
Chinese social networks effect on job hunting

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ABSTRACT

Social network is a kind of structural view, the study of how social network affect the job seeking process and result in this view is different from the view of individual and social environment of job in China. This paper described that different unit categories and education lever can affect the possibility of using social network and analyzed how the local economic development lever, the size of social network of individual, the social network heterogeneity and up-reacherability affect the job attainment in China. The result show: Chinese people in different category of work units using social network differently, the members of party and public facilities are less likely to use social network in change a job; The more educated the people, the less likely they using social network in change a job. The more developed the economic is, the bigger the size of one's individual social network; The local economic development lever, the social network heterogeneity and up-reacherability have positive effect on the job attainment; The size of one's individual social network has affect the job attainment process but can't reach the significance lever of statistics.

Key word: social network; job hunting; relation

Chapter 1. Introduction

1.1 Research Background

The social network perspective has been extensively applied since its development (Freeman, 1956). Linton C. Freeman used social networks to examine the process of community decision-making. Coleman (1966) used them to investigate the processes in the diffusion of a new drug. Davis (1989) used them to explore the process of individual interaction. Researchers have also used social networks to examine the process of occupational attainment (Granovetter, 1973). Studies related to social networks can be divided based on their content into social structure and egocentric (individual) network analyses. Sociocentric network analysis refers to analyzing all the relationships within a group of individuals; the main indicators are the total number of dyadic ties and network density. The social network needs to be bounded and due to the complexity of relations, sociocentric network analysis is generally only applicable to smaller groups. The other type of social network analysis, egocentric network analysis, is centered on a single individual in the group and mainly focuses on the individual's network size, heterogeneity, and upper reachability (Granovetter, 1973). Different perspectives can be adopted in egocentric network analysis. Some have adopted the perspective of structural relationships to analyze the impact of the strength of ties on information access, for example, Granovetter's weak tie hypothesis. Others have examined social capital embedded in network relations and the impact of such capital on occupational attainment—for example, Nan Lin's social capital theory (Lin, 2001). In addition, there are different measurement methods for egocentric networks, including nomination and positioning. The present study adopts the

perspective of social capital embedded in egocentric social networks to analyze the impact of social capital on occupational attainment in China. The study also compares the impact of different organization types and education levels on the degree to which social relations are used in the job-search process.

Numerous studies have been conducted on occupational attainment. Prior to the emergence of the social network perspective, most studies focused on the effect of family environment and education on occupational attainment in order to examine the ascribed and achieved factors. This was mainly to explore the impact of the objective environment and human capital on the job search. With regard to the aforementioned impact of social networks on the job search, the weak tie hypothesis claims that the information obtained from general interactions among friends is beneficial to finding better jobs. Subsequently, Burt proposed the structural holes theory in the belief that it is not weak ties that influence access to job information, but that bridging ties have an impact on information flow (Burt, 1992). An individual positioned as an information bridge holds key status and connects different groups. Hence, the information bridge is the most ideal position in which to receive non-redundant information. The bridge can be a tie that is either weak or strong in nature (Lin, 2001).

The social capital theory proposed by Nan Lin claims that it is neither network structure nor ties but social capital embedded in the network that has an impact on the job-search process. The social capital that egocentric networks can directly or indirectly access includes the amount of accessible resources, the types of resources, and the resources that can be accessed through network ties. Compared to using resources provided by information from market supply and

demand, using such network resources in the job search can result in a more favourable outcome. This is a rational judgment made under conditions of information asymmetry and is also the result of interpersonal relations in China.

1.2 Research Purpose

The presence of inequality is reflected in various aspects; hence, research on social stratification is precisely the study of hierarchical differences. From the perspectives of social capital and occupational status, the hierarchical differences are also very clear. Different individuals have different levels of social capital and occupational status. Nan Lin's social capital theory hypothesizes the following: First, with regard to the strength of status, individuals with higher social status have more opportunities to acquire social resources. Second, , in egocentric social networks with higher heterogeneity, social resources are more likely to be acquired through weak ties. Third, individuals who are richer in social resources have better outcomes for instrumental actions (Lin, 1999).

The present study aims to measure the impact of the level of economic development on the size of egocentric social networks, as well as the impact of social capital and level of economic development on the job search. In addition, this study also compares differences in the use of social capital during the job-search process among individuals with different organization backgrounds and education levels. Due to the differences in the level of economic development in different regions, there are disparities in the degree of market economy operations. Hence, there are differences in the various social network characteristics, views of individuals toward the utilization of social capital, and the actual conditions of utilization. In regions with lower levels of economic development, individuals have a smaller range of activity, and the space for utilizing social capital is relatively limited; hence, the size of such individuals' social networks is also relatively small. Conversely, in regions with higher levels

of economic development, individuals need to address various issues and to interact with different types of individuals. Hence, the utilization of social capital is higher during the job-search process, they have a better sense of identity with regard to the use of social ties, and the size of their egocentric social networks is also relatively larger. Different individuals use their social network resources to different degrees during the job-search process. The reason for this difference is related to the individual's own human capital and the organization they belong to.

1.3 Research Significance

On the basis of testing the hypotheses of Nan Lin's social capital theory, the present study performed a variance analysis on the social network sizes of individuals under different levels of economic development in different regions. The study also examines the differences in the degree to which social network ties are used in the job-search process among individuals with different organizational backgrounds and education levels. The study tests the hypotheses generated from the social capital theory. In addition, it also clarifies the impact of social network ties on the job-search process on a broader scale, thereby explaining the origins of certain inequalities in occupational attainment.

1.4 Research Framework

This study is organized as follows. In Chapter 1, the Introduction, the research background, research purpose, research significance, and research framework are elucidated. In Chapter 2, the Literature Review, concepts related to social networks, the origins of occupational status attainment, and an overview of studies related to the application of social networks in the job-search process are presented. In Chapter 3, Data Analysis, the data source and research methods, how the main research variables were measured, and the research hypotheses are discussed. In Chapter 4, Research Results, the results of hypothesis testing are given. In Chapter 5, Conclusion and Discussion, the conclusion on the impact of social networks on the job search

is presented and the different degrees to which individuals with different organization types and education levels utilized social networks in job searches are described; this section also discusses the limitations of the study.

Chapter 2. Literature Review

2.1 Concepts related to social networks

2.1.1 Definition of social networks

Social network analysis is a method that seeks to explain problems from a structural perspective. The definition of social network analysis given by Linton C. Freeman includes the following four features: first, it is motivated by structural intuition, based on the ties linking social actors. Second, it is based on systematic empirical data. Third, it has an emphasis on graphic imagery. Fourth, it relies on the use of relational or mathematical models (Freeman, 2008). Regarding the structural intuition of social networks, the earliest work was by the French sociologist Auguste Comte, who is also known as the father of sociology. In his book *Positive Philosophy*, Comte explains the necessarily relative nature of all real knowledge: if all of our views should be regarded as human phenomena, then these phenomena are not simply personal, but are primarily social. They are, in fact, evolved from the continuity of the collective and all factors and stages of this evolution are essentially interconnected (Comte, 2015:11). He states that our speculations depend on the basic conditions for our individual existence and are also subject to social progress. Our theories should fully account for the true structure of each object. It can be seen here that he began his investigation of society from a structural perspective. Subsequently, Tönnies (1912) made a distinction between traditional and modern social forms. The former linked individuals using shared values and beliefs, while the latter uses formal, impersonal, and instrumental social links. Durkheim (1893) regarded the organic solidarity based on the division of labour as the foundation of social links. These early sociologists intended to demonstrate that different forms of social groups are linked by different social ties. They shared a structural perspective due to the consideration they gave for social connections. Simmel (1971) presented the most explicitly structural perspective by investigating forms of social interactions and socialization.

2.1.2 Collection of structural data

In the early systematic collection of structural data, the anthropologist Henry Lewis Morgan used a field survey conducted in Iroquois to publish a paper on the system of consanguinity of the Iroquois people. His conclusion was that their system of naming kin and reckoning descent was drastically different from Western Europeans. Morgan not only collected data related to kinship terminologies but also used graphics to explain positions of equivalent kinship. In this graphic structural description, points represent actors and lines represent the ties between actors. Graphically, meaning inheres in structure—that is, in the sharing of an edge between two points. Such graphics can be regarded as graphic images drawn in social network analysis using graph theory. Thereafter, Hobson produced an overlapping hypergraph using systematic data on overlapping directorships among members of “the small inner ring of South African finance.” This type of graphic image is still widely used in contemporary social network analysis. In 1883, Macfarlane designed a method that clearly illustrated the characteristics of the English kinship system, using a simple symbol system to express the marital relationships prohibited in English law. In his studies on inheritance, Galton was inspired by Macfarlane, which led him to suspect that the disappearance of familial effects may have been the result of a probabilistic process. Thus, he and Watson applied stochastic methods to network research. Watson applied probability theory to assign values to basic parameters and derived a numerical solution based on these parameters. His conclusion was that any family name ultimately had a 100% probability of disappearing. The positioning method is used to collect social network structural data in the Chinese General Social Survey. The specific steps involved listing a few scales in the survey questionnaire; the scales included several types of occupation that indicated social status. The respondents were asked to respond as to whether there were individuals among their social network members who belonged to a particular occupation. Then, the scores of the corresponding occupational types were calculated to reflect the resources embedded in egocentric social networks (Luo Jia-De, 2010). The data obtained using the positioning method were transformed using a matrix or node-link diagram and subjected to model selection and application for interpretation.

