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ORIGINAL RESEARCH

Social Capital, the State's Structural Intervention and Donors' Choice Among Charitable Causes: Evidence from China

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Abstract
The impact of social capital on individuals' giving behavior has been widely studied, however, most of the existing literature considers charitable giving to be one form of prosocial behavior without further exploring donations to various charitable causes and fails to capture the shaping role of the state on individuals' giving preferences. We draw on social capital literature and deploy the 2012 wave of the Chinese General Social Survey to examine to what extent the key social capital correlates, including social networks, norms of generalized reciprocity and trust affect individuals' giving preferences and the amount given to six specific causes. Results indicate that the effect of social network on giving varies across causes greatly. Attending religious group has the highest explanatory power of giving to Religious cause. Being any associational membership are likely to give to Poverty cause, and individuals holding higher institutional trust give more , the charitable cause prioritized by the state's political agenda and where donation is predominantly channeled through the state. Norm of generalized reciprocity is an important predictor of the decision to give to Neighborhood. Except for individuals attending community-based association donate higher amounts, others are relatively less likely to donate to the domain of Environmental issues, the newly emerged causes whereas still suppressed by the state. This study contributes a better understanding that individuals' giving preferences are not only driven by social capital correlates, but shaped by the state' structural intervention in various charitable domains, which also sheds lights on future studies that explore giving behaviors in other authoritarian regimes.

Keywords Charitable giving · Individuals' preference to give · Charitable causes · Social capital · Structural intervention by the state

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1 Introduction

In recent years, scholars have been increasingly interested in exploring the determinants of charitable giving from diverse perspectives (Gittell and Tebaldi 2006; Bekkers 2006). Social capital, as a well-known sociological concept, has been widely used in explaining individuals volunteering and giving behaviors and is determined as one of the main factors eliciting charitable actions (Glanville et al. 2015; Brown and Ferris 2007; Cox et al. 2018; Herzog and Yang 2018). Despite a well-developed literature has recognized the prominence of social capital in facilitating philanthropy, there remain key research gaps that deserve further and systematic research.

First, although charitable giving behaviors, such as why individuals give and the amount they would like to give, have been extensively examined by the extant studies, almost all of which considers charitable giving to be one form of prosocial behavior without considering personal preferences, that is, without further exploring the donations to different causes. For instance, while the magnitude of social network, a key component of social capital, on charitable giving behavior in general has achieved consensus in the literature (Putnam 1995; Diop et al. 2018), no studies have investigated how the influences of social networks vary across charitable causes. Actually, charitable giving is far from an identical prosocial behavior. It varies greatly with personal choices and preferences. Therefore, studies on charitable giving cannot exclusively be confined to determining whether people donate or not and the amount donated, but include to what particular charitable causes they are inclined to donate.

Second, the existing empirical literature examines the relationship between social capital and charitable giving from the micro-level (e.g., individuals' rationale), while how such behaviors being indirectly shaped by the macro-structural factors is barely captured. However, the latter is of great importance in the authoritarian regime. The propensity of giving to various causes is not only an individual choice driven by individual-level social capital, but to a greater extent, it is reflective of the state' structural intervention through taking differentiated controlling approaches over various charitable domains. Thus, only by segmenting the charitable causes and having a more nuanced study examining individuals' giving propensity between causes, can we see the dual effects from both individual-level social capital and the shaping role of the state's structural intervention.

To fill the research gap and to generate a further and comprehensive explanation of charitable giving behavior in a theoretically integrated approach, we explore to what extent the three indices of social capital, including social networks, norms of generalized reciprocity and trust (generalized trust and institutional trust) affect individuals' giving decisions among six charitable causes, for both giving preference and the amount given in China. China serves as a typical case that in the authoritarian regime, how the shaping role of the state through monopolizing or opening-up charitable domains and spaces for civil society organizations (CSOs), coupled with the factors relevant to social capital, give rise to the intertwined and differentiated effects on individuals' giving choices across charitable causes. To be specific, employing the nationally representative data from the 2012 wave of the Chinese General Social Survey (CGSS) and applying the Cragg model (Heckman and Tobit model used as robustness check), our study systematically examines the extent to which the three dimensions of social capital influence giving preferences among religious causes, poverty causes, health, education and culture, environmental issues and neighborhood.

