Gender and network effects on occupation: a case study of China

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Abstract

Purpose – The purpose of this paper is to ask whether or not social networks can compensate for the disadvantages of being part of an unprivileged group in the job attainment process in urban China, using the 2008 China General Social Survey.

Design/methodology/approach – The author compares the network effects on monthly income of local urban residents and rural migrants.

Findings – First, the results show that social capital exerts no significant effect on monthly income for local residents and rural migrants. Second, having network members who work in state-owned and non-state-owned enterprises helps female rural migrants to obtain higher monthly incomes, compared to those whose network members work only in either state-owned enterprises or non-state-owned enterprises. The same is not true of male rural migrants or local residents.

Originality/value – It can be concluded that a more diversified network may compensate for female rural migrants' disadvantages, caused by being part of an unprivileged group, in their occupational attainment process.

Keywords China, Gender inequality, Social networks, Income inequality

Paper type Research paper

Introduction

Income gaps between social groups are widening in urban China (Meng and Zhang, 2001; Treiman, 2012; Wang, 2005; Wu, 2003). A panel study shows that advantaged groups have consistently earned more since the economic reform (Zhou, 2000). Even the average education level has risen, schooling is failing to work as a leveled group. For example, despite having the same education level and working in urban areas, university graduates who come from rural areas are more likely to earn less than university graduates who come from urban areas (Han, 2011).

Network theorists have studied this income gap between different groups from the social network perspective. Social networks contribute to the income gap because people can access resources embedded in their social networks in the job attainment process in order to achieve their goals, such as getting a better job (Bian, Zheng and Cheng, 2012; Bian, Wang, Zhang and Cheng, 2012; Lai *et al.*, 1998; Lin, 2001; Wang *et al.*, 2002). These resources can be classified into five groups: information, influence, social credential, reinforcement and material resources. Lin (2001) described these resources as social capital. Empirical studies provide ample evidence of the positive impacts of social capital on income in western societies (Lin, 2000; Son, 2013) and in China (Bian, Zheng and Cheng, 2012).

This paper addresses the issue of income inequality by employing the social network perspective to study how social networks affect the income of disadvantaged and advantaged groups. This paper asks whether or not social networks can compensate for the disadvantaged status of individuals belonging to unprivileged groups in the job attainment process in the context of urban China. In the next section, studies on social networks and job attainment are reviewed.

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Literature review

Ample studies have demonstrated the positive effects of social capital on job-seeking outcomes (Bian *et al.*, 2005; Erickson, 2001). This result can be applied in capitalist societies, such as the USA (Lin *et al.*, 2013), socialist societies, such as the German Democratic Republic (Volker and Flap, 1999), also known as East Germany, or societies that are undergoing reform, such as China (Chen, 2013). Below are some examples.

Using two national surveys on social capital conducted in the USA from 2004 to 2005 and from 2007 to 2008, Lin *et al.* (2013) find that using personal contacts can enhance one's job-seeking outcomes. White and Latino job seekers can benefit from using personal contacts during the job-seeking process and may obtain highly occupational, prestigious jobs as a result. This is because using personal contacts during the job-seeking process can help job seekers to access job information or other kinds of assistance that job seekers cannot obtain by themselves.

Networks also mattered in the job-seeking process in East Germany. Using two waves of a national survey conducted in 1992 and 1993, Volker and Flap (1999) studied the effects of using personal contacts on the prestige and income of respondents' first jobs, compared the network effects on the prestige and income of respondents' first jobs in 1989. The results show that using personal contacts did not influence the first job incomes in 1989, but the job prestige of the contact who offered assistance to the respondents was closely and strongly related to the job prestige of job seekers. This positive relationship may be due to the ability of the contact to provide help. Those occupying prestigious job positions are more likely to have access to job information regarding highly ranked job openings or can exert more influence during the recruitment process. Therefore, asking a network member who has a highly prestigious job for help will increase the applicant's chances of getting a highly prestigious job themselves. Similar results are found in studies of communist China (Lin and Bian, 1991; Walder, 1986).