2.1.3 Sociometric Model

In 1934, the sociometrist Moreno published a book entitled *Who Shall Survive?* In his book, he explicitly proposed the concept of networks and explained the pandemic of runaways in the New York Training School for Girls in Hudson by connecting the social links of the runaways. This is a clear and moving example of structural intuition. However, the book lacked mathematical or computational models. After realizing this limitation, Moreno requested help from Lazarsfeld, who was a mathematical sociologist at Columbia University, and the latter established the benchmark model of sociometry. Under the assumption of random selection, he calculated the probability of any particular individual being selected by another particular individual. In 1938, this model was published in the journal *Sociometry*, which presented the four characteristics of social network analysis. This model is the origin of stochastic analysis within this field. Following which, the invention and application of related measurement methods and software began to emerge.

2.2 Research on Occupational Attainment in China

Since the ancient times, China has been divided into two classes: the ruling and the ruled. The former manages people, whereas the latter is managed by people. The hierarchy of ancient Chinese societies comprised people in the vocational grades of scholars, farmers, artisans, and merchants. These corresponded to court officials, cultivators of agricultural land, skilled craftsmen who made things by hands, and those involved in the trading of goods, respectively. A person had to attain the requisite qualifications before they could join a particular vocation. As such, qualifications (or the lack thereof) became the boundaries segregating the various grades. In the past, scholars had to excel at the national-level examinations before they could be appointed court officials. At present, academic achievement remains critical, if one wishes to join the public sector. Those who wished to grow produce had to first have access to land and farm implements, and possess agricultural knowledge and techniques. Craftsmen needed to master special skills related to a particular handicraft, such as pottery making. A craftsman

would start learning these skills at an early age as an apprentice, with the aim of becoming a master and eventually owning a shop. Merchants who engaged in trade would generally have more resources and capital than farmers and artisans, as well as vast social networks with extensive interpersonal connections. A person would enter a vocation through having the prerequisite qualifications. His vocation would bring him a specific social status, which in turn determined his grade and status in society.

2.2.1 Origin of Occupational Status Attainment

Class is a categorization method used in social stratification, and is universally applicable to various types of societies across different time periods. Pre-industrial English society was divided into the aristocracy and peasantry classes. During the same period, China could be divided into the peasant and landlord classes. Under imperial or totalitarian rule, society was divided into the rulers and the ruled. The connections between these classes were maintained through tradition, economics, or military power. Since the advent of the more refined division of labour in industrial society, economics became the predominant form of class division. The earliest class theory proposed by Marx divided society into the bourgeoisie and the proletariat. This is an extreme type of division and represents the upper and lower levels of society. Furthermore, these two classes are mutually opposed, as the bourgeois class is established based on the exploitation of the proletariat. Hence, their contradictions cannot be reconciled. However, Weber believed that economic stratification based solely on the ownership of the means of production was not comprehensive. Weber (1930) advocated using wealth, prestige, and power to examine the inequalities within the economics, culture, and politics of a society. He argued that class refers to a group with shared or similar economic status. Members of the group have the same chances on the goods and labour markets and these chances are solely determined by the goods and income they possess. Prestige (or status) refers to the social honor given to certain individuals or occupations and the positive or negative evaluation of reputation. Power is the basis of stratification in the political domain. In a social tie, power implies the various chances for carrying out one's will. These three different criteria jointly act on the

socioeconomic status of individuals. In modern society, the use of occupations as the main indicator to represent socioeconomic status was inspired by Weber (Huang Chun-Mei, 2004). Occupational income represents economic status, occupational prestige represents social prestige, and political power can be manifested through occupational power. For example, white-collar workers have high economic status, teachers have high social prestige, and officials have great political power. Further research related to occupational status attainment can be found in *The American Occupational Structure* by Blau and Duncan (1967). Their status attainment model emphasized the following: firstly, occupation is the best indicator of economic stratification, which also embodies political and prestige stratification. Secondly, an individual's social status is, on one hand, determined by their own ability and efforts, while on the other hand also determined by their family background. Thus, the inequalities of the previous generation manifest to different extents in the next generation. The factors influencing occupational status attainment can be divided into two categories: achieved factors include the individuals' educational attainment and past work experiences, whereas ascribed factors include the father's educational attainment and occupation. Thirdly, the path analysis used to examine occupational attainment first involves identifying variables related to occupational status attainment and verifying the causal order among these variables; following which, multiple regression analysis is performed on these variables to obtain the standardized regression coefficients (i.e. path coefficients). This research model laid the foundation for subsequent quantitative research related to status attainment. Thereafter, the focus of the research on status attainment turned toward relational structure and social capital.

2.2.2 Occupational Stratification

Weber believed that in addition to ownership of the means of production, economic differences also exerted a direct influence on property (Weber, 2012). This type of resource includes individuals' attainment of skills and certification for different types of job. Individuals with professional certification often have access to titles of professional, technical or senior management personnel. These individuals are treated differently from ordinary workers and

their market position strongly influences their overall chances in life. Individuals with managerial or professional occupations tend to have higher incomes and better work environments than do blue-collar workers. Moreover, blue-collar workers are further divided into skilled and unskilled workers. The former are guaranteed a higher wage than are the latter. This division produced the middle class. Although they do not own the means of production and are employed by others, they possess a certain level of autonomy in their work. They can also use higher job positions and professional skills to attain the direct or indirect right to dispose of certain goods, for example, in managerial positions.

Goldthorpe's class schema is an example of a neo-Weberian class schema (Giddens, 2008). His class schema uses two main factors to differentiate class positions: the first is market situation, which refers to an individual's salary levels, job security, and promotion prospects, with an emphasis on material rewards and general life chances. The second is work situation, which focuses on the issues of control, power, and authority within the occupation, with an emphasis on autonomy in the workplace and overall managerial relations influencing employees—for example, the levels of control possessed by the director, manager, branch manager, and ordinary employees in the corporate hierarchy. This type of occupational stratification is able to reflect the socioeconomic status of individuals, but it still has certain shortcomings. Goldthorpe's class schema (2008), which is based on occupational characteristics, cannot reflect the importance of property ownership and wealth in social class. This schema weakened the relative weight of property relations in social stratification and did not accurately represent high concentrations of wealth. Aside from influencing income levels, occupational differences also have an impact on an individual's status within the organization—i.e., their power status and social prestige. In addition, inter-organizational differences also result in differences in the extent of power. During the job-search process, individuals tend to select the industry before selecting the position and different industries represent the different extents of power. In general, individuals consider power, salary, and social prestige when selecting occupations. Naturally, in a rapidly developing and changing society, the occupations selected by individuals with different values are also influenced by their personal interests.

2.3 Correlational studies on social networks and job search

2.3.1 Western Studies

Granovetter's article "The Strength of Weak Ties" summarizes the use of social networks in the job-search process by 256 white-collar workers (i.e. from the managerial to technical levels) from New York and Massachusetts. His conclusion was that in occupational fields, weak ties had a higher probability of bringing about better jobs. The measurement of weak ties was based on the frequency of contact, closeness, and length of acquaintanceship. More frequent contact, closer ties, and a longer acquaintanceship implied stronger ties. His explanation was that members of a group are very familiar with each other, fulfilling the characteristics of strong ties. Hence, a large extent of their friend networks overlap—that is, a friend of my friend is also a person I am familiar with. When information is shared between individuals in this network, it means that I know most of the information that my friends know, thus information will be repeatedly transmitted to me via different paths. However, if I have a friend that I am less familiar with (an acquaintance), this acquaintance will usually have strong ties with a group that I do not belong to or they may be connected to several groups at the same time. As we have a low frequency of contact, most of the information found in the social network of this acquaintance is new to me. In our occasional contact, I will receive this new information. The empirical data presented by Granovetter demonstrate that the information obtained from this acquaintance increases the chances of upward occupational mobility. The relationship with this acquaintance is a weak tie. Similarly, if this acquaintance acquires information from their own acquaintances, then the size of their friend network will increase exponentially; likewise, the amount of information increases exponentially and the number of groups involved also increases. However, when the respondents were asked where their contacts obtained the information, 39.1% already knew the employer, 45.3% had one intermediary between themselves and the employer, 12.5% had two intermediaries, and 3.1% had more than two intermediaries (Granovetter, 2010). This is inconsistent with Granovetter's expectation of

multiple paths with longer connections (i.e. a higher number of intermediaries). His explanation was that an excessively high number of intermediaries implies that the value of the information is questionable.

