

To Whom Is Contact Use Beneficial? The Impacts of Self-Selected Contact Use on Gender Income Differentials in the Transitional Economy of Urban China

Jing Shen*, Irena Kogan

Abstract:

In this study, we examined the effect of contact use on the gender earnings gap in urban China, by taking into account the existence of self-selection effect. We theorised two sources of individuals' self-selected job obtainment behaviour; namely, the structuralised gender-segregated employment environment and one's internalisation of the structural constraints. Based on data collected from the highly marketized Chinese city Xiamen, our estimations from the Endogenous Switching Regression model show that there is indeed a significant tendency, in which women with marketable qualifications use social contacts to find jobs, even though their obtained income would have increased significantly had they chosen not to rely on contacts to find jobs. Men enjoyed premiums from their job search strategies, whether they relied on contact use or not.

Keywords: Self-selection; contact use; gender income differentials; gender segregation; urban China

Introduction

The recent development in the literature about gender stratification in the labour market has reached a stage, where scholars strive to integrate two traditionally parallel research streams – research on status attainment from the structural stratification perspective and research on job values and cultural perceptions from the socio-psychological perspective (Buser et al., 2014; Correll, 2001; Halaby, 2003). From this integrated approach and by using experimental as well as longitudinal data, existing studies have convincingly demonstrated that gender differences in career outcomes cannot be solely explained by human capital and labour market factors, such as statistical discrimination, sectoral and occupational segregation, or the gendering of job queues (England, 1992; Roos & Reskin, 1984; Tomaskovic-Devey & Skaggs, 2002). Rather, individuals' decisions on their career paths based on their job values, career goals, and perceptions of the labour market play a significant role in leading them into substantially different occupational directions (Correll, 2001: 1692). Those studies have, thus, shed light on an innovative perspective to understand gender differentials in the labour market, by highlighting the importance of individual self-selection behaviour in this process.

This perspective is of particular importance in studies on gender income differentials. The majority of the existing literature has explained gender income differentials from a structural perspective, with a focus either on pre-existing gender differences in human capital (as well as soft skills, such as salary negotiation) accumulation (Budig & England, 2001; Budig, Misra, & Boeckman, 2012; England et al., 1994) or on gender differences in access to different jobs, occupations, and sectors due to structuralised gender segregation (Bielby & Baron, 1986; Darity & Mason, 1998; Tomaskovic-Devey & Skaggs, 2002). Only recently has a behavioural perspective started to be adopted to examine the part of gender income differentials that cannot be explained by the conventional, structural perspective. With a focus on individual job obtainment behaviour, particularly regarding contact use, Shen and Kogan (2017) have found that women's contact use narrows the gender earnings gap by enhancing women contact users' earnings in the lower to middle levels of the

* E-mail of corresponding author: jing.shen@mzes.uni-mannheim.de

earnings hierarchy, but it has no significant impact on gender income differentials in the upper level of the earnings hierarchy. By using data from a local labour market in a Chinese city during the formation stage of the market economy, they have attributed those findings to contextually sensitive outcomes of contact use. Namely, women would benefit from using their contacts in job obtainment when the extent of gender segregation is relatively low in the local context, and the positive effect of women's contact use disappears in a highly gender-segregated context (Shen & Kogan, 2017).

While there is no doubt that individual behaviour – contact use – is confined by contextual constraints – the extent of gender segregation, individuals can also respond to the external context actively (Wu & Xie, 2003). The examination of gender income differentials from a behavioural perspective is thus incomplete, if the focus is merely limited to individual passive responses to contextual constraints. In this study, we aim to take Shen and Kogan's (2017) behavioural approach a step further, to explore whether or not individuals' active responses to contextual constraints would also contribute to shaping gender income differentials. For this reason, we adopt the same survey dataset used in Shen and Kogan's (2017) study, the 1999 Xiamen Survey, so that our analyses about the impacts of individual behaviour – contact use – would be situated within a context identical to that discussed in their study. Research questions we intend to address in this study are: whether or not and to what extent is the behaviour of contact use in job obtainment due to an individual's active response to contextual constraints, namely, one's self-selection? And subsequently, if women and men display different self-selection behaviours in terms of using contacts, to what extent do their self-selected uses of contacts influence the earnings gap between them?

In the following parts of the paper, we will first trace the foundation of individual behaviour to contextual constraints, by reviewing the transitional process of structuralised gender segregation in urban China. We further draw inspiration from the socio-psychological literature and explain how individuals actively respond to contextual constraints based on their internalisation of those contextual factors, particularly under the influence of Chinese traditional culture. The review about existing studies on urban China's transitional context and the internalisation mechanism in individuals' responses to contextual constraints leads to our hypotheses about the gender differences in self-selected contact use and the subsequent impacts on gender income differentials. We test our hypotheses by using a suitable technique, the Endogenous Switching Regression (ESR hereafter). Following the results from the ESR estimations, we will conclude this study by emphasising the policy significance of a focus on individuals' active responses, namely, self-selection behaviour, in terms of reducing gender income inequality.