Using data collected in eight cities in China in 2009, Bian, Zheng and Cheng (2012) recorded the positive impacts of social networks on income. They found that direct assistance and providing job information can enhance respondents' income. For instance, the income of respondents who mobilized others' help or received job information from others were 25 and 27 percent higher, respectively, than those who did not use personal contacts during the job attainment process.

Another comparative study investigated the influence of using personal contacts in China, Taiwan and the USA, in order to see whether or not there are differences in the network effects among these three societies. Chen (2013) found that using weak ties during the job-searching process can enhance applicants' chances of obtaining higher status jobs, such as executive jobs, in three societies, aside from for women in China. Chen explains that job seekers are more likely to gain access to prestigious job recruitment information or other unique resources through weak personal ties (i.e. less intimate relationships), such as through colleagues.

Despite these fruitful studies on the positive influences of social networks on the job-seeking process, there is still no conclusive answer regarding whether or not social networks are useful during the job-searching process. This is because scholars (Huang and Western, 2011; Matthews *et al.*, 2009) have also yielded results regarding the negative impacts of using social networks on the job-searching process. For example, in the Australian study conducted in 2007 by Huang and Western (2011), they found that using social networks as a job-searching method leads to lower levels of job prestige and income, compared to those did not use social networks as a job-searching method. Similarly, Matthew *et al.* (2008) found a negative effect of using weak ties as a job-seeking method on income in rural Canada.

From the above, it is obvious that the effects of using personal contacts on job-searching vary across societies. Matthews *et al.* (2009) posit "context matter" as an

explanation for this; who is using the social network and under what circumstances will affect the impact of personal contacts on the job-seeking result. Here, we can interpret the "what circumstances" as under what kinds of institutional structure the social network is being used and "who is using it" refers to the personal characteristics of the network user. Below, we review how scholars explain the variations in network effects on the job-seeking process among societies from the institutional structure perspective and the personal characteristic perspective.

Institutional structure

Chua (2012) argues that the type of labor market affects the impacts of social networks on job-seeking outcomes. In his Singaporean study, Chua asked whether or not social networks work in the same way in all types of labor markets. The results show that this is not the case. Using personal contacts during the job-seeking process failed to bring about any advantages for job seekers in Singapore. Chua explained that there are two types of labor markets: liberal market economies (LMEs) and coordinated market economies (CMEs). In LMEs, education systems are weakly connected with the labor market, and education level cannot fully represent one's skills and qualifications. In contrast, education systems are closely connected with the labor market in CMEs, and education level can fully represent one's skills and qualification to employers. Singapore is a CME labor market that highly values education level, as well as being a highly bureaucratic society. Employers strictly follow a formal and transparent recruitment process and employers only select job seekers who are most qualified. Elitism and bureaucracy make the market impermeable to network influences or other informal forms of influence.

Similar to Chua, Bian (1997) explained the inconsistent effects of social capital on job-seeking outcomes from a market structure perspective. Many socialist countries, such as China, are transforming into capitalist societies. In these transforming societies, socialist institutions and old recruitment systems have not yet been totally replaced by new market-orientated systems. As market institutions have not grown fast enough while the old ones are retreating, there is no reliable formal system for employers to use to recruit new staff. Thus, employers tend to ask network members for recommendations, which is a relatively reliable way to hire new staff member. The malfunctioning of the new market institution makes space for the use of social networks in the hiring process.

Unlike Chua (2012) and Bian (1997), Huang (2008) focuses more on the structure of the employment organization, instead of the macro labor market structure. She points out that the institutional structure of the employment organization accounts for the variation in network effects on job searching across societies. Based on 65 interviews conducted with job seekers in China, she concluded that social networks only exert pronounced positive influences on job searching in stated-owned enterprises, high-ranking position or positions that demand soft skills (i.e. skills that it is difficult to measure by education level or other qualifications). In contrast, using personal contacts to seek a job in non-state-owned enterprises, low-ranking jobs and jobs that demand skills that can be easily measured by education level or other qualifications will cause negative effects on the job-seeking result. This difference is mainly due to the institutional characteristics of employment organizations. Non-state-owned enterprises usually have more transparent and standardized procedures to select candidates and examine their qualifications. This limits the room available for others to intervene in the recruitment process.