Although the value of the information, obtained through these channels, is proportionate to that acquired from the labour market, job advertisements, and job agencies, the compensation for the jobs obtained through public media appears to be less favorable. This involves the downgrading of the role of intermediaries in the dissemination of information.

After Granovetter proposed the theory of “the strength of weak ties,” his student Lin (1982; 1983) put forward the theory of social capital, which suggests that, in addition to the utilization of weak ties in social networks, the key to finding a good job also lies in resources that an individual has access to from within the social network. The resources embedded in social networks (such as power, wealth, and prestige) are not directly possessed by any individual, but rather acquired through the individual’s direct or indirect social relations. The detailed description of the three major hypotheses of his social resources theory is listed in Section 1.2. In his study, Lin suggested four reasons that an individual would be willing to invest in his/her social capital as a means of exchange for desired resources: First, by investing social capital, an individual can obtain useful information that is inaccessible through other channels, which, thereby reduces transaction costs for firms and job seekers to find one another. Second, investing social capital may influence individuals in decision-making positions in a firm, leading them to prefer a particular candidate as opposed to other candidates, and therefore, provide the candidate with an excellent opportunity for gaining the position. Third, social capital may provide job seekers with a guarantee of credibility, implying that firms can acquire additional resources from such job seekers, other than human resources. Fourth, social capital has positive effects on individual self-identity and the identity of corporate values. In addition to providing individuals with emotional support, specific social ties can provide individuals with common information regarding equally desired resources. Blau (1991) argued that intra-group heterogeneity is more beneficial to the promotion of social interaction than inter-group heterogeneity. He believed that inter-group heterogeneity was the cause of social segregation,

and that the greater the difference that exists between groups, the less likely they would be to reciprocate. However, differences within a group are likely to encourage social interaction, as the individuals within the same group have a common sense of belonging; the forces of attraction caused by the differences are greater than the forces of repulsion. This argument is consistent with Lin's viewpoint that network heterogeneity tends to increase individuals' likelihood of receiving a desired position, and that heterogeneity within groups facilitates social interactions. From within an individual's own social network (intra-group), the greater the heterogeneity of the network is, the more useful the information tends to be, as is the level of social support the individual is likely to obtain. In his doctoral dissertation, Lin's student Wu (2008) utilized data of 3,529 individuals from 167 cities in China to investigate the influence of factors from both an individual and city-wide perspective on the acquisition and utilization of social capital, as well as the use of social capital to obtain social status. The conclusions of the study are as follows: (1) Individuals from developed cities, and cities with higher political importance, are likely to have more social capital. (2) Both long-term and short-term cross-city geographical mobility are conducive to the accumulation of social capital. (3) The expansion of the network of the individual's father tends to influence the acquisition of social capital; however, this effect decreases alongside economic development. (4) Higher-level management can obtain information related to business opportunities through social ties, and thereby they are more likely to use their social capital. (5) Individuals from more developed cities were found to use their social capital more effectively. (6) An increase in unemployment rates tends to stimulate the use of social capital. (7) Social capital and its application can significantly affect an individual's current occupational status; however, such influences vary in accordance with the restrictions from government regulations regarding the labour market. (Wu Shanhui, 2008)

2.3.2 Research by Chinese Scholars

Bian Yanjie and Zhang Hongwen (2001) wanted to test the hypothesis of weak ties and its explanatory powers under the specific circumstances of China. Four types of assumptions were proposed in their paper titled "Economic Systems, Social Networks and Occupational Mobility."

First is the discussion and assumption of market conditions. Under this scenario, people utilize weak ties in their social networks extensively during their job search. Second is the assumption of maintaining power: political powers maintained direct or indirect control over resources. In a transitional economy, the agents of economic entities act either as employers who continuously grant favours to job seekers or as rent-seeking bureaucrats who sell positions to job-seekers. In the job search process, there was increasingly frequent use of social networks to gain occupational mobility. The dominant role of strong ties was also maintained.

Coexistence of mechanisms, the third assumption, is based on the operation and implementation of the dual-track system in the 1980s. Weak and strong ties played their respective roles as information and social networks, respectively. As such, the usage of both strong and weak ties increased at the same time. The fourth assumption is that there was a hole in the system. The redistribution mechanism had disintegrated, but the market mechanism was yet to be fully established. In this situation, the social network mechanism played a transitional role. People used weak ties in their social networks to collect information; concurrently, the frequency of using strong ties to earn favours increased (Bian & Zhang, 2001).

The study's conclusion proves that the hypothesis of strong ties remained effective. The ratio of usage was significant during era changes, when strong ties were needed to obtain favours and information for occupational mobility. The assumption of market conditions was more applicable for job seekers with professional qualifications or specialized technical skills. In their process of job searching, the extensive use of weak ties was more useful. However, under the assumption of maintaining power (which is contrary to that of market conditions), the effect of strong ties kept strengthening, and the number of people using such ties for transaction of favours increased. Regarding people's structural status, being in the central and state-owned enterprises allowed one to provide more favours than information. However, during the transition period, those without any position provided a greater proportion of favours and information compared to those with a high structural status. This reflected the role played by social networks during the process when market conditions were gradually being perfected, and proved that the hole-in-the-system assumption was valid. The aforementioned research on the

application of different mechanisms to the process of job searching at the various developmental stages of modern China.

Separately, Wu Yuxiao (2011) studied the impact of social capital on a person's attainment of a first job and occupational mobility. He also analyzed the heterogeneity between various communities that used social network resources, as well as the way their dependence on social relation resources affected the outcome of their job search. He stated that there was homogeneity in the impact of social networks on job searching: the higher a community's status, the more abundant was its social network resources. It would be more likely for such a community to use social relation resources during job searching. However, other channels, such as market-oriented means, would be used as well. In other words, one's socioeconomic status affected the amount of resources (relations and network) that one could access. This being the case, how much of the impact of social networks as a factor affecting the job search process should be attributed to one's socioeconomic status? This is an issue that requires in-depth study.

At the same time, the phenomenon of heterogeneity was also observed. Although communities of low socioeconomic statuses were most lacking in social network resources, they tended to make greater use of social relations during the job search process compared to those of high socioeconomic statuses. In fact, they had a greater dependence on social relations because that was the only channel through which they could secure positions (Yuxiao, 2011). This shows that among communities using social relation networks for job searching, there was high internal heterogeneity in terms of economic status. This controversy over convergent versus divergent trends was first proposed by Mo Wei when Lin Nan proposed to question the theory of social capital. The latter subsequently responded, and proved that social capital did have an impact. In fact, homogeneity did not cause its impact to be overestimated; rather, heterogeneity resulted in its underestimation (Yunsong, 2014).

2.4 Section Summary

This section reviews concepts related to social networks. From a perspective of initial

structural, to the collection of systematic data to graphically illustrate the establishment of the model, social network theories have developed into a method and perspective that explains social issues. In addition, the history of social stratification has led to occupational social-class division. Past studies related to job acquisition from a social networks perspective have drawn attention to the investigation of social capital. More in-depth studies include social capital in the examination of social networks, and exploring the impact that structural gaps in social networks have on instrumental behavior.

Chapter 3. Data Analysis

3.1 Data Source and Analysis Method

The data utilized by this study was extracted from the reports of the Chinese General Social Survey (CGSS) in 2008. The CGSS is a nationwide, large-sample survey project initiated by the Department of Sociology of Renmin University of China. By 2008, four surveys have been successfully implemented. The main purpose of the survey is to understand the employment, working, and life conditions of urban residents in China, as well as their views on certain social issues. This study mainly used the social interaction and job-related data from the survey conducted in 2008. The survey adopted a multistage sampling method, with a combination of stratified, simple random, systematic sampling, and Kish selection methods, to select households from 28 provinces, autonomous regions, and municipalities in China. Next, specific criteria were employed to select one member of the nominated household to participate in the survey. An appointed investigator then brought the questionnaire for the survey to the participants' address, gave the questionnaire to the participants in person, and collected the feedback on the spot. The survey was conducted between October and December 2008. Stratified and simple random sampling methods were utilized to determine the primary sampling units. Next, neighbourhood committees (urban areas), and village committees (rural areas), of which the household belonged, were selected using a stratified sampling method based on their geographical location, and a systematic sampling method, based on the complete list, respectively. Then a Kish selection method, combining direct interviews, was applied to select the participants aged over 18. The total valid samples of the survey were 6,000, with 2,892 males (48.2%) and 3,108 females (51.8%); of these 3,982 were urban residents (66.4%) and 2,018 were rural residents (33.6%). Detailed information of the samples is listed in Section 3.2

This study adopted the results of the survey in 2008 for the data analysis. Various analytical methods and models were applied based on the hypotheses, including descriptive analysis,

independent sample *t*-test, one-way ANOVA, multinomial logistic regression model, pivot table, and the *chi*-square test. A descriptive statistical analysis of the variables was conducted prior to each analytical method.