Structuralised Gender Segregation and Discrimination in Urban China's Transitional Context

Structuralised gender segregation is often characterised as occupational segregation in the well-developed labour market in Western society (Bielby & Baron 1986; Budig & England 2001; Budig, Misra, & Boeckmann 2012; Tomaskovic-Devey & Skaggs 2002). However, gender segregation in urban China underwent a transitional process from workplace-based segregation under the socialist economy to occupational-based segregation in the market economy, a trend similar to what has been observed in the transitional Russian labour market (Ashwin & Yakubovich, 2005). In the era of the socialist state-controlled job assignment system, women who did the same work as men were entitled to equivalent pay to their male co-workers, based on an "equal pay for equal work" (*tong gong tong chou*) policy. Gender income differentials were, thus, mainly due to women's and men's concentration into different types of work organisations. While women were overrepresented in workplaces with lower levels of state control, where relatively lower wages, fewer employee benefits, and less job security were provided, men were overrepresented in workplaces with higher levels of state control, where higher wage rates, comprehensive fringe benefits, and better job security were offered (Shen & Kogan, 2017; see also Loscocco & Wang, 1992; Knight & Song, 1993). According to Shen and Kogan (2017), the fact that women were more likely to concentrate in areas with relatively lower levels of state control made it possible for a sharp increase in women's participation in the market sector at the early stage of urban China's marketization, as state control was reduced to the minimum in this newly emerged sector. During

this stage, men were still interested in getting jobs in the state sector, due to lower prestige and social status attached with jobs in the market sector at this stage (Davis, 1999; Shen & Kogan, 2017). Statistical information shows that the rate of female labour market participation was the highest during the formation stage of urban China's market economy, with an average level of 45 percent in the 1990s. Along with the development of the market economy, however, urban Chinese women have been continuously losing ground in the labour market competition against their male counterparts. By 2010, the proportion of working women has decreased to 37 percent of the country's total labour force population, far below the average level in the 1990s (NBSC, 2010). By using a survey dataset collected in 1999, we thus intend to capture the gender income inequality scenario when female labour market participation was at its peak.

Two sides of the same coin, while marketization at the early stage opened a new arena for women to escape workplace-based gender segregation in the state sector, this transition simultaneously created a new form of gender segregation along boundaries of occupations and jobs, fundamentally based on gender differences in human capital (Shen & Kogan, 2017). Studies focusing on gender income inequality in China's newly emerged labour market have generally confirmed that gender differences in human capital became the main driving force of the increase in gender income differentials, with, on average, less educated women starting to concentrate in low-paying jobs that required lower levels of human capital, whereas, on average, more educated men starting to concentrate in high-paying jobs that required higher levels of human capital (Maurer-Fazio & Hughes, 2002; Shu & Bian, 2003). This phenomenon was particularly salient in the market sector. With a focus on the gender earnings gap in foreign-direct-investment (FDI hereafter) firms, Shu et al. (2007) found that women were more likely to be employed in low-skill, export-oriented manufacturing industries that offered low wages, and were less likely to work in knowledge-intensive, high-paying foreign firms and joint ventures. Occupational-based gender segregation, consequently, caused a 35 percent gross gap in income between women and men, a gender earnings gap significantly larger than the countrywide average in the mid-1990s (Shu et al., 2007: 1307).

During the above-mentioned transitional process of gender segregation from a workplace-based to an occupational-based form (Shen & Kogan, 2017), overt discrimination against women has often been observed in China's newly emerged labour market, due to the lack of regulations and policies promoting employment equity. In a study focused on job advertisements posted on the most popular job search website in South China in the early 2000s, Woodhams, Lupton, & Xian (2009) found that the use of gendered recruitment advertisements was a common practice for employers in the private sector. Jobs open to female applicants were often administration or sales positions that were relatively less-paid, and at a lower level of the organisational hierarchy, whereas jobs open for male applicants were often professional, technical, and managerial positions that were better-paid, and at a higher level of the organisational hierarchy.

Gendered Internationalisation of the Contextual Constraints

A great amount of literature in social psychology has shown that individuals do not just passively react to environmental factors; but rather, they actively adjust their behaviours by internalising contextual factors, so as to achieve optimal outcomes within the environmental constraints (Heslin, 2005; Inceoglu et al., 2008; Warr, 2008). This makes studies on the formation of job values and career goals indispensable to explain how individuals actively choose their ways in the job obtainment process. Using data from the 1957 and 1992 waves of the Wisconsin Longitudinal Survey, Halaby (2003) found that the socialisation process men experience was oriented toward a future of economic independence rooted in the labour market, whereas the socialisation process women experience was oriented toward a future of economic dependence rooted in a stable marriage. As a result, men valued high-return, high-risk "entrepreneurial" jobs, while women valued low-return, low-risk "bureaucratic" jobs (Halaby, 2003).

In China's context, gender differences in job values are even more salient. Studies (Chan & Ng, 2013; Kim et al., 2010; Lee, 2000; Leung, 2003) have shown that the Confucian patriarchal hegemony (Leung, 2003), under which women are considered "subservient and undervalued and [having] no place in public life" (Kitching, 2001: 39), continues to cast an influence in current Chinese

society (Woodhams et al., 2009). Although significant changes in gender roles occurred during the communist era, the predominant cultural model of an “ideal woman” still centres on the image of a “virtuous wife and good mother” (*xianqi liangmu*). After being married, Chinese women are likely to identify more closely with their family roles, while men identify more closely with their work roles (Kim et al., 2010). In a study conducted in Shanghai in the 1990s, Sensenbrenner (1996) found that Chinese wives were more likely than their husbands to plan careers around their spouses'. As a result, while Chinese husbands tended to seek career paths associated with higher pay and better promotion opportunities, Chinese wives tended to find work close to home or with better work-family balance through the help of their contacts, who were normally male kin (Sensenbrenner, 1996; Wang, 2009).

