Published in final edited form as:

Popul Res Policy Rev. 2019 February ; 38(1): 1–25. doi:10.1007/s11113-018-9501-5.

Allocation of Eldercare Responsibilities between Children and the Government in China: Does the Sense of Injustice Matter?

Anning Hu,

Fudan University

Feinian Chen

University of Maryland

Abstract

China's large aging population poses grim challenges to eldercare provision. Against the background of withering traditional kinship-based eldercare and the increasing significance of government-sponsored support programs, this study draws on data from the 2013 Chinese General Social Survey to investigate not only the correlation between the sense of social injustice and the preference to allocate eldercare responsibilities between public and private agents but also how this correlation varies between urban-versus-rural regions. We find that perceived social injustice is significantly correlated with the odds of designating the government, instead of family members, to shoulder eldercare responsibilities. Further mediation analysis suggests that this correlation is mediated through concerns about eldercare. On average, the link between perceived social injustice and the preference for eldercare duty allocation is weaker in rural China than in urban China. Theoretical and policy implications are discussed.

Keywords

eldercare responsibility allocation; concerns about eldercare; perceived injustice; China

Introduction

China's population is aging in concert. According to a statistical bulletin released by the National Bureau of Statistics (2017), by the end of 2016, the number of citizens who were aged 60 or above was more than 230 million, making up 16.7 percent of the total population. Against this backdrop, the issue of how to support China's rapidly expanding group of older adults has become a social concern that has attraction both within and outside academia (e.g., Chen and Powell 2012; Chen 2016; Hatton 2015; Nelson 2012).

With respect to the provision of elder support, the traditional lineage culture in China views eldercare as a kind of filial responsibility of offspring, especially for sons and their spouses (Cheng and Chan 2006; Cohen 1990; Ikels 2004). However, this family-based support has been declining amidst China's comprehensive social transitions of the past several decades, i.e., shrinking household size, increasing divorce rate, urbanization, migration, and closing

gender gap in socio-economic status. In contrast to the hardship in sustaining traditional family-based eldercare, public agents, such as the government, play an increasing role in providing assistance to the senior populace. For example, fiscal subsidies for basic pension insurance have increased from 195.4 billion in 2010 to 471.6 billion in 2015, more than doubling within five years (Ministry of Human Resources and Social Security of the People's Republic of China 2011, 2016). Governments at different levels have also been active in sponsoring community eldercare programs (e. g., Yu et al. 2012).

Both public and private eldercare agents are mentioned in *the Law of Protection of Rights and Interests of the Aged* that was amended in 2013. On the one hand, the law stipulates that eldercare expenditure should be guaranteed by the fiscal budget of different levels of government. On the other hand, in an unprecedented manner, it legally requires the children of people older than 60 both to visit their parents on a regular basis and to satisfy their financial and emotional needs. However, the mixed feelings surrounding this amended law suggest that eldercare responsibility allocation is not only a legal issue but also a complicated social subject. Although children's duty to support their parents is unquestionable, this amended law, by targeting those who do not support their parents, seems to put too much pressure on adult children (Meng and Hunt 2013). For many older parents, particularly those whose children have migrated away, government-sponsored elder support programs are attractive alternatives.

Against this background, one question of academic and public interest is as follows: Between traditional kinship-based private support and modern government-based welfare support, which is preferable in the eyes of Chinese citizens? Specifically, we are interested in how Chinese citizens' perceived sense of social injustice – the expression of fairness and deservingness – is linked to this eldercare preference. We also present a more nuanced picture by examining the heterogeneity of this link in terms of China's well-known urban-versus-rural regional cleavage.

We believe our research is innovative and contributes significantly to the literature. First, we introduce the ideational factor of perceived social injustice to the caregiving literature, supplementing prior studies that focus on the structural constraints of elder support, such as intergenerational resource exchange, living arrangements, and demographic transition (e.g., Lin 1995; Wang et al. 2009). Second, this article enhances our understanding of eldercare preference with reference to the distinction between the state and the family. This private-versus-public distinction has been understudied, since other than a very limited number of studies (e.g., Hoefman, Maulenkamp, and De Jong 2017; Mair, Quinones, and Pasha 2016), scholars mostly pay attention to either the preference for a particular caregiver (e.g., Cong and Silverstein, 2014; Pillemer and Suitor, 2006) or the preference for a specific eldercare program (e.g., Cheng et al. 2012; Werner and Segel-Karpas 2016; Zhan, Liu, and Guan 2006). Third, we investigate potential regional heterogeneity in the nexus between perceived social injustice and the preference for allocating eldercare duties.¹ By doing so, we highlight the variations in citizens' potential demands for governmental support of eldercare, an issue that has strong policy implications.

¹Cohort variations are also examined. Since no significant results are obtained, empirical findings are presented in the appendix.

Theoretical Framework

Eldercare Preference, Micro, Meso, and Macro Approaches

The distinction between public and private eldercare agents is a significant but understudied theme in the current eldercare literature. Depending on the parties that are assumed to take on eldercare responsibilities, we identify micro-, meso-, and macro- approaches to eldercare preference. The micro approach concerns the choice of the ideal caregiver among individuals. The most relevant research in this regard is parental favoritism of caregivers among all offspring (Cong and Silverstein 2014; Pillemer and Suito 2006; Zhong and Li 2017). The meso approach shifts attention from the individual caregivers to eldercare programs, such as whether or not to register in an institutionalized eldercare program.²

In contrast to the micro and meso approaches, the macro-approach examines one's allocation of eldercare responsibilities between public and private agents. On this topic, Mair, Quinones, and Pasha (2016) examine 14 European nations and find that those with chronic diseases, limited resources for informal care, and generous long-term care funding are more likely to prefer state-based care to family-based care. Hoefman, Maulekamp, and De Jong (2017)'s study in the Netherlands notifies the positive correlation between caregiving burdens and the propensity to view eldercare as a governmental responsibility. This study echoes an earlier one conducted by Hori (1993).

To the best of our knowledge, there has been no similar research in developing societies. For China, in particular, we can only identify indirect studies. Zeng (2001) warns about the social problems associated with a strong reliance on family-based eldercare and calls for the government to play a greater role. Cheung, Kwan, and Ng (2006)'s psychological research underscores the potential cleavage between public and private eldercare and articulates that the traditional culture of filial piety in China encourages one to lean toward private family-based care, although it may not be sustainable in the long run.

In terms of the macro approach, it is necessary to mention that this study is also motivated by the current scholarship on welfare state reform and the ensuing privatization of eldercare. During the last several decades, changes of long-term senior care have been one important element in the reform of welfare states (Pavolini and Ranci 2008), a fact that is mainly driven by the considerable rising percentage of older adults in the population. Regardless of the welfare regime type, a commonplace of this strand of reform for different welfare countries is to restructure the eldercare policies so as to transit from the once reliance on publicly-funded care to a system with multiple types of care-providing agents (Aysan 2009; Pfan-Effinger 2012). Many studies, in this regard, have highlighted the distinction between public and private agents (Daatland and Lowenstein 2005; van Hooren and Becker 2012). Moreover, in this wave of welfare reform, citizens are increasingly viewed as consumers, so they have more freedom to make choices regarding the care than before (Eichler and Pfan-

²One relevant finding of the meso-approach is that the likelihood of an older person being institutionalized is related to socioeconomic status. However, both positive (e.g., Hong, Hong, Kim, and Yi 2016; Werner and Segel-Karpas 2016) and negative results (Kim and Choi 2008; Kim and Kim 2004) have been documented. In China, institutionalized care is not as prevalent as in other societies partly due to the influences of traditional ideas (Liang and Marier 2017), but financially better-off elders have been noted to have a higher likelihood of entering institutions (e.g., Cheng et al. 2012; Zhan, Liu, and Guan 2006).

Effinger 2009; Morel 2007; Rostgaard and Zechner 2012). Placed in this literature on welfare regimes, especially the distinction between public and private agents in welfare building, the experience of China, as illustrated by this article, undoubtedly adds an interesting case from the East.

Altogether, eldercare preference concerns not only individual caregivers and specific programs but also the broader distinction between private and public agents. This distinction has substantial implications for both the implementation of eldercare policies and the overall wellbeing of the senior population, thus necessitating this study, which investigates the determinants of people's preference for eldercare responsibility allocation.