3.2 Research Hypotheses

Individuals' social network resources are embedded in the social environment. Before the implementation of the reform and opening policy, the political system controlled job allocation through resource redistribution. Since the implementation of the reform policy in 1978, the market economy was first developed in several special economic zones, and eventually expanded throughout the country. When the control of the state was strong, there were fewer opportunities for individuals to use their social networks in the search for a job. However, people tended to use their strong ties in gaining desired positions. In a market economy, the control of the state is more relaxed, and a two-way selection method has been developed between firms and job seekers. As a result, it is more common to apply social networks to more actively obtain job-related information. This study used the level of economic development to represent the level of marketization, and proposed the first two hypotheses:

H 1.1: Individuals in developed regions tend to have larger social networks;

H 1.2: Individuals in developed regions are more likely to find a job.

Individuals' social networks are their social capital; however, the amount of social capital differs for each individual. There are two common methods to measure social capital: *name generator* and *position generator*. Name generator involves asking the subjects to list the names of the people with whom they are familiar. However, the relationship between the listed persons and the subjects tends to involve strong ties; weak ties are not usually included. The position generator method involves providing the subjects with a list of occupations of industrial society and asking them to identify whether they know someone from each occupation. The social networks identified by this method are not limited to the strength of the ties or geographical factors; therefore, the position generator method can measure an individual's social capital more effectively. In addition, this method can also be used to calculate the upper-reachability

and internal heterogeneity of an individual's social network. The heterogeneity of an individual's social network is extended from the ties that the individual has with people from various social hierarchies and classifications. Blau (1984) studied the impact of heterogeneity within a group on the acquisition of new jobs. He argued that when an individual belongs to a large group, where there are fewer differences among group members, the amount of resources that the individual can obtain tends to decrease because of repetitive information being communicated within the group. However, when an individual belongs to several sub-groups of a larger group, due to the heterogeneity between these sub-groups, the individual tends to have more sources of information and a greater amount of resources. The maximum resources that a social network can reach are defined as the upper-reachability of the social network. Lin claimed that individuals' likelihood of finding a job is dependent upon his/her accessible social resources, and suggested that the more social resources an individual has, the more ideal his/her instrumental action will be.

Therefore, this study proposes the next three hypotheses:

H 2.1: The larger the size of individual's social network, the greater the likelihood is that the individual will get a job.

H 2.2: The greater the heterogeneity of an individual's social network, the more likelihood there is that the individual will get a job.

H 2.3: The greater the upper-reachability of an individual's social network, the greater the individual's job satisfaction will be.

The acquisition of professional status is associated with the ability to utilize social capital. Different industries and professional positions represent different levels of power and authority. For example, in China, civil officers obtain positions through a series of rigorous examinations and tests; the utilization of social resources in acquiring such positions tends to be relatively rare. However, in a corporate context, no large-scale, formal examination is included in the recruitment process, and qualification criteria are not clear. Owing to the incentive and disciplinary mechanism implemented by companies, new employees can be promoted because

of outstanding performance, and senior employees dismissed because of undesirable behaviour; thus the competition for a certain position tends to be more intensive. Usually, when two candidates have the same or similar qualifications, the candidate with an internal recommendation is more likely to be hired. Therefore, in order to be accepted for the desired position, it is necessary to utilize social resources to increase the possibility of obtaining this position. Obtaining a job through social networks helps the individual establish confidence and advantages when joining the company while the company can reduce the risks caused by information asymmetry and the cost of background checking. In addition, the increase of human capital tends to reduce the dependence on social relations during the job-seeking process.

H 3.1: Individuals from various types of employers tend to have different levels of utilization of social resources; individuals working for party and government organs, and public institutions are less likely to use social networks than those working for other types of employers.

H 3.2: Individuals who received a higher level of education have a lower dependence on social networks.

3.3 Operationalization of Variables

(1) Size of Social Network

The “size” of the social network refers to the number of social ties, which is determined based on the interaction between the participants during the most recent Spring Festival. The answers to the question “during the latest Spring Festival, how many people have you interacted with? Please specify the number of relatives, friends, and people of other relationships you independently contacted” were used to calculate the number of social ties for each participant, by identifying the sum of the number of relatives, friends, and other relations, according to their answers.

(2) Heterogeneity of Social Networks

The degree of heterogeneity of the social networks was defined as the number of occupational types found among the people that each participant contacted during the most recent Spring Festival, as different occupations represent different network resources. The participants were given a list of 18 occupations and asked to rate “yes” when at least one person they contacted during the Spring Festival belong to an occupation, and “no” when none of the people they contacted belong to an occupation. In order to calculate the heterogeneity of participants’ social networks, “1” was assigned when the answer was “yes” and “0” was given when the answer was “no.” The values assigned to the 18 occupations were summarized for each participant to represent the heterogeneity of his/her social network. According to Blau (1984), heterogeneity within a given group is beneficial to the increase and utilization of social resources.

(3) Upper-Reachability of Social Network

“Upper-reachability” of social networks refers to the best possible resources an individual can acquire from within his/her social network. The people within the social network that might play a key role in helping the participants find a job are considered as the best possible contacts (Lin, 1999). In this study, the professional power of these contacts was identified as the upper-reachability of a participant’s social network. The answers to the question “what is the management level of the individual who plays a key role in your ability to find a job?” were collected to calculate the upper-reachability. The four options in the answer were adopted to represent professional power: Specifically, a person in a non-management position was considered as having lower professional power, and individuals in junior, middle, and senior-level management positions were considered as having relatively low, relatively high, and high professional power, respectively. These values were represented by the corresponding numbers 1, 2, 3, and 4 in the results.

(4) Economic Development

The level of economic development was determined based on the provincial GDP rankings in 2008 released by the government. Based on the rankings, the 28 provinces, autonomous regions, and municipalities were divided into two groups. The relatively highly developed provinces and municipalities include Guangdong, Shandong, Jiangsu, Zhejiang, Henan, Hebei,

Shanghai, Liaoning, Sichuan, Hunan, Hubei, Fujian, Beijing, and Anhui. The relatively less developed provinces and municipalities include Heilongjiang, Inner Mongolia, Guangxi, Shanxi, Shaanxi, Jiangxi, Jilin, Tianjin, Yunnan, Chongqing, Xinjiang, Guizhou, Gansu, and Ningxia.

(5) Current Employment Status (Likelihood of Getting a Job)

Current employment status (likelihood of getting a job) utilized information related to employment status acquired from the survey. There were six options to the question “what is your current employment status:” (a) “my current job is non-agricultural;” (b) “my current job is related to agriculture, however I used to have a non-agricultural job;” (c) “My current job is agricultural, and I have never had any non-agricultural job in the past;” (d) “I am currently unemployed and only had jobs related to agriculture in the past;” (e) “I am currently unemployed, however, I used to have a non-agricultural job;” and (f) “I have never yet had any form of employment.” In order to suit the purpose of this study, option (a) was labeled as “non-agricultural,” options (b) and (c) were combined as “agricultural,” and options (d), (e), and (f) were combined as “unemployed.”

(6) Job Search Method

The question “which channel played the decisive role in your ability to find your current job (or most recent job)?” was employed to identify participants’ job search method. The options to the question included: (a) the job was allocated by replacing a parent or relative; (b) the job was allocated by the government or appointed by the organization; (c) direct application; (d) job agencies; (e) talent fair; (f) recommended by contacts; (g) self-employed; and (h) others. In this study, options (a) and (f) were combined as “through social networks,” options (c), (d), and (e) were combined as “through market channels,” and the labels of the remaining options were retained. After excluding participants that selected “others,” four types of job search methods were identified, including utilization of social networks, being appointed by the government or organization, through market channels, and self-employment.

(7) Nature of Current Employer

The nature of the current employer was determined based on answers to the question “what is the nature of your current (or most recent) employer?” The available options included (a) party and government organs, (b) enterprises, (c) public institutions, (d) social organizations, (e) self-employed enterprises, and (f) others. As the number of participants that selected “social organizations” and “others” was small, the two options were excluded from analysis. Options (b) and (f) were combined into “enterprises,” and options (a) and (c) were combined into “party and government organs, and public institutions.”

