

**FAMILY STRUCTURE AND INTERGENERATIONAL TRANSFER
IN URBAN CHINA***

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Family support for the elderly has prevailed for thousands years in China. Throughout Chinese society, the predominating ideal family type is comprised of a multi-generational, extended family living together and descending through the male line. In this family system, children were supposed to take responsibility for providing financial security to their parents during old age. As advocated by Confucian philosophy, adult children, especially sons, were raised to respect and care for their elderly parents. Intergenerational responsibility for elderly care has been a central tenet in the Confucian culture of filial piety (Whyte 2003; Zhan and Montgomery 2003).

There is a growing concern that westernization and individualization has weakened the relationship between children and parents. The process of economic development and modernization may be changing traditional norms and values, and transitioning family structure from extended families to nuclear families (Chen and Silverstein 2000; Lin 2001). In particular, continued low fertility and internal migration reduce both the willingness and the capacity of adults to care for their elderly parents. For example, the household size in China decreased from 4.64 persons in 1978 to 3.74 persons in 1995 (Leung 1997). Moreover, women, who have been the primary care-givers, have been encouraged to participate in the labor force. These changes have been eroding the role of family in traditional intergenerational support. At the same time, low fertility and increased longevity increases the elderly population. It has been predicted that the elderly population will reach 168.8 million (or 12.42 percent of the total) in the year 2010, and 341.7 million (or 23.85 percent of the total population) in the year 2030 (Poston and Duan 2000). Providing support for such a large elderly population has been a challenge.

Despite these social changes, the practice of family support to elderly parents by adult children still prevails (Sun 2004). Although social and economic transformations have weakened the role of family support, the influence of traditional values still exists, even in urban areas (Whyte 2003; Hermalin et al. 2003). In interviews with caregivers, Zhan and Montgomery (2003) found continued influence of traditional norms on intergenerational support. Thus, “it is safe to say that traditional values and practices of filial piety linger on or even may play a prominent role in at least some segments of contemporary Chinese society” (Xie and Zhu 2006). Moreover, social and commercial support systems are still underdeveloped (Leung 1997). According to Liang and Gu (1989), the majority of physically dependent elders were cared for by their family members and less than 5% were institutionalized. In addition, social policies such as the Law of Marriage and the Law on Protection of Rights and Interests of the Elderly reinforce the value and practice of family support (Giles and Mu 2006; Sun 2004; Zhang 1997). In particular, due to the unsuccessful implementation of welfare policies in recent years, the government started emphasizing the importance of family support to the elderly (Zavoretti 2006).

Nevertheless, a growing body of evidence indicates that the traditional family support pattern has been changing in contemporary China, especially in urban areas (Thornton and Lin 1994; Whyte 2004), as younger generations today increasingly prioritize their own lifestyles. For example, contrary to the traditional pattern in which married sons carry the major responsibility for supporting their parents, Xie and Zhu (2006) find that married daughters, especially those living with parents, provide more financial support to parents than do sons in urban China. In terms of coresidential patterns, a 1993 survey in urban China shows that the

proportion of elderly living with adult children declined from 71% in 1987 to 67% in 1993 (Logan et al. 1998).

Although many studies have examined intergenerational support patterns in China (for example, Lee and Xiao 1998; Logan and Bian 1998; 2003; Sun 2002; 2004), most of them are based on parent-child pairs across families. They either only examine the transfer between one particular adult child and her/his parents or look at family structure at the family level, ignoring transfers between the child's siblings and their parents. Undoubtedly, intergenerational transfers occur within a family context, and the arrangements for financial transfers between adult children and their elderly parents involve residential arrangement and the characteristics not only of the adult children and their elderly parents but also of the adult children's siblings. Thus, multiple members in an extended family can be involved in making such a decision (Hermalin et al. 1992a; Hermalin et al. 1992b; Knodel and Ofstedal 2002).

Moreover, the across-family models do not control for unobserved family background characteristics, such as a family's values, and these characteristics might be associated with both transfers and children's characteristics, such as financial status. These unobserved factors might suggest that the estimated coefficients in previous research are biased. For example, according to McGarry and Schoeni (1995), parents who have a particular interest on children's success may give them more financial assistance and help them perform better in their careers. Thus the unobserved factors can be positively associated with children's financial status, resulting in the estimated coefficients of financial status in previous research to be biased toward zero. In this research, we take unobserved differences across families into account by estimating fixed-effects models, thus reducing selection bias.