We begin by discussing the Chinese context of philanthropy. Then, building on the literature and theories of the relationship between social capital and charitable giving, we propose sets of hypotheses as to how each of the dimensions of social capital affect donors' incidence of giving and the amount given. After introducing the research methods, including the data, measures and modeling used in this study, we present the main findings and robustness check. A systematic discussion of the empirical research, along with the implications and limitations of the study, is included in the final section.

2 Charitable Giving in China

China has a long and rich history of philanthropy. The value of philanthropical giving is deeply rooted in Confucian, Daoist, and Buddhist ethics (Zhou and Zeng 2006). Soon after the Chinese Communist Party (CCP) came into power in 1949, however, almost all private organizations were either dissolved or tightly constrained by the state (Hsu 2009; Wang et al. 2015). Individual giving, portrayed as dedication to the state and its people, was not suppressed but heavily politicized,[1] as only the state could mobilize societal resources and raise money from the public (1949a, b; 1950; 1953). It was not until the 1980s that Chinese philanthropy reemerged, with the first charitable foundation founded by the government.[2] In the following years, the state gradually opened up space for CSOs and allowed for charitable giving to those organizations with divergent focuses for the two main reasons (Yan et al. 2007). On the one hand, the state was confronted with the pressing social needs, while has only limited capacity to provide the diversified social services; and on the other hand, the economic reform and opening-up in 1978 bring in remarkable expansion of private wealth, the rise of the newly wealthy elites and the middle classes provide a concrete economic and civil ground for the growth of CSOs (Johnson and Saich 2017). Over the past few years, the state issues a series of new regulations and policies on philanthropy, especially the China Charity Law released in 2016 can be seen as one with milestone significance for the charitable sector. The Charity Law not only offers more encouraging environment for individual charitable giving but also provides a comprehensive legal framework for the CSOs, under which they could gain more political legitimacy, as well as favorable tax reduction. As a result, philanthropy domains are expected to be more diversified.

However, the Chinese government still plays a dominant role in the philanthropy market (Deng 2015). Specifically, the state slowly opens up spaces for certain types of CSOs to harness the strength of social forces, such as those with environmental protection and neighborhood orientated (Wong 1994; Tomba 2014). Meanwhile, the state still monopolizes the philanthropy market by possessing the quasi-government nonprofit organizations (QGNOs), such as the Red Cross and China Foundation for Poverty Alleviation, to achieve its political agenda and share its assumed public service responsibilities. For instance, the state could mobilize the public to donate to poverty cause through letting those QGNOs initiate political campaigns such as propaganda and education (Bi et al. 2010; Tomba 2014). Taken together, we see that charitable giving in China is influenced by the state's

[1] With an exception of the period of Culture Revolution.

[2] The first charitable foundation, the China Children and Teenagers' Fund, was founded in 1981.

structural intervention. Donation in China is primarily channeled through the differentiated philanthropy fields controlled by the state.

Regarding specific charitable causes or domains, the Chinese charity predominantly oriented towards urgent social needs such as poverty alleviation, health and education (Johnson and Saich 2017). Poverty alleviation has been a top concern of the CCP since 1978. The market reforms bring about economic take-off and yet also greater inequality of wealth and worsening poverty. Poverty alleviation became the first domain opened up for philanthropy market through founding QGNOs, aiming at devolving more social responsibility from the government to the society. In addition to poverty alleviation per se, emergency and disaster relief, usually in the name of poverty alleviation or relief, were also opened up for charitable donation, and the social forces were encouraged to contribute to. Since President Xi has proposed the ambitious plan to completely eliminate poverty by 2020, the policy priority placed on it has become more prominent than ever. Accordingly, QGNOs and even some private foundations are heavily involved in fundraising activities for poverty alleviation.

Next to poverty alleviation are the two most concerned charitable domains, education and health, both of which have also attracted the widespread attention from both the government and private philanthropic charities (Johnson and Saich 2017). As opposed to poverty alleviation, those two domains are relatively independent of the extensive intervention of the state, allowing social force to step in and help to meet the rising social needs unmet by the state (Spires 2011). Thus, active CSOs contribute to education and health domains in complementary ways rather than as subsidiaries to the government. For instance, to provide free lunch to children living in rural villages who are not covered by national education welfare, Deng Fei, alongside over 500 journalists and a broad range of mainstream media, initiated the charitable education program Free Lunch for Children (FL4C 2011) on a social media platform. Similarly, in the health domain, several large private crowdfunding platforms, such as Water Droplets, have been established for those who cannot afford medical bills. Despite the fact that both campaigns have been active and raised large amounts of charitable donations, it only suggests that health domain has developed compared to that in the past, whereas comparatively speaking, there remains huge disparity when compared to other domains, such as poverty alleviation, in which the state intervenes and mobilizes a lot.

