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Filial Norms, Altruism, and Reciprocity: Financial Support to Older Parents in China

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ABSTRACT:

As a direct expression of filial piety, adult children, in particular sons, are expected to provide support to older parents in China. Despite concerns about a decline in traditional values, few empirical studies examine whether adherence to Confucian family values impacts adult children's financial support of aging parents, or if other factors play a more central role. In the present study, I assess several categories of factors including filial piety, altruism, long-term reciprocity, and contemporary mutual exchange. Survey data from the 2002 wave of the Chinese Survey of Family Dynamics (CSFD) (N=3,768) was utilized. For both sons and daughters, agreement with filial piety values, parents' education level and help with housework were associated with greater likelihood of economic support. For daughters, those with young children (under 18) were less likely to support parents. Among sons, those who received support from parents earlier in the life course (a wedding gift) were more likely to provide financial transfers.

KEYWORDS:
Intergenerational relations
China
Financial support
Gender
Filial responsibility

China is currently undergoing rapid population aging with an under-developed social welfare system for older adults. Demographers predict that by 2050, 35.1% of China's population will be over age 60, comprising more than 470 million people (UN Population Division, 2017). In recent years the Chinese government has set a goal to provide social pensions for all Chinese citizens, but the benefit level is still low and there is inequality across regions (Liu and Sun 2016). Therefore, support from family members is still very important. Traditional Confucian family ideology regards sons as lifelong members of their family of origin and therefore responsible for their parents' wellbeing (Xie and Zhu, 2009; Whyte and Xu, 2003). However, policy makers worry about how a decline in traditional values will lead to lower levels of support for older parents, including financial support. While this claim is frequently voiced, few empirical studies investigate if adherence to Confucian family values impacts adult children's financial support of aging parents, or if other factors play a more central role.

Data from the 2002 wave of the Chinese Survey of Family Dynamics (CSFD) permit me to explicitly operationalize filial piety and analyze whether adherence to traditional values is associated with adult children's financial support of older parents. I frame this investigation alongside other theoretical models that can be used to predict financial support of older adult parents, namely the corporate group model (Lee and Xiao, 1998) and the mutual aid model (Lee, Parish, and Willis, 1994). In addition, I compare financial support patterns from sons versus daughters, as Confucian values dictate different expectations for support from male versus female children.

This study makes unique contributions to the literature on familial support in contemporary China. In contrast to other datasets which use indirect measures, the CSFD captures detailed measures of filial piety and family values, operationalized through multiple survey items. Norms and values are important aspects of intergenerational support but are often over-looked in the literature (Hu and Li, 2020). There is a great deal of variation in filial piety attitudes and practices, and it is worthy of study given the emphasis on traditional culture in many East Asian countries and overseas communities (Canda 2013). The CSFD is also uniquely suited to examine familial dynamics in multiple areas of both rural and urban China, which is important to get a broader understanding of these processes across different regions of the country.

Theory

The Confucian norm of filial piety has served as a central pillar of cultural and moral ideals for Chinese and other Asian societies for thousands of years. Within the family, the virtue of filial piety maintains that adult children should obey, respect, and support their parents (Ikels, 2004). One way to demonstrate filial piety is by providing material support, including financial support (Canda 2013). In a

strict interpretation, filial piety is considered reverence of the father by the son. Sons are required to support parents but daughters' support may be considered a gift. Older parents cannot say that their daughters are unfilial because there are no expectations for them (Miller, 2004). Similarly, parents of daughters are not obligated to support them as much as sons (Ho 2019). This partly stems from the idea that while investment in sons can be repaid with old-age support, when daughters marry, they are members of their new families.

There is debate however, in many East Asian societies that follow Confucian principles (such as China, Korea, Japan, and Singapore) whether the influence of traditional culture is positive or negative (Canda 2013; Hu and Li, 2020). Negative aspects include son preference and lack of support for institutional care, but cultural forces can also motivate instrumental and financial support to older generations. Individuals are not wholly rational and self-interested, cultural values matter for family caregiving.

Beyond cultural practices, Chinese law requires that adult children care for their aging parents physically, financially, and emotionally. Children's "duty to support and assist their parents" was encoded into the 1950 marriage law and the current Chinese constitution (Feng 2017). The state furnishes very limited social welfare benefits to older adults, therefore maintaining the primacy of family in providing old-age support.

Based on this, it is unsurprising that financial support from family members is common among Chinese families (Giles, Wang, and Zhao, 2010; Gruijters 2018; Logan and Bian, 2003). Due to a lack of social welfare provided by the state, financial support from children is often an economic necessity. This is particularly true for poor, rural older adults (Giles, Wang, and Zhao, 2010; Guo, Chi, and Silverstein 2009; Silverstein, Cong and Li, 2006). In addition, economic support is a way for children to demonstrate filial piety (Gruijters, 2018). In urban areas, however, such transfers may be symbolic (Xie and Zhu, 2009) and part of getting along well with one's social network (Ho 2019).

While policy makers in China focus on Confucian values, scholars of modern China understand intergenerational relations through three competing theoretical perspectives: altruism, corporate group model, and mutual aid. The altruism model (Chen, Liu, and Mair, 2011; Cong and Silverstein, 2011; Song, Li, and Feldman, 2012; Zimmer and Kwong, 2003) posits that because family members care about each other, they have selfless concern for one another and are therefore motivated to provide support. In altruistic support, help is given to those family members in greatest need, but not necessarily able to return the favor.

In the corporate group model, families allocate resources where they will do the most good for the entire family (Lee and Xiao, 1998). For example, in studies of patrilineal families, prior research has found that parents invest in sons' education more than daughters' (Hu 2017; Lin et al., 2003; Lee, Parish,

and Willis, 1994), as it a more advantageous long-term investment. Older parents expect a return on their investment through the form of old-age support. In addition, these educated sons will have greater earning power as adults.

