

Social Networks, Sectors and Occupational Attainment in Urban China

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BY

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ABSTRACT

Since the late 1970s, the People's Republic of China has experienced a progressive market transition that has led to profound changes in organizations. The development of product market has nurtured the emergence and growth of the private sector, two parallel while competing sectors, the state sector and the private sector have coexisted since then. China has been a "relationship based" society since ancient times, social networks as an efficient channel have been frequently used during job searching process. Do social networks still have effects on job attainment during the transition to a market economy? From macro structural perspective, do social networks have distinctive influence on job attainment across different sectors, namely state sector and private sector? Based on the dataset of "Job Searching and Social Networks" (JSNet 2009), which is drawn from eight big cities, Xi'an, Changchun, Jinan, Shanghai, Xiamen, Guangzhou, Tianjin, and Lanzhou. I assess the variation of social networks in different sectors by splitting the dataset into two parts (the state sector and the private sector), and organizing occupational attainment into three categories: administrative/managerial positions, professional positions and ordinary workers.

The findings show that there have been continuity and significant effects of social networks in obtaining occupations in both state sector and private sector across the transition period. Taking Chinese cultural background into consideration, strong ties play a more imperative role in job attainment as compared to weak ties. Significant variations of social networks exist across different sectors: network mechanism works more effectively in the state sector than the private sector; regarding state sector, job applicants who use network methods have greater probabilities to secure

administrative/managerial jobs and ordinary jobs in comparison to professional positions, while in private sector, social networks only have effects on searching for administrative/managerial occupations, reflecting the functions of both the persistence of institutions and emerging market forces.

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DEDICATION

I would like to dedicate this thesis to my parents who are always there besides me and behind me, support me to move forward.

TABLE OF CONTENTS

	Page
ABSTRACT	ii
ACKNOWLEDGEMENTS	iv
DEDICATION	v
LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER 1	
INTRODUCTION	1
1.1 Research Background	1
1.2 Research Question	3
1.3 Significance of Study	4
1.4 Research Thought and Structure	5
CHAPTER 2	
LITERATURE REVIEW AND THEORETICAL FRAMEWORK	8
2.1 Chinese Social Networks -- <i>guanxi</i>	8
2.2 Social Networks and Occupational Attainment	11
2.2.1 Social Networks and Occupational Attainment in the West	12
2.2.2 Social Networks and Occupational Attainment in China	20
2.3 Human Capital and Occupational Attainment	24
2.4 Comments on existing literature	25
2.5 Theoretical Framework	26
2.5.1 Market Segmentation Theory	27
2.5.2 China's Market Transition	28
CHAPTER 3	
METHODOLOGY	32
3.1 Theoretical Hypotheses	32
3.2 Concepts Defined	37
3.2.1 Social Networks and Chinese " <i>Guanxi</i> "	37
3.2.2 Occupational Attainment	38
3.2.3 Institutional Segmentation	38
3.3 Data Resources	39
3.4 Variables and Measurements	40
3.4.1 Dependent Variable and Measurement	40
3.4.2 Independent Variable and Measurement	43

3.4.3 Control Variables.....	44
3.5 Analytical Strategy	50
CHAPTER 4	
RESULTS OF THE EMPIRICAL ANALYSIS	52
4.1 Descriptive Analysis of Focal Variables	52
4.1.1 Comparison Within Three Occupations.....	52
4.1.2 Comparison Between State Sector and Private Sector.....	53
4.1.3 The Characteristics of Network Users	55
4.2 Analysis of Multinomial Logistic Regression	58
4.2.1 Holistic Approaches	58
4.2.2 Comparative Approach	64
CHAPTER 5	
CONCLUSION	75
REFERENCE	79

LIST OF TABLES

<u>Table</u>	<u>Page</u>
Table 3-1 Occupational Categories	41
Table 3-2 The Frequency Distribution of Occupational Categories	42
Table 3-3 The Frequency Distribution of the Work Sectors	42
Table 3-4 The Frequency Distribution of Work Sectors in Occupational Categories	43
Table 3-5 Main variables and their measurement	49
Table 4-1 Occupation Differences.....	52
Table 4-2 Work Sector differences	54
Table 4-3 The Characteristics of Network Users	56
Table 4-4 Holistic Approaches: Social Networks and Occupational Attainment.....	59
Table 4-5 Social Networks and Job Attainment in The State Sector	64
Table 4-6 Social Networks and Job Attainment in The Private Sector.....	65
Table 4-7 A Comparison Between The State sector and The Private Sector.....	70

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
Figure 1-1 Structure of The Research	8
Figure 2-1 Theoretical Frameworks.....	28

CHAPTER 1

INTRODUCTION

1.1 Research Background

In recent years, job seekers in China are facing employment difficulties due to oversupply, which is the major problem of the Chinese labor market (Ying, 2011). In 2011, 25 million workers needed to secure jobs in urban areas; however, only 12 million job positions were available; that is to say, there were at least 13 million people who could not get a job in the urban labor market. Regarding rural areas, the most significant feature is that rural to urban migration have dramatically increased, especially to large coastal cities such as Beijing, Shanghai, and Guangzhou (Giles, Park, & Cai, 2005). Nevertheless, there are still 8 million surplus rural workers need to be integrated into the work force every year (Ying, 2011). In such a difficult situation, job hunters' own possession of human capital (such as education, working experiences) is not sufficient to assure success in job seeking without utilizing their social networks.

In China, according to Bian and Zhang (2001), there are three mechanisms that job seekers use in search of a job: the planned redistributive, the market, and the social networks. For planned distribution mechanism, job positions are allocated in a plan formulated by state sectors --- local and central government; in contrast, job seekers and employers could find proper job opportunities and employees freely by using market mechanism such as job advertisements and job interviews. Besides, numerous job hunters utilize different types of relationships obtaining information and exerting influence in order to get decent job positions,

which have already been supported by theoretical and empirical researches (Granovetter, 1973; Burt, 1992; Bian, 1997; Granovetter, 1995; Lin, 1999; Marsden & Gorman, 2001).

Since ancient times, China has been a "relationship based" society (Liang, 1949, 259); that is to say, Chinese people have been accustomed to using *guanxi* (personal social networks) in their daily lives. From cultural perspective, *guanxi* (social networks) is a basic element of Chinese culture (Hwang, 1987; King, 1991; Kipnis, 1997; Yan, 1996). In comparison to individualism in western culture, Chinese people have been more focused on collective interests, and put individual interests behind. Fei (1992) uses *chaxu geju* (configuration of differentiation) to summarize the modes of social interaction of Chinese people. The interpersonal *guanxi* is based on kinship networks and then expands outwards. The strength of emotional support, ethical/moral calculations, and mutual obligations are determined by social distance between ego and contacts in network. The "strength" is stronger when social distance is closer (Fei, 1992).

From an institutional perspective, China has been in an economic transition period since late 1970s when the gradualist transformation from redistributive to market economy was launched and implemented by the government in a top-down manner. In redistributive period, state bureaucracy handled job assignments in a centralized fashion, and almost all the scarce resources related to people's daily lives including job opportunities were allocated by state cadres and political elites (Bian & Zhang, 2001). In order to cope with these institutional arrangements, job seekers had to make use of *guanxi* to approach the job-assigning authorities and to try to obtain their favors. With the ongoing market reform, a new type of sector, private

sector, has been gradually established within China's labor market. Private sector is run privately by individuals or groups, and is not controlled by the state, the main purpose is making profit (Zhang, 2007). Theoretically, this sector recruits staffs through formal channels such as direct applications, job advertisement, and job agencies; however, Chinese society is *guanxi-based*, and the method of social networks still exists and plays an imperative role in job searching processes within private sector (Zhang, 2007) . In the 21st century, China's economic transformation is still in progress. This offers researchers from social science a special opportunity to investigate the impacts of social networks on different job attainments from two parallel while competing sectors, state sector and private sector.

1.2 Research Question

Due to China's ongoing market reform, have institutional changes significantly reshaped the mechanisms of job attainment involving the use of social network? Do social networks still play a significant role in the job attainment process? There are two controversial arguments available for this question. Guthrie (1998) and Hanser (2002) point out that social networks may have become less crucial in job attainment process in transitional period; in contrast, institutional holes theory, which is proposed by Bian (2002), argues that social networks still play an important role in China's emerging labor market. Their debates reflect the complexity and limitations of social networks in explaining job seeking process during transitional period; that is to say, the effects of social network are contingent upon the attribute of jobs and labor market sectors (especially state vs. private), which has already been supported by some scholars (Zhao, 2002). Currently, in the Chinese labor market, the state sector and private sector coexist. These

two sectors have totally different institutional frameworks and logics. In this context, we must take into consideration the differences between state sector and private sector when doing relevant researches about social networks and job attainment.

Given the background of social transition, the primary questions of this thesis are as follows: do social networks still affect job attainment during the transition to a market economy? If so, in what kind of specific jobs, managerial/administrative jobs, professional/technical jobs, or ordinary jobs, do social networks work effectively? From macro structural perspective, do social networks have contingent influence on job attainment within different sectors, namely state sector and private sector? Finally, do different types of social ties, i.e. strong and weak, have differentiated effects on attaining job positions in state sector and private sector respectively?

1.3 Significance of Study

From theoretical perspective, existing researches on social networks and occupational attainment only focus on whether job seekers use social networks, but literature on what jobs do job seekers obtain by using social networks is limited. Besides, previous studies done by Chinese scholars mainly concentrate on the impacts of social networks on job attainment under a holistic structure; however, since China has been experiencing market transition, in which the private sector, as an emerging labor market, is completely different from state sector in terms of operational mechanism and institutional framework, a comparative approach is necessary and significant for exploring the variation between state sector and private sector in the impacts of social networks on job attainment. This study aims to go beyond the current research

limitations, and focuses on how the social networks affects job attainment with the structural factors controlled. At the same time, it attempts to combine the individual level (human capital and network factors) with the structural level (market transition), assuming that job attainment is not only influenced by the former, market segmentation as an institutional factors also has impacts on job attainment.

From the practical perspective, an individual's occupation is the primary source of income and the basis of family life. At the same time, it is closely related to one's reputation, power, and social status in contemporary society. In addition, the national interests are linked to people's occupations, since the division of labor constitutes a major part of the socioeconomic system and maintains social stability. Besides, it is also a crucial mechanism for social stratification and social mobility as well. In this way, research on job attainment is very crucial, especially including the analysis of Chinese cultural characteristics, *guanxi*. I want to share my results with job seekers in China, and remind them of what factors can improve them to get desirable jobs; and I also expect my study could be read by government officers in China, since some possible factors, such as "institutional holes" that prevent job attainment will be offered in this study, policymakers could adjust policies by removing or diminishing these obstacles, and make out society more equal and harmonious.

1.4 Research Thought and Structure

This thesis is divided into six chapters. In Chapter 2, the literature on the Chinese *guanxi* (social networks) studies are first reviewed from both cultural and institutional perspectives followed by a comparison of the studies of social networks and job attainment in western

countries and in China. The limitations of previous researches are then proposed, highlighting the neglect of structural discussion (refers to the state sector and the private sector). Finally, in order to fill the gap of existing studies, a theoretical framework that focuses on the labor market segmentation and the strength of social networks is developed.

Chapter 3 describes the major methodological approaches used in studying social networks and specific job attainment between two sectors, state sector and private sector. Key concepts are defined in this chapter, and the data used for the empirical analysis and the general descriptive statistics of sample are introduced. Logistic Regressions are used in this study.

In Chapter 4, the logistic regression model and its results are presented. Holistic approach is used at first to compare the impacts of social networks on three types of jobs (managerial/administrative jobs, professional/technical jobs and ordinary jobs) with a logistic regression analysis. Then a comparative approach is adopted to examine the differences between state sector and private sector in the light of the effects of social networks on job attainment, with an assumption that the impacts of social networks on occupational attainment are partially determined by structural factors. The hypotheses are tested with the recent statistics of Job Searching and Social Networks (JSNet 2009).

Chapter 5 concludes this thesis by summarizing the main findings of this study and touches on the possibility for future studies as well.

