships, be in a less harmonious situation and with less connections than low NA people, which in turn results in lower job satisfaction.

In terms of the relative effect of PA and NA on job satisfaction, the effects of PA on job satisfaction are different from the effects of NA on job satisfaction in three respects. First, the research found a stronger total effect of PA on job satisfaction than that of NA on job satisfaction. The finding of a stronger relationship between PA and job satisfaction than NA and job satisfaction is consistent with findings in previous meta-analyses (Bruk-Lee et al., 2009; Connolly & Viswesvaran, 2000; Thoresen et al., 2003), where PA was found to have a stronger relationship with job satisfaction than NA. The findings support the argument that the relationship between PA and job satisfaction is stronger than that between NA and job satisfaction because the first two constructs are worded in the same direction (Connolly & Viswesvaran, 2000). Second, PA was found to have a direct effect on job satisfaction, while NA did not. Third, PA also had a stronger indirect effect on job satisfaction via situations than NA.

The Effect of Conscientiousness on Job Satisfaction

Of the hypothesized dispositional factors, conscientiousness also had the third largest total effect on job satisfaction. Conscientiousness had both a direct and a relatively small indirect effect on job satisfaction. Hence, the relationship between conscientiousness and job satisfaction was partially mediated by perceptions of work situations. The finding of a positive relationship between conscientiousness and job satisfaction aligns with the findings in previous meta-analyses (Bruk-Lee et al., 2009; Judge et al., 2002) and multiple regression (Judge et al., 2002), where there was also a positive relationship between conscientiousness and job satisfaction even when the

other four Big Five factor personality traits were controlled. Furthermore, the significant effect of conscientiousness on job satisfaction also aligns with the findings of Cohrs et al. (2006), where they found in two of their three samples of German professionals that conscientiousness was related to job satisfaction when the other Big Five factors were controlled. The finding suggests that individuals high in conscientiousness are happier than their counterparts low in conscientiousness.

One explanation for a direct effect of conscientiousness on job satisfaction irrespective of work situations is that because individuals high in conscientiousness are likely to put more time and effort in their jobs, they are likely to evaluate their jobs as satisfying to rationalize their conscientious work behavior (Bruk-Lee et al., 2009).

Of the five hypotheses on the mediating role of work situations on the relationship between conscientiousness and job satisfaction, only role ambiguity was found to mediate the relationship between conscientiousness and job satisfaction in the expected direction. Mediation of the other four situational variables (i.e. autonomy, promotional chances, pay level, and distributive justice) on the relationship between conscientiousness and job satisfaction was not supported.

With regard to the mediation effect of role ambiguity, the finding suggests that conscientiousness influences perceptions of role ambiguity, which in turn influences job satisfaction. As highly conscientious individuals are more devoted to their jobs than their less conscientious counterparts, they are likely to be clearer about their roles.

The Effect of Neuroticism on Job Satisfaction

Neuroticism had no direct effect on job satisfaction, but had a relatively small

indirect effect on job satisfaction. Hence, the relationship between neuroticism and job satisfaction was completely mediated by work situations. The finding of a negative relationship between neuroticism and job satisfaction is consistent with previous meta-analyses (Bruk-Lee et al., 2009; Judge et al., 2002). However, the finding of no direct effect of neuroticism on job satisfaction in regression when the situational mediators and other dispositional variables were included is inconsistent with a multiple regression by Judge et al. (2002). The inter-correlation of NA and neuroticism and the mediation of perceptions between NA and job satisfaction may account for why neuroticism does not show as statistically significant when NA and work situational variables are introduced to the model.

Of the eight hypothesized situational mediators on the relationship between neuroticism and job satisfaction, only role conflict was found to mediate the relationship between neuroticism and job satisfaction in the expected direction. The finding suggests that neuroticism influences individuals' perceptions of role conflict, which in turn influences their job satisfaction. There are two explanations for the effect of neuroticism on role conflict. First, according to Bruk-Lee et al. (2009), individuals high in neuroticism are more likely to put themselves into stressful situations, and thus they could put themselves in situations objectively with more role conflict. Second, because of the negative nature of individuals high in neuroticism, they are more likely to perceive their work situations more negatively, leading to lower job satisfaction.

In terms of the relative effect of NA and neuroticism on job satisfaction, this research found a stronger relationship between NA and job satisfaction than that between neuroticism and job satisfaction. The research also found that the relationship between NA and work situations is different from the relationship between

neuroticism and work situations. Specifically, multiple regression found that NA was significantly related to five of the 10 situational variables: role ambiguity, role conflict, supervisor support, co-worker support and distributive justice, while neuroticism only had significant effect on role conflict. The finding of different effects of neuroticism and NA on other variables is consistent with previous studies and suggests that in future research these two variables should be used as two separate constructs, rather than using one as the equivalent of the other. The finding of a stronger effect of NA than neuroticism on other situational variables could be explained by the fact that as neuroticism is broader than NA, the relationship between neuroticism and job satisfaction and the organizational situational variables are weaker than those between NA and job satisfaction and those situational variables.

Theoretical Implications of the Research

The research findings have several theoretical implications. First, they suggest that, in general, the measures of job satisfaction and its situational and dispositional antecedents developed in western English-speaking countries can be generalized to populations in China.

