Social Networks and Son Preference of Rural-Urban Migrants

in China: A Study in Shenzhen[*]

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ABSTRACT

Using sample data from the survey of temporary immigrants in Shenzhen, China, conducted by the Institute for Population and Development Studies at Xi'an Jiaotong University in April 2005, this paper studies the attitudes and behaviors related to son preference among these migrants in a framework of social network theory. The results reveal that only a minority of the rural-urban migrants has the attitude to son preference, and behaviors concerning childbearing among the survey participants exhibit strong son preference. Social networks, migration history, and individual factors contribute to their attitudes and behaviors towards son preference. The weak ties in the childbearing discussion network and emotional support network tend to weaken attitudes about son preference. The weak ties in the emotional support network affect how son preference determines childbearing behavior. The longer the residence in urban areas, the weaker is the son preference among rural-urban migrants. Age and education also have significant effects on their son preference. These results may help to understand the increasing sex ratio at birth in contemporary urban China.

Key words: *urban, rural, migrants, son preference, social network*

INTRODUCTION

A social network is a set of nodes (people, organizations or other social entities) connected by a set of relationships, such as friendship, affiliation or information exchange (Mitchell & Clyde , 1969). Social interactions among network members may affect individuals' attitudes and behaviors (Carrington, 1988; Bongaarts and Watkins, 1996; Friedkin, 1998; Kohler et al., 2001). After migration, rural-urban migrants must rebuild their social networks while they adapt to changes in their occupation and habitation.

Studies show that son preference in traditional Chinese culture has been a fundamental cause of the high sex ratio at birth (Zeng, et al., 1993). Since the mid 1990s the number of rural-urban migrants has increased dramatically, and strong son preference among rural-urban migrants contributes to a high sex ratio at birth in urban areas (Wu et al., 2005). According to acculturation theory, son preference among the rural-urban migrants should change during the process of reconstruction of their social networks after migration. In addition the status of son preference among the rural-urban migrants will exert an influence on the sex ratio at birth in urban areas. Thus analysis of the determinants of attitudes and behaviors relating to son preference among rural-urban migrants may lead to alleviation of the dangerously high sex ratio at birth in contemporary urban China.

Studies of migration in the framework of social networks help to understand the evolution of migrants' attitudes and behaviors (Sara & Abigail, 1997; Friedkin, 1998; Li, 2003; Yang et al., 2004; Jin et al., 2005). There are indications that rural-urban migrants' son preference should change after migration, and that factors such as age and education affect how female migrants in China change these attitudes (Yang et al., 2002; You and Zheng, 2002; Hong, 2005). However, there have been few empirical studies on the status and determinants of son preference among migrants using data from surveys of these people. Using sample data from a survey of temporary immigrants to Shenzhen conducted by the Institute for Population and Development Studies at Xi'an Jiaotong University in April 2005, we investigate son preference and its changing status among rural-urban migrants. We use logistic models to analyze the effects of social network, migration history and individual factors to quantify our results.

STUDY DESIGN

Analytic Framework

Migration may produce changes in attitudes towards childbearing in an environment where fertility tends to decline (Goldstein and Goldstein, 1982; Yang, 2000). Research on Chinese migration and change of individual attitudes towards childbearing indicates that social networks, migration history and individual factors have effects on son preference among rural-urban migrants.

Social network factors

Social interactions among network members have an impact on individuals' attitudes and behaviors (Carrington, 1988; Bongaarts and Watkins, 1996; Friedkin, 1998; Kohler et al., 2001). Personal networks have the capacity to provide individuals with examples of behaviors that may be considered and copied. They also help migrants to meet their emotional needs and to accept instrumental assistance, information and advice on daily life (Katz & Lazarsfeld, 1955; Shye et al., 1995).

Relations between network members have effects on individual attitudes (Bott, 1971). Chinese rural society emphasizes family and geographical relations. After migration, relationships based on occupation and friendships are expanded (Cao, 2003; Li , 1996). Social network relations can be divided into strong ties and weak ties (Bian, 1997). Strong ties include "blood relationship" and "geographical relationship", such as family, kin and countrymen; weak ties are formed by "job relationship" and "friend relationship", including friends, bosses, and fellow workers. Strong ties generate homogeneity of social characteristics among network members, while weak ties result in heterogeneous identities, and can be regarded as an "information bridge" among network members (Granovetter, 1973). We confirm that weak ties tend to make rural-urban migrants' attitudes and behaviors more consistent with those of the urban residents.