Personal characteristics – gender

Another perspective accounting for the inconsistent results in previous studies on the effects of social networks on job seeking is the personal characteristic perspective. Existing literature on social capital yields rich evidence suggesting that powerful gender and ethnic

groups, such as men and white people, are more likely to enjoy the benefit of using personal contacts during the job-seeking process than disadvantaged gender and race and ethnic groups, such as women and black people (Chua, 2013). This paper mainly focuses on gender.

The reason accounting for the differences in network effects on the job-seeking outcomes of two groups is that not all groups possess an equal amount of social capital. For example, Chua (2013) compared the network patterns between men and women, and majority and ethnic minorities in Singapore. He found that men are more likely to connect to men, non-kin and have more weak ties than women. These ties are the main sources of job information. In other words, there are more resources embedded in men's social networks. Therefore, men are more likely to get job information or other kinds of social capital from their social networks than women. Lin (2000) uses the term capital deficit to describe a situation in which less resources are embedded in the networks of disadvantaged groups.

This social capital deficit regarding women is mainly caused by sex segregation in the workplace and in social networks. First, McPherson and Smith-Lovin (1982) explain that men usually work in larger organizations and in more core positions, compared to women who have the same education level, marital status and age. This strategic position exposes men to more potential contacts with people who are more resourceful, such as the upper classes. Sex segregation in networks is the second reason. As men are already privileged, having more male network members can enhance women's opportunity to access more social capital. However, the fact is that men usually associate with other men, while women are usually connected with other women. As a result, women face difficulties accessing social capital through men.

Due to the difference in structure and composition of networks between men and women, Lutter (2015) points out that a cohesive network disfavors women in their job attainment process. As women tend to have more kin, neighbors and women in their social network, information form this network in fact comes from lower status and this network has limited ties to higher status or influential positions. In other words, this network is not resourceful. Instead, a diverse network which has fewer women, kin and neighbors, tend to be non-redundant and non-exclusive. This can benefit women because they will face fewer network constraints and can more access to external and weak ties which can help them mobilize resources from men or others in higher status.

But, the network effects on women vary in different market structures. Tian and Liu (2018) find that the market context can shapes the effects of using job contacts in hob seeking process of women. First, similar to the above findings, Tian and Liu explain that women are lesser likely to use network in their job-seeking processes they have fewer co-workers and contacts of authority in their networks who are helpful in the job attainment process. Second, they discover that it is more difficult for women to use job contacts in their job-seeking process in market sector than in state sector because state sector adopts gender equality promotion policies. Further, the impact of using weak ties is more salient than strong ties as they can access more diverse resources from weak ties.

Type of social ties

Besides labor market structure and the personal characteristic perspective, the types of social ties job seekers have also affect the usefulness of social networks in the job-seeking process. Not all types of social ties can function effectively in different labor markets. Possessing the right type of social ties can bring about benefits to one's job searching, while having the wrong type of social ties may not be useful for job seekers (Bian, Wang, Zhang and Cheng, 2012).

Bian (2002) takes China as an example to exemplify the importance of having the right type of social ties in the job attainment process. The labor market in China is transforming from a redistributive economy to a market economy. As the market economy has not yet replaced the redistributive economy, there are two types of systems in the same

labor market. State-owned enterprises are the product of the redistributive economy, and non-state-owned enterprises are mainly developed under the capitalist economy. Bian, Wang, Zhang and Cheng (2012) posit that having connections with people who work in state-owned enterprises and people who work in non-state-owned enterprises can maximize the positive effects of using personal contacts during the job-seeking process. This is because job seekers can access resources from these two systems. Using data collected in eight cities in China in 2009, they found that, if respondents have connections within the two systems, they are likely to have higher monthly salaries than those whose network members work only in either state-owned enterprises or non-state-owned enterprises. As these kinds of ties cross two institutions, this paper describes them as cross-institutional ties.

Research questions

Based on the aforementioned studies, we draw three conclusions. First, having the right type of ties brings about benefits for job seekers during the job-seeking process. Second, women face difficulties in regard to obtaining support from network members during the job-seeking process. Third, institutional structure shapes the effects of social networks on occupational attainment. This paper then asks:

RQ1. When women possess the right type of ties, can we assume that they still do not enjoy the benefits of using social networks in the occupational attainment process?