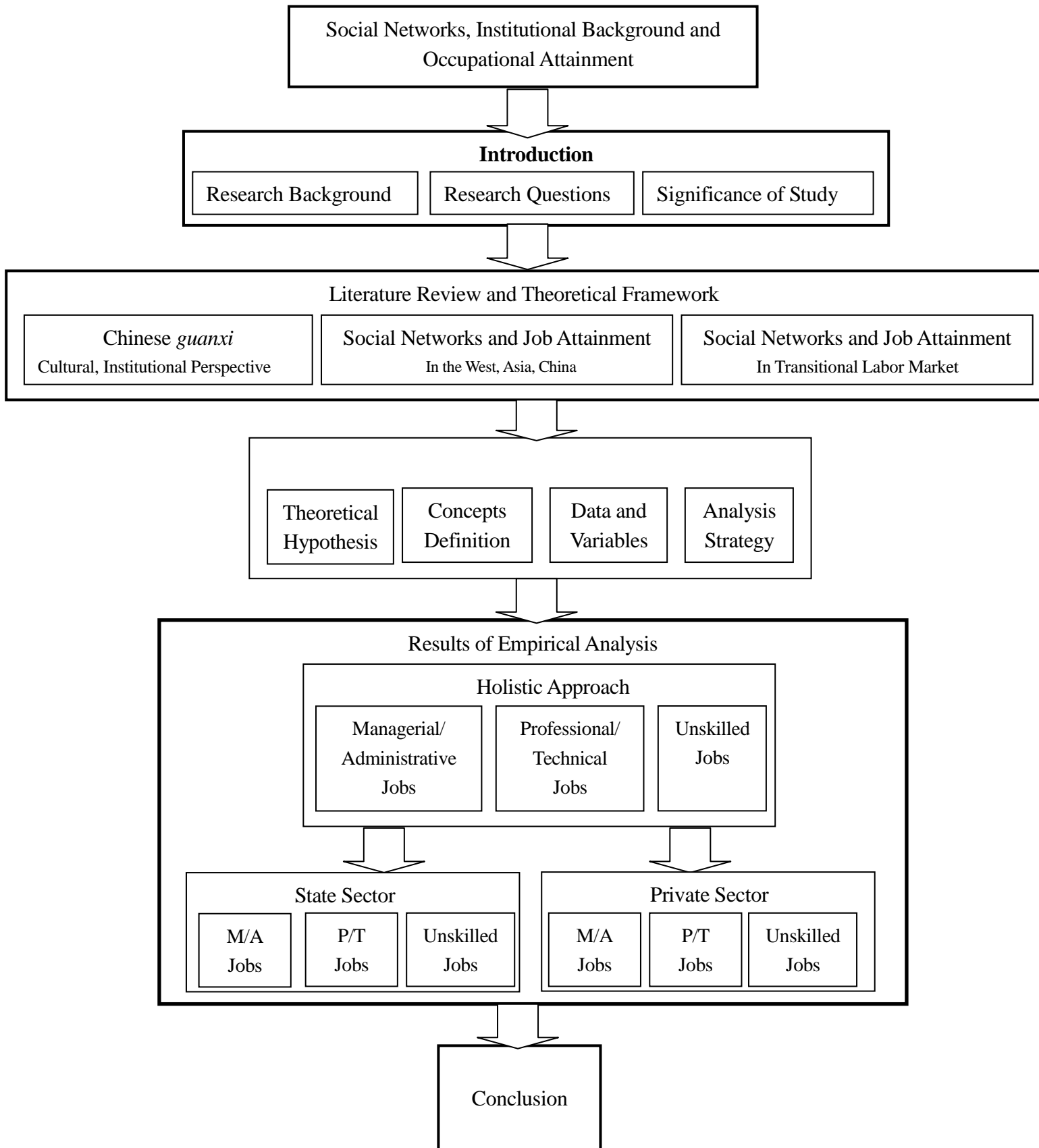


Figure 1-1. Structure of Research

CHAPTER 2 LITERATURE REVIEW AND THEORETICAL FRAMEWORK

The purpose of this chapter is to: a) highlight the meaning of Chinese *guanxi*; b) synthesize existing concepts, theories, and empirical studies on social networks and occupational attainment; and c) summarize the limitations of relevant literature. Then, the theoretical framework and analytical guidelines of this study will be proposed, which attempt to look into the impact of social networks on job attainment under market segmentations.

2.1 Chinese Social Networks --- *guanxi*

To begin, for a better understanding of the relationships between social networks and job attainment in Chinese contexts, a thorough and methodical literature review of Chinese *guanxi* is primarily introduced.

Generally, there are various definitions of social networks defined by scholars (Gold, 1985; Jacobs, 1979; Walder, 1986; Wank, 1994; Yang, 1994). Social networks in Chinese society have particular traits that are different from those in other western countries, and more accurately we can call it *guanxi*. Unfortunately, none of the English translations of *guanxi* (for instance, relationship, connection, relations or tie) could satisfy Chinese scholars in the past or at present (Gold, Guthrie, & Wank, 2002). By definition, “*guanxi* (or *kuan hsi*) refers to a dyadic, particular and sentimental tie that has potential of facilitating favor exchange between the parties connected by the tie. In Chinese culture, any blood or marital relationship is qualified for this definition, and persons with a non kin tie can develop *guanxi* between them if the parties repeatedly invest sentiments in the tie and, at the

same time, build up obligations to each other, making the tie mutually special or particular for both parties”(Bian, 2006, 312).

Chinese *guanxi* has attracted attentions from both Chinese and western scholars for decades. Two major perspectives – cultural analysis and structural analysis – are covered in *guanxi* literatures. The term *guanxi* was first introduced to sociological research by Chinese scholars Liang shumun and Fei Xiaotong in mid twentieth century, and their thoughts became part of the foundation of cultural analysis for *guanxi* (Bian, 2006). From this perspective, *guanxi* is a basic element of Chinese culture (Hwang, 1987; King, 1991; Kipnis, 1997; Yan, 1996), and it can be traced back to the conceptions of Confucius Philosophy on harmonizing relations between ego and society. In contrast to individualism in Western traditions, Chinese culture values collective interests and depreciates individual interests. This perception offers a perspective for explaining how social networks become guiding principles of behavior in China (Bian & Ang, 1997). Chinese society is neither an individual based society, nor a collective based society--- it is a *guanxi* based society (Liang, 1949). As Bian (2006, 313) described:

“Seeing the family and kinship as the cornerstone of Chinese culture and society, these pioneering researchers consider *guanxi* as the extended familial ties that are defined by a set of ethical codes combining sentiment (*qing*) and obligation (*yi*). They argue that under these codes, Chinese individuals are relationally oriented in ways in which their normative behaviors towards others are confined to Confucian elaborations of the dyadic ties of husband and wife, father and son, older brother and younger brother, and so on. These relational codes of conduct go into village, urban and occupational communities to characterize all interpersonal relations of social significance, pushing everyone to build his/her web of ‘pseudo families’ with a lifelong effort.”

Fei (1992) uses *chaxu geju* (configuration of differentiation) to summarize the prevailing pattern of social interaction of Chinese people. Interpersonal *guanxi* is built on kinship networks and then expands outwards to establish pseudo-kinship (or say kinship-like) relations. The strength of emotional supports, ethical/moral calculations, and mutual obligations are determined by social distance between ego and contacts in network. The “strength” is stronger when mutually perceived social distance is closer. A person can act differently on the account of how the *guanxi* relationships with others are valued.

From an institutional perspective, state bureaucracy handles job assignments in a centralized fashion in redistributive period. In this context, state cadres and political elites allocate all the scarce resources relating to daily life. However, *guanxi* still exists in the communist political culture (Bian, 2006). *Guanxi* is becoming more rational and intentional instead of its traditional basis, the familial and pseudo-familial tie. Although sentimental investments and relational support are still an indispensable part of constructing *guanxi*, more individuals use *guanxi* for instrumental purposes such as obtaining job opportunities, accessing scarce consumer products. In order to cope with institutional arrangements, job seekers utilize *guanxi* to approach job-assigning authorities attempting to obtain their favors. Therefore, the ability to influence bureaucratic decisions, while illegal and hence costly, became crucial. Walder (1986, 33) summarized this relationship as “party clientelism under the mode of communist neo-traditionalism.” A contact is willing to exert influence only if he/she believes that the job seeker will be discreet and return the favor when possible. Such trust and mutual obligation are the attributes of strong ties; therefore, for reasons of motivation,

especially, it is important foundations for influence flows than for information transfers (Marsden & Gorman, 2001). However, even with market transition an ongoing reality, “party clientelism” still exists (King, 1991; Kipnis, 1997; Yan, 1996; Yang, 1994). As Gold, Guthrie and Wank (2002) claimed, *guanxi* is not only a persistent mechanism of job attainment and job mobility for job seekers, but also the lifeblood for private businesses.

Many sociologists have sought to conceptualize *guanxi* within the range of social networks, rather than only treat it as a unique phenomenon in Chinese contexts. Bian (1997) treats strong ties as *guanxi* when taking Chinese cultural background into consideration. Strong ties with trust and mutual obligations require frequent interactions, long-term sentimental investments and numerous reciprocal exchanges. Lin (2001) has put *guanxi* under the glance of social capital theory, where it is defined in the context of social exchange networks of asymmetric transaction. Wellman, Chen and Dong (Wellman, Chen, & Dong, 2002) moved much further, suggesting that *guanxi* and *guanxi* networks need to be examined in standard terms by using an analytic framework.

2.2 Social Networks and Occupational Attainment

After Granovetter’s study (1973), the question of how people find jobs and how social contacts influence outcomes of network-embedded labor market has become one of the most popular and controversial topic in researches on labor market. On one hand, extensive studies from Europe, North America, and Asia from both theoretical and empirical perspectives indicate that social networks play a significant role in job attainment and other labor market outcomes, such as income,

and satisfaction with the jobs obtained (Granovetter, 1995; Lin, 1999b; Marsden & Gorman, 2001).

On the other hand, however, some researchers insist that the relationship between social networks and job seeking outcomes is spurious due to the unobserved individual homogeneity (see Mouw, 2003).

Before unfolding my own understanding on the validity of the effects brought by social networks and potential cultural contingency, I will respectively review the existing literature on the relationships of social networks and occupational attainment from western countries and China.

2.2.1 Social Networks and Occupational Attainment in the West

Employers always prefer to recruit one who is able to reach their expected level of productivity (Jovanovic, 1979). However, even if productivity is a potential characteristic of job seekers, employers cannot observe it accurately by job interviews alone. That is to say, market oriented economies may not be a perfect form of economy for the reason that information asymmetry exists inside the labor market (Devine & Nicholas, 1991). So some scholars argue that the importance of social networks will stand out in the labor market: the employers may get more detailed information about the job applicants through their personal social networks, so that it is more likely for them to find out which applicant they need the most (Akerlof, 1970; Granovetter, 1981; Stigler, 1961).

To explain the prominence of social networks in labor markets, sociologists routinely invoke the propensity of social networks to transfer information and influence (Granovette, 1973; Granovetter, 1995; Lin, Walter, & John, 1981; Marsden & Gorman, 2001; Mouw, 2003)

Weak ties theory

In the case of Granovetter's (1973), he concludes that information that has been generated from weak ties is better for job attainment. His major ideas can be summarized as: the power of weak-ties brings non-redundant information through informal channels in the labor market. More specifically, many individuals find their jobs using social networks methods rather than through formal channels such as direct applications, job advertisements, and job agencies. Second, the use of social contacts allows job seekers to gain better information about the potential jobs and job conditions as well. Third, non-redundant information can be best created from weak ties rather than strong ties, through which redundant information within close social circles is circulated because of the homogeneity of group members (Granovetter, 1973). Granovetter points out that job seekers are more likely to get high quality, non-redundant information from heterogeneous people who they do not interact with too often.

Granovetter's theory is based on a sample of 282 white-collar workers from professional, technical, and managerial positions, who were living in Newton, Massachusetts. He found that 57% of people obtained their most recent jobs through employment information provided by social contacts rather than through formal channels. Besides, people who found jobs through social referrals had higher job satisfaction (54%) than those who found jobs via formal methods (30%). Many scholars in America have retested this study repeatedly, as well as scholars in Netherland, Japan and Great Britain (Corcoran, Datcher, & Duncan, 1980; Labor, 1975; Marsden & Campbell, 1990; Marsden & Hurlbert, 1988; Staiger, 1990). In 1980s, Marsden and Hurlbert took advantage of

survey data in Detroit, which were collected by University of Michigan in 1970, and testified the impacts of weak ties.

Social Resources Theory

Lin (1982) amended and extended Granovetter's weak ties theory, and proposed the social resources theory. He argues that the hierarchical status of contacts is probably a key factor in the process of status attainment. The starting point of this theory is that the status attainment can be understood as a process, in which individuals invest resources and mobilize in order to obtain certain socio-economic status. In a stratified society, people who are in the same social class also share similar characteristics in regard to power, status and wealth, thus the relationship between them tends to be strong tie. However, people in different social classes typically have fewer similarities in resources, so the relationships between these people are highly likely to be weak-tie dominated. When individuals take instrumental action (such as looking for a job), weak ties will offer non-redundant information for job seekers as well as provide a channel for people in low positions to get access to people in high positions. Hence, as Lin (1999a) proposed, the chance of obtaining or accessing to social resources for one can be influenced by his hierarchical positions (the strength of position proposition), by the usage of weak ties (the strength of weak tie proposition), and by the social resources he has (the effects of social resources proposition).

The research on social resources theory (Lin, 1999b) has also proved that, when controlling the factors of family background and education, individuals can get access to influential contacts who

may help them get better jobs or lead them to higher socio-economic status by using weak ties.

Lin's theory shakes the view that resources can only be used by those who possess them, and provides an alternative explanation of social structures.

Strong Ties Theory

In comparison to weak tie theory, Bian (1997) proposed strong ties theory, in which he argues that the social networks is more a way for job applicants to obtain favors from job-assigning authorities during Chinese market transition period than collecting and disseminating job-related information. Nevertheless, for most job hunters, a strong direct relationship with decision makers cannot be established. Instead, they need to build relationships through contacts, but contacts and ultimate helpers may not provide maximum assistance. Thus, when Chinese *guanxi* cultural background is taken into consideration, information is often seen to be interpersonally disseminated; and generally, this interpersonal relationship involves strong ties, such as close friends and acquaintances, rather than people who are dispersed and dissimilar with weak ties. Bian (1997) stresses that it is very necessary to classify differences between *information resource* and *influence resource* within social networks. For the former, it is more likely to be transferred through weak ties; however, the latter is more likely to be transferred within strong ties. Finally, he claims that previous studies that mainly focus on direct ties ignore the functions of indirect ties. Actually, both direct and indirect ties function when one succeed in obtaining help from job-assigning authorities, and the role of referrals in indirect ties cannot be neglected. In summary, Bian (1997) holds that strong ties

with trust and mutual obligation are more efficient in accessing favor and influence for jobseekers, and the effects of social network on labor market outcomes are contextually contingent.

Bian's original study is based on a sample of more than 900 urban residents living in Tianjin, China, who were interviewed by him in 1988 using questionnaires. 45% respondents reported that they found their first urban jobs with assistance from social contacts; the vast majority of them turned to help from relatives and close friends; and one third of people utilized indirect relationships. One finding is crucial in Bian's study: the closer relationships among job seekers, contacts and ultimate helpers are, as well as the more sources that ultimate helpers obtain, the higher possibilities of jobs arranged are for job seekers.

