Gender-Earning Differentials in China's Urban Labor market: A Social Capital Perspective

Cheng Cheng[1], Yixuan Wang[2]

Abstract: Two conventional theories to explain gender-earning differentials, human capital theory and gender occupational segregation theory have both met challenges in the rising Chinese labor market. Using the Jsnet 2009 dataset, this study attempts to investigate the male-female earnings differential in China's urban labor market with social capital perspective lens. Two research questions are examined. First, why does social capital affect earnings gap between genders in urban China's labor market? Second, to what extent, after netting out the effects of all the other influential indicators, the earnings gap can be explained by different accesses to (*capital deficit*) and returns on social capital (*return deficit*) between genders. The improved Oaxaca-Blinder decomposition and unconditional quantile regression decomposition techniques are primarily used as statistical methods. It is found that after netting out the effects of the effects of other influential factors, like indicators of human capital and gender occupational segregation, social capital is the most crucial predictor of gender earnings gap in China's urban labor market. Moreover, females' social capital deficit and social capital return deficit simultaneously contribute to their earnings disadvantage in China's urban labor market relative to their male counterparts.

Key Words: Social capital, gender-earning differentials, social capital deficit, social capital return deficit, China.

[1] Ph. D candidate, Department of Sociology, School of Humanities and Social Science, Xi'an Jiaotong University, email: cheng.aca@gmail.com;

[2] Assistant Professor, correspondence author, Department of Sociology, School of Humanities and Social Science, Xi'an Jiaotong University, email: shulitongji1818@163.com.

1. Introduction

Earnings differential by gender is a prominent issue worldwide, and is also an important research area of studies on labor market and social inequality. Among existing studies on gender-earning differentials across many societies, gender-labor productivity differentia [3] and gender occupational segregation are two primary reasons(Meng, 1998)[4]. Accordingly, human capital theory[5] and gender occupational segregation theory [6] are two theoretical tools to explain inter-group earnings differential (Card, 1999; Reskin, 1993). But both theories have met challenges in the rising Chinese labor market.

Using the Jsnet data set conducted in 2009, we attempt to use a social capital perspective to explain the gender-earning gap in China's labor market. A social capital perspective with respect to gender earnings differential in urban China's labor market has been rarely found in substantial existing studies on the social capital effect on inter-group differentials labor market outcomes (e.g., earnings). There are two questions will be discussed in this paper. First, why does social capital affect earnings gap between genders in urban China's labor market? Second, to what extent, after all the other influential indicators are controlled, the earnings gap can be explained by different accesses to (social capital deficit) and returns on social capital (social capital return deficit) between genders.

This paper primarily consists of four parts as below. The first part deals with a systemic literature review on the gender earnings differentials in China's urban labor

[3] A gender difference in productivity refers to differences in human capital and in other demographic characteristics related to earnings. (Meng, 1998).

[4] According to Meng (1998: 743), gender-earning differentials can be attributed to three dimensions, including 'a gender-labor productivity differential, intra-occupational gender wage discrimination, and occupational segregation' within economic researches.

[5] According to human capital theory, individuals' earnings are heavily determined by productivity. It implicitly applies to an ideally non-discriminatory context. In such a context, gender earnings differential can be attributed to differences in productivity-related characteristics between genders. In a discriminatory situation, by contrast, male-female earnings gap should be explained by many other components, such as discrimination(Gardeazabal & Ugidos, 2005).

[6] Gender occupational segregation theory assumes that the segregation by gender can be attributed to an explained part, which is differential individuals' endowments between genders, and a part unable to be explained by these(Meng, 1998).

market, and the effect of social capital on this matter. Three hypotheses are developed on the basis of the discussion. The second part introduces data and statistical methods, with a particular attention to two econometric models, the improved Oaxaca-Blinder decomposition technique (discrimination at the mean) and unconditional quantile regression decomposition (discrimination at quantiles). Empirical results and discussion are presented in part 3, including descriptive statistics, kernel density estimates of log-earnings, OLS estimates of earnings determination function, unconditional quantile regression and decomposition results. The last one part 4 has a summary.

2. Literature Review

2.1 Traditional perspectives and their limitations

Human capital theory and gender occupational segregation theory, which had been briefly discussed above, are two mainstream theoretical tools to explain gender earnings differential. But they all both suffer serious challenges in current urban China labor market.

On the one hand, for more than three decades of market reforms Chinese women have benefited greatly from the country's continuously growing investments in education as the gender gaps in educational attainment at all levels have narrowed to nearly nil(Zhang & Chen, 2013). Accordingly, human capital theorists would expect a reduced gender-earning gap. On the contrary, several studies show that earnings differential by gender have significantly increased overtime(Appleton, Song, & Xia, 2005; Chi & Li, 2008), since equivalent returns to human capital cannot be realized because of market imperfections(Wang, 2012)[7]. Thus, existing studies have been

[7] During the process of economic reform, what determines individuals' earnings in China has transformed from a state-set earnings scales system that attempted to reduce earnings disparity to a competitive labor markets system in which individuals' earnings to some extent depends on their investment in human capital. This tendency has gradually become prevalent especially since the mid-1990s when the labor markets gives more preference to laborers with higher level of human capital (e.g., skills, experience, and education)(Brandt & Rawski, 2008; Price & Fang, 2002). However, as Price and Fang argue, with stronger demand for laborers' human capital in the labor markets, there might be greater social inequality regarding individuals' economic opportunities and rewards(Price & Fang, 2002).

inconclusive as to the direction of change. Due to its focus on personal characteristics, human capital theory represents an individual-level explanation about gender earnings inequality in the urban labor market. It only provides part of the explanation for the observed earnings gap between genders.

Gender occupational segregation theorists, on the other hand, would interpret the increasing Gender-earning gap as a result of China's labor market being increasingly segmented by sex roles. In a segmented labor markets, females tend to and take feminine occupations in the secondary labor markets, whereas their male counterparts normally concentrate in high-pay jobs in the primary labor markets. While this may be true in contemporary urban China, it has remained unclear exactly what micro mechanisms through which females and males are assigned to different types of occupations. Clearly, as an structural-level analysis of gender earnings inequality in the urban labor markets, gender occupational segregation theory only focuses on the structural barriers, rather than on individuals' own deficiency shaping male-female earnings gap(Wang, 2012).

Therefore, there has remained an 'individual-versus-structural dichotomy of explanations' about gender earnings gap among extensive literature(Lin, 2001). This is why there still has been a debate regarding which component, human capital or gender occupational segregation contributes more to male-female earnings gap in urban China's labor market. These two lines of arguments share one thing in common, which is either human capital theory(Chi & Li, 2008; Li, Lai, & Luo, 2013; Wang, 2005; Xiu & Gunderson, 2013) or gender occupational segregation theory[8](Wu & Wu, 2009) can only explain a small part of the gender-earning differentials in China's urban labor market, and discrimination should be the primary reason for it instead.

Recent decades have witnessed an increasing gender earnings differential in China's

[8] Wu and Wu's study focuses on the relationship between gender occupational segregation and social stratification. It is found that though earnings differential can be part explained by gender occupational segregation, its explanatory power is very limited. In particular in China's non-state-owned sectors, only 6.25% of earnings differential between genders can be contributed to it(Wu & Wu, 2009) .

urban labor market, which has interested many researchers(Messinis, 2013)[9]. Both human capital theory and gender occupational segregation theory have met challenges in the rising Chinese labor markets. How can we understand the increasing gender-earning gaps in urban China's labor market?