The Sense of Injustice and Eldercare Preference: Theoretical Mechanisms

In this article, we focus on the sense of social injustice to respond to the fervent academic interest in justice issues in an era of increasingly polarized social resource distribution in both developing and developed countries (e.g., Atkinson, Piketty, and Saez 2011; Dorling and Dorling 2015). By definition, the sense of injustice refers to the perception of the extent of violation of the principle of fairness (Adams 1965; Tyler et al. 1985). As conceived as one's idea about deservingness, the sense of social injustice reveals the combination of one's perception of the *factual* social situation and one's *normative* belief about the appropriate and ideal situation. Therefore, it highlights notions of both equality and equity, shedding light on both descriptive and prescriptive orientations (Forse 2009). It is not surprising that if one feels unjustly deprived of something that others have, certain propensities will be triggered (Jost and Kay 2010). This point of view is illustrated by our examination of how perceived injustice affects the propensity to allocate eldercare responsibilities between different types of agents.

It is worth noting that although perceived social injustice and the allocation of eldercare responsibilities are both subjective variables, they are conceptually distinctive from each other, with one referring to the attitudes established through social experiences and the other referring to value-related norms in terms of intergenerational relationships. This conceptual distinction is important because it suggests that the empirical association between them, if any, should have substantive meaning. Additionally, in light of the ample theoretical discussions on the potential social consequences of perceived injustice on people's preference for resource (re)distribution, if we want to causally interpret the empirical association, we believe the causal relationship should be from perceived social injustice to eldercare responsibility allocation, not the other way around. The formative mechanisms for this chain are laid out in the following subsection.

Two theories link the sense of injustice to the preference for eldercare responsibility allocation. One is the relative deprivation theory and the other is the government protector theory. According to the relative deprivation theory, feelings of relative deprivation can be triggered when an individual views the social environment to be unfair (Adams 1965; Cropanzano and Ambrose 2001; Crosby and Gonzalez-Intal 1984; Tian 2017). One consequence of relative deprivation is that it undermines people's confidence in having the necessary social resources to sustain regular activities in comparison with others (Walker and Smith 2002). Such regular activities include supporting older family members, so a

severe sense of social injustice should decrease the odds of preferring children as caregivers by encouraging the perception that individual caregivers are less capable.

Compared with the relative deprivation theory, the government protector theory argues that the government itself is the protector for the welfare of all, but especially the more vulnerable social members (e.g., Blekesaune 2007; Park 2013; Polanyi 1944). Because of the innate connection between perceived vulnerability and the sense of overall injustice, this theory indicates that a severe sense of social injustice is related to the expectation that the government will play a more prominent role in public issues. Viewed from this perspective, concerns about the uncertainties and risks for relatively vulnerable older adults, e.g., unaffordable eldercare, can be a catalyst that promotes one to designate the government to assume more responsibilities in eldercare (Svallfors 2004).

Taken together, the sense of social injustice weakens people's confidence in their capabilities of assisting older adults, as implied by the relative deprivation theory, and encourages citizens to increasingly place eldercare responsibilities on the shoulders of the government, as suggested by the government protector theory. Clearly, for both theoretical mechanisms, the common mediator between perceived injustice and the way of designating eldercare responsibilities is concern about the condition of eldercare. In other words, a severe sense of social injustice increases people's concerns about eldercare (the relative deprivation theory), and the government is then expected to reconcile such concerns (the government protector theory). It is necessary to mention that by definition, concerns about eldercare stand for the evaluation of the general wellbeing of aged individuals, so it differs from perceived social injustice in terms of its referential meanings. Based on this conceptual distinction, we argue that when people view the social condition to be unfair, they are likely to have more concerns about the wellbeing of *socially vulnerable groups* such as older adults, which subsequently directs people's preference toward the government in assuming eldercare responsibilities.

Before moving to the empirical section of this paper, it is necessary to familiarize readers with Chinese society.

The Case of China: Background

Who Should Take Care of Elders in China: Children or the Government?

The institution of the family in traditional China was built around kin, an extended network with members from multiple generations united by kinship and descent (Ahern 1973; Freedman 1966, 1970). One way of organizing the extended kinship group is to rank members according to age seniority. A direct illustration of this principle is the structure of the family genealogy, or pedigree, in which at the top are located the eldest, followed by the second eldest, with the youngest kinship members at the bottom (Yeh and Bedford 2003). What accompanies this ranking system is the moral ethic of filial piety: youth defer to the wishes and tend to the needs of their parents and other elders (Ikels 2004; Yeh and Bedford 2003). Driven by this ethical requirement, it comes as no surprise that eldercare providers in traditional China were mostly children, especially adult sons, as exemplified by the Chinese proverbs the more sons, the more blessings (*duozi duofu*) and having sons makes one's old

age secure (*yang er fang lao*).” Note that in traditional China, a daughter often assumed a transitory position in her natal family. This is because after her marriage, a daughter would become a permanent member of her husband’s kin and primarily support her parents-in-law (Lee 1953).

This traditional child-based eldercare model, however, has been seriously challenged. For example, after 1949, many kinship-related practices, such as ancestor worship rituals and kinship landownership, were harshly suppressed by the state due to the purported antagonistic relationship of kinship loyalty with the locality to the Communist state (Goode 1963; Parish and Whyte 1978; Davis-Friedmann 1991). As China moved into the Reform Era in the late 1970s, many sociodemographic transitions made it difficult for older adults to rely on their children for old-age support. Partly due to the draconian one-child policy and rapid socioeconomic development, family nuclearization has taken place, with the average household size decreasing from 5.3 in the 1950s to 3.96 in 1990 and 3.10 in 2010 (National Health and Family Planning Commission of the People’s Republic of China 2015). The foreseeable 4–2–1 family structure – four grandparents, two parents, and one child – places the only child into a very difficult situation of providing sufficient support to parents on both sides (Jiang and Sánchez-Barricarte 2011). In addition, urbanization and the ensuing geographical mobility of the younger generations weaken intergenerational proximity, rendering the elder support process less stable than before (e.g., Cong and Silverstein 2011).

Another social trend that undermines the child-centered eldercare model is the improvement of women’s educational attainment and socioeconomic status (Xie and Zhu 2009). Along with the gender balancing of family status, women are no longer relegated to the role of daughter-in-law to fulfill the traditional ethic of supporting their husbands’ parents. Because of these social changes, many studies document the decline of traditional filial piety (e.g., Yan 2003). Thus, it is unsurprising that only four percent of the respondents from the CSIS East Asia Retirement Survey view children as the ideal party to be responsible for providing economic support to retired people (Jackson, Howe, and Peter 2012).

This tenuous situation of child-based support for elders contrasts with the increasingly salient role of the government in eldercare– e.g., through the retirement pension. From the 1950s onward, the Communist state built up a comprehensive work unit system that provided employees of the state-owned enterprises and the government with generous and comprehensive pension benefits in urban areas (Davis-Friedmann 1991). Although the market reform gave rise to a major revamping of the pension system in the 1990s, the government still plays an indispensable role in the new scheme, which is configured to be financed by the government, enterprises, and individuals (for a review, see Chen and Liu 2009).

Rural residents during the socialist regime barely had any pension available for retirement (Davis-Friedmann 1978). After several pilot projects, a rural social retirement pension scheme was launched in the 1990s. However, this pension scheme failed to gain popularity because it featured little investment by the government (Shi 2006). As a result, a reformulated scheme was reintroduced in 2009 that gained more popularity than the previous one partly due to the close involvement of both central and local governments in

financing and administrating it (Zhu 2011). However, overall support for older residents in rural China is still not comparable with support for older residents in urban China, the implications of which are discussed below.

Regional Heterogeneity

In addition to the average link between perceived social injustice and the preference for eldercare duty allocation, we examine regional heterogeneity. In China, the most prominent social cleavage is the urban-versus-rural distinction, and abundant evidence has accumulated on the disadvantages of rural residents relative to urbanites in access to various social resources (Whyte 2010b). What is relevant here is that the government has been playing a very limited role (if any) in supplying elder support in rural China.

Specifically, as mentioned above, no formal social protection was provided for rural older adults before the 21st century. The only nationwide protection program was the Five Guaranteed Household scheme that ensured the provision of basic necessities such as food and clothes to those with no children, income, or property, but the coverage rate of this program is only one percent (Ministry of Civil Affairs 2008). In 2009, the New Rural Old Age Insurance was piloted in 10 percent of rural areas, but the pension benefits can be as low as 55 Yuan per month (according to the exchange rate as of 2018-6-24, this is tantamount to only 8.46 US dollars)(Wu 2013). In terms of the persistent failure of the government to provide public goods in rural China, we have good reasons to expect that although rural residents have greater concerns about eldercare, they are less likely to allocate eldercare responsibilities to the government. In other words, the link between perceived social injustice and eldercare duty allocation preference should be weaker among rural respondents than among urban respondents.