In 1994, Bian conducted another social survey in the light of social networks and job attainment in Singapore. The reason why he chose Singapore as his objective country is the major population (75%) in this country is overseas Chinese. Like people in China, they all have been influenced by Confucianism and value *guanxi* in their daily lives. Most importantly, Singapore is a capitalist state so that this survey could diminish the impact of institutions as compared with similar surveys in China. The result shows that nearly 70% people claim that they have changed their jobs with the help of relatives, close friends and acquaintances who provided employment information and direct help for them. Most people used strong ties; few people used indirect relationships (Bian & Ang, 1997). In 1985, Japanese scholar Shin Watanabe repeated Granovetter's (1973) research in Tokyo, and the results he obtained are distinct from Granovetter's findings of weak tie theory.

However, it verifies Bian's strong ties theory. In addition, Watenaba found that using strong ties may contribute to higher job satisfaction and thus stimulate more passion and enthusiastic with works.

Structure Hole Theory

Burt's (1992) structural hole theory further explains why weak ties are beneficial from the perspective of network structures. It is not the tie strength but the advantageous network bridges that really matters. And most beneficial brokerage ties tend to be weak.

“A structural hole is a relationship of non redundancy between two contacts. The hole is a buffer, like an insulator in an electric circuit. As a result of the hole between them, the two contacts provide network benefits that are in some degree additive rather than overlapping.” (Burt, 1992, 18)

He believes that holes can be discovered within social networks if we treat it as a whole. Due to the phenomenon that there is no direct connection or relationship between most individuals, space has been “naturally” created and it is called the structural holes. Structural holes convey non-redundant information and provide people better opportunities to approach certain forms of capital. Therefore, one that occupies the favorable positions will have relatively higher chances of getting pay-offs in labor markets.

The network structure, as one form of social capital, is subject to certain factors such as network constraints, sizes, density and hierarchy. Specifically, the relationship between network constraints and structural holes is a negative correlation; network size and structural holes are positively related, i.e. the larger the network is, the more possibilities for members in the network

benefit from structural holes (Burt, 1992). Network density and structural holes are inversely related as more structure holes appear within members with lower density of network (Zhang, 2006). Burt (1997, 1998), Podolny and Baron (1997) have proved that people who are in strategic positions within the informal networks in an organization will experience less structural constraints and gain better economic rewards.

Empirical Studies on Social Networks and Occupational Attainment

Until now, numerous empirical studies have been introduced and they demonstrate that social networks have positive effects on labor market outcomes such as job attainment, and monetary or non-monetary returns. However, others could not detect a relationship between social networks and job attainment (Bridges & Villemez, 1986; Franzen & Hangartner, 2006; Marsden & Hurlbert, 1988; Mau & Kopischke, 2001).

Montgomery (1992) reformulated Granovetter's (1973) thesis in terms of sequential job search theory. When facing job offers, job seekers are confronted with a rational decision-making process – calculating the searching cost, expected reservation wage, and current available offers – either accept the offer and stop job searching, or reject the offer and continue searching. All these three parameters are influenced by social network applied in job seeking process, which reveals its significant role for job seekers' decisions.

With respect to how employee's eligibility and job requirements match each other, Franzen and Hangartner (2006) extended Montgomery's work (1992) employing reservation wages perspective

to analyze job-matching conditions. From this perspective, the level of job-match is defined as “how well a worker’s education and qualification fit the requirement of the job” and called “job adequacy distribution” (Franzen & Hangartner, 2006, 355). The rationale is that the interests and qualifications of job seekers can be well informed to employers via social contacts, through which job opportunities get filtered in an effective way that facilitates reasonable matches. Predictably, jobs obtained from network searching and formal offer distributions seem to be completely different. Homogeneous networks may result in more adequate job offers.

Franzen and Hangartner (2006) then introduce a sample of 8,000 Swiss university graduates to support their theoretical hypotheses. Statistics indicate that graduates who have obtained their jobs via social networks have better career prospects and tend to get jobs that are consistent with their degrees. In addition, the employment of social contacts lowers down the costs on searching jobs.

Based on a sample of formerly unemployed, low-skilled job seekers in Germany, Krug and Rebien (2011) find out weak evidence that supports the effects on non-monetary outcomes when using social networks to search for jobs. Occupational satisfaction, permanent employment contract, and employment stability are chosen as their non-monetary indexes. “Using job search instead of accepted jobs as an indicator for the use of networks leaves no significant effect on non-monetary outcomes (with the exception of a barely significant effect on employment stability)” (Krug & Rebien, 2011, 14). They attribute such a result to the specific context of unemployment in Germany, in which the information may dysfunction in Germany labor market, suggesting that the social networks are unable to convey information more effectively than formal channels.

Birds of a feather flock together. Mouw (2003) argues that the role of network social capital in the labor market reflects the correlation between friends' characteristics and unobservable individual productivity rather than the casual relationship between social networks and labor market outcomes. Just as what homophile implies, there is a tendency for certain group of individuals become friends. Better performers tend to share the job information on better jobs and exert stronger influence on their friends who are more probable to become better performers soon. In conclusion, without eliminating possible homogeneity issues in social capital/networks models, we cannot conclude how social capital affects labor market outcomes.

2.2.2 Social Networks and Occupational Attainment in China

Since 1990s, Chinese scholars have begun to apply theories of social capital and social networks to analyze the occupational attainment and mobility in China, and a large number of theoretical and empirical results have been generated in the past three decades. The studies of social networks and occupational attainment in China could be broadly divided into two categories: the holistic study and studies of special groups, such as migrant workers (*nongmin gong*) and laid-off workers.

The Holistic Study

Social networks approach is adopted in the holistic study to analyze individual's occupational attainment and mobility for the whole population of Chinese labor market participators. Many researches on Chinese labor market have proved that the employment of social resources from

social networks could bring much more monetary returns (Liang, 2010; Zhang & Guo, 2011; Zhang, 2006). Zhang (1996) believes that non-institutional social networks function uniquely in the process of occupational mobility in Chinese society, and play an important role in status attainment in the social transitional period. Fan (2004) claims that the effects of social capital on occupational mobility are mainly represented in two aspects: a) the impact of family background when one is seeking for their first jobs; and b) people from different social classes have different attitudes towards the significance of social capital in occupational mobility. Based on his research, Wang (2000) points out that the social networks are not only an intermediary for transferring information, but also a mechanism for job applicants to obtain or change jobs. Family ties and friends have played a more significant role in the migration processes. According to the Employment Survey in Tianjin in 1999, Zhang (2006) finds that “people with less human and political capital but at a higher economic status tend to frequently utilize social network resources to fulfill their occupational mobility” and “the direction of job mobility through social networks is from government agencies and state-owned enterprises to self or collective-owned companies, international joint ventures, foreign firms, new-economy agencies, or other market sectors with no administration at superior levels” (Zhang, 2006, 27).

Study on Special Groups

Before 1990s, researches on job searching focused on uprooted migrant workers. With deepened economic reforms, more and more workers in state sectors have been facing

unemployment due to the fact that the impact of marketization on the labor market is getting stronger. Under such a circumstance, “employment” and “job searching processes” has become a hot issue.

(1) Group of Migrant Workers

In 1996, Li (1996) conducted a survey regarding migrant workers in Jinan, assuming that in the process of occupational mobility, migrant workers rely on social networks that is often driven by genetic and geographic factors to get employment information and obtain relevant jobs. Peng (1996) believes that social capital is the premise of occupational mobility for contractors, and other factors such as experience, capacity could only have effects through the social capital. Cao’s (2003) study shows that in China's modernization process, even though the patterns in which the migrant workers access to resources have fundamentally changed (such as the social roles, spatial location and occupational mobility); kinship and geographical ties, as a kind of primary relationship, are still a basis for the construction of their social relations. From the cultural perspective of Chinese society, Zhai (2003) argues that, the key question for the current and potential migrant workers is how to protect themselves from deceptions prevailing in unfamiliar and complex urban environment, and he proposes the concepts of "strong trust" and "weak trust". Who is the most reliable person must be the first question for our considerations in studying the employment of migrant workers. Wang and Tong (2003) consider that the size of social networks of migrant workers for job attainment is relatively small and the role of their relatives stands out correspondingly. The frequency of using social networks in their initial job seeking is higher than that in finding current jobs. Based on

studies of female migrant workers, depending upon kinship and pseudo-kinship relationships might be the only way for them to find urban jobs in a "snowball" fashion.

(2) Group of Laid-off Workers

Li Peilin, Zhang Yi, Zhao Yandong (2000) find that laid-off workers with richer social capital and less human capital tend to use social networks more often to achieve their re-employment. At the same time, laid-off workers who possess higher human capital and social capital are more likely to receive re-employment opportunities by both market mechanism and social networks mechanism. Research done by Zhao and Feng (2000) has shown that how social capital and human capital of laid-off workers affect the acquisition of the re-employment opportunities. In addition, characteristics of the friends and relatives of laid-off workers including social status, job title, skill certificate, education, and sex significantly contribute to their re-employment. Gui and other scholars conduct a survey in Shanghai within unemployed population, which shows that a strong relationship has always been an important route for new jobs, and in different periods of the labor market transition, whether the unemployed were able to get new jobs or not depends on the strength of relationships to a certain extent (Gui, Gu, & Zhou, 2002). Through the survey of laid-off workers in four urban districts in Guangzhou, Qiu and other scholars also finds out that in the process of re-employment, the percentage of laid-off workers who got help from relatives and other informal social networks accounts for 47.9%, and the transforming pattern of social support of the laid-off workers leads to less dependence on the work units and the state (Qiu, Chen, & Ren, 1998).

In addition, Chinese scholars also focus on job seeking process of other social groups, such as college students (Xu, 2002), cadre groups (Zhou, 2005), women (Ding, 2011) and so on.

2.3 Human Capital and Occupational Attainment

From the perspective of rational choice, it is more effective for job applicants to demonstrate their competent human capital for obtaining occupational positions with higher income, higher job satisfaction and better job matching.

Economist Becker (1964) illustrates human capital theory in detail in his monograph "Human Capital". He believes that the income difference in the labor market originates from the variation of various human capital of individual. The source of the human capital theory can be traced back to Economic Nobel winner Theodore. W. Schultz, who presented human capital theory at the 1960's American Economics annual meeting, and this was also the first time that human capital theory was systematically proposed. Schultz (1971) believes that the growth of national output is greater than the growth of land, hourly labors and material capital, and this situation becomes increasingly evident in modern society. The investment in human capital, such as technology and knowledge, is the key explanation for this imbalance (Schultz, 1971). From then on, education, level of skills and working experience become the most common indicators for human capital. Various studies have been focused on the relationship between human capital and job attainment. For instance, McDonald (2005) empirically proves that males with high education and working experience have the greatest chance of obtaining jobs. Wolbers (2003) also points out that it is much easier for

well-educated people to find the matched jobs than people with little education experience. Van de Werfhorst (2002) proposes that the personal skills and working experience have a significant positive impact on job attainment; moreover, the majority of applicants also exert great influence on the job matching: people who study economics, communication, and technical professional are easier to find matched jobs than those who majored in cultural and humanity disciplines. McDonald and Elder (2006) argue that professional experience is also an imperative factor affecting the condition of occupational attainment.

2.4 Comments on existing literature

As mentioned above, studies in past decades provide remarkable evidence that the social and human capital exerts strong influence on occupational attainment across nations and levels of marketization. However, research on this topic is constantly changing and developing, and many issues require clarification in the further research.

Existing studies highlight the significance of social networks on job attainment and job mobility in the market transition period. A majority of researchers adopted a holistic perspective, but they have merely discussed whether job hunters get jobs by using informal channels such as social networks when seeking job opportunities, and few pay attention to the kind of jobs obtained through social networks mechanism. Besides, these studies more or less ignore the institutional differentials: private sector and state sector have completely different logics and institutional framework, and the mechanisms of social networks in these sectors are distinctive. Thus, it is necessary and significant

to use a comparative approach to explore the variation between state sector and private sector with respect to the impacts of social networks for occupational attainment.

2.5 Theoretical Framework

Focusing on the utility of social networks on occupational attainment from the perspective of institutional segmentation, this research aims to move beyond current research limitations. In other words, it attempts to answer how network factors affect job attainment contingent upon institutional differences between state sector and private sectors. The framework of this study will be unfolded across two analytical levels: a) the macro level refers to the institutional segmentation (state sector and private sector); and b) the micro level refers individual perspective and *guanxi* perspective. See Figure 2.1 for a graphic explanation.

For a better understanding of how structural factors influence occupational attainment, some relevant literature in relevant areas needs to be reviewed.

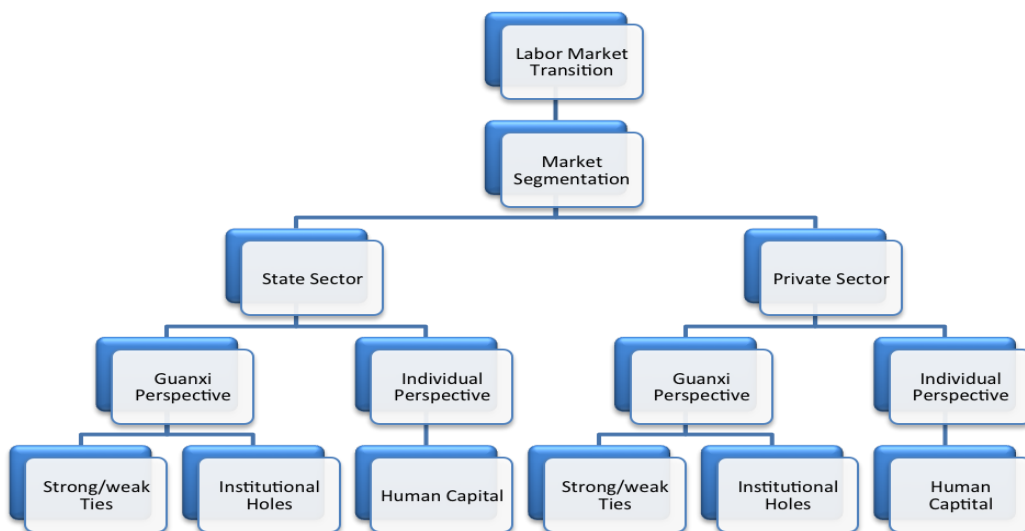


Figure 2-1. Theoretical Frameworks

2.5.1 Market Segmentation Theory

Labor market is always disturbed by a great number of complicated non-economic factors. From the neo-structuralist point of view, things that lead to diverse processes and consequences in labor market not only include individual's characteristics and capacity, but also the structural position one occupies. Labor market has been divided into different departments by institutional and social factors. (Cain, 1976; Doeringer & Piore, 1970; Doeringer & Piore, 1971; Piore, 1975)

Since Schultz (1960) proposed human capital theory, many economists have found that human capital theory cannot fully explain some empirical questions, such as the persistence of poverty (Cain, 1976), the failure of education and training (Gordon, 1972), the inequality of income (Thurow, 1969), and the discrimination within the labor market (Reich, 1971). To assess these problems, scholars have carried out many empirical studies and come up with a theory of labor market segmentation.