While the corporate group model examines long-term arrangements between generations, aimed at maximizing family well-being, the mutual-aid model looks at a shorter time horizon. This model emphasizes contemporaneous exchanges between generations (Lee, Parish, and Willis, 1994). For instance, coresident older parents providing childcare enables mothers to enter the labor force (Shen, Yan, and Zeng, 2016). Mutual aid is similar to the corporate group model in that the overall aim is still to enhance the entire family's well-being. A "time-for-money" exchange is common in Asian families where grandparents provide help with housework and childcare in exchange for food or money from their adult children (Frankenberg, Lillard, and Willis, 2002). These three theoretical models have been used to understand intergenerational relations in contemporary China, but previous limitations in data have limited our understanding of the role of filial piety attitudes.

Literature Review

While few in number, existing research from Chinese societies regarding filial piety and support to parents found largely positive correlations. Two studies from China found that adherence to filial norms was associated with a higher likelihood of financial support (Zhan and Montgomery, 2003) and higher levels of financial support (Lin and Yi, 2011). In research examining ancestor worship, another cultural tradition, Hu and Li (2020) found a positive correlation with financial support to older parents but not assistance with household chores. Prior analysis of the dataset used in this paper by Zhang, Gu, and Luo (2014) found that stronger filial piety attitudes were associated with higher likelihood of coresidence.

However, studies on gender variations in adult children's financial support of parents complicate the picture of traditional filial piety. One recent study found that daughters have higher levels of filial piety beliefs (Yi, et al, 2016). Evidence from mainland China show that contrary to cultural dictums, married daughters provide more monetary support than sons (Hu 2017; Xie and Zhu, 2009; Zhu, 2016). Gruijters (2018), using a nationally representative sample of both urban and rural areas, found that daughters were more likely to provide financial transfers but sons gave higher amounts. Some evidence that for old-age care, sons' and daughters status' is becoming more equal. Migration of daughters from rural to urban areas may be one reason why daughters' roles are enhanced, thus increasing gender equality within the family (Feng 2017). On the other hand, women's labor force participation has declined overall since the beginning of market reforms. This is likely due to both gender discrimination in a market

economy, the fading of the socialist idea that "women hold up half the sky," and increased interest in women as housekeepers (Hu 2017; Wu et al 2016).

Prior research on economic support has highlighted the importance of altruism but results are mixed. Some studies have found support for altruism – parents with greater need are more likely to receive financial support. This includes widowhood (Xie and Zhu, 2009), specifically widowed mothers (Logan and Bian, 2003), lower parental SES (Lee and Xiao, 1998; Logan and Bian, 2003; Xie and Zhu, 2009) and older age (Gruijters, 2018). By contrast, other studies have found a negative relationship between parental need and financial transfers. This includes widowed fathers (Logan and Bian, 2003) and less educated parents (Logan and Bian, 2003; Cong and Silverstein, 2011).

Prior research from China has also provided somewhat mixed support for the corporate group model and the mutual aid model, which are both rooted in exchange-based understandings of intergenerational support. In support of the corporate group model, Lee and Xiao (1998) found that parents who helped offspring get a job in pre-reform China were more likely to receive financial support from their children than parents who did not aid their children in this fashion. By contrast, analysis of China Health and Retirement Longitudinal Study (CHARLS) data found that investment in children's education and weddings was not associated with greater probability of adult children supporting older parents materially (Ho 2019).

Other studies support the mutual-aid model. Adult children who receive help with childcare were also more likely to provide financial support to parents (Cong and Silverstein, 2012; Gruijters, 2018). Lee and Xiao (1998) found that older adult parents who helped with housework received more economic support than parents who did not aid in housework. Song, Li, and Feldman (2012) found that daughters, and not sons, were more likely to reciprocate, which suggests that daughters may be more responsive to the mutual aid model than the altruism model. By contrast, Hu's 2017 study found an asymmetrical relationship – daughters provided more to parents but received less, such as assistance in purchasing a home.

This study will add to our understanding of financial support from younger to older generations in contemporary China. I will investigate the separate influences of filial piety attitudes, parental need, long-term reciprocity, and short-term support between generations. In addition, I will explore whether determinants of support differ between sons and daughters.

Data and Methods

The data for this project come from the Chinese Survey of Family Dynamics (CSFD), 2002 wave. This is a two-wave 9-province survey of adult children in China who are the children of a subset of

respondents from the 2002 wave of the Chinese Longitudinal Healthy Longevity Survey (CLHLS). The overall response rate for the CLHLS is very high, 95% in the 2002 wave (Gu 2008). Details about the study design of the CLHLS can be found elsewhere (Gu, 2008; Gu and Dupre, 2008; Zeng, 2008). The 2002 wave of the CSFD consist of 4,364 interviews with adults ages 35-65 who reside in the same county/city as the parent that is interviewed in the CLHLS. The response rate was over 90% (personal communication with Peking University staff). The first wave of the survey was carried out by the Center for Healthy Aging and Family Studies at Peking University, the China National Research Center on Aging, and the Mainland Marketing Company in the summer of 2002. Respondents resided in the following provinces and municipalities: Beijing, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Guangxi. The CSFD collects extensive data on demographic characteristics, health behaviors, educational attainment, work experience, marriage, filial piety values, family values, information about parents and parents-in-law, living arrangements, financial expenditures, children's education, and support for older family members.

While more recent datasets are available – such as the CHARLS and the China Family Panel Studies (CFPS) 2018 waves – neither study contains both the filial piety and financial support measures that are essential for the present study. While much research on intergenerational support in China highlights the importance of filial piety, the present dataset permits a specific and detailed operationalization of filial piety and family values. In addition, this study can shed light on the relationship between filial piety and financial support to parents in the early 2000s during the "demographic dividend" period, while families are still relatively large and before major population aging has taken place. Last, this dataset helps document the "generation gap" between older cohorts who have greater adherence to filial piety than that of younger people (Hu 2017).