(8) Educational Background

The answers to the question “what is your highest level of education?” were utilized to identify participants’ educational background. The options to the question included (a) I did not receive any education; (b) private institution; (c) primary school; (d) junior high school; (e) vocational high school; (f) senior high school; (g) specialized high school; (h) technical school; (i) college (adult higher education); (j) college (regular higher education); (k) undergraduate (adult higher education); (l) undergraduate (regular higher education); (m) masters degree and above; and (n) others. Because the number of participants that selected “private institution” and “others” was small, and the definition of “private institution” was not specified, these selections were treated as missing data and excluded from the analysis. Options (a), (c), and (d) were combined as “low level education,” options (e), (f), (g), and (h) were combined as “medium level of education,” and the remaining five options were combined as “high level of education.”

(9) Job Satisfaction

The job satisfaction related question in the survey was “how satisfied were you with each of the following factors, after six months following the allocation of your current position? (In case of new employment or being unemployed, please use either your current position or most recent position as a reference).” The investigated factors included salary, benefits, workload, labour conditions and facilities, relationships with colleagues, relationships with bosses or supervisors, distance between home and workplace, housing welfare, and overall satisfaction. A five-point Likert scale was used to measure the degree of satisfaction (“1” for “very dissatisfied,” “2” for “dissatisfied,” “3” for “unsure,” “4” for “satisfied,” and “5” for “very

satisfied”). The mean of the nine factors was adopted to measure participants’ job satisfaction.

3.4 Section Summary

This section introduces the research methods, measurement methods, and data sources of the study. Hypotheses are put forward according to the research purposes. The hypotheses can be divided into three categories. Hypotheses in the first category are associated with the impact of macroeconomic development on the size of individuals’ social networks and acquisition of jobs. Hypotheses in the second category are related to the influence of size, heterogeneity, and upper-reachability of individuals’ social network on acquisition of jobs. Hypotheses in the third category involve the impact of employer type and education background on individuals’ utilization of their social networks.

4. Results

The influence of individuals' social networks on their likelihood of finding a job was examined from four perspectives. First, a macro perspective was adopted to examine the impact of the economic development level on the size of individuals' social networks (H 1.1). Second, the influence of employer type and educational backgrounds on individuals' degree of dependence on their social networks was explored (H 3.1-3.2). Third, a multivariate logistic regression model was applied to investigate the influence of economic development level, size, and heterogeneity of individuals' social networks on the probability of acquiring a desired job (H 1.2, 2.1, and 2.2). Fourth, the impact of upper-reachability of individuals' social networks on job satisfaction was analyzed (H 2.3). Detailed descriptions of the samples are listed below.

Table 4.1: Descriptive Statistics of the Size and Heterogeneity of Participants' Social Networks, and Job Satisfaction

		Min.	Max.	Mean	Std. Deviation
Size of Social Network	5989	0	320	24.255	23.96428
Heterogeneity of Social Network	5588	0	18	3.463	3.01174
Job Satisfaction	3310	1	5	3.3323	0.58848

Descriptive statistics of the size and heterogeneity of participants' social networks and job satisfaction are shown in Table 4.1. The number of samples with valid information regarding the size of the network was 5,989. The minimum value was 0, indicating that some participants did not contact any person during the most recent Spring Festival. The maximum value was 320, suggesting that during the most recent Spring Festival the participant interacted with 320 persons, including relatives, friends, and persons in other relationships. The mean was 24.25, indicating that the participants interacted with 24.25 persons on average. The standard deviation

was 23.96, suggesting the average differences between the size of the social networks of two participants was 23.96. The number of samples with valid information regarding heterogeneity of the network was 5,588. The minimum value was 0, suggesting that the individual had no interaction with anyone during the Spring Festival. The maximum value was 18, indicating the participants interacted with people from all 18 occupations during the Spring Festival. A mean of 3.46 indicated that the participants interacted with people from 3.46 occupations during the Spring Festival on average. A standard deviation of 3.01 suggested the heterogeneity of the social networks of two individuals was 3.01. There were 3,310 samples containing valid information regarding job satisfaction. A minimum of 0 and maximum of 5 suggested that some participants were not satisfied with their job at all and some participants were very satisfied with their job. The mean value was 3.33, indicating that the majority of the participants had an average level of satisfaction (between “unsure” and “relatively satisfied”).

The frequency analysis of current employment status, economic development, and upper-reachability of individuals’ social networks is presented in Table 4.2. The number of samples containing valid information on employment status was 6,000, and the number of unemployed participants, participants involved in agriculture, and participants involved in non-agricultural occupations were 2,053 (34.2%), 1,450 (24.2%), and 2,497 (41.6%), respectively. The number of samples with valid information regarding economic development was 6,000. The number of participants from highly developed regions was 2,460 (41.0%), and that of participants from less developed regions was 3,540 (59.0%). The number of samples with valid information on upper-reachability was 1,259; 690 (54.8%) participants had low upper-reachability, 332 (26.4%) had relatively low upper-reachability, 171 (13.6%) had relatively high upper-reachability, and 66 (5.2%) had high upper-reachability.

Table 4.2: Frequency Analysis of Current Employment Status, Economic Development, and Upper-Reachability of Individuals’ Social Networks

		Frequency	Valid %
Employment	Unemployed	2053	34.2

Status	Agricultural	1450	24.2
	Non-agricultural	2497	41.6
Economic Development	High	3540	59.0
	Low	2460	41.0
Upper-Reachability of Social Network	Low	690	54.8
	Relatively Low	332	26.4
	Relatively High	171	13.6
	High	66	5.2

4.1 Analysis of the Size of the Subjects' Social Networks

The independent sample t-test results showed that the size of the networks of individuals from highly developed regions ($M = 25.4272$) was greater than that of individuals from less developed regions ($M = 22.5698$); the difference in the mean was 2.85744 ($t = 4.546$, $\text{sig.} = 0.000, < 0.05$). Hence, H 1.1 was accepted.

A possible explanation for this finding is that, in economically developed areas, there are more frequent trade transactions and human interactions. In order to maintain good relationships that can be utilized when necessary, people are more likely to contact each other during the Spring Festival. As a result, the size of social networks in developed regions tended to be larger. The suitability of employing the size of the "Spring Festival network" as a reference to measure the size of an individual's social network will be further discussed in Section 5.

4.2 Analysis of occupational attainment

4.2.1 Descriptive analysis

The ways in which people obtain jobs refer to job-seeking approaches. Different people use different approaches to find a job. This study selects two criteria for categorization, namely, level of education and types of organization, in order to explore their influence on job-seeking approaches. This section presents a descriptive analysis of the three related variables.

The results of the descriptive analysis for job-seeking approaches, level of education, and organizational types are shown in Table 4.3. Among the job-seeking approaches, there were 879 people making use of social relationships, accounting for 14.7% of the 4193 valid participants. There were 1018 people following national assignments and organizational arrangements, accounting for 17% of the total number of valid participants. There were 1312 participants who employed market-oriented means, 21.9% of the total; 598 were self-employed, 10% of the total; and 386 adopted other means, accounting for 6.4% of the total. In the following correlation analysis, individual cases (participants) who adopted “other means” were excluded.

Among the 5988 valid individual cases (participants), there were 3710 people with a low level of education, accounting for 61.8% of valid participants; 1374 people with a medium level of education, 22.9% of valid participants; and 904 with a high level of education, 15.1% of valid participants.

There were 756 participants in party/government offices and institutions, accounting for 18.1% of the total of 4180 valid participants. There were 3262 involved in enterprises, accounting for 78.0% of the total and 162 participants using social groups and other means, 3.9% of the total. In the analysis of the correlation between types of organizations and job-seeking approaches, this study excluded “social groups and other means.”

Table 4.3 Descriptive analysis of job-seeking approaches, levels of education, and types of organizations

Variable	Level of education				Type of organization			
	Low	Medium	High	Total	Party/government offices and institutions	Enterprises (including self-established)	Social groups and self-employment	Total
Frequency	3710	1374	904	5988	756	3262	162	4180
Percentage	62%	22.90%	15.10%	100%	18.10%	78%	3.90%	100%

Variable	Job-seeking approaches					
	Use of social relationships	National assignments and organizational arrangements	Market-oriented means	Self-employment	Other means	Total
Frequency	879	1018	1312	598	386	4193
Percentage	21%	24.30%	31.30%	14.30%	9.20%	100%

4.2.2 Cross-tabulation analysis

Now that the relevant variables have been described, this section presents analyses of the correlations between types of organizations and job-seeking approaches as well as between levels of education and job-seeking approaches, respectively.