Second, the research findings in the current study suggest that the hypothesized relationships between job satisfaction and its situational antecedents based on studies in western cultures, in general, can be generalized into the Chinese culture. The research finding of a positive relationship between job satisfaction and autonomy, supervisor support, promotional chances and distributive justice, and a negative relationship with routinization, role ambiguity, and role conflict are consistent with previous findings in western English-speaking countries (e.g. Gaertner & Robinson,

1999; Price, 2001). Thus, many of the work attributes that people value in the west seem to apply to China, including distributive justice, supervisor support, and autonomy. This is evidence for convergence between China and western countries (Zhang & Zhang, 2006; Zhang & Zhao, 2007).

However, the findings of a non-significant relationship between co-worker support and job satisfaction, and the relationship between work overload and job satisfaction are inconsistent with findings in English-speaking countries. The non-significant relationship between work overload and job satisfaction could be related to economic reform in China or Chinese culture. A heavy workload may be an indicator of a secure job, which could make people more positive about their jobs. The non-significant relationship between co-worker support could be caused by the relatively less important role of co-worker support than supervisor support in the Chinese workplace. In organizations in contemporary China, the role of supervisors could play a much more important role in individual's career development than the role of co-workers.

Third, the research findings suggest that the relationship between dispositions and job satisfaction found in western English-speaking countries can be generalized to China. The findings of a statistically significant relationship between positive affectivity, negative affectivity, extraversion, conscientiousness, neuroticism and job satisfaction are consistent with findings in previous studies in western English-speaking countries (e.g. Judge et al., 2002; Price, 2001).

Fourth, there are several theories trying to explain the mechanism of disposition on job satisfaction. These theories include affect event theory (Weiss & Cropanzano, 1996), the information processing model (Motowidlo, 1996), and the mechanisms of the dispositional influence model (Staw & Cohen-Charash, 2005). All of these

theories in common suggest that the relationship between dispositions and job satisfaction could be mediated by perceived work situations. However, these theories do not tell which dispositional factor influence job satisfaction via which work situations. Bruk-Lee et al. (2009) proposed a model specifically linking PA, NA, neuroticism, extraversion, conscientiousness, agreeableness and job satisfaction with nine mechanisms. These nine mechanisms represent general tendencies to be satisfied/dissatisfied, selection or self-selection of work situations, threshold for negative emotion/hyper-reactivity, performance as a mediator, dissatisfaction/stressor creation, attrition/change of work, perception/appraisal, and cognitive consistency. The findings of this study support these theories on the mediating role of work situations on the disposition and job satisfaction relationship. The research found that affectivity (in particular positive affectivity) has a much stronger indirect effect on job satisfaction than the elements of Big Five factors personality traits. There was little effect of the mediating role of work situations on the relationship between the Big Five factors and job satisfaction. The explanation for this could be that as affectivity has an affective nature, it could be more closely related to work situations than the Big Five factors, thus affectivity has a stronger indirect effect on job satisfaction than the Big Five factors. It was found that about two-thirds of the total effect of PA on job satisfaction, and all the effect of NA on job satisfaction were through work situations, indicting the important role of affectivity on perceptions of work, and their consequent effect on job satisfaction. The research findings of a stronger mediation of work situations on the relationship between positive affectivity and negative affectivity support the theories of that affectivity will have an effect on perceptions of work situations, which in turn, have an effect on job satisfaction (Bruk-Lee et al., 2009). The finding of mediation of work situations on the positive affectivity and job

satisfaction relationship is also consistent with research findings by Heller et al. (2009). According to Bruk-Lee et al. (2009), the mechanism of PA's influence on job satisfaction is by PA's influence on perception or appraisal of their work or work situations. In addition, according to Lyubomirsky et al. (2005), there is a link between happiness and success, which is not only because success makes people happy, but also because positive affect engenders success. There is empirical evidence on a positive relationship between PA and performance in the west (Kaplan et al., 2009; Ng & Sorensen, 2009). It is also likely that it is performance which explains the mechanism of the mediation of work situations on the PA and job satisfaction relationship.

The research found that the indirect effect size of NA on job satisfaction is about half of that of PA. According to Bruk-Lee et al. (2009), the mechanism of the influence of NA on job satisfaction can be more complicated than that of PA. The mechanism of the influence of NA on job satisfaction includes selection or self-selection, threshold/hyper-reactivity, stressor creation, attrition, and perception or appraisal. As China is a collectivist culture, harmony in a work place is important. Displaying of negative affect could damage the harmony of workplace. This could be the explanation for a much weaker relationship between NA and job satisfaction.

The mediation of perceptions of work situations on the relationship between Big Five and job satisfaction was only partially supported. The mediation of work situations on the relationship between conscientiousness, neuroticism and job satisfaction supported the argument of Bruk-Lee et al. (2009). Bruk-Lee et al. (2009) suggested that performance and cognitive consistency could be explanation of the indirect effect of conscientiousness, and selection, threshold or hyper-reactivity and performance could be explanation for the indirect effect of neuroticism on job

satisfaction.

Fifth, the research findings support the research undertaken in inland regions in China, suggesting they may be able to be generalized more widely. The research findings on the relationship between work situations and job satisfaction in the current study are consistent with the findings of previous studies in other regions in China (e.g. Zhang et al., 2003b), although in several aspects, the current study is different from these studies (e.g. Zhang et al., 2003b) . First, the study by Zhang et al. (2003) was done about six years before the current study, and during this period of time, both the environment of organizations and the organizations themselves have changed. Second, Zhang et al. (2003b) used a sample from a city in China's northwest, while the current study used a sample from China's northeast. Third, although both studies used validated survey instruments developed in western English-speaking countries, many of the scales were different. However, in both studies autonomy, distributive justice, promotional chances, supervisor support, role ambiguity, role conflict, and routinization were found to be predictors of job satisfaction, while co-worker support was found to have a non-significant effect on job satisfaction. The similarity of the current study and that of Zhang et al. (2003b) implies that the findings in the current study could be generalized to large populations in China beyond the studied region in this study.