According to the study design, a respondent in the CLHLS who lives in the nine provinces/municipalities with at least one living child ages 35-65 who lives in the same county/city as the older parent is picked up as a valid object. For those older adults with more than one adult child, a single child is chosen at random. The sampling procedure dictates that the child is chosen based on the birth month of the older adult CLHLS respondent. For respondents with two children, the survey team divided the year into two, and if the birth month of the older respondent falls in the first half of the year, the elder child will be selected as a respondent and vice versa. For three children, the year is divided into three parts, and so on.

Upon careful inspection of the data, however, it would appear that the characteristics of adult child respondents in the CSFD are significantly different (based on t-tests) from all eligible children of CLHLS respondents. For example, respondents in the CSFD are more likely to be male and coreside with an older parent than other eligible siblings. It may be the case that response rates were lower for non-

coresident or female children, and therefore those people were not included in the survey. In light of this, I decided to construct post-stratification weights to account for non-response bias[1].

While CSFD data contain information on 4,364 respondents I was only able to link the CSFD data to the CLHLS data for 3,869 respondents, which was necessary for the creation of weights. The weights are based only on those older respondents who could be successfully linked to the CSFD data. Due to missing data on covariates, the final analytic sample is 3,768 (less than 5% missing data).

Measures

Variables used in this analysis pertain to three generations in the family. For clarity, I will refer to the three generations in the family as the following: generation one (G1) – older parents; generation two (G2) – adult respondents; and generation three (G3) – children of adult respondents (also grandchildren of G1).

Dependent variable. The dependent variable in this study is a binary variable of whether or not the adult child respondent (G2) provided any monetary financial support to the older adult parent (G1) in the past year (yes = 1). In this study I am examining respondents from both rural and urban regions of China. This makes it a challenge to determine what amount would be merely symbolic versus an amount that would be of practical significance (for example, using a cut-off point). Therefore, in this study a binary variable is used to indicate "likelihood of any support". Several prior studies also examine financial support as a binary variable (Gruijters, 2018; Ho 2019; Hu 2017; Hu and Li, 2020).

G2 respondents were asked "What kind of help did you provide to the elderly in the last year? give money – amount of Yuan". This was asked for mother, father, father-in-law, and mother-in-law. Respondents who reported giving any amount of financial support to either their natal father or mother are counted as "yes" – provided a financial transfer to parents.

[1] I began by looking at the CLHLS respondents (older adults) that were linked to the CSFD dataset. Among 3,869 older adults who could be successfully linked to CSFD, on average each had 2.7 eligible children. I reshaped the data to make each eligible child of a CLHLS linked older adult have their own data entry for a total of 10,407 children. I compared the cross-tabulations by age group (35-44; 45-44; 55-65), sex, and coresidence status for those children in the CSFD and those not. Post-stratification involves classifying the sample by groups (here age group, sex, and coresidence status) and then weights individuals in each group (poststratum). The weight $w_h=rP_h/r_h$ is computed for reach sample in post-stratum h, where r_h is the number of respondents in post-stratum h, P_h is the "population" proportion from all eligible children in the CLHLS dataset, and r is the respondent sample size(Little 1993; Smith 1991). For example, while coresident sons ages 55-65 make up only 2.77% of all qualifying children in the "population", they comprise 14.24% of respondents in the sample. Therefore the weight for coresident sons ages 55-65 is 0.19499.

Key independent variables. The key independent variables are listed in order of whether they pertain to the three theoretical models of intergenerational exchange: altruism, corporate group, and mutual exchange. Key measures of altruism are adult children's (G2) attitudes towards filial piety and family values and older parents' (G1) need. The CSFD asked respondents the extent to which they agree with a series of statements pertaining to filial piety and family values. Interviewees responded on a 5-point likert scale with 5 being "very important" and 1 being "not very important". There are 24 items in total, 13 relating to filial piety and 11 relating to family values. Exploratory factor analysis was carried out on all 24 factors. The "factor" command with principal components was carried out in STATA for both weighted and unweighted values. Both weighted and unweighted analyses resulted in the items loading onto 5 factors (Kaiser criterion – eigenvalues ≥1). Rotation produced orthogonal factors which are helpful for creating indexes that are not correlated to each other (Hamilton 2009; Kim and Mueller 1978). Factor analysis was similar for both weighted and unweighted data so unweighted data were used to create the factors for consistency. Only the first 3 factors had Chronbach's alpha values greater than .70 and were retained for analysis (Santos 1999).

Table 3 (see results section) lists the items and means for the three retained factors, and the percentage of respondents who rate the item important/very important. The first unweighted factor is titled "family values" (alpha=0.7963) and consists of 5 items. The second factor is titled "respect" (alpha=0.7679), and consists of 3 items. The final factor is titled "coresidence" (alpha=0.7185) and consists of 3 items. For ease of interpretation of descriptive statistics, each factor ranges from 1 to 5 and is constructed from the average scores of the items in the factor. In the multivariate analysis the predicted values (from factor analysis) of the factors are used so that each factor has a mean of zero and a standard deviation of 1.

Additional measures of altruism are measures of parental need. These include health, marital status, age, and socioeconomic status (SES) of G1. Parental (G1) health is a binary measure of ADL disability – for either one or both parents. It is measured by a question asking whether one or both parents have any of four activities of daily living (ADL) limitations. This measure is assessed by asking the adult child. While there is additional information on the health status of the focal parent (the parent who was interviewed in the CLHLS), this same information is not available for the spouse. Therefore, I chose to limit the health variable to the adult child respondent's report. Marital status measures whether both parents are alive, or whether there is only one parent living (father only or mother only). Age is measured by the average age of the two parents (G1), if both alive. Age is treated as a categorical variable of ten-year age groups ranging from 60's to 100+ years of age. SES is measured by each parent's educational attainment split into three categories – no education, elementary school, or junior high or greater.