2.2 Social capital model on gender earnings differentials

Though these is little discussion on the relationship between social capital and social inequality, substantial researches indicate that social capital has a significant income effect, and it is a crucial factor determining individuals' social and economic status on Chinese labor market (Bian, 2004; Chang, Wen, & Wang, 2011; Knight & Yueh, 2008; Lu, Ruan, & Lai, 2013; Yuan & Chen, 2013; Zhang & Cheng, 2012). According to social capital theorists, the social resources/social capital to some extent shape individuals' status attainment (e.g. employment earnings) and mobility process(Lin, 2001). Following this logic, differences in social capital may differentiate individuals in earnings and lead to inter-group earnings gap among them. In the case of a comparison between genders, differences in social capital may contribute to gender earnings gap. This perspective primarily offers two lines of argument dealing with females' disadvantages in earnings relative to their male counterparts (Lin, 2000).

The first line of argument is *capital deficit*, which holds that females have smaller accumulation of social capital than males. China has a strong patriarchal culture in which traditional gender roles persistently influence people: men bring resources from outside to home and women work inside of it. This is true today even after market reforms(Lin, 2000; Yang, 1994). In addition, the gender division of labor has unavoidably constrained Chinese females' investment in social capital. This is especially the case when they have dependent children. At this stage, females' social

[9] The prominent instances come from some empirical diachronic studies of the earning-gap between genders and its dynamics throughout the economic transition process in urban China. For example, earnings of females relative to those of males are observed to drop from 84.4% to 82.5% within fewer than ten years (1988-1995) (Gustafsson, Li, & Sicular, 2008). Meanwhile, the gender earnings differential is found to vary at different time points during the economic reform in urban China. According to Appleton et al.(2005) , for instance, the male-female earnings gap first broadened at the early stage (1988-1999) and narrowed at the later phase (1999-2002).

networks are seriously narrowed and constrained. Therefore, it is not surprising to see Chinese women, relative to women living in developed countries, tend to be disadvantaged in social capital investment and social capital mobilization.

The second argument is *return deficit*, which assumes that females receive lower returns to social capital than their male counterparts in contemporary China. They differ from each other in motivations to invest in social capital. Specifically, males, one the one hand, are mostly associated with productive activities and the public arena, and therefore their motivation to invest in social capital is instrumental; on the other hand, females are normally associated with reproductive activities and the private sphere, and their motivation to invest in social capital is emotional. According to Ibarra, females tend to rely on this sort of social capital for friendship and mental support(Ibarra, 1992), which in turn, reinforces their close attachment to family rather than the labor market(Browne, 2000). In contrast, males' social networks are significantly composed of more friends, advisors, and coworkers than kin(Fischer & Oliker, 1983; Marsden, 1987; Moore, 1990). This gender difference may explain why women suffer a lower rate of returns to social capital, even if they have the same accumulation of social capital as their male counterparts.

Based on these two lines of argument above, it is clear that in contemporary China females actually suffer double jeopardy associated with social capital relative to their male counterparts, that is, a lack of accumulation of social capital (*capital deficit*) and of returns to social capital (*return deficit*) as well. One of the penalties of this double jeopardy is most females' lower earnings than males. We propose three hypotheses below.

H1. In contemporary urban China, females have smaller stock of social capital than males.

H2. Females' inadequate stock of social capital relative to males leads to gender earnings differential in contemporary China's urban labor market.

H3. Lower returns to social capital for females compared with those for males also

generates gender earnings differential in contemporary China's urban labor market.

3. Data, Variables and Method

3.1 Dataset and Samples

Jsnet (Social Networks and Job Search Survey) 2009 dataset, a large-scale household survey is used for analysis. Conducted in 2009 within eight major cities in China, this full survey includes hundreds of questions covering a broad range of social and political issues, offering comprehensive examination of multidimensional societal issues in urban China and providing demographic and socio-economic information. In particular, many questions are closely related to the topic of social networks and job search. The total number of samples is 7,102. We restrict our attention to respondents who have been employed or self-employed in China's urban labor market at the time of the survey. Any observation that has missing information on selected variables is dropped. As a result of selection, the working sample is reduced to 4,102 cases.

3.2 Variables

3.2.1 Dependent Variable: Hourly Earnings

In this paper, the dependent variable is the result of the natural logarithm transformation of hourly earnings. Earnings here are the sum of income received in four forms from the current job in 2009, including regular wages, bonuses, subsidies and all other sources of income.

3.2.2 Independent Variable

(1) Human Capital and gender occupational segregation

Two indicators, exact years of schooling and years of work by the year of 2008, are used to measure human capital. In addition, data about the number and frequency of females in each occupation in contemporary China can be accessed in terms of Chinese Census Data (2000). An occupation is defined as *feminine occupation* if it has 70 per cent and above females. Then variable occupation is recoded into a dummy variable, with 1 representing feminine occupation and 0 referring to other

occupations.

(2) Social capital

Considering the particularity of Confucian relationism(Bian, 2010), 'Chinese new-year greeting networks'(Bian, 2004; Bian & Li, 2000; Zhang & Cheng, 2012) measured by positional generator(Lin, 2001) is used as proxy for social capital. *Chinese new-year greeting networks* is measured by five indicators, which include: (1) the number of occupations; (2) the number of work unit (*danwei*) (Lin & Bian, 1991) (3) upper reachability(Lin, 2001); (4) the mean value of network resources; (5) ties with social elites (e.g., government officials, managers, and professionals)(Bian, 2004). In purpose of clarification, we do a composite index of social capital in terms of the combination of five indicators through a factor analysis.

(table 1 about here)

Table 1 shows the basic statistical information about our factor analysis. The relative contributions of these seven indicators to the generated factor score are suggested by factor loadings. They are reported in descending order as below: the mean value of network resources (0.96), the number of occupations (0.94), ties with social elites (0.91), the number of work unit (*danwei*) (0.81), and upper reachability(0.78). This order demonstrates that network resources (e.g. political powers, material capitals) and network diversity are two most important components for social capital. We standardize the common divisor from 0 to 10. This common factor, which refers to individuals' Chinese new-year greeting networks, can explain over 78% of all variances of these five indicators.

3.3 Statistical Method: Econometric Models

There are two statistical methods to measure the gender earnings discrimination, which can be interpreted as the effect of social capital on the gender earnings differential. First, discrimination at the mean: the improved Oaxaca-Blinder decomposition technique(Blinder, 1973; Jann, 2008; Oaxaca, 1973) is employed to analyze to what extent the social capital can be attributed to the mean gender earnings

differential(Lin, 2001; Messinis, 2013). This method is developed from the conventional OLS estimates of earnings determination function. Due to its focus on the average earnings between genders, however, this method only contributes to the measurement of discrimination at the mean of the observed distribution of earnings rather than to that of other distributional statistics, for instance, quantiles, gender earnings differential at other locations of the earnings distribution(Gardeazabal & Ugidos, 2005; Messinis, 2013).

Second, discrimination at quantiles: unconditional quantile regression decomposition(Firpo, Fortin, & Lemieux, 2009) goes beyond the conventional Oaxaca-Blinder decomposition technique by focusing on the gender earnings differential at diverse locations across the entire earnings distribution other than the median alone(Messinis, 2013). Following from the Recentered Influence Function (RIF) regression methods developed by Firpo et al.(2007; 2009), the RIF unconditional quantile regression decomposition[10] helps to modify the traditional standard Oaxaca-Blinder decomposition, and allows us to decompose the gender earnings differential at various points of earnings distribution into the explained part attributable to the gender differences in productivity characteristics and the unexplained part due to differences in the returns to these characteristics(Messinis, 2013). Simply said, it enables us to estimate the effect of social capital in earnings attainment throughout income distribution, namely, among people with varying level of income. Specifically, unconditional quantile regression decomposition helps to examine if the degree of gender earnings differential varies with different quantiles across the earnings distribution where we do comparisons between genders. In terms of this econometric method, we can identify if the '*sticky floor effect*'[11] or '*glass ceiling effect*'[12] exists in China's urban labor market for females(Gardeazabal &

[10] See Magnani and Zhu (2012), Messinis (2013) for review about the relative advantages of the unconditional quantile regression relative to the conditional regression.