Sixth, the findings of the current research support the argument for integrating the situational and dispositional antecedents of job satisfaction in any single study (Cohrs et al., 2006; House et al., 1996; Judge & Hulin, 1993; Staw & Cohen-Charash, 2005). The present research found that integrating situational and dispositional antecedents can significantly explain more variance in job satisfaction than using only situational variables or dispositional variables alone. Furthermore, both situational and

dispositional antecedents uniquely predicted job satisfaction. The finding of the additive effect of dispositional and situational variables on job satisfaction is also consistent with findings from previous research in China (Chiu & Francesco, 2003a; Zhang et al., 2003a; Zhang et al., 2006), where both affectivity and work situations were found to be predictors of job satisfaction.

Seventh, the findings in the current research suggest integrating positive and negative affectivity and the Big Five factor personality traits framework better predicts job satisfaction than either affectivity or the Big Five alone. Hence, the research found that these two frameworks are not redundant of each other. For example, even though some researchers argue that PA and extraversion are conceptually similar, this research shows they are empirically different constructs and each of them can uniquely explain some variance in job satisfaction, indicating that one is not redundant of the other and one should not be looked as the equivalent of the other. Similarly, the research implies that the role of NA and neuroticism in predicting job satisfaction is different and the relationship between NA and job satisfaction is much stronger than the relationship between neuroticism and job satisfaction. The research findings thus suggest that NA and neuroticism and PA and extraversion should not be used interchangeably in job satisfaction research.

Practical Implications of the Research

With regards to the practical implications of the present study, it is instructive to first consider the level of satisfaction of employees in the sample. In the current study, the mean value of job satisfaction was 3.36 out of 5. This value is equivalent to 59% of the percent of maximum possible score (POMP)(Cohen, Cohen, Aiken & West,

1999). Using the same measure for job satisfaction as in the present study, studies in Jiangsu (Zhang & Zhao, 2007), in Xi'an (Zhang et al., 2003b), and in Beijing (Zhang & Zhang, 2006) found a mean value of 3.47, 3.45, and 3.10, respectively. The POMP values in the above studies range from 52% to 63%. Therefore, the level of job satisfaction in this study is similar to job satisfaction reported in other China studies. Using the same scale, studies in the US (Agho et al., 1992), in Korea (Kim, 1999), and in Australia (Iverson & Maguire, 2000) reported a mean job satisfaction of 3.48, 3.21, and 3.24, respectively. The POMP of these studies range from 55% to 62%. In addition, Spector (2010) reported a mean score of 134.8 out of 216 for the 36 item job satisfaction survey scale (Spector, 1985) with a sample size of 36,380 cases, which is equal to 55% of POMP. Thus, the results in this study showed that job satisfaction of the studied population is about the average compared with other studies both inside and outside China. Two significant conclusions can be drawn from the above. First, the above findings demonstrate convergence in job satisfaction between people from different cultures and socio-economic environments. This is in contrast to theories which predict a lower level of job satisfaction in China. Second, the POMP value of 59% means that there is scope for raising job satisfaction through modifying the antecedents of job satisfaction in Chinese organizations.

From the perspective of management, knowledge of the antecedent variables that encourage and discourage job satisfaction of employees may allow management to take appropriate action to improve human resource management in their organizations. Hence, the study findings have several important practical implications for management to improve employee job satisfaction and these are outlined below.

First, on the basis of the evidence of the present study, managers in China concerned with improving job satisfaction of employees should focus more on the

seven important work situational variables that emerge as predictors of job satisfaction: autonomy, routinization, role conflict, role ambiguity, supervisor support, promotional chances and distributive justice. The finding of a statistically significant relationship between these seven situational variables and job satisfaction suggests that managers should create situations with more autonomy, supervisor support, promotional chances, distributive justice, and less routinization, role ambiguity and role conflict. Particular attention should be provided to improving employees' perception of distributive justice and supervisor support, the two strongest predictors of job satisfaction identified in the present study.

The practical implication for management on the finding of the strongest impact of distributive justice on job satisfaction is that Chinese managers should pay special attention to the fairness in the management of people. Perception of distributive justice is quite broad, and involves beliefs about the justice of extrinsic rewards such as pay and promotion, and intrinsic rewards such as recognition of work. Manager should consider the fairness component in their management actions.

With economic reforms, labor-management relations in China are also changing. Management has much more power in issues such as recruiting, labor contract, promotion etc (Cunningham & Rowley, 2007). Management should consider the fairness component in their decision making on promotions, pay raise etc. According to Cooke (2010), performance appraisal has long been used in China, and performance management is currently being promoted as a modern, western HRM concept in China. Performance appraisal is now linked with wages and bonuses of ordinary employees and managerial staff's promotion and bonus. Cooke (2010) noted that studies in China have demonstrated that employees may be interested in performance management, while line managers may be reluctant to implement

performance appraisal. This phenomenon could be explained by the findings of this research. Both employees and manager like distributive justice. A fair performance management system can be favorable in both Chinese and western cultures. Employees are in favor of the performance management system, as a well-designed performance system can build a link between performance and rewards, thus making it fairer for them. However, for the managers, establishing a fair performance management system may be not an easy task. To make performance management fair, two-way communication, ability to challenge evaluations, the rater's familiarity with the ratee's work, and the rater's ability to apply standards consistently are all important.