As we stated above, Chinese charities have developed with an extending array of charitable domains. Among them, neighborhood and environmental affairs as two charitable domains have emerged only in the past two decades (Wong 1994; Tomba 2014) and thus are quite new to Chinese donors. Unlike the above-mentioned three areas, neighborhood and environmental issues are suppressed by the state to a certain extent. For instance, deriving from the perception that environmentalism is a threat to social stability, the state dominates the field of environmental issues by regulating the market and emphasizing on corporate social responsibility rather than collaborating with CSOs (Ho 2001; Lin 2007). Neighborhood CSOs only emerged in 1990s when welfare services cannot adequately be met by work units (*danwei*) (Wong 1994) and since then, neighborhood CSOs have started to undertake the obligations in sharing social welfare burden. However, the state has long been taking a controlling attitude towards neighborhood CSOs at the community level, especially those that promote collective action, such as owner's committee (Read 2008), so that there is still quite a limited number of neighborhood CSOs while neighborhood charitable cause is unfamiliar to donors in China. It should be noted that with the shift of political priorities and the burgeoning of the public awareness, philanthropic practices in both two areas are changing but slowly. In

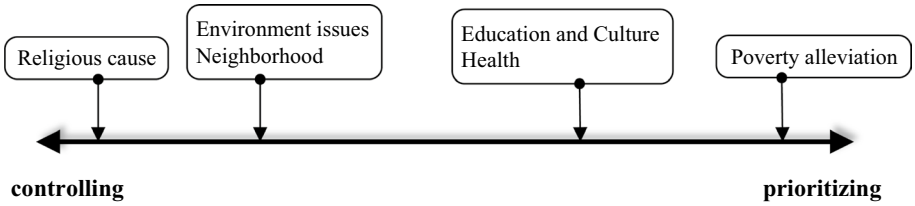

Fig. 1 The state's differentiated controlling strategies to various charitable causes

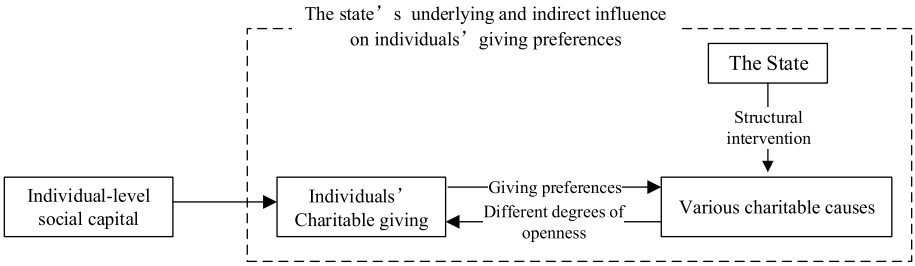

Fig. 2 Schematic diagram of the state's impact on individuals' giving preferences

addition, while China has witnessed a revival of religion since the reform era, religious organizations are still in an intricate situation in which the state wields restrictive control over them (McCarthy 2013). Because of the nature of political sensitivity, religious organizations are forced to keep a low profile and to avoid being engaged in philanthropic practices, except for raising funds from lay believer populations.

Drawing upon the state's graduated controls over CSOs as proposed by Kang and Han (2008), if we consider the state's differentiated strategy towards charitable causes as a spectrum according to political agenda and political sensitivity of CSOs, the state's controlling and prioritizing strategies could be seen as the two ends of the spectrum with poverty alleviation locating at one end and religious cause at the other. Education and health as the two charitable causes approach poverty alleviation while environmental issues and neighborhood reach to religious cause (Fig. 1).