Doeringer and Piore are usually treated as the pioneers of the dual labor market theory (Doeringer & Piore, 1970, 1971; Piore, 1975). Labor market is divided into two parts here: the primary labor market and the secondary labor market. Employees in the primary labor market have relative high income, high educational return (Osterman, 1975), high job stability, decent working conditions, more training opportunities (Bosanquet & Doeringer, 1973) and smooth promotion mechanism. Conversely, secondary labor market is portrayed with low income, insecurity, poor working conditions, less training opportunities, and the lack of promotion mechanisms (Boston, 1990; Doeringer & Piore, 1971; Neuman & Ziderman, 1986). Possible factors that contribute to

market segmentation are summarized as: a) race – white people or visible minorities; b) sex – males or females (Bosanquet & Doeringer, 1973; Hall, 1970); c) occupation – primary labor market or secondary labor market (Boston, 1990); d) nationality – native residence or migrant (Cain, 1976); e) educational performance – scores; f) ascribed factors – high-income family or low-income family (Bowles & Gintis, 1975); and g) information asymmetry (Cain, 1976; Piore, 1970).

Labor market segmentation can be seen as a notable feature of the current employment system in China, which lies in the constraints of institutional factors. Generally, there are four institutional factors that may contribute to the labor market segmentation in China: administrative system, household registration system (*hukou*), educational system and social security system (Guo, 2004). This thesis will principally discuss the influence of administrative system on labor market segmentation – how does administrative system lead to the market segmentation in China – which directs us to the Chinese market transition process.

2.5.2 China's Market Transition

Unlike Eastern Europe and the former Soviet Union, China's transition process from plan to market economies has been gentle and gradual since 1979. The process started with a detailed introduction to entrepreneur and officials in urban areas, and decollectivization in the rural areas, as well as the introduction of economic autonomy. This meant enterprise autonomy, where “party and industrial bureaus were no longer standing over the shoulders of economic actors in the industrial economy” (Guthrie, 2000, 729), which shocked the central economic institutions in China.

The reform leads to: a) a decline of the advantage of redistributive power and other forms of political capital in relation to non-state economic actors who possess market power; b) higher returns to human capital; and c) new opportunities centered on market activities (Cao & Nee, 2000). On the other hand, the process of Chinese market reform has been in a gradual and mild matter. Some old systems have retained their fundamental power when channeling the transition from one system to the other. For instance, although the main goal of market reform is to give autonomy for managers and officials to operate organizations freely, many organizations are still embedded in the former hierarchical structures and constrained by them (Bian & Logan, 1996). What is more, the position which the organizations occupied in the former hierarchy is capable of maintaining its influences in the transitional paths of the companies that are involved (Cao & Nee, 2000).

With the gradual impact of market-oriented reforms, Chinese employment policies have been changed correspondingly. In pre-reform period (from 1950 to 1979), jobs were considered as national resources subject to state planning, and all urban citizens were required to wait for assignments from state labor bureaus (Bian, 2002) accompanied by a series of policies, such as *hukou* (household registration system) and *danweizhi* (work unit system), in order to limit job mobility. In state sectors, lifelong tenure was institutionally guaranteed during this period (Bian & Huang, 2009). Second stage started from 1980, when state monopoly for controlling jobs resources began to change (Gold, 1990). Although job assignment system still worked within state sectors, an emerging system – contract system – was then carried out calling for shares with job assignment system; in addition, employment services organizations are opened up in almost every cities to

assist in finding jobs (Davis, 1990; Naughton, 1995). In the post-1992 period, private sectors experienced full-blown expansion, during which numerous rural migrant labors flooded the cities and offered sufficient labor forces facilitating the expansion of private sectors. What's more, labor distribution was implemented based on the new Labor Law within all sectors. Published in 1994, the law entitled *General Idea of Establishing Socialist Market Economic System*, confirms the basic content, the target model, and fundamental principles of the establishment of labor market institutions (Zhao, 2002). In 1995, the official implementation of the law signifies that lifetime employment was legally abolished, which induced the internal labor market in the organizations, making education, age and gender the important indicators within labor market (Li & Bian, 2008). In the past three decades, market transition brings about institutional transition that the segmentation of Chinese labor market has significantly changed, and the market cannot be simply split by industry segmentations but with the consideration of “institutional segmentations”.

A great number of studies have been done in terms of the income within labor markets from a structural perspective. For instance, Liu (2006) analyzes how authority exerts influence on the income distribution in the process of market-oriented reforms, taking occupational hierarchy and political capital as major indicators. By building regional differences of income model, Hao and Li (2006) estimate the impact of institutional segmentation on personal income. Bian and Zhang (2001) further distinguish the role of social capital in different institutional segmentations. To be specific, in the redistributive time, if job seekers flow to the unit that in charges of the central level, the network resources they used are more likely to be influence rather than information resources.

From the perspective of institutional segmentation, two sectors exist in China's labor market, private sector and state sector. As a progressive process, market transition in China features that the authorities do not directly intervene the core of the planned economic system in the initial stage of reform due to the strong opposition from interests groups under the planned economic system (Xu, 2007). Under the circumstances, China's economic reform was launched from the private sector, and then to the state sector. At present, the size of employment in private sector is significantly larger than that in state sector, which affirms that the structure of labor market has experienced a transformation from state sector-oriented to private sector-oriented (Xu, 2007).

In the planned economic system, the allocation of labor forces, the price of labor, the employment structure and other relevant issues in the state sector are institutionally regulated to a considerable extent. The state plays a leading role in the allocation of resources, and the role that market plays is very limited because the economy is not tied to the supply-demand relations in external labor market. On the contrary, the proportion of supply and demand in the private sector determines the price of labor that will regulate the relationship between supply and demand of labor reversely (Guo, 2004).

CHAPTER 3 METHODOLOGY

This chapter is concerned mainly with methodological approaches to the study of social networks and job attainment from the perspective of institutional segmentation, including theoretical hypotheses that I propose based on existing studies and my own understanding, concepts definition, data resources, variables and their measurements, and analysis strategy.

3.1 Theoretical Hypotheses

In China's transitional labor market, the effects of social networks on the outcome of job attainment seems to be complex and mixed findings have been found aiming at the increasing or decreasing significant of social networks (Bian, 2002, 2008; Guthrie, 1998; Hanser, 2002; Huang, 2008; Yang, 1994).

According to Victor Nee's (1989) Market transition theory, with the development of the market economies, the value of human capital will increase; however, the value of political capital will decrease. In this view, social networks also stand for lower inefficiency, so scholars made a further hypothesis: with increased marketization, the power of social networks will decline correspondingly (Guthrie, 1998). Hanser (2002) believes that the significance of social networks in urban employment processes has declined dramatically, since many job search channels have been generated by market reform, individuals have more choice when looking for jobs. Besides, with the increasing of job-hunters' job specificity and skill marketability, employers or enterprises start

focusing on job seekers' productivity and human capital. Thus, workers who have high potential to deliver quality products should enjoy great opportunity for job attainment (Hanser, 2002).

In contrast, Bian offers institutional holes theory to account for the persistent significance of social networks in job searches. Redistributive and market mechanism coexist during transitional labor market, but these two mechanisms are not compatible so that some gaps or "holes" appear between those two systems, which imply that formal channels are ineffective in transmitting information, building trust, and establishing mutual obligations between job seekers and prospective employers. Social networks as informal channels could fill in these holes and through which job seekers connect to employers (Bian, 2002). Besides, although marketization is the general trend of economic transition in China, this does not mean that the controlled exercises by political power will weaken (Bian & Logan, 1996), this is the "persistence of power" theory on how social networks mechanism have effect on job attainment. Given the consistent findings of Bian's research, my first hypothesis is:

Hypothesis 1: In general, the impacts of social networks on job attainment still work in transitional period in China.

Since China is a broad country, inter-regional variations exist due to the different pace of reforms and economic development, which leads to controversial findings about the impacts of social networks on job attainment. The majority of the controversies about social networks is produced by empirical approaches broadly, and did not distinguish specific occupational characteristics, such as ownership type of work units, skill requirements of positions and

competition intensity of jobs. Based on all the arguments offered above, although Bian (2002) proposes institutional holes theory to explain the persistent significance of social networks in transitional period, he did not mention which fields may exist more institutional holes, and which fields may have less. Combining Bian's and Hanser's (2002) points, my second hypothesis is stated as follows:

Hypothesis 2: Social networks are still playing a significant role in some fields due to the existence of more institutional holes; however, its effects have declined in other fields where less institutional holes exist.

According to Walder's (1995) dual-path model, there are two distinctive institutionalized career lines in Chinese organizations, one path "emphasized expertise and education (but not politics) and led to professional occupations (with little decision-making authority)", and the other "emphasized political loyalty (but not higher education) and led to influential leadership positions" (Walder, Li, & Treiman, 2000, 194). In Chinese organizations, based on the dual-path model, one career line is administrative, and the other is professional, the mechanisms underlying these two lines are different (Zhao & Zhou, 2004).

In addition, regarding the skill requirements of job positions, jobs with specific skill requirements need certain skills level, such as language ability and computer levels. These are "hard" standards for jobs with skill requirements, if job hunters cannot reach the required skill level, then they will not be given this kind of jobs. Compared to professional or technical jobs, administrative positions are more easily influenced by network factors (Huang, 2008).

Hypothesis 2-1: Compared to the professional job positions, social networks have more effects on managerial and unskilled positions.

When taking the strength of social networks into consideration, Granovetter's (1973) believes that information that has been generated from weak ties is better for job attainment, since the power of weak-ties that bring non-redundant information through informal channels in the labor market. In comparison to weak ties theory, strong ties theory as proposed by Bian (1997) clarifies that disseminating information is often based on personal favor exchange in China, and generally this relationship involves strong ties rather than weak ties. Strong ties with trust and mutual obligation are more efficient in accessing favor and influence for jobseekers. In his view, social network effects on labor market outcomes are contextually contingent. My third hypothesis is as follows:

Hypothesis 3: Compared to the weak ties, the strong ties have more effects on occupational attainment.

From the perspective of institutional segmentation, Chinese economic system could be divided into two parts, state sectors and private sectors. And correspondingly there are two labor markets: state sectors' labor market and private sectors' labor market. These two sectors have totally different institutional framework due to the variation of the starting time of reform, the extent of reform, the pricing mechanism of labors and other relevant factors; therefore, the role that social networks play within these two sectors regarding job attainment much be different. Thus, I propose my fourth hypothesis:

Hypothesis 4: In terms of occupational attainment, the impact of social networks in the state sector and private sector is different.

To be specific, the market transition in China is a progressive process starting with economic reform started in the private sector (Xu, 2007). Most private sectors have been developed in the market environment. Their production and business activities are conducted in full accordance of the laws of market economy (Li & Bian, 2008). Because the market economy is guided by strict rules and regulations, less room has been left for social networks to work within private sector. Consistent with the market economy, the proportion of supply and demand determines the price of labor; hence the payment of ordinary workers is very low due to the oversupply in current China's labor market. Besides, ordinary jobs in the private sector are lack of stability and security (Guo, 2004). Therefore, if possible, job seekers are hesitant to take ordinary jobs, and are less likely to use social networks to access them.

On the contrary, the reform of the state sector occurred much later than in the private sector, the features of state sector have remained in a low level of market orientation. Instead, the sector is characterized by a high degree of monopoly, a high degree of uncertainty regarding the new rules and regulations. As a result, the economic transition in the state sector remains incomplete and contains a lot of institutional holes, leaving more room for social networks to play. In the state sector, the price of labor is not tied to the supply-demand relations in external labor market, but is determined by the planned economic system rather than the supply-demand relations. The state sector still guarantees job stability and income security to even ordinary workers.

Hypothesis 4-1: In comparison to the private sector, social networks have more effect on occupational attainment in the state sector.

Hypothesis 4-2: in comparison to ordinary jobs in the private sector, ordinary workers prefer to use their social networks to secure a job within the state sector.

3.2 Concepts Defined

3.2.1 Social Networks and Chinese “*Guanxi*”

Social networks refer to particular connections within and between certain groups of people, and networks can be generated from combining these connections or relationships together (Xiao, 1999). Social networks highlight the value of social relations and the role of cooperation and facilitate socio-economic outcomes for network members or the collective well being. Chinese social networks have its particular traits and are often named as “*guanxi*”. By definition, “*guanxi* (or *kuan hsi*) refers to a dyadic, particular and sentimental tie that has potential of facilitating favor exchange between the parties connected by the tie. In Chinese culture, any blood or marital relationship is qualified for this definition, and persons with a non kin tie can develop *guanxi* between them if the parties repeatedly invest sentiments in the tie and, at the same time, build up obligations to each other, making the tie mutually special or particular for both parties”(Bian, 2006, 312). And in this research, “Chinese social networks” and “*guanxi*” are equivalent concepts.