Empirical Research Questions and Hypotheses

Based on the discussions set forth above, we investigate the following research questions:

1. *Is there a significant association, other things being equal, between one's sense of social injustice and the pattern of the allocation of eldercare responsibilities?* Based on our discussions above, we hypothesize that perception of a more severe condition of social injustice is associated with a stronger propensity to allocate eldercare responsibilities to the government.
2. *If the answer to the first question is positive, do concerns about the eldercare situation play a significant mediating role?* For this question, we hypothesize that those who perceive a more severe state of social injustice have greater concerns about eldercare, resulting in the preference of public agents over private ones.
3. *Are there variations between urban and rural areas in the link between perceived social injustice and the preference of allocating eldercare duties?* We hypothesize a weaker link in rural China than in urban China.

By examining these research questions, we illustrate the connection between the perceived condition of a society and the preference in the manner of assisting older adults, which adds new insights to the literature of modern welfare states (e.g., Flora 2017). This is a relevant,

valuable, and timely research theme because older citizens are more reliant on public support than younger ones due to their peripheral relationship to work and employment and their decaying physiological functions. This study also helps improve our understanding of the potential variations in citizens' *demands* for public old age support. In light of the rapidly increasing financial burden of maintaining the welfare of the elderly in an era of an aging population (Bengtsson and Scott 2011; Hsieh and Tung 2016), the manner in which ordinary citizens allocate eldercare responsibilities is highly relevant for anticipating potential elder-support pressure on the government and future generations (Aysan and Beaujot 2009; Naumann 2017).

Methodology

Sample

The data used in this study come from the Chinese General Social Survey (CGSS) 2013. The CGSS is an ongoing comprehensive nationwide survey project that started in 2003. Similar to the General Social Survey in the United States, the CGSS is nationally representative, adopting a multilevel PPS (proportional to population sampling) scheme with the primary sampling unit of the provincial administrative district, the secondary sampling unit of the neighborhood committee (for urban areas) or the village committee (for rural areas), and the tertiary sampling unit of the household (more details of the sampling procedure can be found at <http://www.chinagss.org>). The respondents were all above 18 years old. The sample size with valid variable information for this study is 6092.

Measures

The predictor of interest is the sense of social injustice, as measured by the question “*In general, do you think social resources in our society are fairly distributed?*” The options are 1 = totally just; 2 = relatively just; 3 = neutral; 4 = relatively unjust; and 5 = totally unjust. The outcome variable is the preference for allocating eldercare responsibilities, which is measured by the question: *In your opinion, who should take care of elders if they have children?* Options to this question are coded to be 0 = children and 1 = government.

The survey question about our dependent variable concerns the perceived undertaker of eldercare duties who will employ resources to assist older adults. In this regard, it essentially captures one's attitudes toward public spending vis-à-vis private spending on eldercare. However, this question does not reveal the concrete manner of public eldercare spending, which can include subsidies, supplementary pension, and community programs, to name a few options. Additionally, with the focus on the welfare of elders, this question does not concern the general welfare regime of everyone, nor does it imply the government's involvement in family issues. Family members and the government are simply juxtaposed and respondents were allowed to choose their preference.

We use the following control variables in the analyses: region of residence (1 = urban; 0 = rural), gender (1 = female; 0 = male), age, age square, years of formal education, political identity (1 = Chinese Communist Party member; 0 = otherwise), marital status (1 = married; 0 = otherwise), ethnicity (1 = Han; 0 = minorities), household registration status (1 = rural; 0

= urban), log transformed individual annual income,³ household size (the number of co-residing family members), basic retirement pension access (1 = yes; 0 = no), commercial retirement pension access (1 = yes; 0 = no), and dummies for provinces. The dummies for provinces are controlled for to compensate the massive provincial differences in terms of economic conditions, income inequality, and eldercare service quality, among others (Fan 1995; Hauser and Xie 2005). We control for both region of residence and household registration status because the values of these two variables differ for the large number of rural-to-urban migrants. For them, household registration status is rural, but the region of residence is urban. No multicollinearity is detected.

We hypothesize that the mediator between the sense of social justice and the manner of designating eldercare duties is concerns about eldercare, which are measured by the following question: *How do you evaluate the severity of the lack of support to and the lack of security of the elders?* The options are 1 = not severe at all; 2 = not very severe; 3 = neutral; 4 = relatively severe; and 5 = very severe. This question captures the general situation of the living conditions of the older population. According to the discussions presented earlier, those who view the state of social injustice as serious should attribute a higher value to this question, which is further associated with a preference for the government to primarily shoulder eldercare responsibilities.

Descriptive statistics for these variables can be found in the Appendix I.

Analytical Strategies

For research question 1, the binary nature of the dependent variable directs us to use the logistic regression model, in which the sense of social injustice is used to predict the preference for the allocation of eldercare responsibilities.

For research question 2, a mediation analysis is appropriate. In this study, we used the method proposed by Karlson, Holm, and Breen (2012) (KHB, hereafter). To save space, the methodological details of KHB can be found in Appendix II.

Research question 3 concerns effect heterogeneity. While this can be routinely studied by means of subsample comparison, a similar procedure cannot be applied to the logistic regression model because of heterogeneous error-term variances across subpopulations (for a methodological discussions on this concern, see Mood 2010). Hence, we must first homogenize error-term variances between urban and rural cases (Train 2009). This homogenization accomplished by using the heterogeneous choice model developed by William (2009). More methodological details can be found in McCullagh (1980).

A Note on Cohort Variations

We also conducted analyses to determine whether the association between perceived social injustice and preference for eldercare responsibility allocation varies across different cohort

³Log transformation is used to enhance the interpretability of the coefficient. Without this operation, the estimated coefficient would stand for the effect of a one Yuan increase in individual annual income, resulting in a very small coefficient. There is no material change in the analytical results if the original scale is used.

groups. This is an endeavor to examine the potential effect of the one-child policy and the distinction between caregiver and care receiver. Since no significant results are detected, to save space, we present the details in Appendix III.

Results

Descriptive Patterns

Descriptive information about the manner of allocating eldercare responsibilities between the government and children is presented in Figure 1. As shown in Figure 1a, most of our surveyed individuals (84 percent) designate children to be the primary caregivers for their elders, while sixteen percent prefer the government to assume a major role in assisting elders. This distribution suggests that the allocation of eldercare duties in contemporary China still mostly follows the traditional model, although that a considerable proportion of respondents opt for the government-based care.

How, then, does the sense of social injustice relate to the likelihood of preferring one type of agent over the other? In Figure 1b, we describe how the proportion of respondents who prefer the government-based eldercare model varies across the levels of the sense of social injustice. To facilitate interpretation, we added the fitted linear trend. On average, there is an upward tendency to obligate the government to assume a primary elder-support role, from the pole of totally just to the pole of totally unjust. This descriptive pattern is consistent with our hypothesis.

Multivariate Analysis

To better understand how one's sense of social injustice relates to preferences in the allocation of eldercare responsibilities, we fit the logistic regression model. The result is presented in Table 1. It is shown that one's sense of social injustice can significantly promote the probability of bestowing eldercare duties on the government in relation to children. This finding lends support to our hypothesis.

Among the other covariates, it is shown that people living in rural areas, holding a rural household registration status, having a large family, and having a commercial retirement pension are less likely to designate eldercare responsibilities to the government. In contrast, older people, those with Han ethnicity, and the economically better-off prefer the government to assume eldercare duties.

In addition to this model, we conducted a robustness check to accommodate the potential concern about geographical unobserved confounders that cannot be captured by the province-level fixed effect terms. This check is done by shifting to control for *county-level* fixed effect terms. This operation sacrifices the degree of freedom by increasing the number of fixed-effect terms from 28 to 127, but a significant and positive effect for perceived social injustice is still affirmed (coefficient=0.20, standard error=0.04, p value<0.001). In addition to this model, we fitted the Firth model (Puhr et al. 2017) to account for the potential skewed distribution of the dependent variable, and a similar result is obtained (coefficient=0.23, standard error=0.04, p value<0.001).⁴ These findings support the robustness of our conclusion.