The aim of this paper is to examine patterns of intergenerational transfer between adult children and their parents, focusing on the effects of the characteristics of adult children and their adult siblings with respect to their financial support of parents. In this study, family structure refers to siblings' characteristics, such as gender, birth order, co-residential status, marital status, and socioeconomic status. Specifically, we will test three hypotheses regarding intergenerational transfer: traditional social norms, exchange, and resource redistribution. We will primarily address the following questions: how children's gender and birth order affect intergenerational transfer between adult children and their parents (the traditional social norms hypothesis); how children's education correlates with financial transfer (the long-term exchange hypothesis); and how resources are redistributed within families through intergenerational financial transfer (the resource redistribution hypothesis). After exploring answers to these questions, we can better understand the underlying mechanisms of family support to the elderly in which siblings make different contributions. The findings also improve our understanding of the relations between children and their elderly parents. To control for unobserved family-level factors, fixed-effects models are used to perform the analysis.

Hypotheses

Many studies have investigated recent patterns of intergenerational support in China. Overall, in the majority of Chinese families, adult children are still the primary sources of elder support, though social and economic changes have been undermining this traditional practice (Xu and Yuan 1997). Support of parents by children takes many forms, but financial and physical assistance are the most essential (Yuan and Whyte 2003). Family structure, such as family size, sibling gender composition, and coresidential status, is also examined in previous

studies, and the findings show significant associations with elder care practices (Lin et al. 2003; Logan and Bian 2003; Zimmer and Kwong 2003).

To explain intergenerational transfers between parents and children, researchers have proposed a number of theoretical models based on motivations and family strategies (Lee, Parish, and Willis 1994; Lillard and Willis 1997). This study focuses on testing three hypotheses – traditional social norms, long-term exchange, and resource redistribution – derived from the standard explanations of gender and birth order pattern, the mutual aid model, and the altruism model respectively. Many hypotheses derived from these models have been empirically tested in western countries, but few systematic studies have been conducted in Chinese families. These three hypotheses play important roles in explaining patterns of intergenerational support, and also imply the underlying mechanisms of intergenerational relations.

Traditional social norm hypothesis

The traditional social norm hypothesis shows how gender and birth order matters for intergenerational transfer. More specifically, sons and the eldest child are expected to carry the major responsibilities for taking care of their elderly parents. The valuation and practice of these gender and birth-order orientated patterns is mainly due to the influence of traditional culture. Under the influence of Confucius over thousands of years, traditional Chinese families are patrilocal and patrilineal (Thorton and Lin 1994). In this family system, as Xie and Zhu point out, “sons are permanent members of their natal families and retain life-time contractual relationships with their parents. Throughout their lives, they are expected to contribute to the economic well-being of their parents. In contrast, daughters are only transitory members of their natal families; after marriage, they begin to contribute to the family households of their parents-

in-law” (2006: 1). Given this traditional gender ideology, we may expect a substantial gender difference in children’s support to the elderly. Although social and economic changes may undermine this traditional gendered culture of filial piety, gender differences in intergenerational support can still be expected.

The previous literature particularly examines gender difference in supporting the elderly, and the findings are less than consistent (Lee et al. 1994; Lin et al. 2003; Xie and Zhu 2006; Whyte and Xu 2003). For example, Lee, Parish, and Willis’s (1994) study shows that in Taiwan married sons provide greater financial transfer to their parents than do married daughters. Similarly, using data from the Survey of Health and Living Status of the Elderly in Taiwan in 1989, Lin et al. (2003) report that sons generally provide more support to their older parents than daughters do. However, another study conducted in urban China by Xie and Zhu (2006) suggests that married daughters are more likely to provide greater transfers than married sons do. This inconsistency may indicate social and cultural differences between Taiwan and mainland China (Xie and Zhu 2006), and that the gendered culture of filial piety has been changing, with daughters becoming the primary support providers in China, especially in urban areas (Davis 1993; Zhan and Montgomery 2003). However, many studies that examine gender patterns are based only on inter-family models; thus evidence from intra-family analysis is still needed.

Birth order is another important factor in the traditional Chinese family system. Not only do male members have power over female members, but older members have power over younger members. Because of the patrilineal structure, the oldest child is expected to bear more responsibility in caring for parents. More importantly, birth order is often connected with gender. The interaction of these two plays an essential role in transfers; the oldest son carries major responsibilities in providing food and housing for his parents (Fricke, Chang and Yang 1994;

Zhang and Goza 1996). In return, there is a cultural preference for the oldest son to be given a larger share of his parents' property or receive more financial or other support from them (Snug 1981).

Although birth order plays an important role in intergenerational support, it is often ignored in previous studies (Knodel and Ofstedal 2002), due in part to a lack of data. With information on all siblings, this study uses birth order, gender, and the interaction of birth order and gender to test the traditional social norm hypothesis.