[11] The *sticky floor effect* is defined as a greater gender earnings differential taking place at the bottom of the earnings distribution, where female at lower- income brackets have lower earnings than their male counterparts(Messinis, 2013).

[12] The *glass ceiling effect* is defined as a wider gender earnings differential occurring at the top of the earnings distribution, where female classified as high earners get lower earnings than their

Ugidos, 2005). At the same time, the RIF unconditional quantile regression decomposition helps us to examine the importance of each variable in explaining the gender earnings differential and its subcomponents, whereby allowing us to see the explanatory power of each variable with respect to the gender earnings differential(Messinis, 2013).

According to Lu et al.(2013), the purpose of decomposition is to investigate the relationship between the variations in outcomes (i.e., gender earnings differential) and two comparative groups' differentials endowments/characteristics (i.e., productivity)[13] and their differential returns to these characteristics (i.e., discrimination)[14](Lin, 2001; Messinis, 2013). Considering that this paper attempts to shed light on the role played by social capital in explaining earnings-gap between males and females, gender earnings differential, thus, can be decomposed into two sources, differences in social capital deficits and differences in social capital return deficits between genders(Gardeazabal & Ugidos, 2005; Lu et al., 2013).

Before these two statistical methods, ordinary least squares (OLS) regressions are performed. As discussed above, log transformed hourly income is the dependent variable, and several demographic characteristics as well as social capital are independent variables. In order to estimate the effect of social capital on differential earnings between genders, a sequence of regression is used. Control variables (i.e., region, type of *danwei*, marital status), occupational gender segmentation, human capital, and social capital are put into the regression in sequence. Then separate models are performed for males and females, which allows us to see the relative importance of social capital for each group(Lu et al., 2013). The regression

male in the same income brackets (Messinis, 2013).

[13] This is also called *characterized effect, composition effect* or *endowment effect*, and refers to the earnings gap because of differences in labor markets characteristics between genders. It is related to the second hypothesis in this paper, social capital deficit hypothesis(Messinis, 2013) (Magnani & Zhu, 2012). When decomposing the gender earnings gap, the portion that cannot be explained by differences in endowments/productive characteristics is generally defined as 'discrimination'(Lee, 2012).

[14] This is also termed as *coefficient effect, structure effect* or *discrimination effect*, and indicates the earnings gap due to differences in returns to labor markets characteristics. It is related to the third hypothesis in this paper, social capital return deficit hypothesis(Magnani & Zhu, 2012; Messinis, 2013).

coefficients are interpreted as 'the percentage change in income with changes in the covariants'(Lu et al., 2013). Due to its focus on the mean of the earnings distribution, the OLS method is unable to display the contribution made by the independent variables to the shape of the entire earnings distribution(Messinis, 2013).

Besides, descriptive statistics are initially done to show the basic information about each variable in this study. Additionally, the kernel density estimates of logarithmic hourly wages are used to describe males and females' log-earnings distributions in 2009. It also helps us to identify the male-female earnings gap across the income distribution and the contrasted earnings distributions across gender(Magnani & Zhu, 2012; Messinis, 2013).

4 Results and Discussion

The descriptive statistics of variables are reported in Table 2. Specifically, this table provides basic information about each variable, including the mean (Column 2), standard deviation (Column 3), notes on values (for ordinal variables)/recoding (for nominal variables) (Column 4), and their association with log transformed hourly income (Column 5). We then had separate mean of each variable for males and females (Column 6 & 7), with statistical tests of the differences (Column 8).

(table 2 about here)

This table first shows the earnings differential by gender. The mean hourly wage for the total sample is 19.7 *yuan*, and ranges from 0.93 to 291.7 *yuan*. Its degree of variation is more than one (21.5/19.7), which represents a substantial income disparity in urban China. Its Gini coefficient is estimated to be 0.45, crossing the international warning line of 0.40. As for mean earnings difference by gender, males are reported to earn 22.0 *yuan* per hour, whereas females have 17.0 *yuan* as hourly wage and earn only 77% relative to their male counterparts. The difference is statistically significant, demonstrating that the study of gender earnings differential is of great importance in urban China. This result is quite close to the figure calculated in a recent study by Li and Song, where they, in terms of a nationally representative survey conducted in

2008 in China, assume that males earn 26% more hourly wages than females(Li & Song, 2013).

We then focus on the association between each independent variable and log transformed hourly income. The indicator of social capital, which is *Chinese new-year greeting network* is both highly statistically significant with earnings. One measure of human capital, educational attainment has the highest correlation coefficient (0.46) to explain earnings, whereas seniority, another measure of human capital, with smaller coefficient (-0.15) is negatively significantly related to earnings. This finding suggests a particular relationship between human capital and income in transitional China, within which seniority (work experience) might be devalued whereas physical strength and health status play more important roles in wage determination. This is consistent with the argument about 'human capital failure'(Li & Zhang, 2003). The coefficient of the association between gender occupational segregation and earnings is -0.10, indicating income of the feminine occupations are lower than that of the non-feminine occupations. In addition, indicators of region, work unit (*danwei*) and marital status are all significant. It is found that earnings in prosperous coastal cities are higher than in hinterland, individuals employed in the system (*tizhinei*) earn much higher than those out the system (*tizhiwai*), and married people have higher income than those unmarried.

Table 2 also displays the preliminary statistics of differences between males and females in terms of each independent variable. We find a noticeable difference between genders in social capital. As for the stock of social capital, the mean of males is 4.46 and that of females is its 92%, which is 4.09. It significantly indicates that females are disadvantaged in both accessing to social capital relative to males. There is little variation between two genders in educational attainment, as the mean years of schooling for males and females are the same (13.2) and statistically insignificant. This finding confirms our expectation above regarding the gender gaps in educational attainment at all levels have narrowed to nearly nil since the market economic reform in urban China. Thus, it is not surprising to see human capital cannot explain gender

earnings gap even though educational attainment is regarded as the most important predictor of individuals' earnings. Third, the gender difference in distribution of seniority is statistically significant, with males being 16.5 and females 15.1. Its negative association with earnings suggests its inability to explain gender earnings gap and instead, it might make us underestimate the actual earnings gap between genders. The fourth finding pertains to gender difference in gender occupational segregation, with males working in feminine occupations consisting of 1% and females employed in male-dominated occupations 9%. The lower mean of earnings in female-dominated occupations than male-dominated ones suggests that gender occupational segregation might be an important predictor of male-female earnings gap. In addition, the relationship between mean of gender earnings gap and marital status and regions are significant. On average, those who get married earn less than those who do not. Among people working in the coastal cities, males earn more than females. This might be due to males more preference to mobilize/migrate to coastal regions of China where the average earnings level is higher than hinterland for higher economic returns than their female counterparts. Work unit (*danwei*) is found not to be an crucial factor to explain gender earnings differential in urban China.

(table 3 about here)

As discussed above due to the advantages of measurement of discrimination at the quantiles relative to that at the mean, most recently there has been a shift from the conventional OLS estimates of earnings determination to quantile regression among worldwide studies on gender earnings differential(Ge & Zhao, 2010). Some empirical evidence in the context of urban China confirms the need for this focal shift by observing the gender earnings differential across distribution. For instance, the *sticky floor effect* is unexpectedly found in China's urban labor market, as earnings disparity between genders appears to be more pronounced in the bottom part of the earnings distribution than in the top part(Chi & Li, 2008; Zhang, Han, Liu, & Zhao, 2008). By contrast, according to Wang (2010), quantile estimates of gender earnings gap vary depending on the target group. Within the male migrant group, the *glass ceiling effect*

is more salient, while among the group of urbanites, the *sticky floor effect* becomes prominent.