Mediation Analysis

To test the mediating effect of concerns about eldercare, we fitted the KHB model, with the result presented in Table 2. When the mediator is left out, the coefficient of perceived social injustice is 0.25 (the reduced model). This coefficient decreases to 0.23 after introducing the mediator into the model (the full model). The difference of 0.02, although moderate in terms of the numeric coefficient value, is statistically significant (p value = 0.011). Hence, the result of the KHB analysis supports the mediating effect of concerns about the eldercare condition between the sense of social injustice and the allocation of eldercare duties.

Regional Heterogeneity

Our last research question requires us to look into more nuanced regional heterogeneity in the association between the sense of social injustice and the manner of allocating elder support responsibilities by fitting the heterogeneous choice model (Table 3). Other things being equal, the interaction effect between the sense of social injustice and region of residence (rural) is significantly negative, meaning that the strength of the connection between one's perceived social injustice and the preference for eldercare duty allocation is almost nonexistent among rural respondents than among their urban counterparts (the negative point estimate can almost counteract the positive main effect). This finding is consistent with our hypothesis.

To better understand urban-rural heterogeneity, we also examine the pairwise correlations between perceived social injustice, concerns about eldercare, and the preference of allocating eldercare duties, using either binary or ordered logistic regression models to control for other covariates. The results are presented in Figure 2. For urbanites, one's perceived social injustice has a significantly positive correlation with concerns about eldercare ($b=0.212$; $p<0.001$), which subsequently is significantly associated with the preference for the government ($b=0.234$; $p<0.001$). This is the chain that is consistent with our hypothesis.

If we shift our attention to rural areas, the sense of social injustice, as among urban residents, also promotes concerns about eldercare ($b=0.217$; $p<0.001$), but unlike urban respondents, rural respondents' concerns about eldercare fail to increase the propensity of designating eldercare responsibilities to the government.

Conclusion and Discussions

The unprecedented speed of aging of the Chinese population poses grim challenges to eldercare, which brings the question of people's obligation to provide elder support to the forefront. This study contributes to the current literature by bridging subjective injustice and aging research, examining how one's perceived social injustice is linked with Chinese citizens' preference in allocating eldercare responsibilities between children and the government. Based on analyses of the Chinese General Social Survey 2013, we find that most Chinese adults still prefer children to be the primary caregiver for elder parents, despite

⁴The skewed distribution of the independent variable does not bias our analytical results (Fletcher, MacKenzie, and Villouta 2005).

a nonnegligible proportion of respondents who are in favor of government-based care. With regard to the sense of social injustice, the more severe one perceives the current state of social injustice, the more concerns one has about the eldercare condition, and the more likely one is to designate the government instead of children to assume eldercare duties. The connection between perceived social injustice and the preference for allocating eldercare responsibilities is weaker among rural residents than among urban residents, which can be attributed to the government's longtime deficiencies in providing public assistances in rural China.

One theoretical implication of this study is that elder support preference is driven not only by structural factors but also by predisposing factors. Here, by structural factors, we mean the constraints that are linked with the external social structure, such as the sufficiency of eldercare resources. In contrast, predisposing factor refers to the internal and psychological inclination, propensity, and susceptibility, such as the sense of social injustice examined by this article. In this regard, studies on population aging and eldercare should devote more attention to people's ideas, values, and predispositions.

The mediator between the sense of social injustice and the allocation of eldercare duties is the concerns about eldercare conditions, which, as discussed earlier, can be promoted by the declined confidence in one's capabilities in providing eldercare, the triggered expectation for the protector role of the government, or both. The significant mediating effect among urbanites suggests that a general evaluation of the society's condition (social injustice) can be transformed into the specific evaluation in a particular domain (eldercare situation), and this conversion bears practical consequences on the propensity of assigning eldercare duties. In a sense, this finding affirmed the fact that eldercare process is not independent, but embedded in the broader societal environment. In other words, eldercare issues are "social" issues.

In terms of the mediation effect, it is also interesting that it fails to hold in rural China. The concerns of eldercare can be aroused by the intensified perceived social injustice, but such concerns cannot be converted to greater reliance on the government. In a sense, this finding supports our conjecture that due to the long-time lack of accessible eldercare, even if rural residents are deeply concerned about old-age support, they are not confident in that the government is willing or capable of providing eldercare services. In this regard, the protector role of the government is not fully provoked in rural areas. This non-significant mediation effect in rural China, as such, does not reject our theoretical reasoning. In a sense, it points out that the logic from perceived social injustice to concerns about eldercare and then to preference of eldercare responsibility allocation is *conditional* on a countable government.

This study also has practical implications. As noted in the empirical findings, Chinese citizens appear to still follow the traditional model by mostly viewing children as the primary caregivers (e.g., Chou 2010). However, whether or not this will always be the case should be deemed as an open question, as implied by the major conclusion of this study. Since one's sense of social injustice encourages people to gravitate toward state-based care, if social injustice in contemporary China continues to deteriorate, we can reasonably expect

more urban Chinese citizens to lean toward a government-centered eldercare model, which implies heavier financial burdens.

The varying extents of preference for government-driven elder support underscore that citizens' demands for public eldercare are not always the same. For this, we may have different approaches to accounting. On the one hand, this finding could mean that people have differential expectations for the role of government in eldercare. If this is the case, public agents should not implement eldercare programs unilaterally. Instead, such programs should be configured to accommodate the heterogeneous demands – i.e., to leverage more public support to those who are in greater need. On the other hand, it is also likely that the heterogeneous demands for government-driven programs are the result of the general underdevelopment of reliable and accessible government-based elderly care in Chinese society. That is to say, if public programs are further improved, people might cultivate stronger reliance on and expectation for the government. This potential dynamic between the supply and the demand should be considered in future policy design.

In a sense, the link between the sense of societal injustice and intensified reliance on the government for eldercare can be a particularly acute social concern in China. For many industrialized societies, the public preference for the government's provision of elder support usually results in the "graying" of the welfare state. In other words, the government's allocation of social resources gradually favors the older population, especially those who are economically disadvantaged or whose children are economically disadvantaged (Busemeyer, Goerres, and Weschle 2009; Higgs and Gilleard 2010). For China, however, the country is "growing old before growing rich," as the aging of the population accelerates in the next two decades. As a result, the urgency of establishing an adequate old age support system is paramount. In a sense, the amended *Law of Protection of Rights and Interests of the Aged* reflects the government's sense of its inability to bear the sole responsibility without family support. However, economic development leads to widening social inequality and social inequality, as shown by this study, can be translated into deeper sense of social injustice and stronger expectation for the government to take up more responsibility for elder support. Clearly, if the government is unable to do so, this tension can lead to social unrest.

Following this study, there are several directions for future research. For instance, this article examines subjective injustice, and more insights can be gleaned if objective indicators of social justice can be considered together. Additionally, following people's eldercare preference, it would be of interest to see how this kind of preference shapes subsequent behaviors in intergenerational relations, e.g., whether those who prefer the government to take care of elders are less inclined to support their older parents. Finally, cross-national comparative research is in order. In a sense, Chinese citizens stand out in that they have great reliance on the government due to their decades of exposure to egalitarian communist ideology and the all-encompassing comprehensive social welfare that was provided by the government in the socialist era. Therefore, growing inequality is seen as a breach of promise and instigates the sense of injustice that subsequently triggers a strong expectation for the government to step in (Smyth, Mishra, and Qian 2010). Although similar patterns have been detected in Eastern Europe (e.g., Roller 1999), whether or not this is the case in other

societies is still an open question. For example, in the US, citizens unsatisfied with the social justice situation might still refrain from supporting an omnipresent government due to that country's civic tradition. These sociocultural differences cannot be ascertained without cross-national comparative research.

Some limitations of this research should be acknowledged. For example, the cross-sectional design of the CGSS 2013 determines that we cannot ascertain the time order, so a causal interpretation of the association between perceived social injustice and the allocation of eldercare responsibilities should be made with caution. This consideration also applies to the dynamic between perceived injustice and the difficulty of eldercare. For instance, the two concepts might have something in common with a third psychological attribute.

Additionally, we cannot strictly rule out the possibility of a reverse causal link. These issues are usually handled using more sophisticated longitudinal methods, such as fixed effect modeling and the cross-lagged modeling based on longitudinal data (e.g., one exemplar study is conducted by Sønderskov and Dinesen [2016]). In addition, only one mediator – concerns about eldercare – is studied here, but we cannot rule out other potential mediators, which should have been examined had more nuanced instruments been available. Finally, the variables of interest focus on people's subjective perceptions and ideas, so there could be measurement errors. Furthermore, the meaning of social injustice can be subject to the socioinstitutional context, and the same social condition might be rated differently by people from different societies. Accordingly, readers may have to exercise caution if generalizing our conclusions to other societies.