As people are concerned about fairness in work place, management needs to be careful in designing remuneration system and making decisions on people's promotion and pay raise. Although employees are not likely to compare pay with people doing the same job outside the organization, they are likely to compare their remuneration with their colleagues. Pay rises and promotions should therefore be linked with people's performance, education, work experience, and skills. Employees' good behavior should be recognized by the company promptly.

The finding of a positive relationship between perception of supervisor support and job satisfaction suggests that employees value both physical and emotional support provided by supervisors. The finding supports the practice of mentoring adopted in Chinese enterprises. According to Cooke (2010), MNCs and large Chinese private firms have adopted mentoring for employee development. In the mentoring system, the mentor is not only responsible for inducting the mentee into the organization, but also is instrumental in guiding the career development of the mentee. In the mentoring system, the managers are trying to provide support to the employees. At the same time, training of managers to improve their skills in providing improved

quality of support to employees could be equally important. Jin and Sun (2007) also argued that supervisors should try to have more communication with their subordinates and be concerned about their well-being to improve employees' perception of supervisor support. According to Taormina (1999), a supervisor's conscientious offering of training to employees and provision of career development and guidance can also make employees more efficient in their work and fulfill their development needs, thus allowing them to feel the support of their supervisor and consequently raise their job satisfaction.

The implication for management of the finding of a significant effect of role conflict on job satisfaction is that role conflict can be detrimental to Chinese employees' job attitudes. The current study not only found a stronger effect of role conflict on job satisfaction than other job stressors such as role ambiguity and work overload, but also much role conflict than role ambiguity. In Chinese organizations, there could be more than one supervisor. For instance, typically there is one from the management, and another from the party. If the two supervisors give conflicting instructions to their subordinates, there could be role conflict, and consequently some negative effect on employee's job satisfaction.

Job characteristics such as autonomy and routinization were also predictors of job satisfaction. These findings suggest that supervisors should trust employees, grant them more voice in the decisions on their method of work, assign them jobs with more freedom in scheduling works, and allow autonomy to make decisions. Zhang and Zhao (2007) argued that companies can increase employees' perceptions of autonomy by job design and granting employees additional power. According to Jin and Sun (2007), job rotation allows companies to provide employees with diversified tasks and more opportunities to use their different skills, and as a result lower

employees' perceptions of routinization.

Role ambiguity was also a predictor of job satisfaction. On the basis of this evidence, managers should establish good communication within the organization. The implication for management is that management should try to avoid ambiguous job descriptions, responsibilities, authority, or expectations of others, as they may be stressful for employees and make them less happy with their job. Better communication between employees and their supervisors can make employees clearer about their roles in the company and reduce role conflict (Li, 1999).

Promotional chances are also valued by employees. Companies may need to create a job hierarchy so that employees can have more opportunities for promotion (Jin & Sun, 2007). Companies may also need to design training programs for employees to increase the skills required by the organization, and to fulfill the employee's development needs, thus should provide them with opportunities for career growth (Taormina, 1999; Zhang & Zhao, 2007).

Finally, the findings of a direct and indirect effect of dispositional factors on job satisfaction suggest that job satisfaction is influenced by both dispositions and perceptions of work situations. As it is difficult to change the dispositions of employees, management should improve the work environment on the situational factors outlined above in order to increase the job satisfaction of employees.

The findings in this research can also provide some practical implications for management in solving the problem of turnover of talented people in Chinese organizations. Studies have found that job satisfaction is an important predictor of turnover intentions and actual turnover in Chinese organizations (Chen & Li, 2009; Tian-Foreman, 2009; Ye et al., 2005; Zhang et al., 2003a; Zhang & Zhao, 2007). An understanding of the predictors of job satisfaction can be helpful in having a better

understanding of the antecedents of turnover and turnover intentions. There has been a shortage of talented people in Chinese organizations. For instance, according to Cunningham and Rowley (2007), a pressing problem for small and medium sized enterprises in China is the need to find and retain talented and qualified staff. There is a shortage of skilled professionals and over-supply of unskilled labor. There is a tough competition for talented staff, as a result small and medium sized enterprises have to increase wages to attract and keep the talented.

Limitations of the Current Study

The findings and contributions of the current study should be viewed in light of several limitations.

A first limitation is related to the adoption of a self-reported questionnaire for data collection in this study. This data collection method is open to potential common method variance and social desirability bias (Chang, 2010; Moorman & Podsakoff, 1992; Podsakoff et al., 2003; Spector, 1987, 2006; Williams & Brown, 1994). These two kinds of bias may distort the relationship between the studied variables.

To strengthen the thesis with regard to the risk of common method variance a statistical method known as Harman's single-factor test was adopted (Chang, 2010). Although not a definitive test, it is concluded from the evidence of the Harman's test that CMV does not appear to be a serious threat to the study. Moreover, despite its acknowledged importance, the effect of CMV could be exaggerated (e.g. Brannick, Chan, Conway, Lance & Spector, 2010; Conway & Lance, 2010; Spector, 2006). Empirical evidence suggests that CMV is not as serious an issue as it was originally thought. For instance, Spector (2006, p. 233) noted that "there are few scientific data to

unequivocally support (the common view of CMV), and there are data to refute it.” For example, in a meta-analysis of 581 articles, Crampton & Wagner (1994, p. 72) concluded CMV inflation “may be more the exception than the rule.” In an earlier paper, Spector (1987) also argues that properly developed reliable and valid instruments such as those used in this thesis are more resistant to CMV.