3.2.2 Occupational Attainment

For the proposed study, occupational attainment is defined as the jobs that job seekers obtained. According to Walder's (1995) dual-path model, in Chinese organizations, one career line is administrative, and the other is professional, "administrative positions are in charge of the production process and personnel management, while professional positions are in charge of the technical task of production design and engineering implementation" (Zhao & Zhou, 2004, 188). Administrative job positions are connected with political authorities and resource allocation, while professional job positions more concern about technical aspects during the production process.

In addition, based on Huang's (2008) study, professional/technical job positions have more skill requirements than jobs for administration and management, some "hard" indexes indeed exist for professional/technical jobs, if job hunters can't meet all the skill requirements, then they will not be given this kind of positions; therefore, the impacts of social networks could penetrate managerial positions and ordinary worker positions more easily (Huang, 2008).

Thus, in this study, I classify the obtained jobs into three categories: managerial/administrative, professional/technical and ordinary positions.

3.2.3 Institutional Segmentation

In China, labor market segmentation is an outstanding feature of the current employment system. The main reason for the formation of this feature is constraints from institutional factors related to economic system, which means that the integration of different institutions that formulate and implement economic decision-makings within a certain region.

Market economic reforms in the past 30 years make the condition of segmentation of Chinese labor market has a significant change. Structural segmentation of market is not the original simple organization split or industry segmentation, but the “institutional segmentation”. From the perspective of institutional segmentation, there are two sectors exist in China’s labor market, private sector and state sector.

3.3 Data Resources

I use dataset of “Social Networks and Job Searching Survey 2009”, which was conducted by the Institute for Empirical Social Science Research in Xi’an Jiaotong University in China. The questionnaire includes following parts: social interactions, job search strategies and experiences, job mobility and incomes, and social attitudes.

The respondents of this survey include 19 to 69 years old Chinese citizens with at least once occupational experience. Samples were chosen from eight cities of Xi’an, Changchun, Jinan, Shanghai, Xiamen, Guangzhou, Tianjin, and Lanzhou. Each city followed the same sampling methods and procedures: first, 35 to 50 neighborhood committees were randomly selected in cities by using PPS sampling method, then investigators used map sampling method to select 20 households from the adopted neighborhood committees.

On arriving at the households, the investigators used the Kish table to select interviewees and conduct questionnaire interviews. According to the size of cities, the total sample of each city is between 700 and 1000. The survey ultimately collected 7102 effective questionnaires.

During the whole process of this survey, all interviewers strictly abided by relevant ethical requirements. First, interviewers would get formal consents from randomly selected respondents before they started their surveys; all interviewers were not allowed to do anything that would cause physical or emotional harm to their respondents. Second, all the information about respondents in the questionnaires was protected by *Statistics Law*, we only use the dataset for academic analysis and all the respondents are anonymous.

3.4 Variables and Measurements

3.4.1 Dependent Variable and Measurement

Occupational Attainment

In this study, occupational attainment is defined as the jobs which job seekers obtained. Based on Zhao and Zhou's (2004) research, I divide the obtained-jobs into three categories: a) Managerial/Administrative positions, b) Professional/Technical positions and c) Ordinary worker. As discussed previously, China has been implemented market transition since late 1970s, which contributes to the labor market segmentation of the current employment system. China's labor market is segmented to private sector and state sector. So, I construct an indicator to show such segmentation in order to make comparisons between state sector and private sector in terms of how network factors influence individuals' occupational attainment. Occupations here refer to current occupations, if respondents have not changed jobs before, then I use the information of their first jobs; if the respondents have changed jobs, then I use current jobs' information.

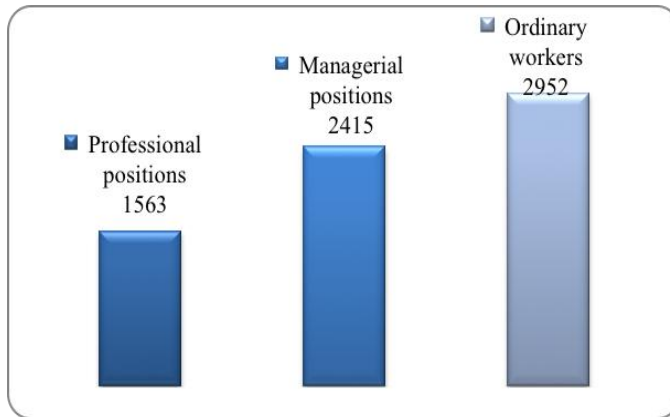
I use the following question to measure “the obtained job positions”: “what is your current occupational category?” Thirty choices are offered for respondents:

Table 3-1. Occupational Categories

Occupation		Job Title/ Technical Title	
Professionals	11) Senior professionals	12) Intermediate professionals	13) Other professionals
Leader of Organs & units	21) <i>chuji</i> and above	22) <i>keji</i> and below	23) No title
Leader of Institutional units	24) <i>chuji</i> and above	25) <i>keji</i> and below	26) No title
Head of enterprise	27) <i>chuji</i> and above	28) <i>keji</i> and below	29) No title
Office clerk	31) <i>chuji</i> and above	32) <i>keji</i> and below	33) No title
Business people	41) Operation and management	42) Technical work	43) Unskilled work
Service staff	51) Operation and management	52) Technical work	53) Unskilled work
Forestry, animal husbandry and fishery personnel	61) Operation and management	62) Technical work	63) Unskilled work
Industrial worker	71) Director	72) Technical work	73) Unskilled work
Unclassified jobs	81) Operation and management	82) Technical work	83) Unskilled work

I recode these thirty categories into three types: professional/technical positions, managerial/administrative positions and ordinary workers. I treat 11, 12, 13, 42,52,62,72,82 as professional/technical positions, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 41, 51, 61, 71, 81 as managerial/ technical job positions, and 32, 33, 43, 53, 63, 73, 83 as ordinary or unskilled job positions. “Professional/technical positions” is the reference category for the managerial/administrative positions and ordinary workers.

Table 3-2 The Frequency Distribution of Occupational Categories



I use “ownership type of work units” as an indicator of segmentation. Ownership type of work units is measured by the response to this question: “What is the ownership type of your current work unite?” Nine options are offered: 1 Party and government organizations, 2 state-owned enterprises, 3 state-owned institutions, 4 collective enterprises, 5 self-employment, 6 private firms, 7 Wholly owned foreign enterprises (WOFEs) or Joint ventures (JVs), 8 Corporate enterprises. According to previous studies (Zhang, 2006; Zhang & Guo, 2010), I recode first four categories as state sectors; treat last four options as private sectors.

Table 3-3. The Frequency Distribution of the Work Sectors

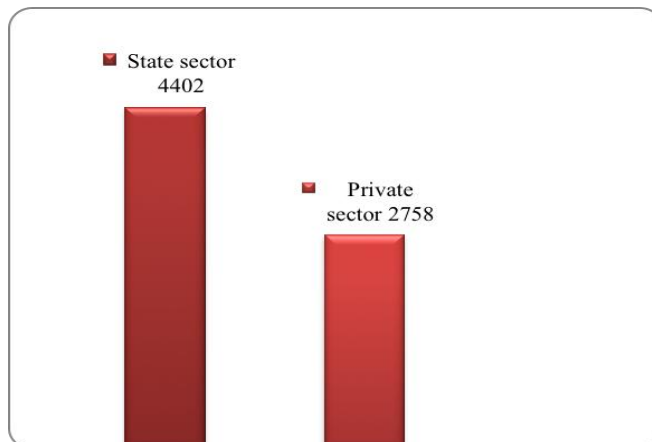
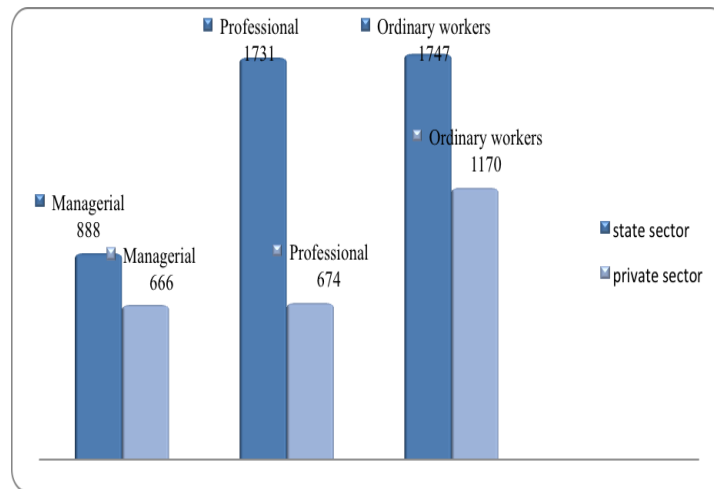


Table 3-4. The Frequency Distribution of Work Sectors in Occupational Categories



3.4.2 Independent Variable and Measurement

Social Networks Measures

I combine several questions to determine whether and how individuals use network mechanism during job searching process. To be specific, channels of job seekers entering the work units, channels of collecting employment information, the number of people who initiatively provide job seekers information or assistance, and the number of people that job seekers find to help in the process of looking for jobs.

Moreover, if jobseekers use social contacts when looking for jobs, then according to the strength of social networks (Granovetter, 1973; Lin, 1982; Bian, 1997), I classified social networks into three types, strong ties, weak ties, and not use social network. Familiarity with the contact: “particularly familiar”, "very familiar ", " familiar "as " strong ties ", accounting for 29.56%; "unfamiliar " or " do not know "(indirect relationship) as " weak ties”, accounting for 27.70%; do not use network mechanism accounts for 42.74%.

Human Capital

Based on Becker's (1964) human capital theory, the time of receiving formal education is an important indicator for measuring the human capital of workers, the higher the education, the higher the ability of the workers, the more the human capital that workers possess, the better their job prospects will be in the labor market. The measurement of human capital is a traditional area of economics. Human capital theory suggests that in order to get better returns in the labor market, individuals could invest and accumulate human capital. In this study, I use the indicator -- education level -- to represent human capital variable. Then main effect of respondent's education is an ordinal variable, 1 means "Junior high school or below", 2 stands for "technical secondary school / professional high school/ senior high school", and 3 is "College or above".

3.4.3 Control Variables

Gender

Since the 1950s, socio-economic status of Chinese women has enhanced significantly due to the fact that more and more women are participating in the labor market. However, gender inequality in the labor market still remains. And such a gender gap tends to be widened after economic reforms and the emerging free labor market since late 1970s. A number of empirical studies have shown that gender plays a significant role in the employment inequality in labor market. However, take employment income as an example, recent studies demonstrate that: Hao and Li (2003) for example, find that the development of marketization alleviates the income differences

between males and females based on CGSS 2003 data. Therefore, in this paper I use gender as a control variable in regression models. As descriptive statistics results show below, in the 7102 valid samples, the ratio of male to female is 85:100.

The Entry Age

The entry age refers to the age when workers obtained their most recent jobs. If the respondents have never changed jobs, then we use the age of their first jobs; if respondents changed jobs, then the age of their current jobs would be used. According to China's Labor Law, the 16-year-old is the minimum age for employment, so I do not include a very small fraction of respondents who are younger than 16-year-old in the eight-city dataset. As descriptive statistics results show below, the valid sample of this question is 6958, the minimum is 16 years old, the maximum is 68-year-old, and average age is 26.35 years old.

For the control of the nonlinear effect of age on income, age squared term is added into the regression models.

***Hukou* (Household registration) System**

The *Hukou* system is a cornerstone of China's infamous rural–urban ‘apartheid,’ (Alexander & Chan, 2004) creating a system of ‘cities with invisible walls.’ (Chan, 1994) It is a major source of injustice and inequality. (Yu, 2002) At the core of the household registration system are two measures: dividing citizens into two categories – those with agricultural *Hukou* and those with non-agricultural *Hukou* – and putting them under local government administration with strict control over changes in *Hukou*. (Lu, 2008) *Hukou* system significantly affects personal life in many respects.

Within the labour market, Yang and Guo (1996) pointed out that the tasks in which the temporary workers are engaged are typically those which urban permanent residents are unwilling or unable to do. Through empirical study, Guo and Iredale (2004) confirm that the *Hukou* system was based on ‘ascribed’ attributes that largely influence the occupational attainment and labor market returns. On the life chances, Xiaogang Wu and Zhiqiang Liu confirmed separately that people of rural and urban origins differ substantially in their access to educational and political opportunities that may help them move upward in the socialist hierarchy.

According to the China’s unique urban and rural household registration system, the respondents in this survey are divided into two categories: non- agricultural *Hukou* and agricultural *Hukou*. As descriptive statistics results show below, the valid sample of this question is 7099, the citizens with non- agricultural *Hukou* account for 89.76%.

Chinese Communist Party (CCP) Membership

CCP endeavors to cultivate the political loyalty in Chinese citizens, which at the individual level is demonstrated via one’s “political status” (there is no accurate translations here to the Chinese term of “*zhengzhi mianmao*”, which literally means “what does your lineament look like politically”). According to Victor Nee’s (1989) “Market transition theory”, with the development of the market economies, the value of human capital will increase; however, the value of political capital (which is measured by party membership) will decrease. In contrast, “persistence of power” theory argues that although marketization is the general trend of economic transition in China, this does not mean that the controlled exercises by political power will weaken (Bian & Logan, 1996).

Political status in this study is measured by “whether joined CCP when you find the most recent job”¹. If the respondents have never changed jobs, then we use the party membership that they started the first jobs; if respondents changed jobs, then the party membership of their current jobs would be used. As descriptive statistics results show below, the valid sample of this question is 7086, the proportion of CCP members is 8.51%.