My analysis includes five variables that measure the corporate group model – which is the idea of allocating resources where they will do the most good for the whole family. This includes longer-term reciprocity. Three variables pertain to support from G1 to G2 earlier in the life course. Respondents are asked whether G1 parents paid for education (senior high school or college), provided a wedding gift, and the amount of the wedding gift in Yuan. Another test of the corporate group model is whether G2 adults provide support to their children (G3) versus parents (G1). Therefore I included variables measuring the number of G3 children and whether at least one child is an adult (over 18). I do not hypothesize whether having younger or older children would influence whether G2 will give financial support to G1. G2 might have fewer resources to spare when G3 children are younger – having to pay fees for primary and secondary schools, tutors, etc. -- or when children are young adults – potentially college tuition, help with migration costs, wedding gifts, or buying an apartment.

Variables that pertain to the mutual aid model relate to present-day support from G1 parents. This is operationalized through a survey question that asks G2 respondents whether the older parent(s) (G1) provided any childcare or housework to the focal child within the past year. This is a categorical variable with codes for none, housework only, childcare only, or both. For respondents with both parents being alive, this is a measure of support from either one or both parents.

Control variables. Control variables include variables pertaining to G2 characteristics and also the G1-G2 relationship. G2 controls include age, sex, marital status, SES, and family composition. SES of the respondent is measured by several variables – educational attainment, occupation, household income, and hukou (household registration). Family composition refers to number of siblings, gender of siblings, and whether the respondent is an eldest son. In China is it considered the role of the eldest son to provide the lion's share of old-age support to parents.

G1-G2 relationship variables income residential distance and relationship quality. Residential distance is a self-report of whether parents coreside with the respondent, on the same village or street, in the same county or district, or in the same province or city. The CSFD does not include respondents who live beyond the province. I also included a measure of whether G1 parents live with another child instead. Relationship quality is assessed by the question "How is your relationship with your Father? Mother?" This is measured on a 5 point scale from very bad to very good. Relationship quality is a binary variable where 1 is good or very good relationship with mother or father. I also averaged the two to assess relationship quality with both G1 parents.

Analytic Strategy

I generated a series of models used binary logistic regression predicting the likelihood of giving any financial transfers to parents. Separate models were run for sons and daughters. Marginal effects are reported in the regression tables. Models are as follows: Model 1 - controls plus altruism measures; Model 2 – controls plus corporate group variables; Model 3 - controls plus the mutual exchange variable. I carried out the multivariate analysis separately by weighted and unweighted data and found the results to be largely the same. Due to the fact that the variables used to create the weights (stratifying variables) are controlled for in the regression, then there should be no difference in the analysis (Winship and Radbill 1994:248). All analyses are performed with STATA version 13.

Results

Table 1 provides descriptive statistics for covariates, separately by gender, organized by whether they pertain to G2 (respondent's generation), G1 (older adult parents of respondents) G3 (children of respondents), or characteristics of the relationship between G1 and G2. Weighted data are presented.

-- insert table 1—

For the adult child respondents (G2) overall, nearly half of respondents were female, and nearly all were married. Respondents had on average 7.16 years of education and a household income of 1,735 Yuan. While more than half were agricultural *hukou* holders, only 36% worked in agriculture. Although the household registration system persists, non-farm employment opportunities are available to rural residents. G2 respondents were likely to have multiple siblings, with the majority having had at least one sister and at least one brother. While only 12.74% of respondents coresided with parents, 30% had siblings who coresided with parents.

Older parents (G1) of respondents had a mean age of 80 years. Disability rates were fairly low despite advanced age (18.98%). About half of respondents still had both parents living; only 17.6% had a father only living. Parents' education levels were lower than adult children. A fraction of parents paid for the adult child's education (21%) while the majority provided some sort of wedding gift (82.6%), with the amount reported ranging from a minimum of twenty Yuan to a maximum of 30,000 Yuan. Twenty percent of adult child respondents reported receiving some days of help with housework or childcare within the past year. More than three-fourths of respondents gave some financial assistance to parents in the form of money, with a mean value of 495.90 overall.

In examining the weighted data, sons and daughters were similar across many characteristics, including no statistically significant difference in percent who give financial transfers, amount of financial

transfers, household income, and number of children (G3). Respondents had, on average, 2.06 children (G3) and the majority had at least one child under age 18. In terms of filial piety, daughters had higher scores for the family values and respect factors and a lower score for the coresidence factor. Sons were more likely to report receiving help with housework (25% vs. 14%) but less likely to report good relationship quality (85% vs. 93%).

-- insert table 2

Table 2 lists the items and means for the three filial piety factors, and the percentage of respondents who rate the item important/very important. The first unweighted factor is titled "family values" (alpha=0.769) and consists of five items. The second factor is titled "respect" (alpha=0.768), and consists of three items. The final factor is titled "coresidence" (alpha=0.718) and consists of three items. Most respondents highly rated the items in the first two factors, but levels of support for the items in factor three were much lower. For example, only 26 percent of respondents agreed that it is important for a married adult to live with older family members.

--insert table 3 here—

In tables 3 and 4 I examine four different models predicting any amount of economic support (yes/no) from adult children to their parents with separate analyses for sons and daughters. While sons and daughters have the same overall likelihood of giving to their parents, the probabilities differ by level of control variables. I compared a fully interactive model with separate analyses for sons and daughters and found that the predicted probabilities were the same for both types of analyses. Separate models are presented here because it is easier to interpret. All models include all controls. I will first describe the regression results for sons (table 3).

Model 1 includes measures of filial piety. For sons, only one of the filial piety attitudes factors is statistically significant – family values. Those who agreed more strongly with family values were more likely to give transfers. When examining predicted probabilities, for an average son whose family values score is 2 SD above the mean, his probability of giving economic support to parents is .81 (95% CI: .77, .84). This is .07 higher than an average son whose family values score is 1 SD below the mean.