Furthermore, women's and men's different perceptions of labour market discrimination also play a significant role in shaping their labour market behaviour. Socio-psychological studies have found that women, particularly those who enter the labour market for the first time, have disproportionately high perceptions of discriminatory treatment in the labour market, as compared to men of equal age (Antecol & Kuhn, 2000; Bowlus, 1997; Orazem et al., 2003). This pessimistic perception of market opportunities held by women subsequently lowers their reservation wages, leading to women's lower starting wages relative to men's. Using a sample drawn from the graduating cohort at the Iowa State University in the 1996-1997 academic year, Orazem et al. (2003) found that while human capital measures (such as college major or GPA) explained 14 percent of the gender difference in starting pay, 37 percent of the gender pay gap was caused by the differences in expected pay and resulting different job search strategies between male and female students. The following experimental implementation of a career orientation program consequently improved female students' starting wages significantly by altering their job search strategies, but did not have a significant impact on male students' starting wages (Orazem et al., 2003). This study provides clear evidence that without any intervention, women's job search methods are likely not to reflect their formal qualifications. Their job search strategies are, therefore, likely to lead them to a disadvantaged economic position relative to men.

Hypotheses

Indeed, despite the fast increase in women's educational attainment that has been widely documented across societies (Blossfeld et al., 2015; Morris & Western, 1999), the increase in women's earnings has been falling far behind (Bielby & Baron, 1986; Darity & Mason, 1998; Gustafsson & Li, 2000). Existing studies have shown that the gender earnings gap is, to a great extent, set up by earnings at the job entry level, which is closely associated with how individuals got their jobs. In this regard, the role contact use plays in the labour market has widely been documented across societies (Flap & Boxman, 2001; Granovetter, 1974; Lin, 1999, 2001). According to Lin (1999, 2001), the use of social contacts benefits a job obtainment process in 1) conveying job information, 2) influencing the employer's decision-making, 3) providing social credentials to the potential employee, and 4) reinforcing the employee's self-identification as a member of the work organisation. Despite this, the majority of the existing studies fail to find a positive effect of women's contact use on their job obtainment outcomes. In the United States, for example, Marini and Fan (1997) found that while gender differences in human capital accumulation explained, in total, about 30 percent of this wage gap, the external influences of employing organisations and network processes on gender differences in occupational and industrial placement accounted for 42 percent of the gender earnings gap. In a study based on the Swedish labour market, women were found to earn less than men, because women had less job contacts than men, and their job contacts were also less diverse than men's (Eriksson & Lagerström, 2012). However, once the geographic area of job search was controlled, the observed gender differences in contact use disappeared. The authors, thus, argued that female job seekers' fewer and less diverse work contacts were, to a large extent, explained by the fact that women had a preference towards jobs close to home (Eriksson & Lagerström, 2012). Women's priorities to family obligations also limit the effectiveness of their help, when they play the contact role. Based on a survey dataset collected in a Russian city in 1998, Ashwin and Yakubovich (2005) argued that women's leading role in the household played a significant role in shaping their networking preference towards close-knit circles, which largely explained why obtained earnings would be lower through a female contact than a male contact.

The above studies show that individuals' labour market activities cannot simply be predicted by their formal qualification. Either using contacts or being the contacts, individuals' behaviours are strongly shaped by their perceptions of the gender roles in the society. Although an equivalent study in the Chinese context is absent, we speculate that Chinese women and men internalise the structural factors and develop job obtainment strategies in the way similar to their counterparts in the Western context.

Studies have shown a continuously critical role contact use has played in the urban Chinese's employment activities before and after marketisation (Bian, 1997; Bian et al., 2015; Gold, Guthrie, & Wank, 2002). From a cultural perspective, on the one hand, contact use in the Chinese context is characterised as the heavy reliance on family ties, kin, and kin-alike relationships (Fei, 1992[1949]; Yang, 1994). A weak tie between the job applicant and the key helper is essentially a chain of strong ties that bridge the job applicant and the key helper together through at least one intermediate helper (Bian, 1997; Bian et al., 2006; Bian et al., 2015). This kind of behavioural pattern is deeply embedded in Chinese culture, so that contact use cannot be regarded as merely a supplementary strategy to make up one's disadvantage in human capital, as Goldthorpe (2007) argued. That is to say, it would be far from sufficient to predict the gender differences in the likelihood of using contacts or not and its subsequent consequence on job obtainment outcomes solely based on human capital and other measurable factors, at least in the Chinese context.

Contact use is important for both Chinese women's and men's job obtainment. However, we speculate that women and men use contacts for different reasons. Based on data collected among graduating university students in a prestigious Chinese university, Wang (2009) found that even at the same educational level, female students were more likely than male students to report seeking advice and emotional support from family and friends, while male students were more likely to report seeking substantial help, such as job information and financial support, from supervisors and classmates. The reported entry-level wages were on average lower among female students than male students. This finding about women with equivalently marketable qualifications landing in relatively lower-paying jobs through contact use has repeatedly been confirmed by studies on China's labour market (Sensenbrenner, 1996; Wang, 2009), as well as studies about other societies (Ashwin & Yakubovich, 2005; Kogan et al., 2013). If contact use does not pay off for women, why would they still do so? We explain this phenomenon through individuals' internalisation of and active responses to the contextual constraints.