Social desirability is the tendency of participants to answer questions in a way that projects themselves in a publicly favorable light, regardless of their true feelings about an issue or topic (Paulhus, 1991). That is, they tend to over-report socially desirable attitudes and behaviors and underreport those that are socially undesirable (Krosnick, 1999). This tendency is problematic because of its potential to bias answers of respondents, and also because it can mask relationships between two or more variables or produce spurious relationships (Moorman & Podsakoff, 1992). As a result, biases shared by job satisfaction, situational variables, and dispositional variables would serve to inflate the observed relationships. Conversely, biases that are unshared would serve to attenuate relationships. For instance, social desirability might bias reports of neuroticism and NA, but are unlikely to bias job satisfaction (Moorman & Podsakoff, 1992). As a result, the relationship between job satisfaction and neuroticism or NA might be underestimated. However, research (Chan, 2001) using a latent variable approach found that the impact of method effects (such as social desirability) on estimation of substantive relations among self-reports of work attitudes (organizational commitment, perceived organizational support, job satisfaction, and intention to quit) was trivial. A meta-analytic review (Moorman & Podsakoff, 1992) also revealed weak correlations between social desirability and a number of constructs used extensively in organizational behavior research such as overall job satisfaction, role conflict, role ambiguity, and organizational commitment.

As to research in China, researchers (Davey, Chen & Lau, 2009; Davey & Higgins, 2005) have suggested that as Chinese society is less exposed to survey methods than participants in western countries, participants may be reluctant to answer fully, or may report answers based on what they feel they should say. In the current study, there is no strong reason to believe that respondents deliberately distorted their responses in any way as participation was voluntary, anonymous, and for research purposes only. Therefore, it is unlikely that social desirability bias would be a serious threat to the validity of the study.

In summary, although self-report data may be susceptible to the above-mentioned common method variance and social desirability biases, assessment of employee perceptions and attitudes via self-report is more accurate than through other measures, because employees should know their own perceptions and attitudes better than others do. Generally, it is agreed that in well designed research, self-report data provides useful information and is a starting point for the study of interrelationships between organizational constructs (Spector, 1994). Nevertheless, it is recommended that future research should replicate the present findings using data gathered from multiple sources. Although not possible in this study, one recommended strategy for controlling common method bias is to obtain measures of the independent and dependent variables from different sources. For example, future studies could benefit from a procedure with multi-source ratings for the studied variables. For example, ratings of personality can be given by significant others, such as supervisors or co-workers (Judge et al., 2008).

A second limitation is related to the validity of the measures adopted in the study. Although all the measures are well-established in western English-speaking countries, only a few of them have been validated in a Chinese population in previous studies.

The adoption of a measure in another population with different language and culture could be problematic. However, the confirmatory factor analysis demonstrated a clear structure for most of the measures adopted in this study, and all the scales are of acceptable reliability. So the adoption of those measures in the current study should not be a concern. The only thing which needs to be mentioned is about the 44-item BFI scale. The results of CFA of this scale suggest that about half of the items should be dropped from the original scale. Although the reasons are unclear, this could be caused by the use of negatively worded items or cultural differences. This suggests that the results on the effect of the Big Five personality traits on job satisfaction should be interpreted with care. Future research is needed to explore the reliability and validity of the BFI scale in larger more representative samples, particularly in cross-cultural contexts. An alternative way is to measure the Big Five factors with longer measures such as the NEO (Costa & McCrae, 1995), which have stronger validity in China (Dai, Yao & Cai, 2004).

A third limitation of this study is related to the cross-sectional research design. Because of this, one cannot draw confident causal conclusions concerning the direction of the relationship between job satisfaction and its antecedents. Furthermore, the effects of perceptions of situations on job satisfaction could be overestimated, because perceptions of work situations may themselves be influenced by job satisfaction. Cross-sectional studies and longitudinal studies have reported that the relationship between work situations and job satisfaction is bidirectional (Campion & McClelland, 1993; James & Tetrick, 1986; Mathieu, Hofmann & Farr, 1993). However, recent studies have found that time-lagged effects of work situations on job satisfaction is stronger than the reverse effects (De Jonge et al., 2001; De Langeff, Taris, Kompier, Houtman & Bongers, 2004). Nevertheless, more longitudinal studies

should be conducted to test the causality of the relationship between job satisfaction and its antecedents.

Fourth, as the study is restricted to a white-collar urban sample located in one city in the northeast of China, the results may add to the existing literature on job satisfaction in other regions of China, but are in themselves not necessarily generalizable to other locales or segments of the population. With that being said, the research collected data from different organizations in multiple industries to increase the generalizability of the results and ensure they are not specific to a single organization or industry. The consistency of findings in the current study and those in other regions in China, such as in Xi'an (Zhang et al., 2003a), suggest that the findings may be generalizable to other regions. Further research should be conducted using larger samples across a broader number of cities to build up a more complete picture of the complex interrelationship between job satisfaction and its situational and dispositional antecedents in China.

A fifth limitation is related to the employment of a convenience sample. The use of convenience sampling may limit the generalizability of the findings. However, every attempt was made to ensure that respondents from each of the organizations were as representative as possible in terms of gender, age and education level. In addition, given that data were collected across many enterprises in both public and private sectors, rather than one organization, it is concluded that the findings of the current study are potentially generalizable to white-collar employees in other industrial and commercial organizations in Fushun city.