In terms of individuals' giving preferences, the donors in China essentially shares some similarities with its Western democratic counterparts, such as wealthy donors functioning as the leading force and the people most in need being the targets of charity funds (Ryan et al. 2014). However, by segmenting the charitable causes and focusing on individuals' giving preferences among various causes, it is expected to see that in an authoritarian regime, the state intervenes in philanthropic domains through adopting the differentiated controlling strategies. In sum, placing the donation discourse in the Chinese context, this study will generate a comprehensive explanation for the dual rationales that individuals' giving preferences to various charitable causes is not only driven by individual-level social capital factors, but shaped by the varying degree to which the state intervenes in different philanthropy fields. That is to say, the state exerts an underlying and indirect influence on individuals' giving preferences by means of controlling the donation channels of charitable causes. A schematic diagram illustrating the state's structural intervention can be seen from Fig. 2.

3 Literature Review and Theoretical Hypotheses

3.1 3.1 Social Capital and Charitable Giving

Starting with the classic sociological understanding, social capital is defined as the accumulated resources correlated with "the possession of a durable network" that facilitates collectively-owned capital with one another by "transforming contingent relations" (Bourdieu 1986) and similarly, Coleman (1988) sees it as a property of relationships that people can benefit from. While as a dynamic and developmental concept, Putnam (1995) views social capital as a key attribute of building viable communities that entails mutual obligation and responsibility for action and over time, scholars have gradually come to a consensus that social capital is consisted of three key dimensions: networks, norms and trust as proposed by Putnam (1995). Together, the three dimensions facilitate coordination and cooperation for mutual benefits.

In terms of the relationship between charitable giving and social capital, a dominant rationale lies in that higher stocks of social capital are likely to increase the possibility of being exposed to giving opportunities and of being solicited to donate (Schervish and Havens 1997). By exploring different social capital indices, existing literature extensively investigates the relationship between volunteering or giving behavior, and almost all of which find that higher levels of social capital are positively related to individuals' donating behaviors (Jackson et al. 1995; Brown and Ferris 2007; Lin 2019; Wang and Graddy 2008). For instance, Glanville et al. (2015) use social networks and generalized trust as individual-level social capital and reveal that both of which are significantly associated with charitable giving. Taniguchi and Marshall (2012) empirically find that trust, especially institutional trust, has great explanatory power in predicting charitable giving. Brown and Ferris (2007) identify both associational networks and norms are key predictors to secular giving, while norms is of great importance to volunteering as well. Brooks (2006) finds that different social capital correlates, ranging from civic group involvement, social trust to political engagement, have impact on giving behavior to a various degree. Despite these advancements, it remains understudied which particular dimensions of social capital matter to individuals' giving decision to various domains.

In order to have a systematic and comprehensive understanding of individuals' giving behavior from the social capital perspective, a future study that explores which specific dimension(s) of social capital is/are significant predictor(s) of giving preferences is necessary. Hypotheses concerning the relationship between social capital correlates and giving preferences are proposed based upon the existing literature of individuals' giving behavior in general, alongside the recent development of social capital measurement as suggested by Wu et al. (2018), this study attempts to examine in China where the state intervenes in charitable field, the extent to which social networks, norms of generalized reciprocity and trust drive individuals' giving behaviors to varying charitable causes.

3.2 3.2 Theoretical Hypotheses

3.2.1 Social Networks

Social networks, generally referring to the involvement with diverse types of associations, is an important component of social capital (Putnam 1995). A causal relationship between

social networks and philanthropic behavior is identified by Putnam (2000) that, social networks provide the opportunities to be engaged with "good deeds" and whereby, encourage individuals to care about others' welfare. Here, the key logic suggests that simply being solicited is a great impetus to charitable behavior. The more social networks an individual getting involved, the more opportunities of being asked to donate and higher expectation from the civic engagements will be faced with. As such, charitable giving can be strongly predicted by social networks.

Although the positive impact of social network on charitable giving has been well documented, in most of the existing literature (Jackson et al. 1995; Brown and Ferris 2007), social network was treated as a homogeneous variable without further division. It is noteworthy that by incorporating a range of associations with different characteristics as a single predictor, the variations among individuals who are engaged with various groups could largely be undermined. This way of treating the nature of social network as a whole and assuming that the influence on charitable giving is the same is challenged recently. For instance, Taniguchi and Marshall (2012) find that associational memberships and religiosity as social network variables have divergent influences on volunteer work and financial donation, respectively. In addition to the chances of being solicitated for giving vary as people are engaged with various forms of social network, people attending associations differ widely in the motives, goals and missions they strive for (Putnam 1995), and certainty, donors give in a way that reflect the priorities and propensity of the associations they are affiliated with.