Table 3 reports earnings at selected quantiles across the distribution for each gender. The fourth and seventh columns respectively show what percentage the (log) hourly earnings of females takes up that of their male counterparts. We find that females, whether in terms of hourly earnings or logged hourly earnings, are disadvantaged relative to males at every selected quantile across the distribution. Thus, females have to encounter difficulties when moving up from the bottom and the likelihood of their reaching higher level of income is definitely low. This might explain why females experience severe *glass ceiling effect* (Cotter, Hermsen, Ovadia, & Vanneman, 2001) in urban China's labor market. The observation that their disadvantages in earnings tend to be more serious at the very top end of the distribution (60%) than at the bottom confirms this effect for females. The *sticky floor effect* cannot be strongly supported, since females' earnings are around 80% of that for males at lower quantiles.

(Figure 1 about here)

We present a graphical representation of our quantile measure of gender wage differential in Figure 1, which shows the kernel density estimates of (log) hourly wages for each gender. It enables us to better observe the contrasted earnings distributions between genders and therefore, contributes to our understanding of the gender earnings differential in urban China's labor market. The right-hand side of this figure demonstrates the results after adjusting (i.e., logarithmic hourly wages) and the left part shows the unadjusted results. The real lines represent the distributions of hourly earnings for males, and dotted lines show those for females. It is clear from the right-hand side of this figure that the proportion of females is higher than that of males at lower percentiles, but when moving up the hourly wage distribution, females' number reduces monotonically. This pattern stays similar after adjusting the hourly wage in terms of logarithm. In the left-hand side of the figure, distribution of logged hourly wage of males and females respectively follow normal distribution. Thus,

earnings gap and its distribution by gender are both substantial, and females suffer from *glass ceiling effect* in urban China's labor market.

(table 4 about here)

Tables and figures above have thus far provided basic information about each variable, and associations between variables. In order to test Hypothesis 2 and Hypothesis 3, we run ordinary least squares (OLS) regressions with full samples (Mode 1-5), males (Model 7) and females (Model 6) as samples. Table 4 reports the results. It totally includes seven models. The first model only considers gender, and from the second to the fifth, variables, including control variables (i.e., region, work unit, marital status), gender occupational segregation, human capital, and social capital are included in order into regressions. Such a sequence of regression with and without the indicator of social capital is specifically designed to echo the theoretical arguments discussed above regarding which factor has the greatest explanatory power for gender earnings differential on the one hand, and on the other hand, to investigate its overall effect on male-female earnings gap. A particular attention is paid to three factors, including human capital, gender occupational segregation, and social capital. We find that from Model 1 to Model 5, R square persistently gets bigger as the number of variables included into regressions increases and BIC value decreases. The observation that R square reaches 36% and BIC value drops to the minimum after adding social capital to the regression proves the success of the present OLS regression of wage determination.

The coefficient of gender in Model 1 is 0.228 while in Model 2 where control variables are included, it reduces to 0.200. But gender earnings gap only associate with region, and deal nothing with work unit or marital status. Model 3 reports that gender occupational segregation is an important predictor of male-female earnings gap. Taking into account this variable makes the coefficient of gender drop to 0.181 by 9.5%. A negative relationship between them suggests that earnings of feminine

occupations are 22% lower than that of non-feminine occupations[15]. We have an additional variable in Model 4, human capital, which is measured by two indicators, seniority and educational attainment. They are both statistically significant predictors of earnings. Individuals' earnings negatively associate with seniority and positively with educational attainment. The coefficient of gender increases by 18.2% to 0.227. Thus, it is clear that females' higher human capital to some extent underplays the actual gender earnings gap. Moreover, our observation that the coefficient of gender occupational segregation reduces after controlling for human capital suggests that human capital contributes part of the formation of gender occupational segregation.

In Model 5, the indicator of social capital is included, and is found to be statistically significant (sig. < 0.001). Gender earnings differential drops from 0.216 to 0.188, with a reduction of 13.0%. This reveals that when social capital is taken into account, earnings gap between genders greatly reduce nearly by 14.2%, and thus social capital plays a significant role in male-female earnings differential in urban China. Meanwhile, the effect of gender occupational segregation becomes insignificant. These results not only support hypothesis 2 regarding social capital's importance to drive up male-female earnings gap, but also show that social capital can explain earnings differential by gender caused by the gender occupational segregation .

We do models respectively for males and females to examine the differences of the estimates, which provide an insight into the relative importance of social capital for each gender. Statistical tests of the differences are done. It is observed that whether males or females, social capital plays a significant in wage determination. It differs little in gender,. This preliminarily confirms hypothesis 3. In addition, gender occupational segregation does not affect females but males, which indicates that males may have lower earnings if they transfer to feminine occupations, but this case does not apply to females. The measure of years of working, seniority, does not relate to females' earnings, but negatively affects males, indicating that physical strength and health status matter in earnings gap among male group rather than females.

[15] It is calculated by 1-exp (-0.240).

Marital status significantly affects male and females' earnings. But its effect for males is greater than that for females. This finding runs against our finding from Table 2, this inconsistence suggests the need for the OLS regressions.

The OLS regression, in general, generates some key findings. After considering differences in other variables, the role of social capital in earnings stands out and earnings gap between two genders becomes substantially smaller. Thus, it is assumed that males and females' differential access to social capital contributes to gender-earning gap. Moreover, social capital is an important predictor of earnings differential by gender caused by the gender occupational segregation, as differences in social capital lead to male and females entering into different occupations, which generates their differential earnings.

(table 5 about here)

As discussed above, in order to examine the gender earnings differential at different quantiles across the entire earnings distribution other than only the median, the quantile regressions are performed and the results are presented in Table 5. It is found that when moving up the distribution, some variables remain significant while others become not, and coefficient estimates for explanatory variables at each selected percentile also change. Specifically, the observation at the 10^{th} percentile, coefficient estimate of gender is 0.202, and amounts to 0.193 around at other percentiles indicates that the unexplained portion of gender-earning differentials gets more serious at lower tail of the distribution. Clearly, gender discrimination appears prevalent among low-income groups. In addition, variable work unit (*danwei*) is insignificant across the whole earnings distribution but only significant at the 25^{th} percentile, though individuals working within the system earn higher than those out the system. A negative effect of seniority on earnings difference reduces as percentiles increase, and when up to the 75^{th} percentile, its effect no longer exists. This finding reveals greater importance of physical strength and health status to middle class. After netting out the differences in social capital and human capital, gender occupational segregation becomes an insignificant predictor at every percentile, which further confirms that

human capital and social capital are both important micro mechanism through which gender occupational segregation forms. Lastly, social capital remain highly statistically significant across the whole distribution, indicating that the effect of social capital on earnings are comprehensive rather than limits to some income groups only. Furthermore, a positive effect of social capital on earnings becomes stronger as percentiles increase, which indicates that social networks capital may be more useful for rich people than those who are poor.

(table 6 about here)

We proceed with showing the quantile regression results for male and female subsamples in Table 6. It reports two findings. First, the indicator social capital, Chinese new-year greeting networks is significant for males and females across the earnings distribution. We notice that males have higher returns to social capital than females when among low-income and high-income groups, for instance. At lower tail of the distribution, return to social capital is higher for males than females. Females are found to be disadvantaged at every percentile relative to their male counterparts with respect to social capital, except 50^{th}. This finding again approves that females might face social capital return deficit, and this case is more easily found among low- and high- income groups. Therefore, Hypothesis 3 is confirmed and elaborated. Second, a pattern holds true for both males and females, which is returns to social capital increases with percentiles. For example, returns to males' social capital is 0.064 at 10^{th} percentile and substantially increases to 0.111 at 90^{th} percentile.