Exchange Hypothesis

An alternative explanation for intergenerational support among family members is the exchange model, involving both long-term and short-term exchanges (Lee, Parish and Willis 1994). The essence of the exchange model is mutual assistance among family members of different generations. For example, in the short-term exchange, adult children may need their parents' help in childcare and household chores. In the long-term exchange, parents may invest in children's education in return for financial support in later years (Lee, Parish, and Willis 1994). The long-term exchange hypothesis may be more important in Chinese context: parents' early investment may determine their children's future socioeconomic status, given that education is one of the most important factors in social stratification. Parents may receive more financial assistance in their old age from children with high educational attainment, and thus enjoy greater economic security. A number of studies find that children's education is positively associated with the amount of assistance to parents (e.g., Lee, Parish, and Willis 1994; Sun 2004; Xie and Zhu 2006), indicating that the extent to which parents receive support from their adult

children may be based on the parents' investment in the children (Cox and Rank 1992; Hermalin et al. 1992b).

In examining the exchange hypothesis, this study looks at whether adult children with higher levels of schooling within a family are more likely than those with lower levels of schooling to provide financial support to their elderly parents. Similar to Lee, Parish and Willis's study in Taiwan (1994), we would also expect that adult children who have received more investment, such as higher education, are likely to provide greater financial support to their parents.

Resource Redistribution Hypothesis

The redistribution of resources within a family is also an implication of the altruism model. The altruism model assumes that a family head is altruistic and he or she cares about less well-off members by providing more financial support (Becker 1974; Lee et al. 1994). In the redistribution of resources through intergenerational transfers, parents manage the resource flow among the whole extended family. In a study on redistribution of resources within the family, McGarry and Schoeni (1995: S184) found that parents "give greater financial assistance to their less well-off children than to their children with higher incomes," and that well-off children transfer more to their parents. Although this study was conducted in the U.S., we can infer that there may be a parallel case in China, with wealthy children transferring more to their parents, and parents giving more to their less wealthy children.

This study tests the resource redistribution hypothesis by examining downward (from parents to children) and upward (from children to parents) transfers within the extended family. Specifically, we examine whether wealthy children give greater financial assistance to their

parents and whether parents give greater financial assistance to their less wealthy children. We use financial situation to measure children's wealth. Following McGarry and Schoeni's study (1995: S186), the question of whether parents make greater transfers to less wealthy children can be directly answered by examining intra-family differences in transfer behaviors after "unobserved differences in family generosity are controlled for."

In sum, this study extends previous research by examining three hypotheses regarding intergenerational transfer in China – traditional social norms, exchange, and resource redistribution – in an intra-family context. By estimating fixed-effects models, unobserved intra-family differences are taken into account.

Data

The dataset we use for this study draws from the survey "Study of Family Life in Urban China," conducted in 1999 in three large Chinese cities: Shanghai, Wuhan, and Xi'an. The researchers used a two-stage probability sampling method and initially targeted a probability sample of 1,300 households. 50 neighborhood communities were randomly selected in the first stage, and 20 households were randomly chosen in each neighborhood community in the second stage. An adult respondent was chosen from each selected household based on a Kish table. The survey has a unique design, matching an adult respondent with one of his or her elderly parents. If the person who was interviewed was younger than 60, she or he was interviewed with Questionnaire A. Then one of his or her parents was interviewed with Questionnaire A+, in which questions were specially designed for the elderly. If the person who was interviewed was 60 years or older, she or he was interviewed with Questionnaire B, which is similar to Questionnaire A+. Then one of his or her children was randomly selected for interview with

Questionnaire B+, which includes questions similar to Questionnaire A. Therefore, the study contains an adult child sample, a parent sample, and a matched sample with adult-parent pairs¹ based on the former two samples. Information on intergenerational support is collected from both the children's and parents' sides.

For this study, we use the elderly sample to perform analyses, pooling the respondents interviewed with questionnaires B and A+ (i.e., the parents), since this sample includes more family structure information such as children's genders, birth order, educational attainment and economic status. Information about financial support to parents was also collected, including both upward (from children to parents) and downward (from parents to children) in the year 1998. In addition, we restrict the analysis to families with more than one child and at least one surviving parent. Selecting for families with at least two adult children is for the estimation of fixed-effects models. Since after marriage, daughters are expected to care for their husbands' parents, we further restrict the sample to married children.² The final sample size is 4,813 from 1418 families, including 2,320 sons and 2,493 daughters.