We hypothesise that the aforementioned gender-segregated employment context and individuals' internalisation of it are likely to result in different labour market behaviours between men and women. Men's perception of their higher level of competitiveness (relative to women) makes them assertive, aggressive, and task-oriented (Ngo & Ji, 2012). Whichever methods men adopt for job obtainment are thus expected to optimise earnings both among men who choose to use contacts and those who choose not to aim to achieve optimal income outcomes.

By contrast, women usually do not value career success purely based on earnings. Rather, having more flexibility at work so as to be able to fulfil one's family roles is an essential concern for the majority of women to make career decisions (Warr, 2008). Thus, Chinese women's decisions on whether or not to use contacts for job obtainment are likely to be driven by their motives of finding family-friendly, rather than high-paying, jobs (Kim et al., 2010; Sensenbrenner, 1996). Such jobs are much easier to be accessed through contacts, and particularly family and kin, than through a formal application procedure. Meanwhile, due to the existence of overt gender discrimination in China's market economy, women are likely to further reduce the effort in seeking jobs through formal hiring channels. As a result, women tend to rely on contact use in job obtainment, regardless of their levels of formal qualifications. To summarise, we hypothesise that the decision on using or not using contacts for job obtainment involves an individual's active response to the contextual constraints, namely, self-selection. More specifically,
Hypothesis 1a: Chinese women are likely to self-select in favour of contact use for job obtainment. And,
Hypothesis 1b: Chinese men tend to self-select to maximise economic success, namely, earnings, which can be achieved through either using or not using contacts for job obtainment.

Both women's and men's self-selection behaviour, in turn, influences their actual earnings. Considering their different motives, we thus hypothesise that:

Hypothesis 2a: Chinese women's self-selection into contact use does not necessarily lead to an earnings premium. By contrast,

Hypothesis 2b: Chinese men's self-selection strategies pay off economically, whether they obtain jobs through using or not using contacts. This can be applied in the case of Chinese society.

Data and Measurements

Following Shen and Kogan's (2017) study, we adopted a survey collected in the coastal Chinese city of Xiamen in 1999. This dataset is a part of the 1999 Five-City Social Survey in Urban China conducted by Yanjie Bian, Department of Sociology at the University of Minnesota (Bian, 2003). This dataset is particularly suitable for studying female workers' job obtaining behaviours, for two reasons. First, as one of the five Chinese cities designated as a "Special Economic Zone" in the early 1980s, Xiamen had experienced a fast-paced economic development that attracted a large proportion of female employees. The female labour force increased, on average, by 10 percent per year, from the mid-1990s to the early 2000s. In 1999, the rate of female labour market participation was well above 45 per cent, and it reached 49 per cent in 2001 (Xiamen Statistical Bureau, 2001). An almost equal distribution of male and female labour market participation reduces the risk of job-entry selection, so that estimations about job obtaining methods and the following outcomes are based on equally heterogeneous male and female samples. Second, Xiamen's economic structure was characterised as the dominance of the private sector. Within the year of 1999, Xiamen attracted the international investment amounting to 1.34 billion US dollars, which contributed to almost 80 percent of the gross value of industrial output of the city in the same year (Xiamen Statistical Bureau, 2001). A relatively open labour market would allow individuals to choose job obtaining strategies based on their own decisions, and thus provide much more freedom for individuals to seek informal help in job obtaining than the state-controlled economy.

Corresponding to the jurisdictional hierarchy of the city, a four-stage stratified sampling method was adopted to select respondents throughout seven districts, 18 townships (*jiedao*), 308 neighbourhoods (*juweihui*), and about 547,000 dwellings within the urban area of the city². Respondents were eventually chosen by using a table of random figures within the selected dwellings. As a result, 1,000 respondents, including 430 females and 570 males, aged between 18 and 60 and with at least one year full-time employment experience, were selected from both permanent (with the local *hukou* [legal residence] status) and temporary (without the local *hukou* status) residents in the city. After missing values were deleted listwise, 731 cases were used in the analysis. While the survey questionnaire collected retrospective information about the entire job history of each respondent, we focused only on the respondent's experience in entering the most recent workplace by the time of the interview.

The dependent variable, employed income was measured by log-transformed monthly salary when the respondent first entered his or her most recent workplace. We used a dichotomous variable "contact use" to indicate whether or not the respondent used social contacts in the process of job obtaining (with using contacts coded 1, and not using contacts coded 0). Other independent variables included age, education (measured by years of schooling), party membership (with party members coded 1 and non-party members coded 0), type of work organisation, era of job entry, and family background. Herein, education, party membership, and family background were used to measure one's resources in human capital, political capital, and social capital, respectively, prior to job obtaining. The inclusion of these variables is commonly seen in labour market stratification studies in the socialist context (Bian, 1997; Róna-Tas, 1994; Wu & Xie, 2003). We used the type of work organisation and era of job entry to indicate contextual constraints. The variable "type of occupations" was omitted, mainly because a mature occupational classification system was not available in China until this century. In a trial analysis, we made an attempt to include a coarse occupational classification (consisting of six groups, including production workers, service sector employees, administrative clerks, cadres, professionals, and others), and results showed that this variable had no power of explanation when the type of work organisation was controlled (results are not presented, but are available upon request). The "type of work organisation" was a categorical variable, consisting of state-owned enterprises (SOEs hereafter), governmental institutions, collective firms, small family businesses, and private, foreign, or hybrid firms. The "era of job entry" was divided along the timeline of the socioeconomic reforms, including the

pre-reform era before 1979, the first stage of the reforms between 1979 and 1991 (characterised as initial marketization mainly in the rural area), and the second stage of the reforms between 1992 and 1999 (characterised as deepening marketization in the urban area). Family background was measured by father's years of schooling, party membership (party members=1, non-party members=0), and cadre status (cadre=1, non-cadre=0). Descriptive statistics of used variables were reported in the appendix.