(table 7 about here)

Thus far, we have got preliminary findings that seemingly support Hypothesis 2 and Hypothesis 3, for instance, females' disadvantage in the stock of social capital relative to males' leads to an increase in gender-earning gap by 14%, and the return deficit of social capital for females reinforces their earing gap between males, particularly at the top end and lower part of earnings distribution. But these findings appear to untenable. First, a wider gender-earning gap by 14% and its explanatory power might vary as the

sequence of including variables changes. Second, we are unclear about the ranking of the effect of social capital on male-female earnings gap among all independent variables. Third, it remains unknown that how much social capital return deficit contributes to gender-earning gap, and that we did not do statistical tests of the differences in social capital returns between genders.

In order to solve these questions and explore the hidden reasons for the varied male-female earnings gap throughout the distribution, decomposition approach to the inter-group earnings gap is used. The gender-earning differentials at the mean and across distribution are decomposed into *characteristic effects* explained by gender differences in productive characteristics and *coefficient effects* by two genders' differential returns to these characteristics. Table 7 shows the results from mean decomposition (Model 1) and decomposition at selected quantiles (Mode 2-6), including 10^{th}, 25^{th}, 50^{th}, 75^{th} and 90^{th} percentiles of distribution, which respectively represent lowest, second lowest, middle, second highest, and highest income groups.

There are four parts in Table 7, including overall decomposition of hourly earnings by gender, gender-earning gap due to differences in social capital possession between genders, gender-earning gap as a result of males and females' different returns to social capital, and contribution made by each variable to male-female earnings differential.

Specifically, in the third part, whether mean decomposition or quantiles decomposition, social capital statistically affects gender-earning gap in a positive way. In particular, the influence of social capital grows across the quantiles, and by contrast, human capital and gender occupational segregation, both of which are conventionally emphasized deal nothing with male-female earnings gap. Together with results from the second part, it is found that in Blinder-Oaxaca regressions (decomposition at the mean), the overall contribution of *characterized effect* to gender-earning gap is 17.1%, among which social capital deficit can explain 12.7%. The ratio of social capital's explanatory power to all independent variables' amounts to 80.1%. In RIF unconditional quantile regressions (decomposition at the mean), the fraction driven by

social capital becomes bigger with the percentile, for example, from 65.8% at lower percentile to 124% at upper of the distribution. At the same time, the relative ability of social capital to explain gender-earning gap among all independent variables gets stronger when moving up across the distribution, from 11.6% at the lower end to 13.7% at the upper part.

Table 7 also respectively shows the effects of human capital and gender occupational segregation on gender-earning gap. As for the *characteristic effect*, human capital measured by years of schooling and work experience does not affect male-female earnings gap. This is consistent with previous finding by Wu and Wu's research, which assumes that males and females tend to have equal educational attainment in China(Wu & Wu, 2009). Another predictor, gender occupational segregation has similarly weak effect on male-female earnings gap, and is insignificant in most cases.

All decompositions above suggest that in both Blinder-Oaxaca regressions and RIF unconditional quantile regressions, social capital deficit has the greatest explanatory power to gender-earning differentials among all independent variables considered in this paper. Therefore, Hypothesis 2 is strongly supported. Moreover, it is observed that as far as social capital deficit is concerned, it plays a bigger role at the upper rather than the lower tail of earnings distribution. Together with the argument of *glass ceiling effect*, we hold that social capital deficit might be the most important barrier to access high income for females.

Results reported in the fourth part can be used to test Hypothesis 3. In Blinder-Oaxaca regressions (decomposition at the mean), males' higher social capital returns than females might explain part of the gender-earning gap, but it is insignificant. An additional analysis in RIF unconditional quantile regressions (decomposition at the quantiles) reveals the hidden reason for females' disadvantage in social capital return deficit. At both lower and upper percentiles of earnings distribution, females have substantially lower return to social capital than their male counterparts, which significantly reinforces the earnings gap between them. But around the median, returns to social capital differ little between them. This suggests that gender

differences in social capital not only closely relate to *glass ceiling effect*, but also associate with *sticky floor effect*. Educational attainment shapes gender-earning gap in a negative direction, which can be interpreted as this way: gender inequality mostly turns to be less pronounced with an increase in years of schooling.

Therefore, Hypothesis 3 is confirmed, and of more interest is that gender-earning gap result from females' social capital return deficit relative to their male counterparts does not apply to middle class but to those of low- and high-income levels.

5 Conclusion

Unlike conventional studies that use human capital theory and gender occupational segregation theory to explain gender-earning differentials, this paper, in response to changing Chinese urban labor market, adopts a social capital perspective. The Jsnet 2009 data set is used to answer two specific questions, which are, why does social capital affect earnings gap between genders in urban China's labor market? And, how much male-female earnings gap can be explained by differences in social capital deficit and social capital return deficit between genders after controlling for other factors. The improved Oaxaca-Blinder decomposition and unconditional quantile regression decomposition techniques are used as primary statistical methods.

We find a few key findings below. First, it is found that after netting out the effects of the effects of other influential factors, like indicators of human capital and gender occupational segregation, social capital is the most crucial predictor of gender earnings gap in China's urban labor market. On average, female workers get 77% of males' hourly earnings, and earnings gap between genders is much larger at 99% quantile than at others. Females have smaller possession of social capital than their male counterparts, but differ little from males in human capital measured by educational attainment. Second, Oaxaca-Blinder decomposition results show that after considering differences in other influential factors, females' social capital deficit can explain 12.7% of gender-earning gap, amounting to 80.1% of the portion explained by all independent variables. Thus, social capital is the most crucial predictor of

gender-earning differentials in urban China's labor market. Third, the RIF unconditional quantile regressions decomposition results show that in each income level, social capital deficit affects gender earnings gap in a stable and significant way. Gender differences in social capital and the contribution made by social capital to gender-earning gap are respectively bigger at upper tail of the distribution. Moreover, males have higher return to social capital than their female counterparts among both low- (10% percentile and below) and high-income (90% percentile and above) groups. This finding implicitly suggests the coexistence of *sticky floor effect* and *glass ceiling effect* in China's urban labor market. Fourth, decomposition at the mean and at the quantiles both indicate that human capital only has coefficient effect and no characterized effect on male-female earnings gap, with females having higher returns to human capital than males. We do not find any evidence regarding an extra effect of gender occupational segregation on gender earnings differential after considering differences in human capital and social capital. It is assumed that females' social capital deficit might be one of the primary reason for their employment in low-income occupations. Accordingly, we need to explore other factors to explain their disadvantage in China's urban labor market in future studies. In general, three hypotheses proposed in this paper have all been supported. In other words, females not only are disadvantaged in access to social capital and encounter social capital deficit, but also suffer social capital return deficit, since they have lower returns on social capital compared with their male counterparts.

Females' double jeopardy in social capital deficit and social capital return deficit might be explained by their weaker motivation than males to invest in social capital, especially in that of instrumental function. Such a lower motivation for females is substantially shaped by gender ideology in Chinese society. We assume that it is through the gender socialization that Chinese males and females, like those living in other societies, learn to conform to and internalize gender ideology, such as gendered expectations and division of labor. Once their internalization is formed, these social rules are imposed by themselves rather than by external power, and remain relatively

stable over time (Wang, 2012). As a result, males and females differ from each other in motivations with respect to social capital investment, and females mostly voluntarily choose to have emotional ties rather than instrumental ties with others.