Inspired by the prior research by Taniguchi and Marshall (2012), religious group and associational memberships are taken as social network correlates in our study, with associational membership including political association, community-based association and public association. Specifically, individuals who believe in religion are inclined to attend more religious gatherings and activities, by which the chances of being solicited to donate to religious causes are greatly improved. However, as religious organizations are under the strict control of the state as which challenge the official ideology, the specialty of giving to religious cause in China deserves further exploration.

As to particular associational memberships, the primary motive for those attending political associations is to engage with political activities and to impact the political process. In our study, as mentioned above, poverty alleviation as a main policy task has been put on the agenda for the Chinese government and other quasi-government agencies. As members of political associations mainly function as participants in deliberating and administering state affairs and being highly isomorphic with the CCP, it is reasonable to assume that they have more political support for the endeavors that the CCP concentrates on. Unlike participating political associations, the motive for attending community-based associations is to meet the needs of in-group members in leisure, entertainment, and other social needs without generating much spillover effects onto the out-groups. The spirit of cooperation and in-group loyalty derived from attending community-based associations, to a great extent, fosters neighborhood connection. As such, we propose that those attending community-based associations are likely to contribute more to Neighborhood. Moreover, driven by volunteering spirit, public associations seek to provide goods and services for society without being compensated. Unlike other social associations with activities confined to in-group members, public associations commit themselves to benefiting larger society, especially those closely related to social welfare, such as education and culture, health, and environmental issues. Given the reality that although education and culture, alongside health, are the two domestic domains that Chinese CSOs are allowed to contribute largely to, environmental affairs have only emerged for a short period and are still

suppressed by the state, whether attending public association would like to contribute more to the above three charitable causes as the general rationale implies is uncertain. In this study, we categorize social network into four groups: religious group, political associations, community-based associations and public associations, and formulate three hypotheses:

Hypothesis 1a Attending religious group is positively related to the incidence of giving and the amount given to Religious causes.

Hypothesis 1b Attending a political association is positively related to the incidence of giving and the amount given to Poverty causes.

Hypothesis 1c Attending a community-based association is positively related to the incidence of giving and the amount given to Neighborhood.

Hypothesis 1d Attending a public association is positively related to the incidence of giving and the amount given to Health, Education and Culture, and Environmental issues, respectively.

3.2.2 Norms of Generalized Reciprocity

Norms of generalized reciprocity, as one of the essential dimensions of social capital, is captured from the attitudes and behaviors of citizenship that disseminated throughout the society by influence processes (Marsden and Friedkin 1993) and is defined as a critical indicator influencing philanthropic behavior as well (Putnam 1995, 2000). The principle of norms of generalized reciprocity lies in that expecting nothing specific back from someone that a person used to help out, and even without knowing whom he or she was, but in a great confidence that others will do a favour in return (Putnam 2000). Emphasis is placed on the necessity of mutual obligation and collective action that are required for mutual benefits. Reciprocity motives individuals to shape a sense responsibility and desire to care about others' welfare and meanwhile, gives back the assistance that has received with gratitude. A person who believes that his or her generosity would be rewarded in the future, is likely to contribute to the community or society for the greater good through volunteering or charitable giving.

However, norms of generalized reciprocity are barely explored in the existing empirical studies, with the exception of Brown and Ferris (2007) and Wu et al. (2018). In the study of Brown and Ferris (2007), the nature of norms and individuals' trust in others and institutions are mixed up, which causes the inaccurate measurement of norms of generalized reciprocity. In the more recent empirical study undertaken in the Chinese context by Wu et al. (2018), by contrast, norms of generalized reciprocity as a key dimension of social capital was accurately captured and demonstrated to have a significant impact on voluntary giving than civic networks and generalized trust. Prior research show that in the ethnically heterogenous areas, prosocial behavior such as mutual trust and social cohesion among individuals are relatively lower (Leigh 2006; Andrews 2009), which inversely, leads us to draw a reasonable inference that reciprocity to a very large degree can be witnessed among neighbors, in which the homogeneity of the resident population tend to be higher and with the increase of daily interaction, the interpersonal relationship is expected to be closer.

Consider that neighborhood charity in China has only opened up for a short period, the Chinese government has been strictly constraining its development, neighborhood charity is still relatively new to individuals. Whether the presumed logic that norms of generalized reciprocity facilitates people's donation preference to neighborhoods being applicable to the Chinese context deserves further investigation. Therefore, we formulate the hypothesis:

Hypothesis 2 Norms of generalized reciprocity in neighborhoods is positively related to the incidence of giving and the amount given to Neighborhood.