Methods

Scholarly efforts have been made to address the self-selection issue in social capital studies. However, strategies, such as the Propensity Score Analysis, usually only address estimation bias resulting from measurable factors (Tegegne, 2015). To take into account biases resulting from both the measurable and non-measurable factors, we adopted the Endogenous Switching Regression (ESR) model to test the effect of one's contact use on earnings. A successful application of the ESR model in social capital and contact use studies can be seen in Gerber and Mayorova's (2010) *AJS* publication. Details about the ESR model can be seen in studies by Gamoran and Mare (1989), Gerber (2000), and Mare and Winship (1988). The ESR model's unique methodological strength in detecting self-selection effects makes it possible to test how individuals' job search motives influence their job search strategies, which in turn, influence income outcomes. According to the ESR rationale, sampled respondents were assumed to come from two separate populations, contact users and non-users.

One could consider the ESR model as estimating the outcome variable (income) twice for both contact users (population 1) and non-users (population 2). One estimates the population based on the observed data, while the other estimates a predicted hypothetical population when the assumption of random selection is applied. A significant self-selection effect occurs when two estimations are significantly different. In an ESR model, ρ is used to denote: 1), whether there is a significant self-selection effect in each of the scenarios (either using or not using contacts in this study), or both; and 2), the degree and direction of the self-selection at the population level, if it exists.

In population 1, the "+" sign of ρ^1 indicates a positive selection, while the "-" sign of ρ^1 indicates a negative selection. In population 2, the "+" sign of ρ^2 indicates a negative selection, while the "-" sign of ρ^2 indicates a positive selection. When a significantly positive ρ^1 occurs in population 1, one part of the observed advantage of contact use is because contact users do better than what they are predicted to achieve, so the observed income gap between contact users and non-users is larger than the actual income difference caused by contact use *per se*. This means that the observed income gap would upwardly bias the estimation of the contact use effect. By contrast, a significantly negative ρ^1 in population 1 means that contact non-users do better than what they are predicted to achieve. Thus, the observed income gap between contact user and non-users is smaller than the actual income difference caused by contact use *per se*, causing an underestimation of the contact use effect.

In population 2, however, a significantly positive ρ^2 means that contact non-users do worse than what they are predicted to achieve, which thus widens the income gap observed between contact users and non-users. In this scenario, the observed income gap between contact users and non-users is an overestimation of the contact use effect. On the contrary, a significantly negative ρ^2 means that contact users do worse than what they are predicted to achieve, so that the observed income gap between contact users and non-users is an underestimation of the contact use effect. We summarised the possibilities of self-selection effects and their influences on estimations of the contact use effect in the following Table 1.

Table 1. Directions of Self-Selection Effects and Their Impacts on Estimation Outcomes

	Using contacts (Population 1)		Not using contacts (Population 2)	
Selection effect	Sign	Estimation consequence	Sign	Estimation consequence
Positive selection	+	Overestimation	–	Underestimation
Random selection	Neutral	No bias	Neutral	No bias
Negative selection	–	Underestimation	+	Overestimation

Results

We first conduct the t-test to examine gender differences in measured characteristics. As shown in Table 2, men's average logged earnings are significantly higher than women's by 1.65 units. The proportion of women's use of contacts is about 9 percent higher than that of men's. In terms of other characteristics, men are significantly older, have slightly more education, and contain a higher percentage of party members. The female group has significantly larger proportions in private, foreign, or hybrid firms, as well as in the category of job seekers who entered their workplaces between 1992 and 1999. This corresponds to the aforementioned marketization trend in Xiamen; namely, women's massive participation in a gender-segregated employment environment. We further adopt the ESR model to examine whether or not the observed gender income differentials can solely be explained by the above gender differences in measurable qualifications, such as age, education, and party membership. Table 3 presents ESR estimations in the male and female samples, respectively. The "type of work unit" is included in the selection equation that estimates the likelihood of contact use in one's job obtainment. Although the type of work unit would usually be treated as one of the outcome measures, it could also serve as the proxy to measure one's motives, as what type of work unit one desired to enter could influence one's behaviour in the process of job obtainment, particularly in the context of workplace-based segregation in urban China. Family background, indicated by father's education, party membership, and cadre status, is included in the selection equation, but not in the two outcome equations that estimated individuals' earnings. This is because family background is associated with the quantity and quality of social contacts one can access, and therefore has a direct effect on the likelihood of one's contact use in job obtainment. However, family background influences the earnings outcome only indirectly, mainly through one's education attainment and other measurable characteristics formed in the socialisation process (Blau & Duncan, 1967).