Parents' marital status, age, and education are measures of need that are included in model 2 - altruism. Those sons whose parents are more educated (junior high vs. no education) are less likely to provide a financial transfer to parents, for the average son. This significant coefficient gives evidence to

support altruism as a motivator for sons to give financial support to older adult parents. For education, the average son whose parents have a junior high education has a .67 probability of giving financial support (95% CI: .62, .72) compared to a .76 probability (95% CI: .74, .79) for the average son whose parents have no education.

-- insert table 4

Model 3 looks at the corporate group model, adding in covariates for previous support from parents (education, wedding gift) as well as presence and age of G3 children. The only significant coefficient is for parents' provision of a wedding gift. Those sons whose parents provided a wedding gift increase their probability by .08 to give some amount of financial support to their parents. Amount of wedding gift is not a significant predictor. Number and age of children (G3) are also not significant.

The fourth model examines the mutual exchange model and finds that sons whose parents currently provide housework (vs. no help) are more likely to provide economic assistance to parents. For the average son, the predicted probability of providing a financial transfer for those who received no assistance from parents was .73 (95% CI: .71, .76) compared to .81 (95% CI: .78, .85) for those who received housework help. It was only housework that was significant, having parents provide childcare help or both childcare and housework was not significantly different than no help with household tasks.

When I combine variables from all 3 models into a full model (not shown) the previous coefficients remain significant and largely similar in magnitude. Using this full model to examine predicted probabilities for two different profiles I find large differences in predicted probabilities. For the average son with a high family values score, low parental education, received a wedding gift, and receives help with housework the predicted probability is .86 (95% CI: .82, .90). This is .32 higher (p-value<0.001) than that of an average son with a low family values score, high parental education, did not receive a wedding gift, and does not receive help with housework.

Table 4 presents binary logistic regression results predicting financial transfers from daughters to own parents. In model 1, one of the filial piety factors – respect – is a marginally significant predictor. Daughters with higher scores on the respect factor are more likely to give financial support to parents. In examining predicted probabilities, daughters whose respect score is low (1 SD below the mean) have a predicted probability of .76 (95% CI: .72, .80). Those with a higher score (2 SD above the mean) have a probability that is .08 higher (p<.01).

Table 4 model two shows similar results to sons. Those daughters whose parents have attended junior high or more education (compared to none) are less likely to provide economic assistance. Those

with no education, the predicted probability is .82 (95% CI: .79, .86), compared to .73 (95% CI: .67, .80) for those with a junior high education.

-- insert table 5

The next two models examine variables related to exchanges. Model 3 examines variables capturing previous support from parents (G1) and also obligations to children (G3). The only significant variable is that respondents who have children who are over age 18 increase their probability of providing support by .16, compared female respondents with young children. For the average daughter, those whose children are over age 18 have a predicted probability of .83 (95% CI: .80, .86). In model 4, daughters whose parents provided help with either housework only or both housework and childcare were more likely to give economic support than those whose parents did not provide support. For the average daughter, those whose parents do not provide housework or childcare the predicted probability of providing a financial transfer is .77 (95% CI: .74, .80). The predicted probability for parents who provide housework only or both housework and childcare are .08 ($p<.05$) and .10 ($p<.05$) higher respectively.

The final model combines the variables from the four models (not shown). All previously significant coefficients remain significant with the exception of parents provide housework only. Using this full model to examine predicted probabilities for two different profiles there are large differences in predicted probabilities. For the average daughter with a high respect score, low parental education, older children (G3 18+), and receives help with childcare and housework the predicted probability of financial support to parents is .95 (95% CI: .91, .99). This is .45 higher (p-value <.001) than for an average daughter with a low respect score, high parental education, young children, and does not receive help with housework.

Discussion

Many aspects of filial piety continue to be important for adult children in 21st century China. In addition, those adult sons and daughters with strongly held beliefs are more likely to support their parents financially. Other factors also motivate adult children to support their parents – such as parental SES and mutual support. Overall, financial support to parents is common and I found that sons and daughters were equally likely to support parents, which is in keeping with recent research.

Survey respondents had high levels of agreement with attitudes pertaining to family values and respect, but much lower for traditional attitudes. Sons who had strong agreement with attitudes relating to family values were more likely to support parents financially. The “family values” factor includes items such as: “avoid marriage dissolution” and “family is good for individual’s development.” In Chinese culture, support to parents is part of the bigger picture of family relations. Sons who don’t value the

importance of family are less likely to provide economic support. For daughters, by contrast, it was agreement with respect values that mattered. This includes the items: gratitude for parents' fosterage, respect to parents no how matter how parents did with you, and support parents for their better life. These items relate more to altruism—selfless concern for the welfare of others. Daughters' support for parents is less proscribed by traditional Chinese culture as part of general family relations (Hu 2017). Instead, daughters' respect for parents is actualized through financial support.

In examining other aspects of altruism, I found similar results across sons and daughters. Parents with less education were more likely to receive financial transfers from children, even after controlling for the G2 respondent's SES. This may be capturing altruism – children give to parents with greater need (lower SES), regardless of whether parents can respond in kind. These findings are consistent with some prior literature that found lower SES parents more likely to receive economic support from children (Lee and Xiao, 1998; Logan and Bian 2003; Xie and Zhu 2009). It may also be that parents with more education have less traditional attitudes regarding financial support from adult children. In this study, I did not find that other measures of need – parents' age and health – to be predictive of financial transfers.