3.2.3 Generalized Trust

Trust, as one of the most widely recognized dimensions of social capital (Nieminen et al. 2008), matters to people when deciding to make charitable donations. A great deal of the literature has confirmed that generalized trust and institutional trust are two determinants of both the likelihood of giving and the amount given (Irwin 2009; Wu et al. 2018). Generalized trust, defined as trust in strangers, is based on the perception of "shared fate with others (p16)" (Uslaner 2002). People who hold higher trust in others are generally more likely to engage in civic affairs and actively contribute their time and financial resources to society (Uslaner 2002). Empirically, Bekkers (2003) find that in the Netherland, social general trust increases the amount donated to charitable causes and similarly, Brown and Ferris (2007) reveal such positive relationship in the US as well.

Charitable giving is a voluntary behavior that donors expect no reward in return from the people who receive the donation except public respect (Hsu 2009). However, donors are in a poor position to determine whether the money they donated to charities is in fact well used, and it is such discrepancy that hinders donors from giving (Bekkers 2003). One rationale of generalized trust is that it "reduces the perception of risk in anonymous scenarios" (Yamagishi and Yamagishi 1994). In other words, individuals are expected to have higher levels of generalized trust and faith in the good intentions of others when are engaged in an action with higher uncertainty. Thus, generalized trust is viewed an important motivator of donors' charitable giving to the areas that cannot be monitored easily and take years to evaluate the results (Wiepking 2010). For instance, environmental issues is the typical cause in which the performance cannot be traced. In China, although an increasingly national emphasis has been laid on environmental protection, environmental CSOs are suppressed by the state, particularly the local governments, which leads to difficulties and uncertainties in practice. Therefore, environmental efforts are even harder to be evaluated and cannot be witnessed in the short term as well. As such, this study hypothesizes that people holding higher generalized trust give are more likely to environmental cause.

Hypothesis 3 Generalized trust is positively related to the incidence of giving and the amount given to Environmental issues.

3.2.4 Institutional Trust

In addition to generalized trust, institutional trust, which is concerned with trust or confidence in public agencies, has also been widely viewed as a determinant of charitable behavior (Paxton 1999). According to McKnight et al. (1998) (p.478), institutional trust stems from "the necessary impersonal structures in place that enable one to act in anticipation of a successful future endeavor," in which impersonal structures is referred to

monitoring systems (police, governments, commanders), legislations and regulations that restrain individuals' inappropriate behavior (Farrell and Knight 2003).

Studies introducing institutional trust as a predictor of charitable giving, however, have generated conflicting results. These inconsistencies reveal that associations with institutional trust vary by social welfare regimes (Hustinx et al., 2010; Vamstad and Essen 2012). For instance, the research conducted in the US suggests that people with less confidence in the federal government are more willing to contribute to both religious and secular organizations (Brooks and Lewis 2001); while no correlation is found in Canada, where residents' decision to give is separate from their attitudes towards the government (Wang and Handy 2013). However, institutional trust is found to be a strong predictor of charitable giving in China, where donors' giving behavior is deeply rooted in an institutional context (Wu et al. 2018). We argue that the significance of institutional trust varies across philanthropy fields according to the degree to which the state intervenes. Specifically, institutional trust takes effect only in the fields that the state actively steps in or that are in line with the state's political agenda. In other words, people's willingness to donate is predominantly guided by public institutions (Hustinx et al. 2012; Zhao et al. 2016). Given that poverty alleviation has long been taken as the political priority over the past decades in China and is also an importance source from which the Chinese government gains legitimacy of performance, the Chinese government has a sustained dominance and strong monopoly over QGNOs in the poverty-alleviation domain. Thus, we assume that people who hold higher institutional trust tend to donate more to poverty cause than to other causes.

Hypothesis 4 Institutional trust is positively related to the incidence of giving and the amount given for Poverty causes.