Thus, it is clear that as an informal institutional structure in contemporary China, gender ideology differentiates two genders' patterns of interaction, and their ways to invest in and mobilize social capital. Males and females' access to and returns on social capital are therefore quite different, which lead to gender-earning differentials in urban China's labor market. As Wang (2012) argues, socially-defined roles for both men and women maintained and reinforced status disparity between men and women. Past decades especially after the economic reform have witnessed the state's persistent commitment to social inequality and its anti-discrimination practices (e.g., laws and policies) in China. However, China is a country with ingrained traditional ideologies or gendered expectations(Leung, 2003; Maurer-Fazio & Hughes, 2002; Patrickson, 2001), together with failures of many monitoring mechanisms and punishments in urban China to be strictly and effectively implemented(Cooke, 2005; Woodhams, Lupton, & Xian, 2009), females are still treated simply as secondary and inferior in Chinese culture and discourse(Gaetano & Jacka, 2004). As Chen argues, rapid economic development in China can change the feudal tradition, but there might be a lag in individuals' attitudes and behaviors(Chen, 2005).

To sum up, the mechanism through which gender ideology leads to gender-earning differentials can be interpreted in the following way: the persistence of gender ideology in contemporary China generates gendered expectations and division of labor, and thereby shapes differences between genders in their ways of interaction in the society. Males are encouraged to actively involved in instrumental interaction, whereas females, by contrast, are thought to confine to emotional interaction only. Accordingly, males have different types of social capital possession and mobilization from females, and therefore, males have greater probability of getting high income than females.

This paper makes two contributions. First, this paper, by studying male-female

earnings gap from the social capital perspective, and showing the significance of social capital to social inequality, contributes to extant researches on inter-group earnings differential, especially between genders. The social capital lens overcomes two extremes in studies on social inequality (i.e., structure-based and individual-based perspectives), and in this context social capital perspective works as a connection between individual and structural dimensions of analysis of inter-group earnings differential. On the one hand, unlike gender occupational segregation theory that focuses on structural-level analysis of gender earnings inequality in the urban labor market, social capital theory provides a refreshing explanation about social structure and earnings inequality from a micro perspective. Of more interest is that part of earnings differentials between genders caused by gender occupational segregation can be attributed to social capital. In other words, males and females differ from each other in social capital that may lead to their entrance into different occupations, and as a result, there are earnings differentials between them. On the other hand, social capital theory, by emphasizing social interactions among individuals which are shaped by gender ideology in this paper, goes beyond human capital theory that represents a more individual-oriented explanation about gender earnings inequality in labor market, and offers a valuable relatively macro viewpoint. Differences in social interactions with others between genders lead to their differential access to social resources, whereby generating gender-earning differentials in China's urban labor market.

Second, examining the gender earnings differential across the log-earnings distribution in urban China's labor market enables us to see how earnings discrimination plays out at any quantile across the earnings distribution, that is, how earnings discrimination is distributed among the population(Gardeazabal & Ugidos, 2005). Such a quantile measure of gender earnings differential implicitly sheds light on recommendations for future policy directions. Given that many governments' policies that generally aim at reducing gender earnings inequality may have different effects at various quantiles across the earnings distribution(Gardeazabal & Ugidos, 2005), future policies are suggested to be implemented with more specific target

groups located in different income brackets, for instance, according to our findings, low-income females suggested by *sticky floor effect* and high-income females by *glass ceiling effect*. Another recommendation for future policy is inspired by the gender ideology as a significant mechanism to form gender-earning differentials. The Chinese government has directed lots of efforts to increase females' earnings in urban labor market by some formal institutional structure, such as improving educational opportunities for females, and achieved equalization of education in urban China. However, gender equality, including gender-earning equality cannot be fully attained without recognizing the importance of some informal institutional structure, such as gender ideology. Thus, a finding regarding the significant role of gender ideology addresses another way in addition to formal institutions to reduce earnings disparity between genders in urban China.

There are some limitations that we leave for future research. For instance, we only explore our research question in terms of data at a single point of time rather than cross-sectional. It is definitely true that in addition to 'still shots (synchronic)' focus, 'a moving film (diachronic)' (Anthias, 2013) is also of great interest, since the latter one will provide an accurate description of the trend in which changes in earning-gap between genders occur over years, and demonstrate the dynamics of gender-earning differentials in China's urban labor market.

References

Anthias, F. (2013). Intersectional what? Social divisions, intersectionality and levels of analysis. *Ethnicities, 13*(1), 3-19.

Appleton, S., Song, L. N., & Xia, Q. J. (2005). Has China crossed the river? The evolution of wage structure in urban China during reform and retrenchment. *Journal of Comparative Economics, 33*(4), 644-663.

Bian, Y. J. (2004). Origins and Effects of Social Capital for Chinese Urbanites: Network Viewpoints and Survey Findings. *Chinese Social Sciences, 147*(3), 136-146 (In Chinese).

Bian, Y. J. (2010). Relational Sociology and Its Academic Significance. *Journal of Xi'an Jiaotong University (Social Sciences), 30*(3), 1-6 (In Chinese).

Bian, Y. J., & Li, Y. (2000). Social Network Capital of the Chinese Family. *Hsinghua Sociological Review, 2*, 1-18 (In Chinese).

Blinder, A. S. (1973). Wage Discrimination - Reduced Form and Structural Estimates. *Journal of Human Resources, 8*(4), 436-455.

Brandt, L., & Rawski, T. G. (2008). *China's great economic transformation*. Cambridge: Cambridge University Press.

Browne, K. E. (2000). Work style and network management - Gendered patterns and economic consequences in Martinique. *Gender & Society, 14*(3), 435-456.

Card, D. (1999). The causal effect of education on earnings. In O. Ashenfelter & D. Card (Eds.), *Handbook of Labour Economics* (Vol. 3, pp. 1801-1863). North-Holland: Amsterdam.

Chang, K.-C., Wen, M., & Wang, G. (2011). Social Capital and Work among Rural-to-Urban Migrants in China. *Asian Population Studies, 7*(3), 275-293.

Chen, F. A. (2005). Employment transitions and the household division of labor in China. *Social Forces, 84*(2), 831-851.

Chi, W., & Li, B. (2008). Glass ceiling or sticky floor? Examining the gender earnings differential across the earnings distribution in urban China, 1987-2004. *Journal of Comparative Economics, 36*(2), 243-263.

Cooke, F. L. (2005). *HRM, work and employment in China*. Oxford: Routledge.

Cotter, D. A., Hermsen, J. M., Ovadia, S., & Vanneman, R. (2001). The glass ceiling effect. *Social Forces, 80*(2), 655-681.

Firpo, S. (2007). Efficient semiparametric estimation of quantile treatment effects. *Econometrica, 75*(1), 259-276.

Firpo, S., Fortin, N. M., & Lemieux, T. (2009). Unconditional Quantile Regressions. *Econometrica, 77*(3), 953-973.

Fischer, C. S., & Oliker, S. J. (1983). A Research Note on Friendship, Gender, and the Life-Cycle. *Social Forces, 62*(1), 124-133.

Gaetano, A. M., & Jacka, T. (2004). *On the move: Women in rural-to-urban migration in contemporary China*. New York: Columbia University Press.

Gardeazabal, J., & Ugidos, A. (2005). Gender wage discrimination at quantiles. *Journal Of Population Economics, 18*(1), 165-179.

Ge, Y., & Zhao, Y. (2010). Empirical Evidence on Gender Wage Gaps in China. *Collection of Women's Studies*(6), 87-93 (In Chinese).