Time of Job Entry

With the gradual impact of market-oriented reforms, Chinese employment policies have changed correspondingly. In pre-reform period (from 1950 to 1979), jobs were considered as national resources subject to state planning, all urban citizens were required to wait for assignments from state labor bureaus (Bian, 2002), and the rate of job mobility is pretty low. In this study, the valid sample of this question is 7102 and the percentage of people who entered labor market or experienced occupational mobility during this period is 23.57.

Second stage started from 1980, state monopoly for controlling jobs resources began to change (Gold, 1985). Job assignment system still worked in state sectors, but a contract system was carried out requiring a co-existence with job assignment system (Davis, 1990; Naughton, 1995). The valid sample of this question is 7018; the percentage of people who entered labor market or experienced occupational mobility during this period is 21.69%.

¹ Actually, “*zhengzhi mianmao*” is a measurement with at least four levels, namely, CCP member, Communist Youth League member membership in other eight legally recognized parties, and no political party affiliations. But CCP is the only ruling party in China so we can make this measurement simpler as a dummy: CCP member or not CCP member.

In the post-1992 period, private sectors experienced full-blown expansion, labor distribution was implemented based on the new Labor Law which is published in 1994 within all sectors (Zhao, 2002). In 1995, the official implementation of the Labor Law meant that lifetime employment was abolished (Li & Bian, 2008). The valid sample of this question is 7018; the percentage of people who entered labor market or experienced occupational mobility during this period is 54.74.

Geographic Areas

The regional differences exist in terms of culture and economics in Chinese cities. This dataset of this study is collected from eight big cities: Shanghai, Tianjin, Xiamen, Xi'an, Lanzhou, Changchun, Guangzhou and Jinan. According to the macro regional characteristics, I divide these eight cities into two categories, the coastal cities and the inland cities. Shanghai, Tianjin, Xiamen and Guangzhou are coastal cities; Xi'an, Jinan, Changchun and Lanzhou are inland cities. According to the descriptive results of the 7100 valid samples, 61.83% respondents were from coastal cities. The table 3-5 shows the main variables and their measurement in details.

Table 3-5. Main variables and their measurement

Variable	N	Mean	Sd.	Property	Indicator
Dependent Variables					
Occupational Attainment	6929			Nominal	Administrative/managerial=1 Professional/technical=2 Ordinary workers=3
Occupational Attainment (State sector)	4402			Nominal	Administrative/managerial=1 Professional/technical=2 Ordinary workers=3
Occupational Attainment (Private sector)	2577			Nominal	Administrative/managerial=1 Professional/technical=2 Ordinary workers=3
Independent Variables					
Social networks	7100	0.55		Nominal	Use networks=1 Not use=0 Use weak ties=1,
Social networks	7100			Nominal	Use strong ties=2, Not use social networks=3
Education	7100			Ordinal	Junior high school or below=1 Technical secondary school / Professional high school/ Senior high school=2 College or above=3
Control Variables					
Gender	7100	0.46		Nominal	Male=1, Female=0
Age	7100	26.35	8.7	Interval	Maximum65, Minimum18,
Age Square	7100	770.6	559.0	Interval	Maximum4225, Minimum324
Hukou system	7100	0.90		Nominal	Non-agricultural Hukou=1 Agricultural Hukou=0
Party Membership	7100	0.08		Nominal	Yes=1, No=0
Time of Job Entry	7100			Nominal	1949-1979=1 1980-1992=2 1993-2009=3
Geographic Areas	7100	0.62		Nominal	Coastal cities-1 Inland cities-0

3.5 Analytical Strategy

Both descriptive and multivariate analysis will be conducted. The descriptive analyses include occupational attainment in both state sector and private sector by social networks, and differences in human capital and demographic variables by social networks.

In the multivariate analysis, Logistic regression analysis will be used to estimate the effect of social networks on job attainment which including administrative/managerial job positions, professional/technical job positions and ordinary workers. I also take the structural factor --- institutional segmentation --- into consideration, the effects of social networks on job attainment in both state sector and private sector will be examined separately.

For a dependent variable with m categories, this requires the calculation of m-1 equations, one for each category relative to the reference category, to describe the relationship between the dependent variable and the independent variables:

$$\ln \frac{p(Y_i=m)}{p(Y_i=1)} = \alpha_m + \sum_{k=1}^k \beta_{m,k} x_{ik} + \mu_i = Z_{mi}$$

When there are more than 2 groups, the probabilities are computed as:

$$p(Y_i = m) = \frac{\exp(Z_{mi})}{1 + \sum_{h=2}^m \exp(Z_{hi})}$$

For the reference category,

$$p(Y_i = 1) = \frac{1}{1 + \sum_{h=2}^m \exp(Z_{hi})}$$

Hence, for each case, there will be $m-1$ predicted log odds, one for each category relative to the reference category. (Note that when $m=1$, $\ln(1) = 0 = Z_{11}$, and $\exp(0) = 1$, α is the constant, and μ is disturbance.

CHAPTER 4
RESULTS OF THE EMPIRICAL ANALYSIS

In this chapter, I try to verify my hypotheses that proposed based on my theoretical framework by building logistic regressions, with the most recent survey data of Social Networks and Job Searching Survey 2009.

4.1 Descriptive Analysis of Focal Variables

4.1.1 Comparison within Three Occupations

First, I make a table to compare the variations within administrative/managerial job positions, professional jobs and ordinary workers from income, education and ISEI respectively.

Table 4-1. Occupation Differences

	Administrative/managerial	Professional	Ordinary workers
Education (years)	13.32	12.18	11.26
Income (RBM/month)	2742.541	1337.164	1068.157
ISEI	49.74	45.85	41.31
% of CCP Member	16.54	7.17	5.43

Note. Except for party members, statistics in other categories are the mean of the variables

As shown in table 4.1, education, income and ISEI are all continuous variables. Education here refers to the years of education that respondents received when they entered their current jobs, I recode the level of formal education into years of schooling, more specifically, below primary school equals three years, primary schools is six years, junior high school for nine years, technical secondary school/professional high school/ senior high school equals twelve years, the junior college for 15 years, college for 16 years and graduate students or above for 18 years. Income is the

respondents' monthly income when they just obtained current jobs. ISEI is the abbreviation of International Socioeconomic Index of Occupational Status, based on Liang's study, ISEI in my study is from 19 to 90 by combining the income, education and other variables together.

In China, the administrative/managerial positions are the quintessential jobs for the propagation of talent, merit and credentials. Therefore, it is not surprising that on average, the educational level of administrator and managers (13.32 years) are higher than professionals (12.18 years) and ordinary workers (11.26 years). According to human capital theory, there is also obvious that the administrative/managerial job positions (2742.541) pay much higher than the professional occupations (1337.164) and ordinary jobs (1068.157). With longer education and better monetary returns, people in administrative/managerial positions have higher ISEI (49.74) when compare to professionals (45.85) and ordinary workers (41.31) correspondingly. In addition, 16.54% administrators or managers are Chinese Communist Party members; however, the proportion in professionals and ordinary workers is only 7.17% and 5.43% respectively.

4.1.2 Comparison between State Sector and Private Sector

Along with the thorough reform in China, the structure of labor market has experienced a transformation from state sector-oriented labor market to private sector-oriented labor market (Xu, 2007). Before 1992, the state sector held almost all-important resources and majority of people work in it. However, people in state sectors decreased after 1992 due to market reform when the state gave more power to private sectors who are becoming the main players in the market. The

private sector emphasizes efficiency, profit, and more pay for more. Thus high monetary returns stimulate more and more well-educated people to join it.

Table 4-2. Work Sector differences

Work Sector	Education (years)	Income (RBM/month)	ISEI	% of CCP Members
Private sector (1)	12.32	2663.92	43.91	6.4
State sector (2)	11.88	946.37	45.32	9.81
Difference (1) – (2)	0.44***	1717.55***	-1.35***	-3.41***

Note. Except for party members, statistics in other categories are the mean of the variables
T-test, ***p<.001

As table 4.2 indicates, compared to the state sector, employees in private sector have higher education level (12.32 vs. 11.88, t-test, 0.44) and higher income (2663.92 vs. 946.37, t-test, 1717.55). However, the ISEI of the state sector is higher than the ISEI in comparable private sector positions (-1.35), that is because although China is experiencing market transition. This process has been a gradual and mild matter, therefore, some old systems have retained their fundamental power when channeling the transition from one system to the other; that is to say, the state sector still hold the resources that is of vital importance to the nation's economy and the people's livelihood. Besides, party membership, as an essential indicator for political loyalty of citizens, must be closely link to state sector. So difference of proportion of party members between the state sector and the private sector is statistically significant (-3.41).

4.1.3 The Characteristics of Network Users

What kinds of job seekers use social networks mechanism when looking for jobs? And what kind of jobs do they obtain by using this mechanism? The table below shows the characteristics of respondents who use social networks during job searching process.

The following conclusions can be drawn from the table:

(1) Due to the low overall qualities, the older female ordinary workers with agricultural *Hukou* or lack of political capitals have to utilize their social networks to obtain job opportunities.

The table shows that, more females (56.81) than males (52.63), more non-party members (64.73%) than party members (56.38%), more people above 35 years (60.44%) than whom below 35 years (53.96%), tend to use social networks when they looking for jobs. In addition, the proportion of administrator and managers who use social networks to obtain jobs (49.71%) is lower than the comparable professionals (51.76%) and ordinary workers (59.64). Individuals with agriculture *Hukou* are more likely to use networks mechanism as well (64.37% vs. 53.78%). Since certain kind of job seekers are at a disadvantaged positions than others in terms of physical condition, skills, age, *hukou* system and political capital, they need to utilize their social networks to make up their shortages.

(2) The people with higher academic degrees and social-economic status have the ability to construct and maintain the social networks, so they have more opportunities on utilizing the social networks. As can be seen from the table, the higher the education people received, the lager the tendency for them to use social networks; the proportion of using networks for people who obtained

Table 4.3 The Characteristics of Network Users

	N	Usage of social networks (%)
Gender		
Male	3323	52.63%
Female	3776	56.81%
Age		
Below 35	5722	53.96%
Above 35	1236	60.44%
Education Level		
Below junior high school	2066	47.39%
Senior high school	2589	52.57%
Above college	2374	63.65%
Party membership		
Party member	603	56.38%
Non-party member	6483	64.73%
Hukou system		
Non-agriculture Hukou	6373	53.78%
Agriculture Hukou	727	64.37%
Income (RMB/month)		
Below 1000	4069	47.63%
Above 1000	2823	65.75%
Occupational categories		
Administrative/managerial	1563	49.71%
Professional/technical	2415	51.76%
Ordinary workers	2951	59.64%
Work sector		
State sector	4402	48.93%
Private sector	2577	64.69%
Times		
1949-1979	1654	27.87%
1980-1992	1522	48.03%
1993-2009	3842	69.21%
Areas		
Coastal cities	4390	55.74%
Inland cities	2710	53.43%

degree of junior high school and below, high school and secondary school, college and above is 47.39%, 52.57% and 63.65% respectively. From the model of status attainment by Blau and Duncan (1967), we know that income is partially determined by the occupations, and occupations are determined by education and personal characteristics. Therefore, it can be inferred that the higher the education, the greater the likelihood of obtaining high income. The essence of social networks is the favor exchange, however, a certain economic strength is needed to maintain and mobilize resources of favor exchange. Thus, those with a certain economic strength could build and maintain social networks better, and take advantage of networks for their rational actions (Zhang, 2003).

(3) Utilizing the social networks may increase the possibilities of getting relatively high incomes. As can be seen from the table, 65.75 % job seekers who use social networks to obtain jobs with the income of more than 1000 *yuan* per month. That is partly because, employers may get more detailed information about job applicants through their personal social networks, so that they could save costs and time on searching, inspection and testing job applicants, and still recruit the applicant which they need most (Akerlof, 1970; Granovetter, 1981; Stigler, 1961). The recruiters will take a part of cost savings as the subsidies adding in the income of job applicants; consequently, the income of people who use network mechanism to achieve occupational attainment is higher than people who obtain job positions through official channels at the early stage of their career. This finding confirms the classic survey by Granovetter (1974) which found that nearly half job seekers who used social networks to get new jobs gained more than \$ 15, 000 in 1969. However, the income

of those who find new jobs through employment services and advertising is 1/3 lower than the former group while the direct applicants' income is 1/5 lower than network users.

(4) More job hunters utilize the mechanism of social networks to get jobs in private sectors (64.69% vs. 48.93%). With higher income and more intense competition, the private sector attracts more and more job hunters' attention who through rational thinking are driven by outside interests. In terms of entry time, more and more job applicants tend to use social networks during job seeking process with time goes by. As it presents in the table, from 1949 to 1979, the percentage of tie users is 27.87%, this percentage rises to 48.03% in the period of 1980 to 1992, with the deepening of the reform, this percentage shoots up to 69.21% from 1993 to 2009. This result also verifies Bian's "persistence of power" theory (Bian & Logan, 1996).

4.2 Analysis of Multinomial Logistic Regression

4.2.1 Holistic Approaches

Table 4.4 presents the coefficients for three multinomial logistic regression models of the effects of social networks and other control variables on occupational attainment. Model1 is the basic model estimating how social networks affect job attainment solely; model 2 controls other variables' impacts; in model 3, social networks, as the focal dependent variable, are further divided into two categories: use weak ties and use strong ties.