Appendices

Appendix I:

Descriptive Statistics of Variables

Variables	Percentage/Mean (S. D.)
Eldercare responsibility allocation	
The government	16.22%
Children	83.78%
Sense of social injustice	
Totally just	3.00%
Relatively just	37.35%
Neutral	23.47%
Relatively unjust	28.64%
Totally unjust	7.54%
Region of residence (rural)	39.20%
Gender (female)	49.68%
Age	48.60(16.39)
Years of formal education	8.74(4.73)
Political identity (Chinese Communist Party member)	10.15%
Marital status (being married)	78.46%
Ethnicity (Han)	91.43%

Variables	Percentage/Mean (S. D.)
Household registration status (rural)	55.37%
Individual annual income	23814.43(36753.26)
Log individual annual income	8.17(4.17)
Household size	3.08(1.42)
Basic retirement pension access	66.76%
Commercial retirement pension access	6.02%
N	6092

Data Source: CGSS 2013

Appendix II:: Methodological Details of the KHB Method

To examine the mediating effect, the following two models are fitted to predict a latent continuous variable of the way of allocating eldercare duties, as denoted to be allocation of eldercare duties*:

$$\text{Allocation of Eldercare Duties}^* = \alpha_F + \beta_F \text{Sense of Social Injustice} + \gamma_F \text{Concern about Eldercare} + \delta_F \text{Covariates} + \epsilon_1 \quad (1)$$

$$\text{Allocation of Eldercare Duties}^* = \alpha_R + \beta_R \text{Sense of Social Injustice} + \delta_R \text{Covariates} + \epsilon_2 \quad (2)$$

Model (1) is the full model and model (2) is the reduced model, so the mediation effect of the concerns about eldercare is captured by the difference between β_R and β_F . However, the latent variable of allocation of eldercare duties* is unobservable. Instead, it is measured with a dichotomous variable that has a value of one if allocation of eldercare duties* = 1 and zero otherwise. What follows is that the estimated coefficients – denoted respectively by b_R and b_F – introduce assumptions about the distribution of the error terms (denoted respectively as σ_R and σ_F), as in $b_R = \frac{\beta_R}{\sigma_R}$ and $b_F = \frac{\beta_F}{\sigma_F}$. Therefore, direct comparison between b_R and b_F is problematic, since σ_R is usually not equal to σ_F .

To resolve this problem, we adopt the KHB method. This method starts from regressing the concerns about eldercare situation on the sense of social injustice, and then uses the model residual instead of the original observed measure of perceived social injustice to fit model (1), as in model (3).

$$\begin{aligned} &\text{Allocation of Eldercare Duties}^* \\ &= \tilde{\alpha}_R + \tilde{\beta}_R \text{Sense of Social Injustice} + \tilde{\gamma}_R \text{Concern about Eldercare}_{\text{residual}} + \tilde{\delta}_R \text{Covariates} + \epsilon_3 \end{aligned} \quad (3)$$

Evidently, the variances of ϵ_3 and ϵ_1 are the same (i.e., denote the variance of ϵ_3 to be $\tilde{\sigma}_R$, so that $\tilde{\sigma}_R = \sigma_F$). Also, $\tilde{\beta}_R = \beta_R$. Hence, we have

$\tilde{b}_R - b_F = \frac{\tilde{\beta}_R}{\tilde{\sigma}_R} - \frac{\beta_F}{\sigma_F} = \frac{\beta_R - \beta_F}{\sigma_F} = \frac{\gamma_F}{\sigma_F} b$. Furthermore, a test statistic for the null hypothesis of $\tilde{b}_R - b_F = 0$ can be constructed using the delta method, and we have

$\sqrt{N}(\tilde{b}_R - b_F) / \sqrt{\left(\frac{\gamma_F}{\sigma_F}, b\right) \Sigma \left(\frac{\gamma_F}{\sigma_F}, b\right)'} \sim N(0, 1)$, where Σ is the covariance matrix for γ_F and b . If the test statistic is significant, the mediation effect of concerns about eldercare exists. Note that for research question 2, the estimation of $\tilde{b}_R$ and b_F is based on the logistic regression model due to the binary nature of the allocation of eldercare duties.

Appendix III: Cohort Variations

Cohort heterogeneity in the link between perceived social injustice and the preference of eldercare responsibility allocation is worth exploring for at least two reasons. The first reason is that cohort difference can be used to proxy the distinction between caregivers and care receivers since care receivers are always more senior than caregivers. This distinction matters because caregivers and care receivers could have contrasting eldercare preferences. For example, caregivers might prefer the government to take more responsibilities so as to reduce their own burden, while care receivers might prefer their children as the care provider due to influences of traditional ideas (Liang and Marier 2017).

The other reason to consider cohort heterogeneity is the potential influences of the one-child policy. Regulating that each couple can only have one child,⁵ this policy effectively shrinks the number of potential family caregivers, discouraging older parents to rely on the only child for eldercare. This preference for the government is also likely to be the case for the only child, because, without siblings, their eldercare burden can be overwhelming. However, it is also possible that those affected by the one-child policy are reluctant to turn to the government. For example, one propaganda strategy of the government, when instigating the one-child policy in the 1980s, is to promise to take care of the older adults, but this promise apparently failed to be honored due to the huge financial pressure (Chen and Xie 2013). Against this background, recent propaganda and legal practices started to call for family-based eldercare. The feeling of being cheated on the part of the only child or their older parents can dampen their confidence in the government.

A binary variable is constructed to measure whether or not one belongs to the cohorts affected by the one-child policy. A convenient age cutoff is set at the age of 56. That is, respondents who are 56 years old or younger are treated as those affected by the one-child policy. This cutoff is determined by the following consideration. The one-child policy was promoted to the national policy and written into the Constitution in 1982. Assuming the couples in the 1980s gave birth to their child at around 25, those who were aged 56 or younger in 2013 should then be the individuals affected by the one-child policy. We also tested other age cutoffs, and similar results are obtained. no significant effect is detected for the interaction with either individuals affected by the one-child policy or cohort groups (Model 1 and Model 2 in Table A2), suggesting that the correlation between perceived social injustice and the preference of eldercare responsibility allocation is not altered by whether or

⁵There is one exception for rural areas, where a couple is allowed to have the second child if the first one is a girl.

not one is subject to the one-child policy. Also, since cohort is used to proxy the distinction between caregivers and care receivers, this distinction is also independent from the pattern of association between one's sense of social injustice and allocation of eldercare duties.

Table A2:

Result of the Interaction Effects: The Heterogeneous Choice Model

	Model 1			Model 2		
Perceived social injustice	0.304	(0.050)	***	0.261	(0.138)	
Perceived social injustice × One-child-policy-affected individuals	−0.068	(0.041)				
Sense of social injustice × Age				<0.001	(0.003)	
Region (rural)	−0.940	(0.443)	*	−0.919	(0.441)	*
Gender (female)	0.063	(0.089)		0.059	(0.089)	
Age	0.044	(0.017)	**	0.046	(0.018)	**
Age square	0.000	(0.000)		0.000	(0.000)	
Years of formal education	0.015	(0.013)		0.015	(0.013)	
Political identity (Chinese Communist Party member)	0.057	(0.134)		0.071	(0.134)	
Marital status (being married)	−0.058	(0.117)		−0.070	(0.116)	
Ethnicity (Han)	0.368	(0.189)		0.366	(0.188)	
Household registration status (rural)	−0.622	(0.115)	***	−0.622	(0.115)	***
Log individual annual income	0.025	(0.012)	*	0.024	(0.012)	*
Household size	−0.083	(0.034)	*	−0.082	(0.034)	*
Basic retirement pension access	0.014	(0.100)		0.016	(0.100)	
Commercial retirement pension access	−0.610	(0.181)	***	−0.616	(0.181)	***
Dummies for provinces						
Intercept	2.181	(0.554)	***	2.359	(0.725)	***
log (standard deviation) by Region (rural)	0.291	(0.149)		0.284	(0.150)	
Chi2	984.2		***	981.39		***
N	6092			6092		

*
p<0.05

**
p<0.01

p<0.001 (two-tailed test)

Data Source: CGSS 2013

References

- Adams J.Stacy . 1965 Inequity in Social Exchange In Berkowitz Leonard (Ed.), *Advances in Experimental Social Psychology* (pp. 267–299). New York: Academic Press.
- Ahern Emily. 1973 *The Cult of the Dead in a Chinese Village*. Stanford: Stanford University Press.
- Andersen Ronald M. 1995 “Revisiting the behavioral model and access to medical care: does it matter?” *Journal of health and social behavior* 36(1): 1–10. [PubMed: 7738325]
- Atkinson Anthony B., Piketty Thomas, and Saez Emmanuel. 2011 “Top incomes in the long run of history.” *Journal of Economic Literature* 49(1): 3–71.
- Aysan Mehmet F., and Beaujot Roderic. 2009 “Welfare regimes for aging populations: no single path for reform.” *Population and Development Review* 35(4): 701–720.