RQ2. How does institution structure affect the impact of the type of ties on the occupational attainment of disadvantaged groups?

This paper answers these questions in the context of urban China. One disadvantaged group in the labor market in urban China is the rural migrant (Wu, 2019). This paper specifically explores whether or not having cross-institutional ties can compensate for the disadvantages of being a rural migrant in the job-seeking process in urban China.

The context of China

The household registration system has been in effect since 1958 in China. In 1958, all residents of China were assigned a household registration. Normally, peasants would have an agricultural form of registration (rural hukou) and non-peasants would have a non-agricultural form of registration (urban hukou). Children inherit household registration status from their mothers. This distinction decides people's right to state-provided welfare. Only urban hukou holders enjoy state-provided welfare, such as housing, medical care and pensions (Chan, 2009).

When the hukou are assigned to each person, a place of residence is registered. For example, the residential location for a person living in Beijing will be Beijing. Only people with local registration are treated as permanent residents of this place (Chan, 2009).

This system has produced the rural migrant. If a peasant leaves a village in Guangdong and moves to Beijing without official approval, he or she peasant will be classified as a temporary migrant, as the residential location of that peasant's household registration will not be Beijing. As these migrants come from rural areas, they are called rural migrants (Chan, 2009). According to the National Bureau of Statistics, "rural migrant" refers to a peasant who has been away from his or her hukou origin for over one month. The number of rural migrants has increased from 150.1m in 2009 to 250m in 2011, and is continuing to increase (Lu *et al.*, 2013).

Without local urban registration, rural migrants are not entitled state-provided welfare. Despite their Chinese citizenship, rural migrants are excluded from medical insurance, unemployment insurance, free education for their children in public schools, pensions, and so forth in urban areas. Worse still, the government even imposes discriminative policies

against rural migrants. Some jobs are closed to rural migrants or local residents will be given preference. Factories hiring too many rural migrants are penalized or forced to dismiss some of them (Chan, 2009). It can be said that, although rural migrants and local residents are living and working in the same place, they are in two different worlds.

The segmentation of rural migrants and local residents is also evident in the labor market in urban China. Due to discriminative policies and a lack of protection, rural migrants are trapped in the bottom part of the labor market in the urban China. We can take occupational segregation and the income differences between two groups as examples.

In this dual labor market, rural migrants and local residents tend to have very different occupational choices. The majority of rural migrants work in the service or manufacturing industry. Local residents' career distributions are more even (Qu and Zhao, 2011). One may argue that this job segmentation is caused by the variation in the education levels between the two groups. Chen (2011) found that, even when the education levels of rural migrants and local residents are the same, rural migrants are more likely to work in production lines. Even rural migrants who have high education levels (senior high and above) still have the fewest opportunities to obtain managerial or professional jobs and, again, are more likely to be employed in factories. Therefore, rural migrants are trapped at the bottom of the labor market in urban China and have very few chances to cross this boundary.

Rural migrants tend to be paid lower wages than local residents. In 2002, Demurger *et al.* (2009) discovered that the annual earnings of urban residents were 1.3 times larger than those of rural migrants. In 2007, the monthly wages of rural migrants and local residents were \$1,400.5 RMB and \$1,883 RMB, respectively. The difference is larger if we look at hourly wages. The hourly wages of rural migrants and local residents were \$5.5 RMB and \$10.5 RMB, respectively in 2007 (Qu and Zhao, 2011). A survey conducted by the central government (2006) also documented that, in terms of hourly wage, rural migrants earned only one quarter of local residents' earnings in Henan, Hunan and Sichuan in 2006. One may explain this income gap with the difference between occupations. However, scholars have found that, even when rural migrants and local residents have the same job, rural migrants still earn less (Meng and Zhang, 2001).

Data and method

Data

Data for this paper are from the 2008 China General Social Survey Bian and Li (2013), collected between October and December 2008 in 28 provinces in China by the Renmin University of China. This is the most recent data set that include information about network use in respondents' current job-seeking process. The survey is based on a probability sample of 6,000 respondents, selected from non-redundant households. The survey asks about respondents' occupational attainment, educational achievements, social network, health, attitude, financial situation, family background and demographic information.