Table 4-4. Holistic Approaches: Social Networks and Occupational Attainment

Independent Variables	Model 1		Model 2		Model 3	
	A/M positions	Ordinary workers	A/M positions	Ordinary workers	A/M positions	Ordinary workers
Use social networks	1.595*** (0.114)	1.388*** (0.081)	1.319*** (0.106)	1.208*** (0.080)		
Use weak ties					0.981 (0.088)	1.125 (0.082)
Use strong ties					1.876*** (0.173)	1.352*** (0.106)
Education						
Senior high school			1.412*** (0.135)	0.751*** (0.053)	1.447*** (0.139)	0.756*** (0.053)
College or above			1.968*** (0.199)	0.409*** (0.034)	2.180*** (0.224)	0.421*** (0.036)
Male			0.923 (0.062)	0.544*** (0.031)	0.916 (0.062)	0.544*** (0.031)
Age			1.172*** (0.031)	1.017 (0.021)	1.161*** (0.031)	1.015 (0.021)
Age Square			0.998*** (0.000)	1.000 (0.000)	0.998*** (0.000)	1.000 (0.000)
Party member			1.836*** (0.203)	0.870 (0.104)	1.962*** (0.219)	0.886 (0.106)
<i>Hukou</i>			0.842 (0.106)	0.888 (0.093)	0.219 (0.118)	0.106 (0.098)
Times						
1949-1979			0.977 (0.108)	0.655*** (0.060)	0.885 (0.112)	0.904 (0.095)
1980-1992			0.907 (0.085)	0.757*** (0.061)	1.070 (0.120)	0.674*** (0.063)
Costal cities			1.448*** (0.101)	1.301*** (0.076)	0.936 (0.088)	0.767*** (0.061)
Intercept	0.469*** (0.028)	0.979 (0.047)	0.021*** (0.009)	1.406 (0.469)	0.022*** (0.009)	1.389 (0.463)
Number of cases	6,929		6,929		6,929	
Pseudo R ²	0.35%		6.09%		6.52%	
-2 Log likelihood	-7365.8		-6941.3		-6910.0	

Note. “Not use social networks” is the reference category for “social networks”; “Below junior high school” for education; “1993-2009” for times.

“Professional/technical positions” are the reference category for the administrative/managerial positions and ordinary workers.

*** p<0.01, ** p<0.05, * p<0.1.

Standard errors are in the parentheses.

To begin, as shown in table 4.4, social networks have a significantly advantageous effect on occupational attainment; when refining social networks into strong ties and weak ties, this strong effect still exists. **The results are consistent with my first hypothesis:** in general, the impacts of social networks on job attainment still work in transitional period in China. We can see the odds ratios of the independent variables on social networks in model 2 in table 4.4 are significant and positive (1.319 and 1.208), which indicates that, in comparison to professional job positions, the odds of getting an administrative/managerial job or an ordinary job increases 1.319 times or 1.208 times for people who used social networks during job seeking process than people who did not use while controlling other variables. Since China is a "*guanxi* based" society, Chinese people have been accustomed to using *guanxi* (networks) in their daily lives, especially in the job-hunting process. Although modern Chinese people bathed in the atmosphere of the advanced market economies, they were born from the Chinese culture, their values and behaviors are intensely influenced by the Chinese social structure and traditional rules. The impact and challenges of modernization has not really shaken the deep root of the Chinese Confucian culture.

My second hypothesis is drawn from Bian's institutional holes theory and Hanser's empirical study that predicts social networks may have more power in certain fields due to existence of institutional holes. Then I adopt Walder's dual-path model and skill requirement of job positions (Huang, 2008), revealing that different selection mechanisms and regulations underlying the two kinds of occupations; thus, compared to the professional job positions, social networks have more effects on managerial positions and ordinary workers. **Table 4.4 supports my second hypothesis.**

Model 2 and 3 in table 4.4 show that respondents who use networks mechanism for job attainment have more probabilities to get administrative/managerial jobs or become ordinary workers, compared to people who obtained professional/technical job positions (as indicated by the larger, bigger than 1 odds ratio associated with the “social networks” variable). This result confirms that professional/technical job positions have more skill requirements than jobs for administration and management: some “hard” indexes indeed exist for professional/technical jobs, if job hunters cannot meet all the skill requirements, then they will not be given this kind of jobs; therefore, the impacts of social networks could penetrate managerial positions and ordinary worker positions more easily (Huang, 2008). What’s more, the recruitment of middle or senior management is often through the circle of friends or others’ recommendation rather than formal market mechanism (Huang, 2008). Since the performance of management is difficult to measure, and management skills are soft, invisible and intangible, the risk of recruitment that employers face is very high. The best way to reduce risk is to be recommended through the networks, so that the valid and reliable information could be ensured.

In terms of the strength of social networks, my third hypothesis has been proved as well.

In model 3 of table 4.4, for administrative/managerial jobs, the odds ratio of “use weak ties” is not significant, but the odd ratio of “use strong ties” is statistically significant and bigger than 1 (1.876), revealing that the likelihood of a job seeker who use strong ties in reaching a managerial or administrative position is higher by about 1.876 times than those do not use social networks methods, while this probabilities between people who use weak ties and not use social networks are

the same regarding obtaining jobs in managerial/administrative fields. For ordinary jobs, the odds ratio of weak ties is not significant, while strong ties (1.346) are significant. Overall, these findings lend support to hypothesis 3 in that compared to the weak ties, the strong ties have more effects on occupational attainment. As Fei's (1992) *chaxu geju* (differential mode of associations) describes, in China, interpersonal *guanxi* is based on kinship networks and then expands outwards. The strength of emotional support, ethical/moral calculations, and mutual obligations are determined by social distance between ego and network contacts. "Strength" is stronger when social distance is closer. Regarding job seeking processes, the more intimate the relationship is, the more effective the influence that social networks have on job attainment (Fei, 1992).

As far as education is concerned, human capital has significant effects on occupational attainment, however these effects are different for administrative positions and for ordinary workers. Take model 3 for example, the odds ratios for senior high school and college or above are 1.412 and 1.968 on administrative positions, suggesting that the odds for job seekers with college degree is almost 2 times higher than those with degree of junior high school or below in terms of getting a administrative/managerial job when other variables are held constant. That is to say, the higher the education, the greater the probability of obtaining jobs for administration and management. In contrast, odds ratios for ordinary workers are less than 1 (0.751 on senior high school education, 0.409 on college or above education), which indicates that the lower the education, the higher the opportunities to get ordinary jobs. These results are consistent with relevant empirical research

human capital theory, such as McDonald (2005) who proves that well-educated job seekers have higher chance of obtaining decent jobs.

Regarding **gender**, men do not have significant advantages in entering managerial occupations (since the coefficient is not significant 0.889), however, the odds ratio for male on ordinary workers is 0.544, if we invert it $1/0.544=1.84$, revealing that the likelihood of a female becoming an ordinary worker is higher by about 1.84 times than her male counterpart. When it comes to **age**, it has a significant but declining positive effect on entering administrative or managerial positions (indicated by the odds ratio of age is 1.161 and age square is 0.998). **Party members** have a bigger possibility (more than two times) of getting managerial positions compared to those who do not belong to Chinese Communist Party with other variables held constant. This result is in line with Walder's (1995) dual-path mode that administrative job positions are connected with political authorities and resource allocation. With the development of the time, compared to professional occupations, administrative or managerial jobs have been difficult to achieve, while more and more job seekers become ordinary workers, this situation is associated with current China's employment difficulties. Residents in **coastal cities** tend to have a higher chance to get jobs than residents in inland cities.

4.2.2 Comparative Approach

Table 4-5. Social Networks and Job Attainment in the State Sector

Independent Variables	Model 1		Model 2		Model 3	
	A/M positions	Ordinary workers	A/M positions	Ordinary workers	A/M positions	Ordinary workers
Use social networks	1.294*** (0.109)	1.221*** (0.084)	1.171* (0.111)	1.201** (0.090)		
Use weak ties					1.048 (0.109)	1.094 (0.091)
Use strong ties					1.412*** (0.167)	1.403*** (0.135)
Education						
Senior high school			1.760*** (0.223)	0.659*** (0.055)	1.767*** (0.224)	0.661*** (0.055)
College or above			3.415*** (0.465)	0.382*** (0.042)	3.491*** (0.477)	0.390*** (0.043)
Male			0.893 (0.078)	0.602*** (0.043)	0.898 (0.078)	0.604*** (0.043)
Age			1.134*** (0.039)	1.021 (0.028)	1.129*** (0.039)	1.017 (0.028)
Age Square			0.999** (0.001)	1.000 (0.000)	0.999** (0.001)	1.000 (0.000)
Party member			2.265*** (0.303)	0.924 (0.135)	2.315*** (0.311)	0.938 (0.137)
<i>Hukou</i>			0.613* (0.178)	0.531*** (0.120)	0.631 (0.183)	0.548*** (0.124)
Times						
1949-1979			1.434*** (0.192)	0.805* (0.092)	1.475*** (0.199)	0.827* (0.095)
1980-1992			1.122 (0.130)	0.912 (0.092)	1.131 (0.131)	0.921 (0.093)
Costal cities			1.630*** (0.146)	1.393*** (0.100)	1.620*** (0.146)	1.385*** (0.099)
Intercept	0.441*** (0.029)	0.899** (0.047)	0.023*** (0.014)	1.655 (0.755)	0.024*** (0.014)	1.662 (0.759)
Number of cases		4,366		4,366		4,366
Pseudo R ²		0.14%		7.45%		7.56%
-2 Log likelihood		-4609.5		-4271.9		-4267.1

Note. “Not use social networks” is the reference category for “social networks”; “Below junior high school” is the reference category for education; “1993-2009” for times.

“Professional/technical positions” are the reference category for the administrative/managerial positions and ordinary workers.

*** p<0.01, ** p<0.05, * p<0.1

Standard errors are in the parentheses.

Table 4-6. Social Networks and Job Attainment in the Private Sector

Independent Variables	Model 1		Model 2		Model 3	
	A/M positions	Ordinary workers	A/M positions	Ordinary workers	A/M positions	Ordinary workers
Use social networks	1.581*** (0.271)	1.126 (0.158)	1.648*** (0.287)	1.092 (0.160)		
Use weak ties					1.006 (0.193)	1.089 (0.173)
Use strong ties					2.277*** (0.416)	1.112 (0.173)
Education						
Senior high school			1.281 (0.207)	1.040 (0.142)	1.341* (0.218)	1.037 (0.142)
College or above			1.133 (0.183)	0.472*** (0.067)	1.380* (0.229)	0.474*** (0.069)
Male			0.872 (0.098)	0.447*** (0.045)	0.841 (0.095)	0.446*** (0.045)
Age			1.160*** (0.050)	0.976 (0.035)	1.148*** (0.050)	0.976 (0.035)
Age Square			0.998*** (0.001)	1.001 (0.001)	0.998*** (0.001)	1.001 (0.001)
Party member			1.256 (0.265)	0.817 (0.177)	1.350 (0.289)	0.823 (0.178)
<i>Hukou</i>			1.356** (0.205)	1.179 (0.152)	1.379** (0.210)	1.173 (0.152)
Times						
1949-1979			1.405 (0.759)	1.299 (0.567)	1.617 (0.876)	1.314 (0.574)
1980-1992			1.543* (0.357)	1.054 (0.223)	1.448 (0.338)	1.057 (0.223)
Costal cities			1.129 (0.133)	1.019 (0.107)	1.193 (0.142)	1.025 (0.108)
Intercept	0.660*** (0.106)	1.567*** (0.204)	0.032*** (0.023)	3.247** (1.919)	0.034*** (0.024)	3.248** (1.924)
Number of cases		2,510		2,510		2,510
Pseudo R ²		0.15%		4.53%		5.54%
-2 Log likelihood		-2658.9		-2542.3		-2515.4

Note. “Not use social networks” is the reference category for “social networks”; “Below junior high school” is the reference category for education; “1993-2009” for times.

“Professional/technical positions” are the reference category for the administrative/managerial positions and ordinary workers.

*** p<0.01, ** p<0.05, * p<0.1

Standard errors are in the parentheses.

Model 1 in table 4.5 and table 4.6 presents the effect of using networks on occupational attainment, with relevant controls in model 2, then replacing the strength of social networks (weak ties and strong ties) with “social networks” in model 3.

As can be seen from table 4.5 and 4.6, when splitting the whole dataset into two parts based on work sectors, namely the state sector and the private sector, social networks still plays a significant role in obtaining occupations, especially in state sector (**Hypothesis 1 has been proved**). More specifically, respondents who use networks mechanism for job attainment have more probabilities to get administrative/managerial jobs or become ordinary workers in state sector as compared to people who obtained professional/technical job positions (as indicated by the larger, bigger than 1 odds ratio associated with the “social networks” variable table 4.5 model 2).

Moreover, in model 3 of table 4.5, for administrative/managerial jobs, the odds ratio of “use weak ties” is not significant, but the odd ratio of “use strong ties” is statistically significant and bigger than 1 (1.412 and 1.403), which indicates that, in comparison to professional job positions, the odds of getting an administrative/managerial job or an ordinary job increase 1.412 times or 1.403 times for strong ties user than people who did not use networks during job seeking process while controlling other variables, while the odds between people who use weak ties and not use social networks are the same regarding obtaining jobs in managerial/administrative fields or for some other ordinary jobs (**Hypothesis 3 has been proved**). Overall, these findings support the hypothesis that social networks have a significant impact on occupational attainment in state sector.

In the private sector, using social networks only works for achieving jobs for management and administration but not for ordinary works. As shown in table 4.6, the odds ratio of use social networks on administrative/managerial positions is 1.609, suggesting that the likelihood of a job seeker who use social networks in reaching a managerial or administrative position is higher by about 1.609 times than those who do not use social networks methods with other variables held constant. For ordinary workers, the odds ratio is not significant, which means that in the private sector, there is no difference between entering professional positions and ordinary jobs by using social networks. That is to say, network factor is not the determinant of obtaining professional jobs and ordinary jobs in the private sector.

After dividing social networks into strong ties and weak ties, we find that the usage of weak ties does not have effects on occupational attainment in private sector, while strong ties only influence the obtaining of administrative job positions. From model 3 of table 4.6, we can see that only the odds ratio for the “use strong ties” (2.206) of social networks is statistically significant while controlling other variables, which means that the odds of getting an administrative or managerial job in private sector increase more than 2 times for strong ties users, assuming other variables are held constant.