There were some differences in the relationship between exchange measures and financial support for sons versus daughters. Sons whose parents provided a wedding gift were more likely to provide a financial transfer to parents, but this was not the case for daughters. This is in line with the finding of daughters "providing more but receiving less" (Hu 2017). Descriptive statistics show that the wedding gift is equally common for both sons and daughters (about 80%) but sons receive a much larger amount. This mirrors recent analysis of CHARLS data (Ho 2019). It may be that sons expect a wedding gift as part of being lifelong members of the family. A lack of a wedding gift could indicate some problem in the family that leads sons to not reciprocate when their parents reach advanced ages. I did not find that parents' paying for education was associated with financial support. This is in contrast to previous research on older families in Hong Kong (Chou 2008).

For daughters, however, it was the age of the children that mattered. Daughters who had at least one child under age 18 were less likely to give economic support to G1 parents. Daughters, and not sons, may be more concerned about balancing the needs of multiple generations and their own children may take priority over parents. In addition, daughters were more responsive to the mutual aid model – giving help to their parents if the parents provide help with both housework and childcare. Previous research has also found that daughters are more responsive to contemporaneous support from parents (Song, Li, and Feldman 2012). This may also reflect the idea that daughters' support is motivated more by mutual exchange and emotional connections and not as influenced by Confucian ideology.

Given that this data is from 2002, it is important to compare these findings with more recent research on financial support from adult children to parents. Gruijters 2018 paper analyzed CHARLS data

from 2011-2012 and focused on non-coresident children whose parents lived in rural areas. Interestingly, the average amount of support was CNY 492, fairly close to this dataset with 400 CNY. This study also found sons and daughters to be equally likely to give financial support to parents. Additionally, similar to Hu's analysis of the 2012 China Longitudinal Aging Social Survey (p-class) data (2017), daughters in both datasets receive less overall support from parents.

The analysis also included an examination of different "profiles" of adult sons and daughters (Long and Freese, 2006). For the average daughter with high scores on several important predictors (including respect, low parental SES, older children, and receives housework help) the predicted probability is very high, .95. By contrast an average son with high family values score, low parental education, and receives support from parents the probability is .86. These profiles provide some insight into how families might look in the future, where older generations will have more education (less need). It is difficult to predict, however, whether filial piety will increase or decrease over time. On the one hand, Confucian ideology has been revived and encouraged by the state (Hu and Li, 2020), but there is also evidence that adherence to filial piety is decreasing because of overall modernization of the Chinese family (Hu 2017). There are multiple factors that motivate adult children to provide support to parents, filial piety is just one part of the story.

Several limitations of the present study deserve mention. The dataset limits investigation to the focal child, so I am unable to examine whether siblings provide financial or other types of support to parents. The only sibling data that pertains to the sibling-parent (G2-G1) relationship is about coresidence with G1 parents. The current analysis includes those who co-reside with parents, which some studies have pointed out may be problematic in the analysis of financial transfers (Grujiters 2018) but is included in other studies (Xie and Zhu 2009). It is also important to note that the sample was limited to adult children residing in the same province as their parents, therefore migrant children are excluded. This may make the estimates more conservative, as migrant children tend to provide high levels of financial contributions. Lastly, the data is cross-sectional so I cannot be certain that attitudes influence economic support or the other way around – people may justify their attitudes based on their ability or willingness to give financial support. Here I posit that attitudes influence transfers and not the other way around.

This study adds to our understanding of intergenerational support by providing evidence that both adult sons and daughters are motivated by notions of filial piety, altruism, and exchange to provide financial assistance to older parents in contemporary China. I addition, I add to the growing body of evidence that daughters provide similar levels of support as sons (Gruijters 2018; Xie and Zhu, 2009; Zhu 2016). While this holds true for today's older adults who have multiple children, what will economic support look like among only-child families? Future research should also examine whether economic

support to parents will be necessary or symbolic, which is only possible with greater social welfare from the state.

Table 1 Descriptive statistics of adult children and older adult parents, by adult child gender

	Variable	Daughters (N=1162) Mean/%	Sons (N=2606) Mean/%	Total Mean/%	*p-value*
Characteristics of Adult Child - G2					
Demographics					
	Married	89.67%	92.52%	94.19%	.009
	Age	48.30	48.76	48.55	.086
SES					
	Years of education	6.71	7.56	7.16	.000
	Family Income	1754.60	1718.52	1735.39	.598
	works in agriculture	35.01%	37.51%	36.34%	.338
	Agricultural *Hukou*	57.46%	64.24%	61.07%	.000
Filial Piety Factors					
	Family Values Factor	4.21	4.16	4.19	.006
	Respect factor	4.13	4.08	4.10	.004
	Coresidence Factor	2.95	3.01	2.98	.009
Family of G2					
	Number of siblings	2.10	2.03	2.06	.253
	Has it least one sister	76.08%	81.21%	78.81%	.001
	Has at least one brother	83.02%	81.07%	81.98%	.145
	Coresident with parent	4.39%	20.07%	12.74%	.000
	Sibling coresides with parent	40.59%	21.57%	30.46%	.000
Characteristics of Children of Respondent - G3					
	1 or more G3 children under 18	75.05%	68.37%	71.50%	.003
	# of children	2.10	2.03	2.06	.252
Characteristics of Elderly Parent(s) - G1					
Parent Needs					
	Age	80.15	80.63	80.40	.170
	ADL disabled	19.27%	18.73%	18.98%	.397
	Both Parents Alive	49.20%	48.23%	48.68%	.552
	Father Only	17.00%	18.11%	17.59%	
	Mother Only	33.80%	33.66%	33.73%	
G1 Education	No Education	45.68%	51.94%	49.02%	.000
	Elementary School	32.15%	32.27%	32.21%	
	Junior High +	22.17%	15.79%	18.77%	
Relationship between G1 and G2					
	Good relationship quality	93.19%	85.46%	89.07%	.000
	Parents paid for education	21.50%	20.63%	21.04%	.168
	Provided wedding gift	82.34%	82.82%	82.60%	.482
	Gift amount	486.05	664.78	581.22	.044
	Parents provide housework/childcare	14.34%	25.21%	20.13%	.000
	Gives money to parents	79.69%	77.82%	78.69%	.162
	Amount of financial transfer (Yuan)	395.82	405.19	400.81	.667

Own calculations using CSFD 2002; weighted data reported.