Directions for Future Research

The findings and limitations of the current study give some indication of the direction for future research in the area of job satisfaction. First, as discussed earlier, the current research adopted a self-report questionnaire for data collection; subsequent research could use alternative measures or multi-rater measures for data collection. For instance, data on personality could be collected via third parties such as supervisors or colleagues or data on personality can be collected with longer scales such as NEO (Costa & McCrae, 1995) which has been found to have good validity in China (Dai et al., 2004). Even though multi-rater measurement cannot ensure that social desirability or other biases are eliminated, it can at least provide an alternative way of the measuring variables for purposes of data triangulation (Judge et al., 2008).

A second direction for future study could be adoption of a longitudinal study design. The longitudinal design could provide better prediction of the relationship between job satisfaction and antecedents than the cross-sectional research design adopted in the current research. Specifically, data could be collected in two waves. Data on dispositions and situations could be collected in the first wave, and data on job satisfaction could be collected in the second wave.

A third direction for future study could be replication of this study using different samples or in different cities in China. For instance, the targeted populations could be public servants in the government or employees from industrial and commercial enterprises in many different cities. Although job satisfaction is a well-researched topic in the western English-speaking countries, only a few comprehensive studies with validated survey instruments have been done in China. The generalizability of findings in this study should be tested in future investigations using other populations.

A fourth direction for future study could be examination of the moderators of the relationship between work situations and job satisfaction in China. According to Bruk-Lee et al. (2009), individuals high in NA or neuroticism may be hyper-reactive to work conditions or events which lead to negative or positive emotions, suggesting that NA or neuroticism could moderate the relationship between work situations and job satisfaction. For example, studies on German professionals (2006) have found a stronger relationship between career growth opportunities and job satisfaction for individuals high in neuroticism than for those low in neuroticism.

A fifth direction for future study could be investigation on the link between job satisfaction and its consequences in China. Theories of social exchange (Bateman & Organ, 1983; Organ, Podsakoff & MacKenzie, 2006) argue that employees who are satisfied with their jobs may reciprocate through organizational citizenship behavior, while unsatisfied employees may withdraw their organizational citizenship behavior. Meta-analysis (Fassina, Jones & Uggerslev, 2008) has also found empirical support between job satisfaction and organizational citizenship behavior. Hence, a study could be conducted on the relationship between employees' job satisfaction and their organizational citizenship behavior, and other organizational variables such as task performance, or turnover intentions.

Conclusion

Over the past few decades, the construct of job satisfaction has been an important variable of interest to management and organizational psychology researchers. Research attention in job satisfaction is primarily driven because of evidence of its relationship to various employee behaviors such as work attendance, organizational

citizenship behavior, turnover, and job performance. A review of the literature indicated that there have been a number of studies attempting to address job satisfaction in China. However, there are few comprehensive studies investigating the relationship between situational and dispositional variables and job satisfaction using validated survey instruments on Chinese populations. The present study was therefore designed to address this shortcoming in the literature by examining the relationships between job satisfaction and its antecedents in a sample of white-collar employees from commercial and industrial enterprises in China. The primary objective of the current study was to identify situational and dispositional variables that predict job satisfaction, and investigate the mediating mechanism of dispositions on job satisfaction via work situations. The current study found that seven situational variables (autonomy, routinization, role ambiguity, role conflict, supervisor support, promotional chances, distributive justice) were related to job satisfaction. Distributive justice had the largest effect on job satisfaction; supervisor support had the second largest effect on job satisfaction; and role conflict had the third largest effect on job satisfaction. Three dispositional variables (PA, extraversion and conscientiousness) were found to be directly positively related to job satisfaction. The research findings indicate that both work situations and dispositions are important predictors of job satisfaction. The relationship between job satisfaction and PA and NA were mediated by perceptions of work situations, and to a lesser extent by neuroticism and conscientiousness.

The examination of the mediating role of a range of work situational variables on the relationship between dispositions and job satisfaction was a unique feature of this study. No previous studies have attempted to address this question with a Chinese sample. The research found that affectivity (in particular positive affectivity) has a

much stronger indirect effect on job satisfaction than the Big Five personality traits. Theoretically, the findings of this study provide strong support that when attempting to predict job satisfaction, work situations and dispositions should be incorporated. In terms of practical implications, the findings of this study provide managers in industrial and commercial enterprises with guidelines in establishing conditions for the creation and maintenance of high levels of employee's job satisfaction.

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Appendix A: Human Ethics Certificate of Approval



Standing Committee on Ethics in Research Involving Humans (SCERH)
Research Office

Human Ethics Certificate of Approval

Date	21-FEB-2008	
Project Number	CF08/0516 - 2008000245	
Project Title	Determinants of job satisfaction in enterprises in China	
Chief Investigator	Assoc Prof Margaret Lindorff	
Approved	From: 21-FEB-2008	To: 21-FEB-2013

Terms of approval

1. Approval is only valid whilst you hold a position at Monash University.
2. It is the responsibility of the Chief Investigator to ensure that all pending information (such as permission letters from organisations) is forwarded to SCERH. Research cannot begin at an organisation until SCERH receives a permission letter from that organisation.
3. It is the responsibility of the Chief Investigator to ensure that all investigators are aware of the terms of approval and to ensure the project is conducted as approved by SCERH.
4. You should notify SCERH immediately of any serious or unexpected adverse effects on participants or unforeseen events affecting the ethical acceptability of the project.
5. The Explanatory Statement must be on Monash University letterhead and the Monash University complaints clause must contain your project number.
6. **Amendments to the approved project:** Require the submission of a Request for Amendment form to SCERH and must not begin without written approval from SCERH. Substantial variations may require a new application.
7. **Future correspondence:** Please quote the project number and project title above in any future correspondence.
8. **Annual reports:** Continued approval of this project is dependent on the submission of an Annual Report. This is determined by the date of your letter of approval.
9. **Final report:** A Final Report should be provided at the conclusion of the project. SCERH should be notified if the project is discontinued before the expected date of completion.
10. **Monitoring:** Projects may be subject to an audit or any other form of monitoring by SCERH at any time.
11. **Retention and storage of data:** The Chief Investigator is responsible for the storage and retention of original data pertaining to a project for a minimum period of five years.