Gustafsson, B., Li, S., & Sicular, T. (2008). *Inequality and public policy in China*. New York: Cambridge University Press.

Ibarra, H. (1992). Homophily and Differential Returns - Sex-Differences in Network Structure and Access in an Advertising Firm. *Administrative Science Quarterly, 37*(3), 422-447.

Jann, B. (2008). The Blinder-Oaxaca decomposition for linear regression models. *Stata Journal, 8*(4), 453-479.

Knight, J., & Yueh, L. (2008). The role of social capital in the labour market in China. *Economics Of Transition, 16*(3), 389-414.

Lee, L. (2012). Decomposing wage differentials between migrant workers and urban workers in urban China's labor markets. *China Economic Review, 23*(2), 461-470.

Leung, A. S. M. (2003). Feminism in transition: Chinese culture, ideology and the development of the women's movement in China. *Asia Pacific Journal of Management, 20*(3), 359-374.

Li, P., & Zhang, Y. (2003). From Life's Adversity: "Human Capital Failure" in Re-employing Laid-off Workers in North China. *Chinese Social Sciences, 146*(5), 86-101 (In Chinese).

Li, S., Lai, D., & Luo, C. (2013). Zhong Guo Cheng Zhen Zhi Gong Xing Bie Gong Zi Cha Ju de Yan Bian. In S. Li, T. Zuo & T. Shi (Eds.), *Zhongguo Shouru Chaju Biandong Fenxi* (Vol. IV, pp. 423-457). Beijing: People Press.

Li, S., & Song, J. (2013). Human Capital Investment and Gender-earnings Differentials in Urban China. In S. Li, D. Lai & C. Luo (Eds.), *Research Report on Income Distribution in China* (pp. 200-222). Beijing: Social

Sciences Academic Press (China).

Lin, N. (2000). Inequality in social capital. *Contemporary Sociology-a Journal of Reviews, 29*(6), 785-795.

Lin, N. (2001). *Social Capital: A Theory of Social Structure and Action.* Cambridge: Cambridge University Press.

Lin, N., & Bian, Y. J. (1991). Getting Ahead in Urban China. *American Journal of Sociology, 97*(3), 657-688.

Lu, Y., Ruan, D., & Lai, G. (2013). Social capital and economic integration of migrants in urban China. *Social Networks, 35*(3), 357-369.

Magnani, E., & Zhu, R. (2012). Gender wage differentials among rural-urban migrants in China. *Regional Science and Urban Economics, 42*(5), 779-793.

Marsden, P. V. (1987). Core Discussion Networks of Americans. *American Sociological Review, 52*(1), 122-131.

Maurer-Fazio, M., & Hughes, J. (2002). The effects of market liberalization on the relative earnings of Chinese women. *Journal of Comparative Economics, 30*(4), 709-731.

Meng, X. (1998). Gender occupational segregation and its impact on the gender wage differential among rural-urban migrants: a Chinese case study. *Applied Economics, 30*(6), 741-752.

Messinis, G. (2013). Returns to education and urban-migrant wage differentials in China: IV quantile treatment effects. *China Economic Review, 26*, 39-55.

Moore, G. (1990). Structural Determinants of Mens and Womens Personal Networks. *American Sociological Review, 55*(5), 726-735.

Oaxaca, R. (1973). Male-Female Wage Differentials in Urban Labor Markets. *International Economic Review, 14*(3), 693-709.

Patrickson, M. (2001). Introduction to diversity. In M. Patrickson & P. O. Brien (Eds.), *Managing diversity: An Asian Pacific Focus* (pp. 1-12). Milton: Wiley.

Price, R. H., & Fang, L. L. (2002). Unemployed Chinese workers: the survivors, the worried young and the discouraged old. *International Journal Of Human Resource Management, 13*(3), 416-430.

Reskin, B. (1993). Sex Segregation in the Workplace. *Annual Review of Sociology, 19*, 241-270.

Wang, M. (2005). Gender Wage Differentials in China's Urban Labor Market. *Economic Research Journal*(12), 35-44 (In Chinese).

Wang, Yixuan. (2012). *Double bane or double boon? The effects of gender and the household registration system (hukou) on female migrant workers' employment opportunities and earnings in contemporary urban China*. University of Saskatchewan, Saskatoon.

Woodhams, C., Lupton, B., & Xian, H. P. (2009). The persistence of gender discrimination in China - evidence from recruitment advertisements. *International Journal Of Human Resource Management, 20*(10), 2084-2109.

Wu, Y., & Wu, X. (2009). Occupational Gender Segregation and Gender Wage Gap in Urban China. *Sociological Studies, 24*(4), 88-111 (In Chinese).

Xiu, L., & Gunderson, M. (2013). Gender Earnings Differences in China: Base Pay, Performance Pay, and Total Pay. *Contemporary Economic Policy, 31*(1), 235-254.

Yang, M. M. (1994). *Gifts, favors, and banquets: The art of social relationships in China*: Cornell University Press.

Yuan, Z., & Chen, L. (2013). The Trend and Mechanism of Intergenerational Income Mobility in China: An Analysis from the Perspective of Human Capital, Social Capital and Wealth. *World Economy, 36*(7), 880-898.

Zhang, J. S., Han, J., Liu, P. W., & Zhao, Y. H. (2008). Trends in the gender earnings differential in urban China, 1988-2004. *Industrial & Labor Relations Review, 61*(2), 224-243.

Zhang, S., & Cheng, C. (2012). Markets Reforms and the Income Effect on Social Network Capital. *Sociological*

Studies, *27*(1), 130-151 (In Chinese).

Zhang, Z., & Chen, Q. (2013). College Expansion and Equalization of Genders to the Chance of High Education. *Sociological Studies*, *28*(2), 173-196 (In Chinese).

Table 1 Factor analysis results for social capital

Indicators	Factor Loading	The Characterized of Common Factor	
Number of occupations	0.94	Explained variance	0.78
Number of work unit (*danwei*)	0.81	Mean (s.d.)	4.29 (2.38)
Upper reachability	0.78	range	0-10
The mean value of network resources	0.96	The Value of KMO	0.79
Ties with social elites	0.91	N.	4157

Table 2 Descriptive statistics of variables and summary statistics by gender

Variable	Mean	Std. Dev.	Notes	Correlation with hourly earnings (log)	Mean for males	Mean for females	T Value
hourly earnings	19.7	21.5	min=0.93; max=291.7		22.0	17.0	7.16***
log hourly earnings	2.64	0.82	min=-0.46; max=5.67		2.75	2.52	8.96***
seniority	15.9	11.2	min=0; max=57	-0.15***	16.5	15.1	4.01***
educational attainment	13.3	3.06	min=0; max=19	0.46***	13.3	13.3	-0.02
region	0.53	0.50	1= coastal cities 0= hinterland	0.30***	0.55	0.51	2.47*
work unit (*danwei*)							
in the system (*tizhinei*)	0.52	0.50	1= in the system 0= others	-0.03	0.52	0.51	0.19
out the system (*tizhiwai*)	0.45	0.50	1= out the system 0= others	0.05**	0.45	0.44	0.59
missing values	0.03	0.18	1= missing 0= others	-0.05**	0.03	0.04	-2.16*
marital status	0.77	0.42	1= married 0= others	-0.08***	0.75	0.80	-4.21***
gender occupational segregation	0.05	0.21	1= female occupations 0= others	-0.10***	0.01	0.09	-11.9***
social capital	4.29	2.38	min=0; max=10	0.38***	4.46	4.09	4.91***
observations	4102				2213	1889	

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3 Gender (log) hourly earnings differential at selected quantiles