Results from the selection equations in Table 3 show that measurable characteristics, such as education, type of work unit, era of job entry, and family background, influence men's and women's possibilities of contact use for job obtainment in drastically different ways. Education significantly decreases the likelihood of using contacts among men, but this negative impact is not significant among women. Compared to men entering SOEs, men entering governmental organisations show a significantly lower likelihood of using contacts in job obtainment, while men entering collective firms present a significantly higher likelihood of doing so. Compared to women entering SOEs, only women entering private, foreign, or hybrid firms show a significantly greater possibility of using contacts for job obtainment. One characteristic that the groups of men and women job seekers share is the job-entry cohort effect. Compared to their counterparts entering their most recent jobs before marketization respectively, men and women who obtained jobs during the deepening stage of marketization between 1992 and 1999 both show significantly higher likelihoods of using contacts. Finally, while family background does not influence men's chance of contact use, it does make significant differences among women. Women with party

member fathers are more likely to use contacts for job obtainment, indicating the importance of family background in one's accumulation of social capital. Women with cadre fathers are less likely to use contacts. This may be because women from a high-status family background generally achieve higher levels of education and other desirable qualifications. Meanwhile, the socialisation processes those women experienced with their high-status parents are likely in favour of gender-equality values. Their competitiveness in the job market and gender-equality values may decrease their reliance on their fathers' help. These explanations need to be further tested in future studies. In the outcome equations, the positive effect of years of schooling varies with gender. Economic returns to men's education appear to be greater for contact non-users than contact users (0.121 vs. 0.083), while economic returns to women's education are rewarded similarly (0.075 vs. 0.074), whether using contacts or not. While men's earnings do not seem to differentiate across different types of work units, women employed in collective firms earn significantly less than women employed in SOEs. It is noticeable that contact use, to a significant degree, alleviates women's earnings disadvantage in collective firms. Women who entered this sector with the help of contacts earn significantly more than their counterparts without any informal help for job entry (-0.413 vs. -0.726). The effect of the job-entry cohort is significantly positive for both men and women; moreover, the later the job entry occurs, the higher the initial earnings are. This corresponds to the marketization process of urban China's wage rating system. All intercept items are significantly positive. Herein, the magnitudes of the intercepts in the groups of contact non-users are greater than those in the groups of contact uses for both men and women, with the intercept in the group of women contact non-users being the greatest.

Self-selection indicators (ρ^1 and ρ^2) are predicted based on the selection equation and two outcome equations simultaneously for the male and female groups, respectively. For men, positive self-selections exist within both the groups of contact users and non-users. This means that if men, who are predicted to use contacts (based on estimations of their observable characteristics under the assumption of random selection), indeed get jobs with help from contacts, they are likely to gain an earnings premium from contact use. Likewise, if men, who are predicted not to use contacts, indeed get jobs without help from contacts, they are also likely to gain an earnings premium from self-reliance. For women, the non-significant ρ^1 means that there is no significant self-selection among women who are predicted to use contacts (based on estimations of their observable characteristics under the assumption of random selection). The significantly positive ρ^2 shows a negative self-selection within the group of women contact non-users. Namely, there is a significant trend for women, who are expected not to use contacts, to self-select out of the group of contact non-users and become contact users. Hypotheses 1a and 1b are, therefore, demonstrated.

Table 3. Endogenous Switching Regression Estimations of Logged, Adjusted Monthly Salaries of the Whole Sample, Male Subsample, and Female Subsample, Xiamen 1999

<i>Independent variables</i>	Male Sample			Female Sample		
	Selection (Probit)	Outcomes		Selection (Probit)	Outcomes	
		Using contacts.	Not using		Using contacts.	Not using
Age	0.020 (0.020)	0.024 (0.018)	0.004 (0.020)	-0.030 (0.028)	0.007 (0.018)	-0.023 (0.030)
Years of schooling	-0.079* (0.032)	0.083** (0.027)	0.121*** (0.028)	-0.072+ (0.038)	0.074*** (0.020)	0.075* (0.038)
Party membership	0.316 (0.326)	0.325 (0.288)	0.427 (0.305)	0.113 (0.669)	0.162 (0.536)	0.181 (0.659)
Type of work unit (ref: SOEs) Governmental organisations	-0.795*** (0.249)	-0.843** (0.299)	0.030 (0.194)	0.156 (0.281)	0.158 (0.178)	0.383 (0.294)
Collective enterprises	0.683** (0.247)	0.090 (0.239)	-0.350 (0.259)	0.193 (0.285)	-0.413* (0.172)	-0.726* (0.290)

Small family business	0.463+ (0.271)	0.058 (0.235)	0.282 (0.276)	0.297 (0.408)	0.008 (0.216)	0.467 (0.450)
<i>Independent variables</i>	Male Sample			Female Sample		
	Selection (Probit)	Outcomes		Selection (Probit)	Outcomes	
		Using contacts.	Not using		Using contacts.	Not using
Private or foreign firms	0.220 (0.202)	0.090 (0.179)	0.033 (0.204)	0.466* (0.231)	0.164 (0.135)	0.488+ (0.259)
Era of job entry (ref: Before 1979) Between 1979-92	0.077 (0.230)	1.339*** (0.251)	0.976*** (0.196)	-0.018 (0.333)	1.360*** (0.224)	1.511*** (0.306)
Between 1992-99	0.953*** (0.253)	2.310*** (0.321)	1.190*** (0.229)	0.796* (0.338)	1.585*** (0.239)	2.062*** (0.333)
Father's education	0.026 (0.022)			0.003 (0.026)		
Father's party membership	0.141 (0.142)			0.526* (0.233)		
Father's cadre status	-0.016 (0.164)			-0.638* (0.250)		
Intercept	-0.551 (0.520)	1.398** (0.527)	2.089*** (0.487)	0.673 (0.638)	2.826*** (0.378)	3.526*** (0.746)
$\rho_1 (= \sigma_{13} / \sigma_1)$	0.220 (0.202)			-0.053 (0.330)		
$\rho_2 (= \sigma_{23} / \sigma_2)$	0.776* (0.138)			0.955*** (0.036)		
Observations	415			316		
Log-likelihood	-551.510			-368.236		
LR test of outcome equations (df=1)	249.490			241.790		