In this analysis, I select a subsample from the survey based on the following criteria. This paper only includes respondents who have earnings from non-agricultural jobs in urban China, so study's sample size is 1930 (Tables I–III).

We divide respondents into two groups – an urban household registration group and a non-urban household registration group – and compare their general characteristics in Table I. Table I shows that, among the two groups, there are more men than women. Local people and non-local people constitute 82 and 18 percent, respectively, of the urban household registration group. In the non-urban group, 68 percent of respondents are non-local people. Both groups feature the same pattern in regard to party membership; more than 80 percent of respondents in both groups are non-party members. In the urban household registration group, over 80 percent of respondents are single, while 76 percent of respondents in the non-urban household registration group are single.

Variables	Frequency (%)	Mean of income	Frequency (%)	Mean of income (Urban household registration)	Frequency (%)	Mean of income (non-urban household registration)	F
Gender							22.4***
Male	1,115 (57.77%)	25,512.1	835 (58.9%)	27,211.7	280 (54.8%)	20,443.5	
Female	815 (42.23%)	19,433.4	584 (41.2%)	21,143.4	231 (45.2%)	15,110.4	
Total	1,930	22,945.18	1,419		511		
Household registration							21.61***
Urban registration	1,419 (73.52%)	24,714.25					
Non-urban registration	511 (26.47%)	18,032.64					
Total	1,930	22,945.18					
Local or non-local people							3.88*
Local	1,331 (69%)	22,065.79	1,169 (82.4%)	23,173.9	162 (31.7%)	14,069.8	
Non-local	598 (31%)	24,773.65	249 (17.6%)	31,643.6	349 (68.3%)	19,872.1	
Total	1,929	22,905.24	1,418		511		
Party membership							57.65***
Party member	309 (16.01%)	30,570.55	275 (19.4%)	31,697.8	34 (6.7%)	21,452.9	
Non-party member	1,621 (83.99%)	21,491.61	1,144 (80.6%)	23,035.5	477 (93.3%)	17,788.9	
Total	1,930	22,945.18	1,419		511		
Marital status							0.31
Single	382 (19.79%)	23,659.84	1,156 (81.5%)	24,779.5	392 (76.7%)	16,839.5	
Married	1,548 (80.21%)	22,768.83	263 (18.5%)	24,427.6	119 (23.3%)	21,963	
Total	1,930	22,945.18	1,419	24,714.3	511	18,032.642	
Company type							3.34**
Stated owned	740 (40.86%)	23,783.71	691 (50.9%)	24,401.5	49 (10.7%)	15,071.4	
Collective	145 (8%)	20,217.93	107 (7.9%)	21,132.7	38 (8.4%)	17,642	
Private	880 (48.6%)	24,023.55	536 (39.5%)	27,090	344 (75.8%)	19,245.6	
Others	46 (2.54%)	20,088.69	23 (1.7%)	21,578.2	23 (5%)	18,599.1	
Total	1,811	22,953.45	1,357		454		
Employment type							5.89***
Employed	1,446 (74.92%)	22,825.81	1,179 (83.1%)	23,950.9	267 (52.3%)	17,857.7	
Causal worker	71 (3.68%)	8,958.873	36 (2.5%)	8,105.6	35 (6.8%)	9,836.6	
Family worker	33 (1.71%)	20,248.49	21 (1.5%)	24,647.6	12 (2.3%)	12,550	
Freelance	21 (1.09%)	25,619.05	11 (0.8%)	25,909	10 (2%)	25,300	
Self-employed	359 (18.6%)	25,283.57	172 (12.1%)	33,354.7	187 (36.6%)	19,779.7	
Total	1,930	22,945.18	1,419		511		

Notes: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Table I.
Sample characteristics, and test of significance for independent variables and annual income