Dr Souheir Houssami
Executive Officer, Human Research Ethics (on behalf of SCERH)

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Appendix B: Survey Questionnaire on Job Satisfaction and Its Antecedents

Thank you for taking the time to fill out this questionnaire. The aim of the research is to investigate the relationship between job satisfaction and its determinants. The questionnaires will be used purely for academic research. There are no right or wrong answers, and I simply want your honest answers. You are not asked to fill your name, and all of your responses will be kept strictly confidential.

Please tick the number that best represents your response for each of the following statements.

1. Job satisfaction

Please indicate to what extent you agree or disagree with each of the following statements.	Strongly disagree		Neutral		Strongly agree
1) I find real enjoyment in my job.	1	2	3	4	5
2) I like my job better than the average person.	1	2	3	4	5
3) I am often bored with my job.	1	2	3	4	5
4) I would not consider taking another kind of job.	1	2	3	4	5
5) Most days I am enthusiastic about my job.	1	2	3	4	5
6) I feel fairly well satisfied with my job.	1	2	3	4	5

2. Autonomy

Please indicate to what extent you can decide the following things.	Very little		Moderate amount		Very much
1) How much are you left on your own to do your own work?	1	2	3	4	5
2) To what extent are you able to act independently of your supervisor in performing your job function?	1	2	3	4	5
3) To what extent are you able to do your job independent of others?	1	2	3	4	5
4) The freedom to do pretty much what I want on my job	1	2	3	4	5
5) The opportunity for independent thought and action	1	2	3	4	5
6) The control I have over the pace of my work	1	2	3	4	5

3. Workload

Please circle or underline the best answer which applies to you.	never					very often
1) How often does your job require you to work very fast?	1	2	3	4	5	
2) How often does your job require you to work very hard (physically or mentally)?	1	2	3	4	5	
3) How often does your job leave you with little time to get everything done?	1	2	3	4	5	

4. Routinization

1) To what extent does your job require that you *keep learning new things*?

- (1) never required to learn new things
- (2) rarely required to learn new things
- (3) sometimes required to learn new things
- (4) quite often required to learn new things
- (5) must always be learning new things

2) How often do you get to do a *number of different things* on your job?

- (1) never do different things
- (2) rarely do different things
- (3) sometimes do different things
- (4) quite often do different things
- (5) always doing different things

3) To what extent does your job require that you *do the same things* over and over again?

- (1) never do the same things over and over again
- (2) rarely
- (3) sometimes
- (4) quite often
- (5) always do the same things over and over again

4) To what extent does your job require a *high level of skill*?

- (1) a very low level of skill required;
- (2) low level of skill required

- (3) somewhat high level of skill required
- (4) quite high level of skill required
- (5) a very high level of skill required

5) How *creative* does your job require that you be?

- (1) no creativity required
- (2) very little creativity required
- (3) somewhat creative
- (4) quite creative
- (5) required to be very creative

5. Supervisor support and co-worker support

Please circle the right answer for each question.	no such a person	not at all	a little	Some- what	very much
1) How much does your supervisor go out of their way to do things to make your work life easier for you?	0	1	2	3	4
2) How easy is it to talk with your supervisor?	0	1	2	3	4
3) How much can your supervisor be relied on when things get tough at work?	0	1	2	3	4
4) How much is your supervisor willing to listen to your personal problems?	0	1	2	3	4
5) How much does your co-worker go out of their way to do things to make your work life easier for you?	0	1	2	3	4
6) How easy is it to talk with your co-worker?	0	1	2	3	4
7) How much can your co-worker be relied on when things get tough at work?	0	1	2	3	4
8) How much is your co-worker willing to listen to your personal problems?	0	1	2	3	4

6. Distributive justice

Please indicate to what extent you agree or disagree with each of the following statements.	Strongly disagree	Neutral			Strongly agree
1) I am rewarded fairly for the amount of effort that I put in (Money and recognition are examples of rewards.).	1	2	3	4	5
2) I am rewarded fairly considering the responsibilities I have.	1	2	3	4	5
3) I am not rewarded fairly in view of my experience.	1	2	3	4	5

7. Promotional opportunities

Please indicate to what extent you agree or disagree with each of the following statements.	Strongly disagree	Neutral			Strongly agree
1) Promotions are regular.	1	2	3	4	5
2) Promotions are infrequent.	1	2	3	4	5
3) There is a good chance to get ahead.	1	2	3	4	5

8. Role ambiguity

Please indicate to what extent you agree or disagree with each of the following statement	Strongly disagree	neutral			Strongly agree
1) I feel certain about how much authority I have.	1	2	3	4	5 6 7
2) Clear, planned goals and objectives exist for my job.	1	2	3	4	5 6 7
3) I know that I have divided my time properly.					
4) I know what my responsibilities are.	1	2	3	4	5 6 7
5) I know exactly what is expected of me.					
6) Explanation is clear of what has to be done.	1	2	3	4	5 6 7