Table 2 Mean scores for filial piety factors and percentage agreement with individual items

Factor	Items	% Important
Factor 1: Family Values (alpha=0.769)		4.165 (mean)
	An adult should marry	81.74
	Avoid marriage dissolution as far as possible	80.41
	Bringing up offspring in order to make them useful for the society	91.96
	Keep the good relationship within family	93.02
	Family is good for individual's development	79.25
Factor 2: Respect (alpha=0.768)		4.107 (mean)
	Gratitude for parents' fosterage	90.38
	Respect to parents, no matter how parents did with you	77.84
	Support parents for their better life	83.52
Factor 3: Coresidence (alpha=0.718)		3.07(mean)
	Son should live with parents after he married	32.17
	Three-generations in a family is better	38.51
	Married adult should live with older members in family	26.11

Unweighted data; Own calculations using CSFD 2002; Important/very important equals a score of 4 or 5 on item.

Table 3 Binary logistic regression estimates of financial transfer to parents from sons, marginal effects / discrete change reported

	Model 1: Filial Piety	Model 2: Altruism	Model 3: Corporate Group	Model 4: Mutual Exchange
Filial piety attitudes				
Family values factor	0.025**			
	.009			
Respect factor	.003			
	.009			
Coresidence factor	.002			
	.009			
ADL disabled (parent)		-0.035		
		.021		
Parent status (compared to both parents)				
Father only		.037		
		.027		
Mother only		.014		
		.023		
Parents age (compared to 60-69)				
70-79		.019		
		.031		
80-89		.054		
		.036		
90-99		.063		
		.042		
100+		-.012		
		.052		
Parent's education (compared to no education)				
Elementary		.026		
		.020		
Junior high		-.091**		
		.031		
parents paid for school			-.011	
			.055	
parents provided wedding gift			.084**	
			.025	
amount of wedding gift			0.00	
			0.00	
number of G3 children			.012	
			.009	
G3 children are over 18			.003	
			.029	

Parents provide housework/childcare (compared to none)				
Housework only				.081***
				.022
Childcare only				.064
				.184
Both				.048
				.030
Chi-Square	125.7	146.3	132.0	131.1
BIC	3050.4	3077.0	3059.8	3045.1

Notes: Marginal effects for continuous variables; discrete change for categorical variables; All other variables held at their means; Standard errors in parentheses. ****p < .001, **p < .01, *p < .05;* Models control for G2 age, education, marital status, income, job status, hukou, family composition, residential distance, and relationship quality.

Table 4 Binary logistic regression estimates of financial transfer to parents from daughters, marginal effects / discrete change reported

	Model 1: Filial Piety	Model 2: Altruism	Model 3: Corporate Group	Model 4: Mutual Exchange
Filial piety attitudes				
Family values factor	.006			
	.012			
Respect factor	.022†			
	.013			
Coresidence factor	.012			
	.012			
ADL disabled (parent)		-.037		
		.031		
Parent status (compared to both parents)				
Father only		-.011		
		.038		
Mother only		.030		
		.031		
Parents age (compared to 60-69)				
70-79		.029		
		.041		
80-89		.073		
		.048		
90-99		.000		
		.060		
100+		.005		
		.073		
Parent's education (compared to no education)				
Elementary		-.033		
		.029		
Junior high		-.081*		
		.039		
parents paid for school			.037	
			.616	
parents provided wedding gift			-.010	
			.031	
amount of wedding gift			0.00	
			0.00	
number of G3 children			-.019	
			.012	
G3 children are over 18			0.16**	
			.052	

Parents provide housework/childcare (compared to none)				
Housework only				0.083*
				.036
Childcare only				.074
				.062
Both				0.10*
				.041
Chi-Square	70.39	79.60	79.77	74.43
BIC	1360.6	1393.74	1365.3	1356.6

Notes: Marginal effects for continuous variables; discrete change for categorical variables; All other variables held at their means; Standard errors in parentheses. ****p < .001, **p < .01, *p < .05, †p<.10;* Models control for G2 age, education, marital status, income, job status, hukou, family composition, residential distance, and relationship quality.

References

Canda, E. R. (2013). Filial piety and care for elders: A contested Confucian virtue reexamined. *Journal of Ethnic and Cultural Diversity in Social Work, 22*(3-4), 213-234.

Chen F, Liu G and Mair CA (2011) Intergenerational ties in context: Grandparents caring for grandchildren in China. *Social Forces* 90(2): 571-594.

Chou K (2008) Parental repayment hypothesis in intergenerational financial transfers from adult children to elderly parents: Evidence from Hong Kong. *Educational Gerontology* 34(9): 788-799.

Cong Z and Silverstein M (2012) Caring for grandchildren and intergenerational support in rural China: a gendered extended family perspective. *Ageing and Society* 32(3): 425.

Cong Z and Silverstein M (2011) Intergenerational exchange between parents and migrant and nonmigrant sons in rural China. *Journal of Marriage and Family* 73(1): 93-104.

Feng, Z. (2017). Filial piety and old-age support in china: Tradition, continuity, and change. In Zang, Xiaowei. Zhao, Lucy Xia. (Ed.), *Handbook on the family and marriage in china* (pp. 266-285) Edward Elgar Publishing.

Frankenberg E, Lillard L and Willis RJ (2002) Patterns of intergenerational transfers in Southeast Asia. *Journal of Marriage and Family* 64(3): 627-641.

Giles J, Wang D and Zhao C (2010) Can China's Rural Elderly Count on Support from Adult Children? Implications of Rural-to-Urban Migration. *Journal of Population Ageing* 3(3-4): 183.