To demonstrate Hypotheses 2a and 2b, we distinguish the self-selection effect from the effects of measured variables in the scenarios of using and not using contacts, respectively, following the decomposition method used by Gamoran and Mare (1989) and Gerber (2000). Details about the decomposition of group differences in ESR estimations are explained by Gamoran and Mare (1989: 1178-80). Table 4 presents the decomposition of the expected logged earnings based on the estimations in Table 3. As Panel A “difference caused by contact use” shows, self-reliance brings significantly higher economic returns than contact reliance for women. However, the effect of contact use by itself does not make a significant difference in men’s earnings.

Panel B presents “self-selection effects.” For men, using contacts bumps up male contact users’ logged earnings by 1.061 units, on top of men’s predicted earnings in the scenario of using contacts. Not using contacts bumps up male contact non-users’ logged earnings by 0.639 units, on top of men’s predicted earnings in the scenario of not using contacts. If two groups had hypothetically switched their positions, their expected logged earnings would have been significantly lower (-0.31 and -0.65 units, respectively). Thus, it is clear that male contact users optimise their income returns by purposely choosing to use contacts, while male contact non-users also optimise their income returns by purposely choosing not to use contacts, though male contact users enjoy a greater premium than male contact non-users in terms of the job obtainment strategy. By contrast, there is a significant tendency for women with the typical characteristics of contact non-users to self-

select to become contact users. Consequently, those observed female contact users would have increased their logged earnings by 1.701 units had they hypothetically not used contacts for job obtainment. Because of women’s general tendency in using contacts, those women who remained in the group of contact non-users are thus likely to be those who did not have contacts to use, due to their lack of network resources. As a result, the observed logged earnings for female contact non-users are 0.734 units lower than that of an average female contact non-user under the random selection assumption.

Panel C, “total expected logged earnings,” combines the effects of one’s job obtainment strategy and self-selection. It shows that male contact users gained a premium of using contacts (5.285), since they would have been significantly worse off had they not used contacts (3.914). Likewise, male contact non-users also gained the premium of self-reliance (5.037), since they would also have been worse off had they used contacts (3.747). At the female side, the predicted average logged earnings for female contact non-users are only 4.739 units, after those with the typical characteristics of contact non-users self-selected to use contacts. Correspondingly, the predicted logged earnings would have increased significantly (6.69) had those observed female contact users chosen not to use social contacts to get jobs.

Table 4. Decomposition of Expected Logged Income of the Whole Sample, Male Subsample, and Female Subsample Based on Table 4

X=	Males	Females
A. Difference caused by contact use		
$\Sigma\beta_{1k}x_k$, using contacts	4.224	4.989
$\Sigma\beta_{2k}x_k$, not using contacts	4.398	5.473
B. Selection effects		
1. $\sigma_{13}\lambda_1$ (contact users, actually using contacts)	1.061	0.279
2. $\sigma_{23}\lambda_2$ (contact nonusers, actually not using contacts)	0.639	-0.734
3. $\sigma_{13}\lambda_2$ (contact nonusers, hypothetically using contacts)	-0.650	-0.418
4. $\sigma_{23}\lambda_1$ (contact users, hypothetically not using contacts)	-0.310	1.701
C. Total expected (logged) income		
1. $E(Y_{1i} Z_i>0)$, contact users, actually using contacts	5.285	5.268
2. $E(Y_{2i} Z_i<0)$, contact nonusers, actually not using contacts	5.037	4.739
3. $E(Y_{2i} Z_i>0)$, contact nonusers, hypothetically using contacts	3.747	5.055
4. $E(Y_{1i} Z_i<0)$, contact users, hypothetically not using contacts	3.914	6.690

Note: Italics represent coefficient decompositions based on non-significant error covariances

Conclusions and Discussion

In this study, we made an attempt to examine the effect of contact use on gender income differentials by taking into account individuals’ active responses to contextual constraints, namely, self-selection. Based on data drawn from a highly marketized Chinese city, Xiamen, our ESR estimations show that there is a significant tendency, in which women with typical characteristics of contact non-users (who usually possess marketable formal qualifications) use social contacts to find jobs, even though their obtained earnings would have increased significantly had they not used contacts for job obtainment. Indeed, if women, with a level of formal qualifications comparable to that of their male counterparts, simply do not have an equal opportunity to be hired through formal recruitment channels, there would be no alternative but contact use for women’s job acquirement. More importantly, women’s self-selected contact use for low-paying jobs also resonates with existing socio-psychological studies on women’s internalisation of the contextual

constraints, represented by their job values and perception of labour market discrimination (Antecol & Kuhn, 2000; Bowlus, 1997; Orazem et al., 2003). According to those studies, women choose to get jobs through contacts not for high economic rewards, but rather, for a better work-family balance and more convenience to fulfil their family roles.

Compared to women, men enjoy premiums from their job obtainment strategies, whether they rely on contact use or not. This again, corresponds to existing studies on men's self-perception of their gender role in the labour market (Antecol & Kuhn, 2000; Bowlus, 1997; Warr, 2008). Men are more certain about how to reach their goal – maximizing income gains – by strategising in their job obtainment. Thus, male contact users gain the premium of using contacts, while male contact non-users gain the premium of self-reliance.