- Aysan Mehmet. 2009 "Welfare regimes for ageing populations: divergence or convergence?" retrieved at <http://iussp2009.princeton.edu/papers/90905>
- Bengtsson Tommy, and Scott Kirk. 2011 "Population aging and the future of the welfare state: The example of Sweden." *Population and development review* 37 (s1): 158–170. [PubMed: 21280369]
- Blekesaune Morten. 2007 Economic Conditions and Public Attitudes to Welfare Policies. *European Sociological Review* 23(3): 393–403.
- Bradley Elizabeth H., Curry Leslie A., McGraw Sarah A., Webster Tashonna R., Kasl Stanislav V., and Andersen Ronald. 2004 Intended Use of Informal Long-Term Care: The Role of Race and Ethnicity. *Ethnicity & Health* 9(1): 37–54.
- Busemeyer Marius R., Goerres Achim, and Weschle Simon. 2009 Attitudes towards Redistributive Spending in an Era of Demographic Ageing: The Rival Pressures from Age and Income in 14 OECD Countries. *Journal of European Social Policy* 19 (3): 195–212.
- Chen Feinian and Liu Guangya. 2009 Population Aging in China pp. 157–172 in *International Handbook of Population Aging*, edited by Uhlenberg Peter. New York: Springer.
- Chen Lin. 2016 *Evolving Eldercare in Contemporary China: Two Generations, One Decision*. New York: Palgrave Macmillan.
- Chen Sheying and Powell Jason L.. 2012 *Aging in China: Implications to Social Policy of a Changing Economic State*. New York: Springer.
- Chen Si and Xia Ya. 2013 Who Fills in the Gap of Pension. Retrieved at <http://finance.people.com.cn/n/2013/1126/c1004-23652043.html>.
- Cheng Sheung-Tak and Chan Alfred C. M.. 2006 Filial Piety and Psychological Well-Being in Well Older Chinese. *Journals of Gerontology Series B-Psychological Sciences and Social Sciences* 61(5): 262–269.
- Cheng Yang, et al. 2012 "Access to residential care in Beijing, China: Making the decision to relocate to a residential care facility." *Ageing & Society* 32(8): 1277–1299.
- Cheung Chau-kiu, Alex Yui-huen Kwan, and Sik Hung Ng 2006 "Impacts of filial piety on preference for kinship versus public care." *Journal of community psychology* 34(5): 617–634.
- Chou Rita Jing-Ann. 2010 Willingness to Live in Eldercare Institutions among Older Adults in Urban and Rural China: A Nationwide Study. *Ageing and Society* 30: 583–608.
- Cohen Myron L. 1990 Lineage Organization in North China. *The Journal of Asian Studies* 49(3): 509–534.
- Cong Zhen and Silverstein Merrill. 2011 Intergenerational Exchange between Parents and Migrant and Nonmigrant Sons in Rural China. *Journal of Marriage and Family* 73(1): 93–104.
- Cong Zhen, and Silverstein Merrill. 2014 Parents' preferred care-givers in rural China: gender, migration and intergenerational exchanges. *Ageing and Society* 34(05): 727–752.
- Cropanzano R, & Ambrose ML (2001). Procedural and Distributive Justice Are More Similar than You Think: A Monistic Perspective and a Research Agenda In Greenberg J & Cropanzano R (Eds.), *Advances in Organizational Justice* (pp.119–151). Stanford, CA: Stanford University Press.
- Crosby Faye and Gonzalez-Intal A. Miren. 1984 Relative Deprivation and Equity Theories: Felt Injustice and the Undeserved Benefits of Others, in Folger Robert, ed., *The Sense of Injustice*. New York: Plenum Press, pp. 141–166.
- Daatland Svein Olav, and Lowenstein Ariela. 2005 "Intergenerational solidarity and the family–welfare state balance." *European Journal of Ageing* 2(3): 174–182. [PubMed: 28794730]
- Davis Deborah. 1993 *Urban Households: Supplicants to a Socialist State* In Davis Deborah and Harrell Stephan (eds.), *Chinese Families in the Post-Mao Era*, pp. 50–76. University of California Press, Berkeley.
- Davis-Friedmann D 1978 Welfare Practices in Rural China. *World Development* 6 (5): 609–619.
- Davis-Friedmann Deborah. 1991 *Long Lives: Chinese Elderly and the Communist Revolution*. Stanford, CA: Stanford University Press.
- Dorling Daniel, and Dorling Danny. 2015 *Injustice: Why Social Inequality still Persists?* New York: Policy Press.

- Eichler Melanie, and Pfau-Effinger Birgit. 2009 "The 'consumer principle' in the care of elderly people: Free choice and actual choice in the German welfare state." *Social Policy & Administration* 43(6): 617–633.
- Fan C.Cindy . 1995 Of Belts and Ladders: State Policy and Uneven Regional Development in Post-Mao China. *Annals of the Association of American Geographers* 85 (3): 421–449.
- Fletcher David, MacKenzie Darryl, and Villouta Eduardo. 2005 "Modelling skewed data with many zeros: a simple approach combining ordinary and logistic regression." *Environmental and Ecological Statistics* 12(1): 45–54.
- Flora Peter. 2017 *Development of welfare states in Europe and America*. New York: Routledge.
- Forsé M, 2009 Macro-inequalities and micro-justice In: Haller M, Jowell R, Smith TW (Eds.), *The International Social Survey Programme, 1984–2009. Charting the Globe* Routledge, London, pp. 91–105.
- Freedman Maurice. 1966 *Chinese Lineage and Society: Fukien and Kwangtung*. London: The Athlone Press.
- Freedman Maurice. 1970 *Family and Kinship in Chinese Society*. CA: Stanford University Press.
- Gimpelson Vladimir and Treisman Daniel. 2015 *Misperceiving Inequality*. National Bureau of Economic Research Working Paper 21174. Retrieved at <http://www.nber.org/papers/w21174>.
- Goode WJ 1963 *World Revolution and Family Patterns*. New York: The Free Press.
- Hatton Celia. 2015 *Who Will Take Care of China's Elderly People?* Retrieved at <http://www.bbc.com/news/magazine-35155548>.
- Hauser Seth M., and Xie Yu. 2005 Temporal and Regional Variation in Earnings Inequality: Urban China in Transition between 1988 and 1995. *Social Science Research* 34 (1): 44–79.
- Higgs Paul, and Gillear Chris. 2010 Generational conflict, consumption and the ageing welfare state in the United Kingdom. *Ageing and Society* 30(8): 1439–1451.
- Hoefman RJ, Meulenkamp TM, and Jong JD. 2017 "Who is responsible for providing care? Investigating the role of care tasks and past experiences in a cross-sectional survey in the Netherlands." *BMC health services research* 17(1): 477. [PubMed: 28697752]
- Hong Michin, Hong Seunghye, Kim Mee Hye, and Yi Eun Hye 2016 Intention to Use Long-Term Care Facilities: Differences between Korean Pre-Elderly and Korean Baby- Boomers. *Journal of Cross-Cultural Gerontology* 31: 357–368. [PubMed: 27484325]
- Hori Josef. 1993 Elder care Policy between the State and Family: Austria. *Journal of Aging and Social Policy* 5: 155–168. [PubMed: 10186831]
- Yu-Ching Hsieh Kevin and Tung An-Chi. 2016 Taiwan's National Pension Program: A Remedy for Rapid Population Aging? *Journal of Economics of Aging* 8: 52–66.
- Hu Anning. 2017 On the relationship between subjective inequality and generalized trust. *Research in Social Stratification and Mobility* 49 (1): 11–19.
- Hu Anning. 2017 Providing More but Receiving Less: Daughters in Intergenerational Exchange in Mainland China. *Journal of Marriage and Family* 79 (3): 739–757.
- Ikels Charlotte. 2004 *Filial Piety: Practice and Discourse in Contemporary East Asia*. Stanford, CA: Stanford University Press.
- Jackson Richard, Howe Neil, and Peter Tobias. 2012 *Balancing Tradition and Modernity: The Future of Retirement in East Asia*. Retrieved at <https://www.csis.org/analysis/balancing-tradition-and-modernity-future-retirement-east-asia>.
- Janmaat JG (2013). Subjective Inequality: A Review of International Comparative Studies on People's Views about Inequality. *European Journal of Sociology* 54(3): 357–389.
- Jiang Quanbao and Sánchez-Barricarte Jesús J.. 2011 The 4–2–1 Family Structure in China: A Survival Analysis Based on Life Tables. *European Journal of Ageing* 8: 119–127. [PubMed: 28798645]
- Jost John T., and Kay Aaron C.. 2010 "Social justice: History, theory, and research" pp.1122–1165 in *Handbook of social psychology*, edited by Fiske Susan T., Gilbert Daniel T., Lindzey Gardner. New York: Wiley.
- Karlson Kristian Bernt, Holm Anders, and Breen Richard. 2012 Comparing Regression Coefficients between Same-Sample Nested Models Using Logit and Probit: A New Method. *Sociological Methodology* 42 (1): 286–313.