In the urban household registration group, 50 percent of respondents work in state-owned enterprises, 8 percent are employed in collective enterprises, 40 percent are employed in private companies, and the remaining work in other types of companies. The non-urban household registration group presents almost the same pattern. Most respondents in this group are employed in private companies (76 percent), followed by those working in state-owned enterprises (11 percent); 8 percent are employed in collective enterprises and the rest work in other types of companies. About 83 percent of respondents in the urban household registration group are employees, while only 52 percent of the non-urban household registration group are employees. A total of 3 percent of respondents in the urban household registration group are casual workers, while 7 percent of respondents in the non-urban household registration group are casual workers. Approximately 12 percent of respondents in the urban household registration group are self-employed, but more than 36 percent of respondents in the non-urban household registration group are self-employed – three times higher than the urban household registration group. The rest are family workers or freelancers. In terms of income and year of schooling, the urban household registration group have higher salaries and longer year of schooling than non-urban household registration group.

Variables

As described earlier, the critical issue of interest here is whether or not certain individuals obtain more returns from their social capital in the job attainment process. To address this issue, we measure respondents' social capital, whether or not they possess institution-crossing social capital, the interaction effect of household registration and institution-crossing social capital.

Independent variables

For social capital, this paper uses the amount and the range of the resources embedded in the social network, using a position generator method. This method employs a list of occupations with very different socioeconomic positions and assesses the extent to which a respondent could access these occupations.

As operationalized in the questionnaire, the position generator consists of a question ("Do you know someone who has or has had the following kinds of jobs and how long have you known this person?") followed by a list of occupations. These occupations represent the occupation hierarchy in China. A total 18 positions were chosen. According to the Standard International Occupational Prestige Scale (SIOPS) constructed by Ganzeboom and Treiman (1996), these 18 occupations carry different job prestige scores. These 18

Table II.
Distribution of age, annual salary and year of schooling (urban)

	Mean	SD	Median
Age	38	10.21	38
Annual salary (RMB)	24,714.25	29,282.5	20,000
Year of schooling	11.8	3.29	12

Table III.
Distribution of age, annual salary and year of schooling (non-urban)

	Mean	SD	Median
Age	35.16	10.12	34
Annual salary (RMB)	18,032.64	23,451.55	12,000
Year of schooling	9.55	3.05	9

occupations are labor, university professor, primary school or secondary school teacher, doctor, nurse, cook, waiter, sales, unemployed, scientific researcher, legal professional, business professional, administration, engineering technician, government official, party leader, manager, and housemaid.

From this score, we can compute three indexes: range, the differences between the highest and lowest prestige scores among the 18 occupations a respondent could access; extensity, the number of occupations listed in the position generator that a respondent could access; and upper reachability, the highest score among the 18 occupations listed in the position generator a respondent could access. Table IV also presents the means, standard deviations and range of scores of the three indicators.

A factor analysis (principal component and varimax rotation) is employed in order to yield a single factor solution, depicted in Table V. A factor score based on the above three indexes is then computed for each respondent.

Cross-institutional social capital is measured by the institutions in which respondents' network members worked. Following Bian's (2012b) coding system, if respondents have at least one network member working in a stated-owned enterprise (including government agencies) and one working in a non-stated-owned enterprise, they will be coded as 1

Position (SIOPS)	Respondent accessing prior to current job ($n = 1{,}930$, percent)
Labor (34)	55.5
University professor (78)	10.7
Primary school or secondary school teacher (60)	30.4
Doctor (78)	21.52
Nurse (54)	12.66
Cook (31)	14.69
Waiter (21)	12.26
Sales (32)	27.74
Unemployed (0)	40.59
Scientific researcher (48)	5.19
Law professional (73)	9.8
Business professional (57)	12.8
Administration (55)	15.4
Engineering technician (47)	17.19
Government official (63)	12.28
Party leader (63)	7.87
Manager (63)	22.98
Housemaid (17)	2.84
Indexes	
Extensity	
Mean	3.9
SD	2.99
Range of scores	18
Range	
Mean	6.33
SD	6.35
Range of scores	18
Upper reachability	
Mean	13.5
SD	4.13
Range of scores	18

Note: SIOPS, Standard International Occupational Prestige Scale

Table IV.
Position generator and social capital indexes

Factor	Sample ($n = 1,930$)
I	2.018
II	0.731
III	0.25
Factor loading on Factor I	
Upper reachability	0.6558
Extensity	0.8515
Range	0.9067
Factor scoring on Factor I	
Upper reachability	0.325
Extensity	0.434
Range	0.449

Note: Principal component analysis and varimax rotation

Table V.
Factor structure of social capital prior to current job

(in possession of institution-crossing social capital). If respondents' network members work in either stated-owned enterprises or non-stated-owned enterprises, they will be coded as 0 (not in possession of institution-crossing social ties). Respondents will have met these network members before they (the respondents) obtained their current job.