Due to the ESR approach's strength in identifying the extent to which women's and men's self-selected contact use influences their obtained earnings, this study has an important implication about how women's job obtainment behaviour may reinforce structural barriers they encounter and further deteriorate their status in the labour market. The survey data used in this study were collected in a fast-developed, yet early-stage market economy. Ever since, gender segregation has indeed worsened with a continuous decline in women's labour market participation in urban China (NBSC, 2010). In addition to factors commonly discussed in the literature, such as human capital and contextual constraints, this study draws scholarly attention to an alternative explanation about a worsening labour market environment for women, by emphasising the consequences resulting from individuals', and particularly women's, self-selected job obtainment behaviour. Without any doubt, this study has its limitations. First, some control variables, such as marital status and presence of children in the household, cannot be included in the analysis, because the cross-sectional survey does not capture information corresponding to the time when the respondent first entered the most recent work organisation. Second, the lack of longitudinal survey data sources makes it difficult to trace changes in individuals' behavioural patterns corresponding to those in contextual constraints. Future research may be developed by adopting large-scale longitudinal datasets that consist of detailed information about changes in both individual characteristics and contextual factors.

Nevertheless, by emphasising individuals' self-selected contact use, we by no means intend to legitimise gender income differentials in the current Chinese labour market. As was previously mentioned, women are generally pushed into disadvantaged workplaces and/or jobs due to the existence of structuralised gender segregation either before or after marketization. The impact of structural or contextual constraints on women's poorer economic position relative to men's is undeniable. However, what has not yet been emphasised previously is that as active social actors, individuals have a certain degree of autonomy in their own behaviours, and that such self-selected behaviour can play a role in terms of more or less altering every individual's "doomed fate" in a given context. Therefore, by conducting this study, we hope to highlight the importance of individuals' job obtainment strategies, driven by their job values, career goals, and perceptions of the discriminatory environment, in reversing the gender earnings gap. We agree with Orazem et al. (2003) that individuals', particularly women's, career planning is of great importance in changing their perception of labour market barriers and stimulating their proactive job searches. We anticipate that social policies that promote the gender equality culture and career orientation programs that help women navigate their job search processes will be particularly meaningful, in order to reverse the currently deteriorating gender earnings gap in urban China's labour market.

Note:

1. Because the range of values for "the year of job entry" spans decades before and after the outset of the socioeconomic reforms, original monthly salaries were adjusted based on a computed inflation index with the wage level in 1979 (the starting year of the reforms), used as the baseline. The inflation index was calculated as the ratio of the growth of GDP relative to the growth of RealGDP, in which the growth of GDP was calculated as the ratio of GDP in the corresponding year relative to GDP in the previous year, and the growth of RealGDP was calculated as the ratio of RealGDP in the corresponding year relative to RealGDP in the previous year. Information on GDP and RealGDP from the pre-communist era to 1999 was retrieved from the 2000 Statistical Yearbook of China (NBSC, 2000).

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Jing Shen is a postdoctoral researcher at the Mannheim Centre for European Social Research affiliated with the University of Mannheim, Germany. Her research interests include social inequality and stratification in transitional societies with a focus on how contact use affects job search outcomes, and immigrants' integration in European and North American societies.

Irena Kogan holds a chair in comparative sociology at the University of Mannheim. Her main interests are in the areas of social inequality, migration sociology and life-course research. In particular, her research focuses on structural and cultural aspects of immigrant integration, transition from school-to-work, as well as the role of social and cultural resources in these processes.

Appendix. Descriptive Statistics of Used Variables, the 1999 Xiamen Survey

	Total Sample (N=731)					Male (N=415)					Female (N=316)				
	Percent	Mean	Std. Dev.	Min	Max	Percent	Mean	Std. Dev.	Min	Max	Percent	Mean	Std. Dev.	Min	Max
Adjusted, logged monthly earnings		5.04	1.83	1.1	17.16		5.29	2.20	1.10	17.16		4.73	1.12	1.10	6.46
Contact use		0.45	0.5	0	1		0.41	0.49	0	1		0.51	0.50	0	1
Female		0.43	0.5	0	1										
Age		20.71	4.33	9	50		21.17	4.61	9	50		20.11	3.86	12	50
Years of schooling		11.32	2.91	6	16		11.59	3.01	6	16		10.95	2.73	6	16
Years of schooling squared		136.47	66.15	36	256		143.34	69.33	36	256		127.43	60.64	36	256
Party membership		0.04	0.21	0	1		0.06	0.24	0	1		0.02	0.15	0	1
Father's years of schooling		8.86	2.72	6	16		8.81	2.72	6	16		8.92	2.72	6	16
Father's cadre status		0.1	0.3	0	1		0.11	0.31	0	1		0.08	0.28	0	1
Father's party membership		0.23	0.42	0	1		0.24	0.43	0	1		0.22	0.42	0	1
Type of work organisation															
Public institutions	17.69					17.97					17.30				
State-owned enterprises	28.17					30.02					25.70				
Collective firms	15.5					14.91					16.28				
Family enterprises	7.42					8.60					5.85				
Private and foreign firms	31.22					28.49					34.86				
Total	100					100.00					100.00				
Era of job entry															
Before 1979	25.49					27.03					23.44				
Between 1979 and 1992	31.45					32.61					29.90				
Between 1992 and 1999	43.06					40.36					46.65				
Total	100					100.00					100.00				