4 Data, Measures, and Method

4.1 4.1 Data

The data used in this study come from the 2012 CGSS (http://cgss.ruc.edu.cn/index.php?r=index/index&hl=en). The CGSS is a large-scale survey investigating residents aged 18 and above in both urban and rural China except Tibet (Wu 2013). A multistage and stratified sampling method is adopted to ensure a nationally representative sample (Wu 2013; Bian and Li 2012). In addition to providing detailed information on demographic characteristics, socioeconomic status and other variables at the individual level, the 2012 wave of the survey also involves an extensive measures of social capital variables in part N and respondents' charitable behaviors in part Q, all of which are well suited to our research. In this study, we confine the analysis to the sample with part N and Q completed. The 2012 CGSS covers 11,765 respondents in total, with 5,819 answering part N and part Q. After excluding 358 cases with missing values of our key variables, the final sample is 5,461 individuals.

4.2 4.2 Dependent Variables

Our study contains two sets of dependent variables: charitable giving in general and giving to specific causes in the past 12 months (see Table 1). For giving in general, we include two variables: whether an individual gave (a dichotomous variable) and the amount given

Table 1 Descriptive statistics on dependent variables (N = 5461)

	%	Mean	SD	Min	Max
Amount of donation in general	31.3	195.447	1859.42	0	80,000
Amount of donation to specific causes					
Religious causes	3.10	51.409	1060.31	0	50,000
Poverty causes	26.7	99.284	914.563	0	32,793
Health	2.50	16.261	508.897	0	30,000
Education and culture	2.90	10.877	207.707	0	10,000
Environmental issues	0.56	1.578	50.238	0	3,000
Neighborhood	2.82	7.934	115.169	0	6,000

(a continuous variable). Regarding giving to the specific causes, it contains six paired variables: if an individual donated to each of the six causes involving Religious causes, Poverty causes, Health, Education and Culture, Environment issues, or Neighborhood, and the amount given to each cause.

4.3 4.3 Independent Variables

The predictors used for testing the hypothesis described above are social capital indices, involving social networks, norms of generalized reciprocity, generalized trust and institutional trust (see Table 2).

As close correlates of social network, religious group and three types of associational memberships are involved. In the light of prior studies, religious group is measured by a dummy variable implying whether respondents identify themselves as being religiously affiliated (Lin 2019; Liu and Lu 2013). The question is asked "Do you have religious beliefs (including Buddhism, Taoism, Catholicism, etc.,)?" The order of the code is reversed with 1 representing Yes and 0 otherwise. With respect to association memberships, they are measured based on statements about the extent (1 = member, and actively attend; 2 = member, but almost don't attend; 3 = not member) to which the respondents are affiliated with the organizations as follows: (a) political association, (b) community association, (c) public association (voluntary association or nonprofit association), and (d) entertainment club.[3] We code respondents who are active or inactive members ("1 = members, and actively attend" and "2 = member, but always don't attend") of any type of organization as "1", otherwise coded as "0" (Lu et al. 2019). Given that (b) community association and (d) recreational association are often community-based, these two are added up and recoded as a dummy variable, in which respondents who are active members of at least one group are coded as "1", otherwise coded as "0".

As another key predictor variable of social capital, norms of generalize reciprocity is measured based on statements that "neighborhoods care for one another" and "When I was in need, neighbors would like to give me a hand in return" (Wu et al. 2018). The reversed

[3] It worth noting that in the CGSS 2012 questionnaire there are nine types of associations, including (a) political association, (b) community association, (c) public association (voluntary association or nonprofit association), (d) entertainment club, (e) citizen's movement association, (f) religious association, (g) alumni association, (h) labor union, and (i) professional association. For this study, we only include four types of associations.

Table 2 Descriptive statistics on independent variables (N = 5461)

Independent variables	%	Mean	SD	Min	Max
Regions for control					
Eastern	41.66	0.417	0.493	0	1
Central	31.55	0.316	0.465	0	1
Western	26.79	0.268	0.443	0	1
Gender (female = 1)	49.50	0.495	0.500	0	1
Age					
18–35	23.42	0.234	0.424	0	1
35–55	40.65	0.407	0.491	0	1
> 55	35.93	0.359	0.480	0	1
Marital status (married = 1)	79.49	0.795	0.404	0	1
Political identity (CCP = 1)	12.05	0.121	0.326	0	1
Educational attainment					
≤9 years	64.55	0.645	0.479	0	1
10–12 years	19.06	0.191	0.393	0	1
> 12 years	16.39	0.164	0.370	0	1
Ln of annual income		9.413	1.343	0	16.118
Social networks					
Religious group	14.14	0.141	0.348	0	1
Political association	8.28	0.083	0.276	0	1
Community-based association	8.46	0.085	0.278	0	1
Public association	3.63	0.036	0.187	0	1
Norms of generalized trust		11.638	1.901	2	14
Trust					
Generalized trust		6.414	1.608	2	10
Institutional trust		14.386	2.884	5	20

order of codes for the two questions ranges from 1 to 7, with 1 indicating strongly disagree and 7 indicating strongly agree (Cronbach's alpha = 0.907).