Another independent variable is an interaction variable. This variable is a dummy variable. Respondents who have non-urban household registration and possess institution-crossing social ties are coded as 1, while others are coded as 0. Other independent variables also include human capital measured by years of schooling, party membership, age, local residency, company type and employment type.

Dependent variable

The dependent variable of the current paper is earnings, which is measured by annual wages last year.

Result

Regression results are presented in Table VI. Models 1–5 in the left panel show the regression results for women, while Models 1–5 in the right panel show the regression results for men. We begin the analysis with household registration as an independent variable, to explore its impact on income. As presented in Table VI, household registration is significant in the regression for income. Those with an urban household registration will have 50 and 34 percent higher incomes than those without an urban household registration in the female and male groups, respectively. Model 2 adds the variable of social capital. Social capital is a significant factor, but the influences of social capital are very weak in both groups. Model 3 includes one more variable: cross-institutional social ties. The association between cross-institutional social ties and income in the regression results for women is not significant, but is significant in the regression results for men. Therefore, men with cross-institutional social ties have incomes 17 percent higher than men who do not have cross-institutional social ties.

Model 4 incorporates a set of variables: local people, party membership, company type, employment type, age and years of schooling. The local people variable has significant and negative effects on income in both regressions for men and women. Local people's incomes are lower than those of non-local people. The relationship between party membership and income is strong and significant in the regressions for men and women. Being a party member increases income by 33 percent, compared to non-party members, for women, and 22 percent for men. Both left and right panels show that company type and age are not significant.

Table VI.
Regressions for income

	Female					Male				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1	Model 2	Model 3	Model 4	Model 5
Household registration	0.50***	0.64***	0.64***	0.50***	0.93***	0.34***	0.27***	0.27***	0.20**	0.10
Social capital		0***	0***	0	0		0.007***	0.004**	0	0
Institutional crossing social capital			0.13	0.12	0.4**			0.17*	0.08**	0
Local				−0.25 ***	−0.25***				−0.15*	−0.15*
Party membership				0.33***	0.34**				0.22*	0.22*
Company type										
Stated-owned[a]										
Collective				−0.12	−0.12				0.50	0.05
Private				−0.01	−0.00				0.11	0.10
Others				−0.17	−0.16				−0.24	−0.24
Employment type										
Employed[a]										
Causal worker				−0.66***	−0.68***				−0.36**	−0.36**
Family worker				−0.31	−0.27				1.50	0.08
Freelance				2.25***	2.16**				0.08	0.09
Self-employ				0	0				0.26	0.27**
Age				−0.01	−0.00				0	0
Year of schooling				0.09***	0.09***				0.06***	0.06***
Interaction										
Household registration×institutional crossing social capital					0.41*					0.11
Constant	9.29***	8.88***	8.81***	8.32***	8.12***	9.6***	9.22***	9.18***	8.68***	8.74***
n	809	383	361	330	330	1111	466	448	409	409
Adjusted R^2	0.05	0.11	0.12	0.36	0.37	0.027	0.041	0.043	0.16	0.16

Notes: [a]Reference group. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

The company type variable employed is the reference group. Compared to being employed, the incomes of female casual workers are lower, but female freelancers have higher incomes. Male casual worker have 44 percent lower incomes than employed men and this relationship is significant. Years of schooling has a significant and weak association with income. A one-year increase in schooling leads to a 9 percent increase in income for women and a 6 percent increase for men even other variables are controlled. These variables also somewhat mediate the effects of household registration and social capital in both regressions for men and women. The influence of social capital is not significant.