Migration experiences

Son preference among urban residents is weaker than among people in rural areas, although the sex ratio at birth (SRB) is still male-biased in many large Chinese cities (Feng, 2002). According to acculturation theory, attitudes and behaviors among migrants will change during the process of becoming familiar with the rules and customs at their new location (Yinger, 1985). Rural-urban migrants will learn about the norms and preferences of the urban residents and gradually change their own attitudes and behaviors while living in the urban area. The longer their stay in the urban areas, the more their attitudes and behaviors change (Yu et al., 1996). Accordingly, rural-urban migrants are expected to retain strong son preference in the period soon after arrival, but son preference should weaken with the passage of time. Ultimately, after years of living in urban areas, the migrants' son preference should be consistent with that of the urban residents.

Individual factors

Migration is socially selective (Johnson et al., 1994). The migrants' adaptive ability to change their attitudes and behaviors is determined by personal characteristics, such as gender, age, education and marital status (Sam & Berry, 1995). Generally speaking, the younger the migrants, the greater their adaptive ability should be and the more their attitudes and behaviors will change (Huang & Liu, 2004). Migrants with more education are prone to adapt to urban fertility norms (Schnittker, 2002). In addition, personal social networks differ from one person to another, and these differences will have different

effects on the migrants' attitudes and behavior (Fischer & Claude, 1982; Marsden, 1987).

DATA & METHODS

Data

Data used in this study come from a survey of temporary immigrants in Shenzhen conducted by the Institute for Population and Development Studies at Xi'an Jiaotong University in April 2005. Shenzhen is located in the south of Pearl River Delta. The total population of Shenzhen is 7,008,800 and the ratio of migrants to permanent urban residents is 4.77:1 based on the 2000 Population Census. In Shenzhen the proportion of rural-urban migrants is one of the highest in China so it provides an excellent location for the study of the evolution of their attitudes and behaviors.

A structured household questionnaire and a structured community questionnaire were used in the survey, which was carried out from April 20–28 of 2005 at five companies in three districts that were selected by cluster sampling, and five communities in three districts that were selected by systematic sampling. The respondents were all above 15 years old, and the number of satisfactory responses was 1,739. The survey includes data about personal characteristics, attitudes and behaviors towards childbearing, social support network and childbearing discussion network. In the survey sample, the average age was 31, 51 percent were men, 67 percent were younger than 35 years old, and 68 percent were ever married. The average time of residence in the urban area was 6.78 years, and about 50 percent had resided in the city for more than 5 years.

Methods

Our analysis is divided into two parts. The first concerns the status of son preference after migration, including attitudes about the sex of one's children and the sex ratio of ever-born children. From the desired number of children, the extent of son preference is inferred, and difference between the ratios of migrants having son preference among those who have given birth and those who have not given birth after migration is tested by likelihood-ratio. Then, using data on the interviewees' childbearing after migration, the sex ratio of ever-born children is calculated, and differences between the sex ratio of ever-born children and the standard of sex ratio (105) are tested by chi squared (χ^2).

The second part employs logistic regression models to explore the impacts of social network factors on attitudes and behavior related to son preference, where migration history and individual factors are also taken into account. The dependent variable in the models for the determinants of attitude about son preference is whether the migrant has son preference and is dichotomous (see Table 1). In the models for the determinants of the behavior related to son preference it is the gender of ever-born child after migration. The reference categories are "non-son preference" and "giving birth to a girl," respectively.

Table 1 here

The independent variables in the models are social network factors, migration and individual factors. Social network factors include the weak ties of the childbearing discussion network, instrumental support network and emotional support network; these are all numeric variables. Migration history is expressed as years of living in the urban area. Individual factors are gender, age, education, marriage status, birth order, etc.

RESULTS

Attitude to son preference and the sex ratio of ever-born children after migration

Table 2 shows the status of the attitude of son preference among the rural-urban migrants after migration. Although there is a minority that has son preference among the total rural-urban migrants, a significant difference is found between the attitude to son preference among individuals who have given birth after migration and those who have not. The ratio of migrants having son preference among those who have given birth is significantly higher than that of those who have not given birth after migration.
Table 2 here

Table 3 reports the sex ratio of the ever-born children of rural-urban migrants after migration. Clearly the sex ratios of the ever-born children of rural-urban migrants are significantly higher than normal, which suggests that the behavior of the rural-urban migrants exhibits strong son preference.
Table 3 here

In sum, although there is only a minority having the attitude of son preference among the total rural-urban migrants, migrants who have given birth after migration have stronger son preference both in their attitude and their childbearing behavior.