- Kim Eun-Young, and Kim Chang-yup. 2004 "Who Wants to Enter a Long-Term Care Facility in a Rapidly Aging Non-Western Society? Attitudes of Older Koreans toward Long-Term Care Facilities." *Journal of the American Geriatrics Society* 52(12): 2114–2119.
- Kim Hyungsoo, and Choi Won-Young. 2008 "Willingness to use formal long-term care services by Korean elders and their primary caregivers." *Journal of aging & social policy* 20(4): 474–492. [PubMed: 19042558]
- Kongshoj Kristian. 2017 The Undeserving Poor in China: The Institutional Logic of the Minimum Living Standard Scheme and the Hukou System. *Journal of Asian Public Policy* 10(2): 128–142.
- Lai Daniel WL. 2004 Predicting factors for intention of use of long-term care facilities by aging Chinese-Canadians. *Journal of Social Work in Long-Term Care* 3(2): 31–46.
- Lansley Stewart. 2012 *The Cost of Inequality: Why Economic Equality is Essential for Future Growth*. London, UK: Gibson Square Books Ltd.
- Lee Shu-Ching. 1953 China's Traditional Family, Its Characteristics and Disintegration. *American Sociological Review* 3: 272–280.
- Liang Jiayin, and Marier Patrik. 2017 "Awaiting Long-Term Care Services in a Rapidly Changing Environment: Voices from Older Chinese Adults." *Journal of Population Ageing* 10(4): 385–401.
- Lin Jiang. 1995 Changing Kinship Structure and Its Implications for Old-Age Support in Urban and Rural China. *Population Studies* 49(1): 127–145.
- Mair Christine A., Quiñones Ana R, and Pasha Maha A. 2016 "Care preferences among middle-aged and older adults with chronic disease in Europe: Individual health care needs and national health care infrastructure." *The Gerontologist* 56(4): 687–701. [PubMed: 26035873]
- Peter McCullagh. 1980 Regression models for ordinal data. *Journal of the royal statistical society. Series B (Methodological)* 42 (2): 109–142.
- Meltzer AH and Richard SF. 1981 A Rational Theory of the Size of The government. *Journal of Political Economy* 89:914–927.
- Meng Meng and Hunt Katie. 2013 New Chinese Law: Visit Your Parents. Retrieved at <http://edition.cnn.com/2013/07/02/world/asia/china-elderly-law/index.html>.
- Ministry of Civil Affairs. 2008 Minzheng shiye fazhan tongji baogao [Report of development of civil affairs in 2008]. Retrieved from <http://www.mca.gov.cn/article/sj/tjgb/200906/200906150317629.shtml> [2018–6–25]
- Ministry of Human Resources and Social Security of the People's Republic of China. 2016 Statistical Bulletin 2015 of the Development of Human Resources and Social Security. Retrieved at http://www.mohrss.gov.cn/SYrlzyhshbzb/dongtaixinwen/buneyiaowen/201605/t20160530_240967.html.
- Ministry of Human Resources and Social Security of the People's Republic of China. 2011 Statistical Bulletin 2010 of the Development of Human Resources and Social Security. Retrieved at http://www.mohrss.gov.cn/SYrlzyhshbzb/dongtaixinwen/buneyiaowen/201605/t20160530_240967.html.
- Mood Carina. 2010 "Logistic regression: Why we cannot do what we think we can do, and what we can do about it." *European Sociological Review* 26(1): 67–82.
- Morel Nathalie. 2007 "From subsidiarity to 'free choice': Child-and elder-care policy reforms in France, Belgium, Germany and the Netherlands." *Social Policy & Administration* 41(6): 618–637.
- National Bureau of Statistics. 2017 The 2016 Statistical Bulletin of National Economic and Social Development. Retrieved at http://www.stats.gov.cn/tjsj/zxfb/201702/t20170228_1467424.html.
- National Health and Family Planning Commission of the People's Republic of China. 2015 Report of Family Development. Beijing: China Population Press.
- Naumann Elias. 2017 "Do increasing reform pressures change welfare state attitudes? An experimental study on population ageing, pension reform preferences, political knowledge and ideology." *Ageing & Society* 37(2): 266–294.
- Nelson Christina. 2012 Senior Care in China: Challenges and Opportunities. Retrieved at <https://www.chinabusinessreview.com/senior-care-in-china-challenges-and-opportunities>
- Parish William, and Whyte Martin. 1978 *Village and Family in Contemporary China*. Chicago, IL: The University of Chicago Press.

- Pavolini Emmanuele, and Ranci Costanzo. 2008 “Restructuring the welfare state: reforms in long-term care in Western European countries.” *Journal of European Social Policy* 18(3): 246–259.
- Peng Yusheng. 2010 When Formal Laws and Informal Norms Collide: Lineage Networks versus Birth Control Policy in China. *American Journal of Sociology* 116(3): 770–805.
- Pfau-Effinger Birgit. 2012 “Analyses of welfare-state reform policies towards long-term senior care in a cross-European perspective.” *European Journal of Ageing* 9(2): 151–154. [PubMed: 28804416]
- Polanyi Karl. 1944 *The Great Transformation*. New York: Farrar & Rinehart.
- Puhr Rainer, Heinze Georg, Nold Mariana, Lusa Lara, and Geroldinger Angelika. 2017 “Firth’s logistic regression with rare events: accurate effect estimates and predictions?” *Statistics in Medicine* 36 (14): 2302–2317. [PubMed: 28295456]
- Roller Edeltraud. 1999 “Shrinking the welfare state: Citizens’ attitudes towards cuts in social spending in Germany in the 1990s.” *German Politics* 8(1): 21–39.
- Rostgaard Tine, and Zechner Minna. 2012 “Guest editorial: Shifting boundaries of elder care: changing roles and responsibilities.” *European Journal of Ageing* 9: 97–99. [PubMed: 28804410]
- Shi Shih-Jiunn. 2006 Left to Market and Family – Again? Ideas and the Development of the Rural Pension Policy in China. *Social Policy & Administration* 40(7): 791–806.
- Smyth Russell, Mishra Vinod, and Qian Xiaolei. 2010 “Knowing one’s lot in life versus climbing the social ladder: The formation of redistributive preferences in urban China.” *Social Indicators Research* 96(2): 275–293.
- Sønderskov Kim Mannemar, and Thisted Dinesen Peter. 2016 “Trusting the State, trusting each other? The effect of institutional trust on social trust.” *Political Behavior* 38 (1): 179–202.
- Suitor J.Jill, and Pillemer Karl. 2006 “Choosing daughters: Exploring why mothers favor adult daughters over sons.” *Sociological Perspectives* 49(2): 139–161.
- Svallfors Stephan. 2004 Class, Attitudes and the Welfare State: Sweden in Comparative Perspective. *Social Policy and Administration* 38:119–38.
- Tian Xiaoli. 2017 Immediate Context, Life Experiences, and Perception: How Do Rural Migrants in Urban China Perceive an Unfair Policy? *Chinese Sociological Review* 49(2): 138–161.
- Train Kenneth E. 2009 *Discrete Choice Methods with Simulation*. New York: Cambridge university press.
- Treiman Donald. 2012 The Difference between Heaven and Earth: Urban-Rural Disparities in Well-Being in China. *Research in Social Stratification and Mobility* 30 (1): 33–47.
- Tyler Tom, Rasinski Kenneth, and McGraw Kathleen. 1985 The Influence of Perceived Injustice on the Endorsement of Political Leaders. *Journal of Applied Psychology* 15(8): 700–725.
- Van Hooren Franca, and Becker Uwe. 2012 “One welfare state, two care regimes: Understanding developments in child and elderly care policies in the Netherlands.” *Social Policy & Administration* 46(1): 83–107.
- Walker Ian and Smith Heather. 2002 *Relative Deprivation: Specification, Development, and Integration*. Cambridge: Cambridge University Press.
- Wang Junfang et al. 2009 Perceived Unmet Need for Hospitalization Service among Elderly Chinese People in Zhejiang Province. *Journal of Public Health* 31 (4): 530–540. [PubMed: 19202151]
- Wang Mei and Xia Chuanling. 2001 The Current State of the Burden of Family Support for the Elderly in China. *Chinese Sociology and Anthropology* 34 (1): 49–66.
- Werner Perla, and Segel-Karpas Dikla. 2016 “Factors associated with preferences for institutionalized care in elderly persons: Comparing hypothetical conditions of permanent disability and Alzheimer’s disease.” *Journal of Applied Gerontology* 35(4): 444–464. [PubMed: 25245385]
- Whyte Martin. 2010a *Myth of the Social Volcano: Perceptions of Inequality and Distributive Injustice in Contemporary China*. Stanford, CA: Stanford University Press.
- Whyte Martin. 2010b *One Country, Two Societies*. Cambridge, MA: Harvard University Press.
- Wilkinson Richard and Pickett Kate. 2011 *The Spirit Level: Why Greater Equality Makes Societies Stronger*. London, UK: Bloomsbury Press.
- Williams Richard. 2009 Using Heterogeneous Choice Models to Compare Logit and Probit Coefficients across Groups. *Sociological Methods & Research* 37: 531–559.