9. Role conflict

Please indicate to what extent you agree or disagree with each of the following statements.	Strongly disagree	Neutral			Strongly agree
1) I have to do things that should be done differently.	1	2	3	4	5 6 7
2) I receive an assignment without the manpower to complete it.	1	2	3	4	5 6 7
3) I have to buck a rule or policy in order to carry out an assignment.					
4) I work with two or more groups who operate quite differently.	1	2	3	4	5 6 7
5) I receive incompatible requests from two or more people.					
6) I do things that are apt to be accepted by one person and not accepted by others.	1	2	3	4	5 6 7
7) I receive an assignment without adequate resources and materials to execute it.					
8) I work on unnecessary things.	1	2	3	4	5 6 7

10. Affect

Thinking about yourself and how you normally feel, to what extent do you generally feel	Never	Rarely	Sometimes	Often	Always
1. Upset	1	2	3	4	5
2. Hostile	1	2	3	4	5
3. Alert	1	2	3	4	5
4. Ashamed	1	2	3	4	5
5. Inspired	1	2	3	4	5
6. Nervous	1	2	3	4	5
7. Determined	1	2	3	4	5
8. Attentive	1	2	3	4	5
9. Active	1	2	3	4	5
10. Afraid	1	2	3	4	5

11. View of myself

I see myself as someone who...	Strongly disagree		Neutral		Strongly disagree
1. Is talkative	1	2	3	4	5
2. Tends to find fault with others	1	2	3	4	5
3. Does a thorough job	1	2	3	4	5
4. Is depressed, blue	1	2	3	4	5
5. Is original, comes up with new ideas	1	2	3	4	5
6. Is reserved	1	2	3	4	5
7. Is helpful and unselfish with others	1	2	3	4	5
8. Can be somewhat careless	1	2	3	4	5
9. Is relaxed, handles stress well	1	2	3	4	5
10. Is curious about many different things	1	2	3	4	5
11. Is full of energy	1	2	3	4	5
12. Starts quarrels with others	1	2	3	4	5
13. Is a reliable worker	1	2	3	4	5
14. Can be tense	1	2	3	4	5
15. Is ingenious, a deep thinker	1	2	3	4	5
16. Generates a lot of enthusiasm	1	2	3	4	5
17. Has a forgiving nature	1	2	3	4	5
18. Tends to be disorganized	1	2	3	4	5
19. Worries a lot	1	2	3	4	5
20. Has an active imagination	1	2	3	4	5
21. Tends to be quiet	1	2	3	4	5
22. Is generally trusting	1	2	3	4	5
23. Tends to be lazy	1	2	3	4	5
24. Is emotionally stable, not easily upset	1	2	3	4	5
25. Is inventive	1	2	3	4	5
26. Has an assertive personality	1	2	3	4	5
27. Can be cold and aloof	1	2	3	4	5
28. Perseveres until the task is finished	1	2	3	4	5
29. Can be moody	1	2	3	4	5
30. Values artistic, aesthetic experiences	1	2	3	4	5

11. View of myself (Continued)

I see myself as someone who...	Strongly disagree		Neutral		Strongly disagree
31. Is sometimes shy, inhibited	1	2	3	4	5
32. Is considerate and kind to almost everyone	1	2	3	4	5
33. Does things efficiently	1	2	3	4	5
34. Remains calm in tense situations	1	2	3	4	5
35. Prefers work that is routine	1	2	3	4	5
36. Is outgoing, sociable	1	2	3	4	5
37. Is sometimes rude to others	1	2	3	4	5
38. Makes plans and follows through with them	1	2	3	4	5
39. Gets nervous easily	1	2	3	4	5
40. Likes to reflect, play with ideas	1	2	3	4	5
41. Has few artistic interests	1	2	3	4	5
42. Likes to cooperate with others	1	2	3	4	5
43. Is easily distracted	1	2	3	4	5
44. Is sophisticated in art, music, or literature	1	2	3	4	5

12. Personal Profile

1) Gender

- (1) male
- (2) female

2) Age

- (1) Below 25
- (2) 26-30
- (3) 31-35
- (4) 36-40
- (5) 41-45
- (6) 46-50
- (7) 51-55
- (8) 56-60

3) Marital status

- (1) single
- (2) married

4) Educational Level

- (1) junior secondary or below
- (2) senior secondary
- (3) polytechnic or three years of higher education
- (4) Bachelor degree
- (5) master or Ph. D

5) Your position type

- (1) production worker
- (2) technical staff
- (3) administrative staff
- (4) supervisor/line manager
- (5) middle manager
- (6) senior manager

6) Years worked with the current company

- (1) less than 1 year
- (2) 1-5 years
- (3) 6- 10 years
- (4) 11-15 years
- (5) 16-20 years
- (6) 21-25 years
- (7) 26-30 years
- (8) over 30 years

7) Average monthly income

- (1) below 500RMB
- (2) 501-1000 RMB
- (3) 1000-1500RMB

- (4) 1500-2000 RMB
- (5) 2001-2500 RMB
- (6) 2501-3000RMB
- (7) 3001-3500 RMB
- (8) 3501-4000 RMB
- (9) 4001-4500 RMB
- (10) 4501- 5000 RMB
- (11) 5001RMB

Thanks again for your time and effort in completing this questionnaire.

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