Determinants of son preference among rural-urban migrants after migration

Table 4 reports on the determinants of the son preference among rural-urban migrants after migration. There are six logistic regression models. Models 1 to 4 estimate the odds ratios of the attitude of son preference among all rural-urban migrants and migrants having given birth after migration respectively, and models 5 and 6 estimate the odds ratios for giving birth to a boy after migration.
Table 4 here

From Table 4 we see first that the weak ties of the childbearing discussion network, instrumental support network and emotional support network have effects on the attitude of son preference among rural-urban migrants after migration. The risk of having the attitude of son preference among all rural-urban migrants drops significantly as the number of weak ties of the childbearing discussion network and emotional support network increase. Also the weak ties of the emotional support network markedly reduce the odds of giving birth to a boy among rural-urban migrants who have given birth after migration. On the other hand, increasing the weak tie of the instrumental network raises the risk of having the attitude of son preference among those who have given birth after migration.

Second, time of residence in the urban area has an impact on the attitude of son preference among rural-urban migrants. The risk of having the attitude of son preference declines with the passage of time after migration. It drops significantly among those who have been living in urban areas for 6 to 7 years, with the effect decreasing from 31.9% to 71.2%. However, the migration experience has no effect on the behavior related to son preference.

Third, age and education also affect son preference among migrants. The risk of having the attitude of son preference among migrants who are 25 years old or above is higher than that of those below 25. Migrants with more education are more likely to give birth to a boy.

In general, social network ties, years living in the urban areas, and individual factors have some effects on son preference among rural-urban migrants. However, a lot of factors are found not significantly affect son preference.

DISCUSSION AND SUMMARY

Our data demonstrate that only a minority of the rural-urban migrants has the attitude to son preference, and the ratio of migrants having the attitude of son preference among those who have given birth is significantly higher than among those who have not given birth after migration. The sex ratios of the ever-born children of rural-urban migrants are remarkably different from normal, and the higher the birth order, the higher is the sex ratio of the ever-born child. The results suggest that the behavior of the rural-urban migrants exhibits strong son preference.

Second, we see that some social network factors have impacts on the attitude and behavior of son preference among rural-urban migrants (Bongaarts and Watkins, 1996; Kohler et al., Behrman & Watkins, 2001; Carrington, 1988). The weak relations of the childbearing discussion network and emotional support network decrease the chance of an attitude of son preference among total rural-urban migrants after migration. That is, social contacts through occupation and friendship, such as through friends, bosses, and colleagues, influence the attitudes towards childbearing. On the other hand, increasing weak ties reduces the dependence upon strong ties, such as with one's family members and kin. Accordingly, the influence on the attitude to son preference being from individual's strong relationships that have stronger son preference is decreased. Thus increase in the weak ties of the instrumental network causes son preference to increase among those who gave birth after migration, unlike the other weak ties that decrease the risk of having the attitude of son preference. Although earning power is increased and the standard of living is improved with the change of the occupation after entering the urban area, it appears that rural-urban migrants do not entirely separate themselves from the rural culture. Under the new contract responsibility system each household has become an independent unit of production, which provides a strong incentive to have a male offspring at least to satisfy labor needs. In addition, the absence of social security strengthens the son's obligation to take care of his elderly parents. Even though migrants

accept instrumental support from the social network in their daily life, their need for labor and caring for elderly relatives cannot be completely met.

Third, time of residence has a significant effect on the attitude of son preference among rural-urban migrations. The risk of having the attitude of son preference decreases with the passage of time after migration. The result suggests that the longer the migrants live in the urban area, the higher is the degree of acculturation, and thus the more likely that the migrants' attitude of son preference agrees with the urban residents (Yinger, 1985). The risk of having the attitude of son preference among those who have been living in the urban area for two to eight years is lower than those living there for less than one year. But this effect disappears among migrants who have been living in the urban region for more than eight years. Thus the longer the time of residence in the urban area, the more their attitudes and behaviors change (Yu et al., 1996). Rural-urban migrants retain strong son preference in the period soon after migration because of the residual effect of cultural consonance. However, residence time in the urban area does not influence the behavior of son preference. That is, change in childbearing behavior lags far behind change of the attitude.

Finally, some individual factors influence the son preference among the migrants. Those with higher education have a higher ratio of male to female children, and those 25 years old or above have a higher relative risk of having the attitude of son preference. This is consistent with findings of other studies (Tu, 1993; Wu et al., 2005).