Measures and Methods

Dependent variables

Financial transfer between parents and children involves upward (from children to parents) as well as downward (from parents to children) flows. We study transfers in both directions in light of the hypotheses discussed above, especially the resource redistribution hypothesis. On the elderly parent's questionnaire (Questionnaires B and A+), respondents were asked how much money (including both cash and gifts) he or she received from each of his or

¹ Both members of any pair live in the same city.

² Among families with at least two adult children, about 90% of children are married. There is thus not much variation in the marital status variable.

her adult children and how much money he or she provided to his or her adult children in 1998. We use six dependent variables to perform the analyses. The first two dependent variables are dummy variables for whether an upward or downward transfer occurs, or, in other words, the likelihood of transfer from children to parents and parents to children, respectively. The third dependent variable, also a dummy variable, is the likelihood of transfer based on net transfer, with zero for non-positive net transfer and one for positive transfer. The other three dependent variables are amount of financial transfer from children to parents (upward), from parents to children (downward), and net transfer, with upward transfer subtracted by downward transfer.

Independent variables

The key independent variables are siblings' gender, birth order, education, and financial status.

Gender is a dummy variable. Male is coded as 1 and female is coded as 0.

Birth order is a dummy variable with the oldest coded as 1 and the other coded as 0. In the sample, birth order was originally coded from 1 to 9. Since this study only focuses on whether the eldest sons take more responsibility for supporting elderly parents, we recoded this variable as a dummy variable. With respect to the interaction of gender and birth order, we can make comparisons among four groups: the eldest sons, the eldest daughters, the younger sons, and the younger daughters.

Education is measured by years of schooling. This variable is used to test the long-term exchange hypothesis.

Financial situation is measured by an interview question that asks parents to rate their children's financial situation on a 5-point scale – excellent, good, fair, somewhat poor, and very poor. Very

poor and somewhat poor are combined and coded as 1, fair is coded as 2, and good and excellent are combined and coded as 3. This variable is used to test the resource redistribution hypothesis. Other covariates include siblings' age, co-residential status, and emotional closeness to parents. Co-residential status is a key covariate in this study. According to Xie and Zhu (2006), whether or not co-residence should be considered a form of adult children's support to parents or children's dependence on parents is not clear, because it may depend on the two generations' situations and life courses (Logan and Spitze 1996; Ward, Logan and Spitze 1992). Following earlier studies (Lee, Parish, and Willis 1994; Xie and Zhu 2006), co-residence is treated as a moderator of financial transfer in the analysis, as this strategy is more conservative. Emotional closeness is an important confounding variable in the analysis. It is a dummy variable. Closeness is coded as 1 and distance is coded as 0.

Methods

The major statistical approach in this analysis is the use of simple fixed-effects models. The fixed-effects models allow for unobserved family-level factors. Given the data structure – each family with several siblings, regular regressions relying on interfamily variation are problematic due to endogeneity bias.

The analysis involves three steps. For each step, we estimate two models: logit model predicting the likelihood of transfer and OLS model predicting the amount of transfer. In the first step, we analyze the upward transfer, that is, the transfer from children to parents. We begin with the dependent variable of likelihood of transfer by estimating logit models. In this step, the interaction of gender and birth order, educational attainment, and financial situation are included in the analysis. We next examine the relationship between siblings' characteristics and the

amount of upward transfer by using OLS models. The purpose of this step is to test the traditional social norm hypothesis, the long-term exchange hypothesis, and part of the resource redistribution hypothesis – whether or not wealthy children are more likely to provide greater financial assistance to their parents. In the second step, we analyze downward transfer, i.e., transfer from parents to children. We perform the same analyses as those in the first step. This step tests the other part of the resource redistribution hypothesis – parents are more likely to give more to less well-off children. In the third and final step, we perform the analysis based on the likelihood of positive net transfer and the amount of net transfer so as to further examine the relationships analyzed in the first two steps. All of these analyses are performed with fixed-effects models.

Results

The preliminary results show that the long-term exchange and resource redistribution hypotheses are supported after controlling for unobserved family-level factors. That is, children with higher educational attainment (i.e., who received more investment from parents) repay parents' earlier investment through more financial support, and better-off children transfer more to their parents and parents give more money to less well-off children. However, this study does not support the traditional social norm hypothesis. We find that the oldest sons do not bear more of the responsibility of caring for their parents. Instead, we find that birth order affects neither the likelihood nor the amount of transfer, but significant gender differences in transfer behaviors do exist. Contrary to the traditional gender pattern in which sons carry the major responsibility for caring for their parents, daughters are more likely to provide greater transfer to their parents than sons.

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