Table 4.4 Interaction between organization types and job-seeking approaches

		Job-seeking approaches				Total	
		Use of social relationships	National assignments and organizational arrangements	Market-oriented means	Self-employment		
		114	377	193	13	697	
Types of organizations	Party/government offices and institutions	Types of organization (in %)	16.40%	54.10%	27.70%	1.90%	100.00%
	Enterprises (including the self-established)	Count	731	609	1067	556	2963
		Types of organizations (in %)	24.70%	20.60%	36.00%	18.80%	100.00%
		Count	845	986	1260	569	3660
Total	Types of organizations (in %)	23.10%	26.90%	34.40%	15.50%	100.00%	

The results of the analysis of the interaction between types of organizations and job-seeking approaches are shown in Table 4.4. Among the 697 people currently working in party/government offices or institutions, 377 made use of national assignments for job-seeking, accounting for 54.1% of the total in these types of organization. This was followed by market-oriented means at 27.7%, the use of social relationships at 16.4%, and finally, self-employment at 1.9%. Among the 2963 participants in the category enterprises, there were 1067 people making use of market-oriented means to look for jobs, accounting for 36.0% of the participants in this type of organization. The second largest proportion was 24.7% for the use of social relationships, followed by national arrangements, and finally, self-employment. However, a chi-

square test shows that the chi-square value was 367.462, the degree of freedom (DOF) was 3, and the significance level was 0.00, less than 0.05. This indicates that people in different types of organizations influence job-seeking approaches. Specifically, the use of social relationships in enterprises accounts for a larger proportion than that in party/government offices and institutions. People in party and governmental offices as well as institutions tend to make greater use of national assignments or organizational arrangements and make less use of social relationships. However, for people in enterprises, there is a greater proportion of people using social relationships and market-oriented means for job-seeking. Thus, Hypothesis 3.1 was proved. A possible explanation for this is that party/government offices and institutions require applicants to undergo rigorous assessments or examinations. There are rules to follow regarding the procedures and systems of assessment, and the assessment is very standardized. Hence, the use of social relationships is rarely applied to this type of organization. However, enterprises are different. They are the products of modernization, within which both formal and informal rules operate at the same time. Therefore, there was a high proportion of people using both market-oriented and social relationship means.

Table 4.5 Interaction between educational levels and job-seeking approaches

		Job-seeking approaches				Total	
		Use of social relationships	National assignments and Organizational arrangements	Market-oriented means	Self-employment		
		Count	550	403	589	402	1944
Level of education	Low	Level of education (in %)	28.30%	20.70%	30.30%	20.70%	100.00%
		Count	240	327	398	154	1119

Medium	Level of education (in %)	21.40%	29.20%	35.60%	13.80%	100.00%
	Count	88	281	320	41	730
High	Level of education (in %)	12.10%	38.50%	43.80%	5.60%	100.00%
	Count	878	1011	1307	597	3793
Total	Level of education (in %)	23.10%	26.70%	34.50%	15.70%	100.00%

The results of the analysis of the interaction between levels of education and job-seeking approaches are shown in Table 4.5. Among the 1944 participants with a low level of education, there were 550 people making use of social relationships for job-seeking, accounting for 28.3% of the group. Among the 1119 participants with a medium level of education, 240 made use of social relationships for job-seeking, accounting for 21.4% of the group. Among the 730 participants with a high level of education, there were 88 people using social relationships for job-seeking, which was 12.1% of the group. Meanwhile, along with an increasingly high level of education, the proportion of job-seekers who follow national assignments and organizational arrangements as well as market-oriented means increased in the groups with corresponding educational levels. A chi-square test shows that the chi-square value was 328.413, the DOF was 6, and the significance level was 0.00 (less than 0.05), indicating that level of education has a significant impact on job-seeking approaches. The higher the level of education, the lower the proportion of using social relationships for job-seeking, and the higher proportion of those who follow national assignments and organizational arrangements and use market-oriented means for job-seeking. This indicates that groups with high levels of education are less dependent on social relationships when finding a job. There are many other alternatives and they are more

adept at using them. Conversely, groups with low levels of education may have greater dependence on social relationships when job-seeking. Thus, Hypothesis 3.2 was accepted. The level of education represents human capital. Human capital theory indicates that human capital is a means of competition and that the higher the human capital, the more competitive a situation may become and as a result, fewer people will participate in the competition. An increase in human capital may reduce the use of social capital, as well as the proportion of people using social relationships in job-seeking.

4.3 Analysis of the factors influencing occupational attainment

This study focuses on three variables influencing occupational attainment, namely, level of economic development, size of individual networks, and heterogeneity of individual networks, respectively. The level of economic development is a nominal level variable, the size and heterogeneity of individual networks are continuous variables, and the current working state of dependent variables is a class variable. Thus, a multiple logistic regression test was selected.

For simplify the notation, we name the “Size of individual networks” as X_1 , name the “Heterogeneity value of individual networks” as X_2 and name the probability of occupational attainment as Y . Therefore, the model for farming is that

$$\ln Y = 0.649 + 0.013X_1 - 0.428X_2 \quad (\text{low economic development})$$

$$\ln Y = 0.649 + 0.013X_1 - 0.428X_2 - 0.435 \quad (\text{high economic development})$$

the model for non-farming is that

$$\ln Y = -0.446 + 0.003X_1 + 0.111X_2 \quad (\text{low economic development})$$

$$\ln Y = -0.446 + 0.003X_1 + 0.111X_2 + 0.257 \quad (\text{high economic development})$$

Table 4.6 Multiple logistic regression of the factors influencing occupational attainment

B	Standard	Wald	df	Significan	Exp (B)
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Current states of employment a		error		ce level			
Farming	Intercept	.649	.077	71.708	1	.000	
	Size of individual networks	.013	.002	51.653	1	.000	1.013
	Heterogeneity value of individual networks	-.428	.023	354.607	1	.000	.652
	[Level of economic development=high]	-.435	.075	33.387	1	.000	.647
	[Level of economic development=low]	0b	.	.	0	.	.
Non-farming jobs	Intercept	-.446	.069	41.547	1	.000	
	Size of individual networks	.003	.002	3.576	1	.059	1.003
	Heterogeneity value of individual networks	.111	.012	86.605	1	.000	1.118
	[Level of economic development=high]	.257	.065	15.658	1	.000	1.293
	[Level of economic development=low]	0b	.	.	0	.	.

Note 1: The letter "a" represents the reference category of "non-employment."

Note 2: As "b" represents a redundant number of the parameter, it is set as zero.

The multiple logistic regression results for factors influencing occupational attainment are

shown in Table 4.6. Taking into account the circumstances of non-employment and engagement in non-farming jobs, the regression coefficient of individual network size versus obtaining non-farming jobs was 0.003, the significance level was 0.059 (greater than 0.05), and the odds ratio was 1.003. A value of 1.003 shows that there is very little impact of the size of the individual networks on the outcome whereas someone in a non-farming job with a high level of economic development is almost 30% more likely to experience the outcome (exp B = 1.293). This indicates that the possibility of obtaining non-farming jobs may increase by 0.3% for every one unit increase in network size. However, such impact is below the significance level. Thus, Hypothesis 2.1 was not shown to be true. The regression coefficient of individuals' network heterogeneity versus occupational attainment was 0.111, the significance level was 0.00 (less than 0.05), and the expected regression coefficient was 1.118, representing that for every one unit increase in individuals' network heterogeneity, the possibility of obtaining non-farming jobs increases by 11.8%, as compared with that of non-employment, and that such impacts are significant. Thus, Hypothesis 2.2 is supported by the analysis. This corresponds to the explanation of scholars. The most immediate and important factor influencing the success of job-seeking is the social capital embedded in the networks. Therefore, if network heterogeneity provides an opportunity to make contact with various types of people, it may mean a broader scope of job-seeking and more non-repetitive job information. However, the network size may not affect the ability to provide such information. People in the network may know one another, even in a large company or organization, because they all belong to the same group. Nevertheless, compared with knowing the same number of people in a multitude of different groups, the social capital is small in their networks. This may be the reason why network size has no significant impact on occupational attainment, while the impact of network heterogeneity on occupational attainment is significant.

Regarding the level of economic development, the possibility of obtaining non-farming jobs in regions with high economic development levels was 1.293 times that of regions with low economic development levels. The significance level was 0.00, less than 0.05, indicating

that level of economic development has a significant impact on occupational attainment. This proves Hypothesis 1.2. On the other hand, regarding farming jobs and non-employment, the possibility of individuals becoming engaged in farming in regions with low economic development levels was 1.546 times that of the regions with high levels of economic development. This result corresponds with the current state of China's economic development in urban and rural areas. Given the relative independence of farming jobs, this study does not analyze the causal connection between farming jobs and social capital. Instead, it focuses on the comparison between non-employment (no job) and non-farming jobs. In regions that are economically more developed, there is a greater possibility of obtaining a non-farming job. A possible explanation is that the more developed a region's economy, the higher the level of marketization and the clearer the social division of work. In this case, various types of transactions may occur in such regions, and hence, there may be more different types of positions, leading to more job opportunities and subsequently, a greater possibility of obtaining a job. This also explains why, in recent years, locations to which migrant workers flow and where labour shortages are severe are primarily in regions with more developed production and a more developed economy.