The determinants of the attitude of son preference are different from those of the behavior of son preference. It is known that childbearing behavior depends on the macro social situation and micro family decision (Zhang, 1995). After migration, the standard of living of rural-urban migrants improves and their incomes increase. Although their attitude of son preference will change under the influence of the urban residents, their needs for an heir, for social support, and to take care of the elderly are still not satisfied. Producing a boy remains the core of the rural population's childbearing norms (Mu & Chen, 1996).

In general, only a minority of migrants has the attitude to son preference, and the behavior of the rural-urban migrants shows strong son preference. Social interactions among network members have an impact on individual attitudes and behaviors of son preference after migration. China is a country with strong cultural preference for more children, and "rearing a son for old age" is deeply rooted in the traditional culture. The implementation of the current birth control policy and the socioeconomic transformation has resulted in a relatively low fertility and has intensified son preference. Change in attitudes and behaviors related to childbearing are a dynamic process that may occur slowly. The sex of a child remains of primary importance, while the timing of childbirth and the number of births are secondary (Feng & Zhang, 2002).

One limitation of our study is that we study attitudes and behaviors related to son-preference through the lens of the social network, and do not pay much attention to the social conditions in the urban region, or the individual's childbearing needs, which

may influence son preference. Also our study is based on a survey in Shenzhen, and whether the results found in this research apply to other regions is not known. Attitudes and behaviors of son preference among rural-urban migrants should be studied in conjunction with the individual childbearing needs.

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Table 1 Categories of the attitude of son preference among rural-urban migrants

Definition	Value	Configuration of desired children
Son preference	1	Only one boy, two boys, at least one boy when the desired number of children is two, the number of boys is more than girls' when the desired number of children is three and above
Non-son preference	0	None, only one girl, one child is girl or boy, one boy and one girl, two girls, boy or girl of two children, the number of girls is more than boys' when the desired number of children is three and above

Table 2 Attitudes to son preference among the rural-urban migrants after migration

Content	Sample	Son preference (%)	Non-son preference (%)	Likelihood ratio
Migrants having given birth	549	11.7	88.3	**
Migrants not having given birth	1190	7.6	92.4	
Total migrants	1739	8.9	91.1	

Data resource: Shenzhen Rural-urban Migrants Survey
Note: *** P<0.001, ** P<0.01, * P<0.05, ⁺P<0.1.

Table 3 Sex ratio of ever-born children of rural-urban migrants after migration

Content	Total child	Boy	Girl	Sex ratio	Confidence region (95%)	Chi square test
Total	718	445	273	163.0	140.5~190.1	33.051***
Birth order						
First birth	441	266	175	152.0	126.0~184.8	14.522***
Second birth	224	144	80	180.0	138.2~239.7	21.891***
Third birth and above	53	35	18	194.4	114.1~371.3	4.832*

Data resource: Shenzhen Rural-urban Migrants Survey
Note: *** P<0.001, ** P<0.01, * P<0.05, ⁺P<0.1.

Table 4 Determinants of son preference among rural-urban migrants

Variable/Model	1	2	3	4	5	6
Independent variables						
Factors of social networks						
Weak ties of discussion network on childbearing	0.695*	0.736+	0.902	0.897	1.084	1.104
Weak ties of instrumental network	1.027	1.058	1.282+	1.279+	1.096	1.102
Weak ties of emotional network	0.628**	0.670*	0.577*	0.589*	0.744**	0.707***
Migration experience						
Years of living in urban areas (<=1 year)						
2-5		0.681***				
6-7		0.288*		0.758		1.236
8+		0.557		0.751		1.255
Individual variables						
Gender: (Female)						
Male		0.906		1.192		0.944
Age: (24⁻)						
25-29		1.893+				
30-34		2.153+		1.190		0.975
35$^+$		1.998+		1.382		1.036
Marital status: (Never-married)						
Ever-married		1.746				
Education: (Elementary school and lower)						
Junior high school		0.885		0.653		1.821**
Senior high school and above		1.039		0.740		1.952*
Birth order: (First birth)						
Second birth						1.234
Third birth and above						1.292
Constant	0.134***	0.084***	0.147***	0.193***	1.755***	0.821
-2LL	1010.456***	975.636***	386.703*	383.810	946.970*	934.824+
Sample	1739		549		718	

Data resource: Shenzhen Rural-urban Migrants Survey

Notes: *** P<0.001, ** P<0.01, * P<0.05, ⁺P<0.1;

Reference categories appear in parentheses.