Model 5 adds the interaction variable. However, a significant association is only found for women. This positive association means that if a woman has a non-urban household registration and possesses cross-sector social capital, her income will 41 percent higher than that of women who do not have non-urban household registration and do not have cross-institutional social ties. In other words, cross-sector social capital can compensate for the disadvantages a woman with a non-urban household registration may experience.

Discussion and conclusion

The above results show that social capital fails to exert significant influences on income. In the figure not presented in this paper, we cannot find a significant relationship between social capital and income, even when education level is controlled. This may be caused by market structure. When the market is dominated by state-owned enterprises, social network is particularly important in affecting one's job attainment. For example, Walder (1991) depicts how the patron–client relationship influences people's job seeking and job promotion. However, the number of state-owned enterprises has decreased in recent decades, and more and more private companies are being established. Most of these private companies are foreign companies or joint companies, and many provide professional services, such as accountancy, auditing, hotel management, and so forth. Academic credentials are highly valued in these companies (Huang, 2008). Consequently, there is little room for the use of contacts in a labor market that relies heavily on academic credentials (Chua, 2011).

Another explanation for the insignificant relationship between social capital and income is the flow of job information. Bian (1997) describes the labor market in China as being an immature market; there are many institutional holes. Therefore, job information cannot flow easily to job seekers and influences are much more effective in the occupational attainment process in the labor market in China. However, it is believed that influence is less useful in the recruitment process of private companies. All the while job information cannot be easily accessed and influence is less effective, there is not much use for social capital.

The second finding of this paper is the positive influence of institution-crossing social ties on women who possess non-urban household registration. This paper tries to provide an explanation for this. Studies document that the kinship and fellow villager networks of people from rural areas are well-developed in urban areas (Wang *et al.*, 2002). People from villages usually ask network members to help them find jobs before moving. Once a job is confirmed, the villagers then move to the urban area. Therefore, if an individual has network members working in both state sectors and non-state sectors, that individual will have more choices and, consequently, more chances to obtain a job with a higher income.

The question of why cross-institutional social ties are useful for women who have non-urban household registration but not for men in this same group remains. This may be due to gender segregation in the labor market (Wu, 2019). According to the data, male non-urban household registration holders are mainly concentrated in elementary jobs and manual labor, while female non-urban household registration holders are concentrated in the service industry, manual labor, elementary jobs and clerical jobs. As men who do not have urban household registration are usually manual laborers, such as construction site workers or street cleaners, there are not many other job types for men who have non-urban household registration and

low education levels. So, even when men have cross-institutional social ties, the jobs available to them may be very similar. Women have more choices. Many work in factories, such as assembly line workers, or in service industries, such as waiters, babysitters or cleaners in offices. Therefore, if women have cross-institutional social ties, they are more likely to have more chances to choose a job with higher pay. This is because for these respondents who have lower status, most other positions can offer better pay (Smith, 2000). Apart from this choice, the labor market tends to discriminate against women in regard to recruitment, job assignments and salaries (He and Wu, 2018a, b; Wu, 2019). However, this discrimination is strictly prohibited in government agencies. Therefore, if women can obtain a job in government agencies, this can help them counter discrimination.

One may ask why cross-institutional social ties fails to help women who have urban household registration. From Tables III and IV, we can see that the education level of respondents who have urban household registration is higher than those who do not. As women with urban household registrations are more educated, they probably will not choose jobs that require lower education levels. In the data set, 50 percent of women are in managerial job, professional and associate professional jobs and clerical jobs. In regard to clerical jobs, it is believed that salaries in both the state sector and the non-state sector are usually very similar. Therefore, even if a women has cross-institutional social ties, she may find jobs in different sectors with similar incomes. This is what Smith (2000) describes ceiling effects that not many jobs can provide higher pay. Also, as already mentioned, professional jobs highly value academic qualifications, so there is not much room for the use of social capital in this field.

In summary, this paper investigates the effects of social capital on income using the China General Social Survey 2008. The regression results show that social capital fails to exert influences on income. Cross-institutional social ties have positive and significant influences on the income of women who do not have urban household registration. Due to data limitations, this paper could not further investigate why cross-institutional social ties only help this kind of women. Future studies should focus more on the effects of cross-institutional social ties and the reasons why social capital does not have significant influences on income in China.

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