4.4 Analysis of career satisfaction

Now that network size, impact factors of occupational attainment, and ways to obtain jobs have been analyzed, this section will analyze job satisfaction, primarily focusing on the influence of individuals' maximum network accessibility on career satisfaction.

Table 4.7 A single-factor variance analysis concerning the effects of maximum network accessibility on career satisfaction

Sum of squares	df	Mean square	F	Significance
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Between groups	9.164	3	3.055	8.833	.000
Within groups	345.486	999	.346		
Total number	354.650	1002			

The results of the single-factor variance analysis concerning the effects of maximum network accessibility on career satisfaction are shown in Table 4.7. The F value was 8.83 and the P value was 0.000 (less than 0.05), indicating that the maximum accessibility of individual networks has an impact on job satisfaction. In order to intuitively understand how different degrees of maximum network accessibility influence job satisfaction, the following chart illustrating the mean value was created.

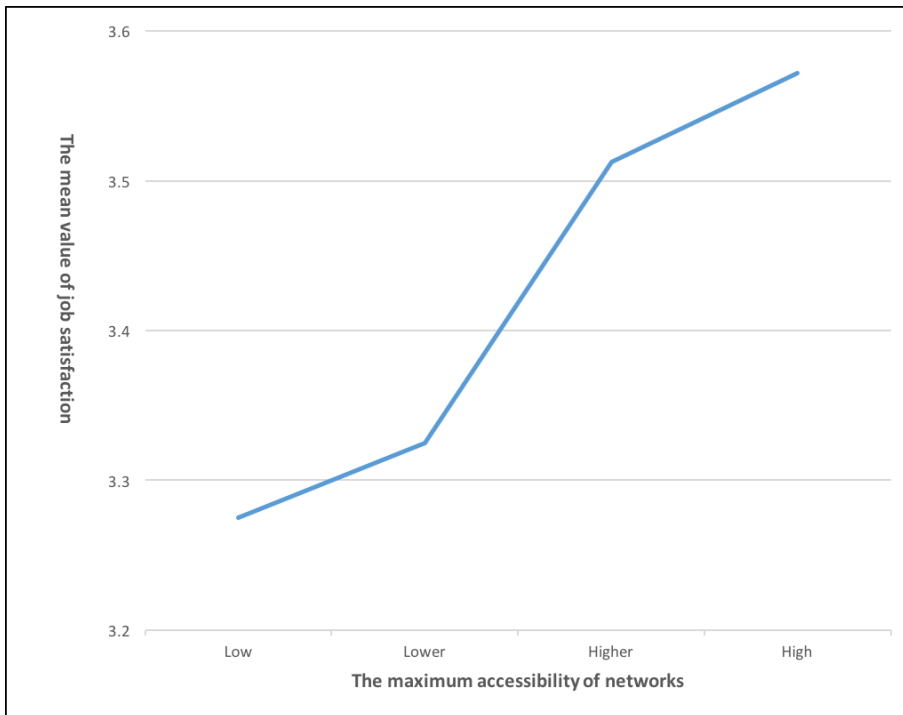


Figure 1. The influence of maximum network accessibility on job satisfaction

As shown in Figure 1, the higher the maximum accessibility of individual networks, the greater the job satisfaction. Hence, Hypothesis 2.3 was proved. This indicates that when given the same job information, applicants whose contacts have greater power tend to be increasingly favored in the job application process and may be more satisfied with the jobs they obtain. Among the qualified applicants for the position of a teacher in the same middle school, an applicant who knows the headmaster has a greater possibility of obtaining this job than an applicant who knows a teacher at the school (Xu, 2004).

4.5 Chapter conclusions

The results of the analysis show that the level of macroeconomic development has an

impact on the individual network size and job-seeking process. In regions with increasingly high levels of economic development, the size of individual networks may increase; in regions that are economically developed, there may be a greater possibility of occupational attainment. This proves Hypotheses 1.1 and 1.2. The results concerning job-seeking means show that there was a lower proportion of job-seekers in party/government offices and institutions using social relationships to obtain jobs than those in other types of organizations. The higher the educational level of job seekers, the less job seekers depend on social networks, proving Hypotheses 3.1 and 3.2. The results validating how social capital in social networks influences the job-seeking process show that the greater the network heterogeneity, the higher the possibility of obtaining a job; the greater the maximum accessibility of networks, the higher the satisfaction with the jobs obtained. This proves Hypotheses 2.2 and 2.3. Because the impact of network size on occupational attainment did not reach the significance level, Hypothesis 2.1 was not proved.

Chapter 5 Conclusions and discussions

5.1 Conclusions

Level of economic development has an impact on the social network scale of individuals. Generally, the social network scale of individuals in regions with high economic development levels is larger than that in regions with low levels of economic development. Meanwhile, the level of macroeconomic development has an impact on job-seeking outcomes. The higher the level of economic development, the greater the possibility of individuals obtaining jobs.

The influence of individual social network size, network heterogeneity, and maximum accessibility on job-seeking is reflected in different aspects. The greater the size of individuals' social networks, the greater the possibility of obtaining a job. However, this correlation is not significant; thus, it cannot be used to prove the impact of social network size on job-seeking. However, the impact of network heterogeneity on job-seeking is significant. It shows that the greater the network heterogeneity of individuals, the higher the possibility of obtaining a job, which is line with the views of social capital in social network theories. The most immediate and important factor influencing the success of job-seeking is the social capital embedded in the networks. The larger the network size of individuals, the greater the heterogeneity, and the higher the maximum accessibility. This represents the increasingly superior social capital of individuals. Nevertheless, when the impact of social network size and heterogeneity on job-seeking is compared separately, the impact of the latter may have more explanatory power. The greater the occupational rights of contacts, i.e., the greater the maximum accessibility of individual networks, the greater career satisfaction will be.

People working in party and governmental offices as well as institutions tend to make use of national assignments or organizational arrangements more frequently and social relationships less frequently. However, for people in enterprises, there is a greater proportion of people who use social relationships and market-oriented means for job-seeking. Groups in different fields have their own typical and effective approaches to tackling problems. People in

party/governmental offices and institutions work in political fields and their typical approaches to tackling problems involve complying with government arrangements and following the instructions or orders of their superiors. They are considerably more influenced by political authority. On the other hand, groups categorized as enterprises, particularly private companies, are normally working in economic fields; thus, they are more influenced by economic laws and market changes, and their typical means of tackling problems often involve business rules and social communication. Therefore, people in different types of organizations are influenced by various fields and scopes, and as a result, there may be different approaches to tackling problems. The higher the level of education, the lower the proportion of people using social relationships for job-seeking among those with the same educational levels. Level of education represents human capital. In the theories concerning status attainment, human capital is a powerful influencing factor. Human capital theory indicates that human capital serves as a means of competition, and that the greater the human capital, the stronger the competition may become, and fewer people will be able to participate in the competition. An increase in human capital may reduce the use of social capital.

5.2 Discussion

The adoption of Chinese New Year greeting networks as a method for measuring individual social networks has been questioned by some scholars. The proposed Chinese New Year greeting networks were inspired by social networking sites in the United States. In the United States, where individualism dominates the cultural atmosphere, with whom people are in contact represents the scope of their activities and power. However, Yanjie Bian pointed out that in the Chinese cultural environment, in a society where favor and face are valued, people can still be friends without social contact or meeting in person, and they will contact each other if needed. Meanwhile, family is also crucial in the daily lives of Chinese people. It is quite common for people to make use of relationships with close relatives, relatives by marriage, and distant relatives. For example, these relationships play a particularly remarkable role when introducing someone to a potential marriage partner. However, the existence of such

relationships does not necessarily mean there is frequent contact and interaction in daily life. In this case, in the cultural environment of China, Yanjie Bian (1994) proposed the use of Chinese New Year greeting networks for measuring the relationship networks of individuals, with a view toward complementing the absence of the above-mentioned relationships on social networking sites in the United States. However, some scholars believe that wedding and funeral networks may be more accurate than Chinese New Year greeting networks in measuring the relationship networks of individuals. The reason is that paying a Chinese New Year call may be canceled due to long distance or special plans such as traveling. However, weddings and funerals are held by families as a unit, and a family does not frequently encounter events such as marriage or death. Therefore, when such major and special events take place in a family, nearly all the people who are related attend or at least send representatives of their own families to do so (Hu, 2013). Hence, there are scholars that believe that wedding and funeral networks are more accurate and effective than the Chinese New Year greeting networks in measuring the network relationships of individuals. In this study, Chinese New Year greeting networks are used to measure individual social networks. However, subsequent studies may refer to other types of networks for measurement so as to conduct comparative research and subsequently, to add theoretical and practical content.