Selected quantiles	Hourly earnings			Hourly earnings (log)		
	Males	Females	Females/ males	Males	Females	Males-females
1th	2.38	1.87	0.78	0.91	0.62	0.29
5th	4.31	3.50	0.81	1.46	1.25	0.21
10th	5.60	4.28	0.76	1.72	1.49	0.23
25th	8.75	6.67	0.76	2.17	1.93	0.24
50th	14.6	11.8	0.81	2.71	2.49	0.22
Mean	22.0	17.0	0.77	2.75	2.52	0.23
75th	25.6	21.0	0.82	3.26	3.09	0.17
90th	43.8	34.5	0.79	3.79	3.56	0.23
95th	61.7	46.9	0.76	4.14	3.90	0.24
99th	136.9	81.7	0.60	4.92	4.44	0.48
Skewness	4.81	4.13		0.26	0.04	
Kurtosis	37.9	37.2		3.24	3.06	

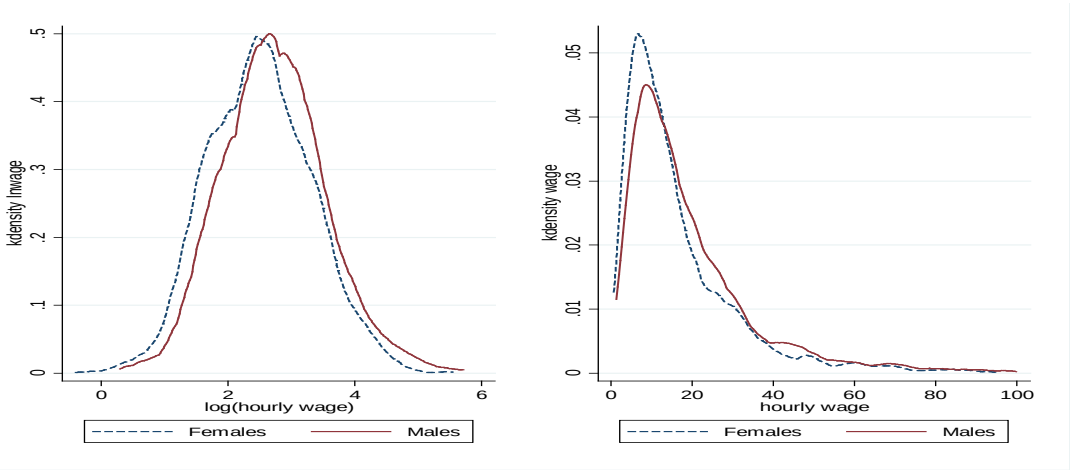

Figure 1. The kernel density estimates of logarithmic hourly wages by gender

Table 4 OLS regression of wage determination

	(1) Base model	(2) Control variables.	(3) Human capital	(4) Occupational gender segregation	(5) Social capital	(6) Females	(7) Males
Gender	0.228***	0.200***	0.181***	0.216***	0.188***		
(reference group: female)							
Region		0.475***	0.471***	0.418***	0.418***	0.454***	0.388***
(reference group: hinterland)							
Work unit (*danwei*)		0.005	0.003	0.125***	0.123***	0.127***	0.128***
(reference group: out the system)							
Martial status		-0.080**	-0.085**	0.174***	0.155***	0.124**	0.183***
(reference group: unmarried)							
gender occupational segregation			-0.240***	-0.103*	-0.076	-0.013	-0.391**
(reference group: non-feminine occupation)							
Seniority				-0.004***	-0.005***	-0.003	-0.007***
Educational attainment				0.121***	0.097***	0.105***	0.091***
Social Capital					0.080***	0.076***	0.083***
Constant	2.522***	2.353***	2.381***	0.591***	0.602***	0.490***	0.884***
Observations	4102	4102	4102	4102	4102	1889	2213
R2	0.019	0.110	0.114	0.314	0.360	0.361	0.340
Adjust. R2	0.019	0.109	0.112	0.312	0.359	0.359	0.338
BIC	9940	9575	9566	8532	8255	3774	4519

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5 The quantile regression estimates of log hourly earnings

Elected quantiles / Variables	10th	25th	50th	75th	90th
Gender (reference group：female)	0.202***	0.177***	0.226***	0.167***	0.193***
Region (reference group：hinterland)	0.357***	0.359***	0.397***	0.470***	0.533***
Work unit (*danwei*)	0.118	0.217**	0.184	0.191	0.077
(reference group：out the system)					
Marital status	0.213**	0.178***	0.146***	0.130***	0.168**
(reference group：unmarried)					
gender occupational segregation	-0.022	-0.049	-0.046	-0.050	-0.067
(reference group：non-feminine occupation)					
Seniority	-0.010***	-0.006***	-0.004*	-0.003*	-0.003
Educational attainment	0.095***	0.104***	0.105***	0.095***	0.085***
Social Capital	0.063***	0.073***	0.074***	0.088***	0.103***
Constant	-0.149	-0.055	0.301**	0.790***	1.291***
Observations	4102	4102	4102	4102	4102
Pseudo R^2	0.192	0.218	0.204	0.198	0.199

Note: * p < 0.05, ** p < 0.01, *** p < 0.001

Table 6 Separate quantile regression estimates of log hourly earnings by gender

Selected quantiles / Gender	10th	25th	50th	75th	90th
Females	0.059***	0.072***	0.075***	0.082***	0.088***
Males	0.064***	0.074***	0.074***	0.093***	0.111***

Note: * p < 0.05, ** p < 0.01, *** p < 0.001

Table 7 Blinder-Oaxaca and quantile regressions decomposition of hourly earnings by gender

Hourly earnings (log)	Mean value decom-position	Quantiles Decomposition				
		10th	25th	50th	75th	90th
	(1)	(2)	(3)	(4)	(5)	(6)
males	2.750***	1.748***	2.202***	2.729***	3.279***	3.792***
females	2.522***	1.533***	1.955***	2.502***	3.086***	3.565***
difference	0.228***	0.216***	0.247***	0.227***	0.192***	0.227***
characterized effect	0.039*	0.038*	0.056**	0.037*	0.037*	0.025
coefficient effect	0.189***	0.178***	0.191***	0.190***	0.156***	0.202***
explained % by social capital	12.7%	11.6%	14.2	13.7	14.1	13.7
explained % by human capital	-3.1%	-4.2	-4.5	-3.1	-2.1	-4.0
explained % by gender occupational segregation	2.6%	4.6	6.5	1.8	-0.5	0.4
explained (characterized effect)						
region	0.016*	0.012*	0.015*	0.014*	0.020*	0.021*
work unit (*danwei*)	0.003	0.003	0.005	0.003	0.003	0.001
martial status	-0.009***	-0.004*	-0.004	-0.009**	-0.009**	-0.021***
gender occupational segregation	0.006	0.010	0.016*	0.004	-0.001	0.001
human capital	-0.007	-0.009	-0.011	-0.007	-0.004	-0.009
social capital	0.029***	0.025***	0.035***	0.031***	0.027***	0.031***
unexplained (coefficient effect)						
region	-0.035	-0.024	-0.023	-0.058	-0.076*	-0.050
work unit (*danwei*)	0.011	0.006	-0.267	-0.082	0.059	0.272
marital status	0.048	0.087	0.108	0.114	-0.052	0.110
gender occupational segregation	-0.009*	-0.008	-0.015*	-0.011*	-0.011**	-0.001
human capital	-0.221	-0.264	-0.333	-0.230	-0.376	-0.094
social capital	0.032	0.120*	0.006	-0.073	0.002	0.267***
constant	0.363*	0.262	0.714**	0.529**	0.609*	-0.303
Observations	4102	4102	4102	4102	4102	4102

Note: * p < 0.05, ** p < 0.01, *** p < 0.001.