- Wise Katie. 2001 Caring For Our Parents in an Aging World: Sharing Public and Private Responsibility for the Elderly. *N.Y.U. Journal of Legislation & Public Policy* 5: 563–598.
- Wong Linda. 2004 Market Reforms, Globalization, and Social Justice in China. *Journal of Contemporary China* 13(38): 151–171.
- Ling Wu. 2013 Inequality of Pension Arrangements among Different Segments of the Labor Force in China. *Journal of Aging & Social Policy* 25(2): 181–196. [PubMed: 23570510]
- Xie Yu, and Haiyan Zhu. 2009 Do Sons or Daughters Give More Money to Parents in Urban China? *Journal of Marriage and Family* 71: 174–186. [PubMed: 20126304]
- Xie Yu, and Zhou Xiang. 2014 Income Inequality in Today's China. *Proceedings of the National Academy of Sciences* 111 (19): 6928–6933.
- Yan Yunxiang. 2003 *Private Life under Socialism*. Stanford, CA: Stanford University Press.
- Yeh Kuang-Hui, and Bedford Olwen. 2003 A Test of the Dual Filial Piety Model. *Asian Journal of Social Psychology* 6(3): 215–228.
- Yu Jianxing et al. 2012 The Construction of Private-Run Community Care Institutions for Old People and Government's Responsibilities. *Zhejiang Social Sciences* 11: 76–83.
- Yu Yanmin. 2006 Market Economy and Social Justice: The Predicament of the Underprivileged. *The Journal of Comparative Asian Development* 5(1): 131–147.
- Zeng Yi, et al. 2008 *Health Longevity in China*. New York: Springer.
- Zeng Yi. 2001 It is no longer appropriate to advocate in programmatic party and government documents that family support should be the main form of eldercare in rural areas. *Chinese Sociology & Anthropology* 34: 81–83.
- Zhan Heying Jenny, Liu Guangya, and Guan Xinping. 2006 “Willingness and availability: Explaining new attitudes toward institutional elder care among Chinese elderly parents and their adult children.” *Journal of Aging Studies* 20(3): 279–290.
- Zhong Xiaohui and Li Bingqin. 2017 New intergenerational contracts in the making? – The experience of urban China. *Journal of Asian Public Policy* 10(2): 167–182.
- Zhu Yapeng. 2011 Social Protection in Rural China: Recent Developments and Prospects. *Journal of Policy Practice* 11: (1–2): 42–58.

(a) The Distribution of the Allocation of Eldercare Responsibilities

(b) Proportion of Individuals who Allocate the Eldercare Duties to the Government across the Levels of the Sense of Social Injustice

Figure 1:

Descriptive Information of the Allocation of Eldercare Responsibilities

Data Source: CGSS 2013

Figure 2:

Further Investigation into the Rural-Urban Heterogeneity

Unstandardized coefficients with standard errors in parentheses

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$ (two-tailed test)

Note: Analytical results based on the binary logistic regression model (predicting the preference in the allocation of eldercare agents) or the ordered logistic regression model (predicting the concerns about eldercare), with control variables of Region of residence (rural), Gender (female), Age, Age square, Years of formal education, Political identity (Chinese Communist Party member), Marital status (being married), Ethnicity (Han), Household registration status (rural), Log individual annual income, Household size, Basic retirement pension access, Commercial retirement pension access, and Dummies for provinces.

Data Source: CGSS 2013.

Table 1:

Result of the Logistic Regression Predicting the Probability of Allocating Eldercare Responsibilities to the Government relative to Children

Perceived social injustice	0.23	(0.04)	***
Region of residence (rural)	−0.24	(0.11)	*
Gender (female)	0.05	(0.08)	
Age	0.05	(0.02)	**
Age square	0.00	(0.00)	
Years of formal education	0.01	(0.01)	
Political identity (Chinese Communist Party member)	0.07	(0.13)	
Marital status (being married)	−0.07	(0.11)	
Ethnicity (Han)	0.33	(0.17)	*
Household registration status (rural)	−0.61	(0.11)	***
Log individual annual income	0.02	(0.01)	*
Household size	−0.08	(0.03)	***
Basic retirement pension access	0.02	(0.09)	
Commercial retirement pension access	−0.62	(0.18)	***
Dummies for provinces			
Intercept	−0.65		***
Chi2	977.29		***
N	6092		

Unstandardized coefficients with standard errors in parentheses

*
p<0.05

**
p<0.01

p<0.001 (two-tailed test)

Data Source: CGSS 2013

Table 2:

Result of the KHB Analysis on the Mediating Effect of the Concerns about Eldercare

Model Type	Coefficient	Std. Err.	P value
Reduced Model	0.25	0.05	<0.001
Full Model	0.23	0.05	<0.001
Difference	0.02	0.01	0.011

Note: Control variables include Region of residence (rural), Gender (female), Age, Age square, Years of formal education, Political identity (Chinese Communist Party member), Marital status (being married), Ethnicity (Han), Household registration status (rural), Log individual annual income, Household size, Basic retirement pension access, Commercial retirement pension access, and Dummies for provinces.

Data Source: CGSS 2013.

Table 3:

Result of the Interaction Effect for Geographical Region: The Heterogeneous Choice Model

Perceived social injustice	0.314	(0.045)	***
Perceived social injustice × Region of residence (rural)	−0.259	(0.093)	**
Region (rural)	−1.460	(0.503)	**
Gender (female)	0.057	(0.087)	
Age	0.046	(0.017)	**
Age square	0.000	(0.000)	
Years of formal education	0.014	(0.013)	
Political identity (Chinese Communist Party member)	0.073	(0.132)	
Marital status (being married)	−0.070	(0.114)	
Ethnicity (Han)	0.346	(0.183)	
Household registration status (rural)	−0.623	(0.113)	***
Log individual annual income	0.025	(0.012)	*
Household size	−0.080	(0.033)	*
Basic retirement pension access	0.014	(0.097)	
Commercial retirement pension access	−0.610	(0.179)	***
Dummies for provinces			
Intercept	2.490	(0.530)	***
log (standard deviation) by Region (rural)	0.190	(0.150)	
Chi2	988.90		***
N	6092		

Unstandardized coefficients with standard errors in parentheses

*
p<0.05**
p<0.01***
p<0.001 (two-tailed test)

Data Source: CGSS 2013