My second hypothesis is partially supported by the table 4.5 and 4.6. In state sector, through social networks mechanism, the probabilities of securing an administrative/managerial position or becoming an ordinary worker is bigger than people who obtain professional jobs (as indicated by the lager, bigger than 1 odds ratio associated with the “social networks” variable). As to private

sector, the influence of using strong ties on occupational attainment is not as powerful as it in state sector. As mentioned before, it increases the possibilities (more than 2 times) of reaching jobs for administration and management but not for ordinary jobs.

When it comes to **human capital**, we must note the significantly advantageous effect of education on job attainment, though this effect is not the same for administrative or managerial positions and for ordinary workers. Taking state sector for example, the odds ratio for administrative or managerial positions are smaller than 1, which indicates that the higher the education, the more the opportunities to get administrative or managerial jobs. Since the odds ratio on senior high school education is 1.760, and on college or above is 3.415, revealing that the odds for job seekers with college degree is nearly more than 3 times higher than those without college degree in terms of getting an administrative or managerial job when controlling the effects of other variables. Still in state sector, from the odds ratios in table 4.5 we could get the conclusion: the lower the education, the higher the chances are of getting an ordinary job. It is suggest that lower-educated respondents do not have high competitiveness as compared to well-educated groups in labor market due to the lack of human capital. Job seekers with high educational degree will have more opportunities to enter decent job positions, while those lower-educated people have no choice but to accept ordinary jobs. These results also support relevant empirical researches on human capital theory.

As far as control variables are concerned, the large **gender** effect draws my attention. The odds ratios of male on ordinary workers are respectively 0.604 and 0.446 in the state sector and the private sector, t, if we invert it, $1/0.606=1.66$, $1/0.446=2.24$, suggesting that females have a bigger

possibility (1.66 times in state sector and 2.24 times in private sector) of getting ordinary positions compared to their males counterparts with other variables held constant. However, for administrative or managerial positions, the gender effect is not significant. That is to say, gender factor does not result to inequality in acquiring high-level occupations such as administrative or managerial positions; however, it contributes to the variation of job attainment for some ordinary workers. That is to say, more females are more disadvantaged in the labor market rather than males.

Regarding **age**, it has a significant but declining positive effect on entering administrative or managerial positions in private sector (indicated by the odds ratio of age is 1.160 and age square is 0.998), since it is generally believed that with age comes wisdom and experience, seniorities fit the role of managements and administrators better in private sector.

Party membership only works for state sector's administrative/managerial positions; persons who are party members have a greater possibility (more than two times) of getting managerial positions compared to those who do not belong to Chinese Communist Party. This result is consistent with Walder's (1995) dual-path mode and meets the objective of the ruling party that to cultivate the political loyalty of their citizens. Because almost all the resources that related to the national economy and people's livelihood are held by state sector, party membership must be treated as the most imperative standard for selecting management and administrators in state sector. With the development of the time, compared to professional occupations, administrative or managerial jobs have been difficult to achieve, while more and more job seekers become ordinary workers.

Respondents in **coastal cities** tend to have a higher chance to get jobs in state sector than respondents in inland cities.

Table 4-7. A Comparison between the State Sector and the Private Sector

Independent Variables	State Sector		Private Sector	
	A/M positions	Ordinary workers	A/M positions	Ordinary workers
Social networks				
Use weak ties	1.048 (0.109)	1.094 (0.091)	1.006 (0.193)	1.089 (0.173)
Use strong ties	1.412*** (0.167)	1.403*** (0.135)	2.277*** (0.416)	1.112 (0.173)
Education				
Senior high school	1.767*** (0.224)	0.661*** (0.055)	1.341* (0.218)	1.037 (0.142)
College or above	3.491*** (0.477)	0.390*** (0.043)	1.380* (0.229)	0.474*** (0.069)
Male	0.898 (0.078)	0.604*** (0.043)	0.841 (0.095)	0.446*** (0.045)
Age	1.129*** (0.039)	1.017 (0.028)	1.148*** (0.050)	0.976 (0.035)
Age Square	0.999** (0.001)	1.000 (0.000)	0.998*** (0.001)	1.001 (0.001)
Party member	2.315*** (0.311)	0.938 (0.137)	1.350 (0.289)	0.823 (0.178)
<i>Hukou</i>	0.631 (0.183)	0.548*** (0.124)	1.379** (0.210)	1.173 (0.152)
Times				
1949-1979	1.475*** (0.199)	0.827* (0.095)	1.617 (0.876)	1.314 (0.574)
1980-1992	1.131 (0.131)	0.921 (0.093)	1.448 (0.338)	1.057 (0.223)
Costal cities	1.620*** (0.146)	1.385*** (0.099)	1.193 (0.142)	1.025 (0.108)
Intercept	0.024*** (0.014)	1.662 (0.759)	0.034*** (0.024)	3.248** (1.924)
Number of cases		4,366	2,510	
Pseudo R ²		7.56%	5.54%	
-2 Log likelihood		-4267.1	-2515.4	

Note. “Not use social networks” is the reference category for “social networks”; “Below junior high school” for education; “1993-2009” for times.

“Professional/technical positions” are the reference category for the administrative/managerial positions and ordinary workers.

*** p<0.01, ** p<0.05, * p<0.1.

Standard errors are in the parentheses.

As I discussed before, in state sector, the odds of obtaining an administrative/managerial job or an ordinary job increase 1.412 times or 1.403 times for strong ties user than people who did not use networks during job seeking process while controlling other variables. However in private sector, strong ties only increase the probability (2.277 times) of obtaining administrative job positions. These results indicate that in regard to the job searching and hiring process, the state sector is much more amenable to social networks method than the private sector.

The reason for this phenomenon maybe because China has experienced market transition since late 1970s, but this reform is a progressive process, an important feature of the gradual reform is that the authorities do not directly touch the core of the planned economic system in the initial stage of reform, or in a longer period of reform, due to strong opposition from interests groups under the planned economic system (Xu, 2007). In such circumstances, China's economic reform started from the private sector, and then went to state sector. The private sector is a brand new sector, the development of product markets has nurtured its growth, the role of market forces in economic development has become prominently bigger and market forces play an essential role in the allocation of resources. Since most private sectors have been developed in the environment of marketization, its production and business activities are in full accordance with the laws of market economy (Li & Bian, 2008). With 30 years' marketization, complete rules and regulations have been established in the private sector. In addition, the major purpose of private sector is to make profits, that is to say, job applicants' own capacities such as education level and productivity are the main indicators for employers to recruit their employees. Therefore, less room has been left for

social networks to work within private sector. On the contrary, the reform of the state sector occurred later than in the private sector resulting in the features of state sector remaining in a relatively low market-oriented level, high degree of monopoly, ongoing revolution and high uncertainty of rules and regulations, so that the economic transition is incomplete and full of “institutional holes”. In this situation, social networks come to play crucial roles: as the bridge of information, as the foundation of trust, and as the guarantee of interpersonal constraints. That is to say, social networks are an important mechanism in the transition period when the old system started to disintegrate, but new system had not yet been fully established. Weak ties as an information bridge will be used; but strong ties as sources of trust and mutual obligations will be used more frequently. Strong ties will not be replaced by weak ties, but will retain their dominant position in job attainment processes.

Regarding occupational categories, in state sector respondents who use networks mechanism for job attainment have more probabilities to get administrative/managerial jobs or become ordinary workers, compared to people who obtained professional/technical job positions (as indicated by the larger, greater than 1 odds ratio associated with the “social networks” variable); whereas in the private sector, social networks only have effect on researching administrative/managerial positions. Why are there variations across different sectors? For starters, in both state sector and private sector, with respect to the skill requirements of job positions, jobs with specific skill requirements need job seekers to get certain skills level, such as language level, computer level and other professional levels. These are “hard” indexes for jobs with skill requirements, if job hunters cannot reach the

skill level which employers required or expected, then they will not be given this kind of jobs.

Compared with professional or technical positions, administrative jobs are more easily influenced by network factors (Huang, 2008). In addition, the recruitment of middle or senior management is often through the circle of friends or others' recommendation rather than formal market mechanism (Huang, 2008). Since the performance of management is difficult to measure, and management skills are soft, invisible and intangible, the risk of recruitment that employers face is very high. The best way to reduce risk is to be recommended through the networks, so that the valid and reliable information could be ensured.

In terms of ordinary workers, job seekers are willing to mobilize their social contacts to become an ordinary staff in the state sector, while few job applicant use network method to secure a job in private sector. That is because the state sector does not only aim for making profit as their sole objective, it also needs to offer job opportunities and social safety for the redundant workers, in order to maintain employment levels and provide social security (Li & Bian, 2008). In the state sector, the allocation of labor resources, the price of labor, employment structure and other relevant matters in the state sector are regulated by institutional rules to a considerable extent. The price of labor (income) within the state sector is not tied to the supply-demand relations in external labor market, it is essentially determined in accordance with the internal needs of the planned economic system, so the role of market forces is very limited. Working for the state sector seems like own an "iron bowl" (*tie fanwan*, a metaphor of a secure job) to some extent. Even to an ordinary worker, the job stability and income could be guaranteed as well. On the contrary, the private sector is closely

linked with the marketization of the labor market; the proportion of supply and demand determines the price of labor. However, many job seekers in China are facing employment difficulties due to oversupply (Ying, 2011); that is to say, the labor market of the private sector is a demand-orientated market, the demanders play a leading role while the suppliers is often at a disadvantaged position, resulting the low price for labor, especially for the ordinary workers in this sector. An important reason for the “labor shortage” (*mingong huang*) in some coastal areas in current China is that the price of labor is too low (Guo, 2004). Moreover, due to the labor market structure of the private sector, one of the most remarkable features of it is job instability. In summary, in comparison to ordinary jobs with low job security and low payment in the private sector, ordinary workers with relatively low education prefer to use their social networks to secure a job with high job stability and stable sources of income.

CHAPTER 5 CONCLUSION

The primary concern of this thesis has been to examine how the social networks mechanism has contributed to occupational attainment across different work sectors. In addition, the thesis seeks to find out whether the social networks continue to play a significant role in the current context of market transition in China. I build several multinomial logistics regression models to answer these questions with recent dataset of “Job Searching and Social Networks” (JSNet 2009). From the empirical data, my hypotheses have been supported, which have yielded three major findings as follows:

First, the impact of social networks on job attainment remains significant in the transitional period in China. As shown in regression models, social networks have a significant positive impact on occupational attainment for job applicants. When introducing the strength of social networks, the statistics show that strong ties play a more imperative role in job attainment as compared to weak ties. Cultural factors do not suffice in explaining the impacts of social networks in labor market. Instead, explanations that highlight institutional factors need to be invoked. China has experienced a profound market transition since late 1979. The two official but incompatible mechanisms for job attainment (redistributive and market mechanisms) exist at the same time, leaving some gaps or holes for social networks to fill/work (Bian, 2002). Moreover, strong ties with trust and mutual obligation have more impact during job searching processes, which is consistent with what Fei (1992) said *chaxu geju* in Chinese society.

Second, compared to the professional job positions, social networks have more effects on obtaining administrative/managerial positions and ordinary jobs. Since specific skill requirements are needed for professional job positions in both state sector and private sector, resulting to less “institutional holes” left in the process of recruitment, as compared to administrative/managerial positions and ordinary workers. This finding reconciles Bian’s (2002) institutional holes theory with Hanser’s view that the significance of social networks has declined, that is to say, social networks are still playing a significant role in some fields due to the existence of more institutional holes; however, its effects have declined in other fields where less institutional holes exist. In addition, my finding is also in line with Walder’s (1995) dual-path model.

Last, significant variations of social networks exist across different work sectors, namely the state sector and the private sector. More specifically, network mechanism works more effective in the state sector rather than the private sector. In terms of state sector, job applicants who use networks method have more probabilities to secure administrative/managerial jobs and ordinary jobs in comparison to professional positions, while in private sector, social networks only have effect on researching administrative/managerial occupations, reflecting the functions of both the persistence of institutions and emerging market forces. Some possible explanations offered to analysis these differences include the fact that China's economic reform started from the private sector, the development of product markets has nurtured its growth and its production and business activities are in full accordance with the laws of market economy (Li & Bian, 2008); and complete rules and regulations have been established, so less room has been left for social networks to work

within private sector. On the contrary, the reform of the state sector occurred later than the private sector. The features of state sector remain at a relatively low market-oriented level, high degree of monopoly, are experiencing revolution and have high degree of uncertainty in rules and regulations. Thus, the economic transition is incomplete and full of “institutional holes”. In the state sector, even for the ordinary workers, the job stability and stable income could be guaranteed (Li & Bian, 2008) due to the association with planned economic system. However, the price of labor in the private sector is tied to the supply-demand relations in external labor market, oversupply is the most severe problem in China’s labor market (Ying, 2011), leading to the low price for ordinary workers in the private sector.

Although the empirical results have supported most of my hypotheses, many limitations still exist for improvement. First of all, in terms of questionnaire design, the questions about job searching are not specific and systematic, especially in the area of occupational categories. There is no consistent standard and adequate evidence to divide occupations into different types, which may lead to many problems in data analysis and explaining results. So in the future, we should consider more carefully and comprehensively in the questionnaire design. Second, this study is only based on quantitative analyses without using any qualitative data, which is not sufficient enough to dig out the deeper reasons behind this social problem. In order to make the research more convincing and more close to the facts, qualitative analysis and quantitative analysis should be combined together when doing relevant researches.

With its deep roots and many rationalizations, the role of social networks in job searching process is alive and well. With ongoing reality of market transition, the consequences of *guanxi* (social networks) will continue to constitute the Chinese way of life in almost every aspect. In the transitional period, the influence of social networks is contingent upon the attribute of different occupations and sectors. However, further development of the China's market transition may reduce the intensity and the extent of social networks effect in people's job seeking process.

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