Gruijters RJ (2018) Daughters' and Sons' Remittances in Rural China: Findings From a National Survey. *Journal of Family Issues* 39(11): 2911-2934.

Gu D and Dupre ME (2008) Assessment of reliability of mortality and morbidity in the 1998–2002 CLHLS waves. In: Zeng Y, Poston D, Vlosky DA and Gu D (eds) *Healthy Longevity in China: Demographic, Socioeconomic, and Psychological Dimensions.* Dordrecht: Springer, 99-116.

Gu, D. (2008). General data quality assessment of the CLHLS. In *Healthy longevity in China* (pp. 39-60). Springer, Dordrecht.

Guo M, Chi I and Silverstein M (2009) Intergenerational Support of Chinese Rural Elders With Migrant Children: Do Sons' or Daughters' Migrations Make a Difference? *Journal of Gerontological Social Work* 52(5): 534-554.

Hamilton LC (2009) Statistics with STATA, updated for version 10. 10 Davis Drive. *Belmont, CA, USA*.

Ho, C. (2019). Child's gender, parental monetary investments and care of elderly parents in China. *Review of Economics of the Household, 17*(3), 741-774.

Hu, A. (2017). Providing more but receiving less: Daughters in intergenerational exchange in mainland China. *Journal of Marriage and Family*, *79*(3), 739-757.

Hu, A., & Li, D. (2020). Are Elders from Ancestor-Worshipping Families Better Supported? An Exploratory Study of Post-reform China. Population Research and Policy Review, 1-24.

Ikels C (2004) *Filial Piety: Practice and Discourse in Contemporary East Asia.* Stanford, CA: Stanford University Press.

Kim J, Mueller CW, Kim J, Ahtola O and Spector PE (1978) *Introduction to Factor Analysis: What it is and how to do It.* : Sage.

Lee YJ and Xiao Z (1998) Children's support for elderly parents in urban and rural China: Results from a national survey. *Journal of Cross-Cultural Gerontology* 13(1): 39-62.

Lee YJ, Parish WL and Willis RJ (1994) Sons, daughters, and intergenerational support in Taiwan. *The American Journal of Sociology* 99(4): 1010-1041.

Lin I, Goldman N, Weinstein M, Lin Y, Gorrindo T and Seeman T (2003) Gender differences in adult children's support of their parents in Taiwan. *Journal of Marriage and Family* 65(1): 184-200.

Lin J and Yi C (2011) Filial norms and intergenerational support to aging parents in China and Taiwan. *International Journal of Social Welfare* 20(s1): S120.

Liu, T., & Sun, L. (2016). Pension reform in china. *Journal of Aging & Social Policy*, *28*(1), 15-28.

Logan, J.R. & Bian, F. (2003) Parents' Needs, Family Structure, and Regular Intergenerational Financial Exchange in Chinese Cities. *Sociological Forum* 18(1): 85-101.

Long, J. S., & Freese, J. (2006). *Regression models for categorical dependent variables using Stata*. College Station, TX: Stata press.

Miller ET (2004) Filial Daughters, Filial Sons: Comparisons from Rural North China. In: Ikels C (ed) *Filial Piety: Practice and Discourse in Contemporary East Asia.* Stanford, CA: Stanford UP, 34-52.

Shen, K., Yan, P., & Zeng, Y. (2016). Coresidence with elderly parents and female labor supply in China. *Demographic Research*, 35, 645-670.

Silverstein M, Cong Z and Li S (2006) Intergenerational transfers and living arrangements of older people in rural China: consequences for psychological well-being. *The Journals of Gerontology.Series B, Psychological Sciences and Social Sciences* 61(5): 256.

Song L, Li S and Feldman MW (2012) Out-Migration of Young Adults and Gender Division of Intergenerational Support in Rural China. *Research on Aging* 34(4): 399-424.

Susan Greenhalgh (1985) Sexual Stratification: The Other Side of "Growth with Equity" in East Asia. *Population and Development Review* 11(2): 265-314.

Whyte MK and Xu Q (2003) Support for aging parents from daughters versus sons. In: Whyte M (ed) *China's Revolutions and Intergenerational Relations.* Ann Arbor: University of Michigan, Center for Chinese Studies Ann Arbor, 167-196.

Winship C and Radbill L (1994) Sampling weights and regression analysis. *Sociological Methods and Research* 23(2): 230-257.

Wu, Y., Wang, P., & Huang, C. (2016). Family patronage, institutional patronage, and work family conflict: women's employment status and subjective well-being in urban China. *The Journal of Chinese Sociology*, *3*(1), 21.

Xie Y and Zhu H (2009) Do sons or daughters give more money to parents in urban China? *Journal of Marriage and Family* 71(1): 174-186.

Yi, Z., George, L., Sereny, M., Gu, D., & Vaupel, J. W. (2016). Older parents enjoy better filial piety and care from daughters than sons in China. *American Journal of Medical Research*, 3(1), 244
.

Zhang Z, Gu D and Luo Y (2014) Coresidence with elderly parents in contemporary China: The role of filial piety, reciprocity, socioeconomic resources, and parental needs. *Journal of Cross-Cultural Gerontology* 29(3): 259-276.

Zeng Y (2008) Reliability of age reporting among the Chinese oldest-old in the CLHLS datasets. In: Anonymous *Healthy Longevity in China.* : Springer, 61-78.

Zhan HJ and Montgomery RJ (2003) Gender And Elder Care In China The Influence of Filial Piety and Structural Constraints. *Gender and Society* 17(2): 209-229.

Zhu H (2016) Adult children's characteristics and intergenerational financial transfers in urban China. *Chinese Journal of Sociology* 2(1): 75-94.

Zimmer Z and Kwong J (2003) Family Size and Support of Older Adults in Urban and Rural China: Current Effects and Future Implications. *Demography* 40(1): 23-44.