As far as the measurement for maximum network accessibility is concerned, some scholars believe that the level of occupational prestige should be employed to measure the height of maximum accessibility. However, other scholars suggest that it is power rather than prestige that has a greater influence on job-seeking. For example, in the occupational prestige table, the professional prestige of scientific research personnel and professors is high, but in the job-seeking process, a department head acquaintance is obviously more effective than research personnel or professors. Therefore, in the job-seeking process, it may be more accurate to employ professional power for the measurement of maximum accessibility.

One of the limitations of this study is that in the process of operationalizing the variables, the measurement of individual network size and heterogeneity was represented by the size and heterogeneity of Chinese New Year greeting networks. However, the maximum accessibility of

individual network size was measured using the standards of professional power, i.e., contacts' occupational management status in individual job-seeking cases through the use of social relationships, in accordance with the questionnaire. This may result in a reduced sample size but it is effective for maximum network accessibility as well as to measure career satisfaction.

References

- Bian, Y. (1994a). Guanxi and the allocation of urban jobs in China. *China Quarterly*, *140*, 971–999. doi:10.1017/S0305741000052863
- Bian, Y. (1994b). *Work and inequality in urban China*. State University of New York Press.
- Bian, Y. (1997). Bringing strong ties back in: Indirect ties, network bridges, and job searches in China. *American Sociological Review*, *62*, 366–385. doi:10.2307/2657311
- Bian, Y. (2002). Chinese social stratification and social mobility. *Annual Review of Sociology*, *28*, 91–116. doi:10.1146/annurev.soc.28.110601.140823
- Bian, Y., Davis, D., & Wang, S. (2002, August). *New Year celebration and urban networks in a relational society: Greeting, gift, and banquet exchanges in four Chinese cities*. Paper presented at the annual meeting of the American Sociological Association, Anaheim, CA.
- Bian, Y., & Zhang, W. (2001). Jing ji ti zhi, she hui wang luo yu zhi yi liu dong. *Social Sciences in China*.
- Blau, P. M. (1964). *Exchange power in social life*. New York: John Wiley
- Blau, P. M. (1991). *Inequality and heterogeneity*. China: Social Sciences Academic Press.
- Blau, P. M., Ruan, D., & Ardel, M. (1991). Interpersonal choice and networks in China. *Social Forces*, *69*, 1037–1062. doi:10.2307/2579301
- Brandt, L., & Benjamin, D. (1999). Markets and inequality in rural China: Parallels with the past. *American Economic Review*, *89*, 292–295. doi:10.1257/aer.89.2.292
- Chen, Y., Volker, B., & Flap, H. (2014). Don't contacts matter? The debate on the labor market effect of used social capital and new evidence. *Sociological Studies*.
- Cheng, T., & Womack, B. (1996). General reflections on informal politics in East Asia. *Asian Survey*, *36*, 320–337. doi:10.2307/2645695

-
-
- Comte, A. (2010). *Positivism*. Beijing: The Commercial Press.
- Durkheim, E. (1997). *The division of labor in society*. (W. D. Halls, Trans.). New York: Free Press.
- Freeman, L. C. (2008). *The development of social network analysis*. Beijing: China Renmin University Press.
- Freeman, L. C., & Romney, A. K. (1987). Words, deeds and social structure: A preliminary study of the reliability of informants. *Human Organizations*, 46, 330–334.
doi:10.17730/humo.46.4.u122402864140315
- Giddens, A. (2009). *Sociology*. Beijing: Peking University Press.
- Gold, T. B. (1985). After comradeship: Personal relations in China since the cultural revolution. *The China Quarterly*, 104, 657–675. doi:10.1017/S030574100003335X
- Guo, B. (2003). Political legitimacy and China's transition. *Journal of Chinese Political Science*, 8, 1–25. doi:10.1007/BF02876947
- He, Q. (2003). A volcanic stability. *Journal of Democracy*, 14, 66–72.
doi:10.1353/jod.2003.0010
- Hong, Z. (2004). Mapping the evolution and transformation of the new private entrepreneurs in China. *Journal of Chinese Political Science*, 9, 23–42. doi:10.1007/BF02876955
- Hu, R. (2013). *The study of Chinese rural residents' wedding and funeral networks and their influencing factors*. Social Networks and the Sub-Forum of Social Capital Research.
- Huang, C. (2004). *Social relationship networks and occupational status attainment*. Guangxi: Guangxi Normal University.
- Jing, Y., & Wang, G. (2009). Western political research approaches and the development of political science methodology in China. *Journal of Political Science*, 14, 299–315.
doi:10.1007/s11366-009-9062-x

Li, J., Qian, G., Lam, K., & Wang, D. (2000). Breaking into China: Strategic considerations for multinational corporations. *Long Range Planning*, 33, 673–687.

doi:10.1016/S0024-6301(00)00077-7

Lin, N. (1982). Social resources and instrumental action. In P. V. Marsden & N. Lin (Eds.), *Social structure and network analysis* (pp. 17–30). Beverly Hills, CA: Sage.

Lin, N. (1999). Building a network theory of social capital. *Connections*, 22, 28–51.

Lin, N. (2011). Capitalism in China: A centrally managed capitalism (CMC) and its future.

Management and Organization Review, 7, 63–96. doi:10.1111/j.1740-

8784.2010.00203.x

Lin, N., & Xie, W. (1988). Occupational prestige in urban China. *American Journal of*

Sociology, 93, 793–832. doi:10.1086/228825

Luo, J. (2010). *Social network analysis - a handbook*. Beijing: Social Sciences Academic Press

(China).

Ma, X., & Timberlake, M. F. (2008). Identifying China's leading world city: A network

approach. *GeoJournal*, 71, 19–35. doi:10.1007/s10708-008-9146-8

Marsden, P. V. (1982). Brokerage behavior in restricted exchange networks. In P. V. Marsden

& N. Lin (Eds.), *Social structure and network analysis* (pp. 201–218). Beverly Hills:

Sage.

Marsden, P. V. (1990). Network data and measurement. *Annual Review of Sociology*, 16,

435–463. doi:10.1146/annurev.so.16.080190.002251

Marsden, P. V., & Campbell, K. E. (1984). Measuring tie strength. *Social Forces*, 63, 482–

501. doi:10.2307/2579058

Parsons, T. (1937). *The structure of social action*. New York: McGraw-Hill.

Parsons, T., Bales, R. F., & Shils, E. (1953). *Working papers in the theory of action*. New

York: Free Press.

Formatted: French (Canada)

-
-
- Peng, D. (2000). Ethnic Chinese business networks and the Asia-Pacific economic integration. *Journal of Asian and African Studies*, 35, 229–250.
doi:10.1163/156852100512211
- Shang, X., & Gleeson, R. (2011). Some useful sources on Chinese social policy. *Social Policy and Society*, 10, 117–121. doi:10.1017/S1474746410000448
- Tung, R., & Worm, V. (2001). Network capitalism: The role of human resources in penetrating the China market. *International Journal of Human Resource Management*, 12, 517–534. doi:10.1080/713769653
- Wang, H., Wang, L., & Li, Z. (2007). *The effect of social network in social entrepreneurship: An empirical Chinese case study*. Hangzhou, China: Zhejiang University City College.
- Weber, M. (1930). *The Protestant ethic and the spirit of capitalism* (T. Parsons, Trans.). New York: Routledge.
- Weber, M. (1951). *The religion of China: Confucianism and Taoism* (H. H. Gerth, Trans.). New York: The Free Press.
- Weber, M. (1978). *Economy and security*. Berkeley, CA: University of California Press.
- Weber, M. (2012). *The Protestant ethic and the spirit of capitalism*. Beijing: Peking University Press.
- Weber, M., Schneider, L. (1975). Marginal utility theory and the “fundamental law of psychophysics”. *Social Science Quarterly*, 56, 21–36.
- Wu, Y. (2011). Social networks, occupational attainment and mobility. *Sociological Studies*, 5.
- Xiao, R. (2010). The international relations theoretical discourse in China: One world, different explanations. *Journal of Chinese Political Science*, 15, 99–116.
doi:10.1007/s11366-009-9084-4
- Xu, H. (2004). *Attainment of social capital and personal occupational status*. Wuhan: Wuhan University.

Zhao, Y. (2003). Job seekers' social networks and reservation wage: The case of reemployment of laid-off workers. *Journal of Sociological Research*, 4, 51–60.