In line with the measurement of generalized trust in the prior studies conducted in the Chinese context (Fan, 2019; Tan and Tamnyah 2011), generalized trust is measured by two questions using a five-point Likert scale. The questions asked are "In general, can most people be trusted?" and "Would most people take advantage of you if you are not careful?" The questions are recoded so that the higher value indicates higher trust. The total values of the responses for the two questions range from 2 to 10, with 2 representing the lowest generalized trust and 10 representing the highest. Generalized trust is calculated as the mean of the two questions (Cronbach's alpha = 0.718).

Institutional trust is an index variable based on statements about the extent to which the respondents trust the following types of people: local government officials, central government officials, police, military officials and judges, which is a typical measure of institutional trust internationally (Wu et al. 2018; Steinhardt 2012). The codes of the five categories are added up and reversed, so that a higher value indicates higher institutional trust (1 = totally not; 2 = not very much; 3 = quite a lot; 4 = very much). Institutional trust is calculated as the mean of these items (Cronbach's alpha = 0.789).

4.4 4.4 Control Variables

Control variables identified by previous studies as having a critical effect on giving are also included in this study. First, given that individuals' giving preference and giving choices might vary by region due to different socio-economic or cultural conditions, regional dummies of the Eastern, Central and Western areas of China are controlled. Then, we control for gender, a dummy variable (female = 1), as empirical evidence has shown that women are more generous than men in charitable giving (Andreoni and Vesterlund 2001; Willer et al. 2015). Age is also expected to have a nonlinear relationship with giving, as age groups differ in the likelihood of giving (Bekkers 2003). Empirical evidence reveals that people below 65 years old tend to have more discretionary income and would like to expose themselves to philanthropy until they retire (Wu et al. 2004; Bekkers and Wiepking 2011). Referring to the real retirement age in China,[4] the three categories used to measure age are below 35 (reference category), between 35 and 55 and aged over 55. Given that individuals with extensive connections are more often solicited for donations, we then control for marital status using dummy variable (Slyke and Brooks, 2005; Wiepking and Maas 2009; Ren and Ye 2017). An individual in our study is classified as "married or not living alone" and "single or living alone."

In addition, other variables found to have underlying impact on individuals' charitable giving are controlled as well, including political identity, educational attainment and level of income. Political identity is assessed by asking the political orientation, which is coded as "1" if the respondents indicated belonging to the CCP and as "0" if anything else (Liu and Lu 2013). In the Chinese context, educational attainment is usually measured as follows: $<=9$ years of formal education (no schooling/elementary school/junior high school are included) serves as reference category, 10–12 years (12 years is included, high school/vocational high school) of formal education along with >12 years of formal education (college/bachelor/graduate school) (Liu 2018). We adopt the log form of individuals' annual income to assess level of income. For respondents who responded with no personal income over the past 12 months, we use information on gross household income divided by the number of people in a family as a proxy of personal income. Missing values are replaced with the mean personal income.

4.5 4.5 Modeling

In this study, we attempt to predict how social capital indices influencing the donor's decision among the six charitable causes and to gain a systematic understanding of donors' charitable giving behavior. Charitable giving in general and to the six charitable causes are examined using Stata 15.1, respectively.

Based on Forbes and Zampelli (2010)'s examination of the three typical applications of studies of charitable giving, Cragg model (Cragg 1971) and Heckman (Heckman 1979) are identified as the models far superior to the standard Tobit. In both the Cragg model and the Heckman model, individuals are assumed to make their charitable giving decision in two stages: first, they determine whether to give, and then make an optimal giving amount by incorporating the results of the first-stage selection (only when the individual determined to

[4] By law, men retire at 60 while women retire at 50 in China. We use the mean retire age (=55) as the second threshold of age categories in the analysis.

give). In other words, the factors affecting the decision to give could be significantly different from those affecting the amount given. Moreover, Cragg model relaxes Heckman's assumption by allowing those who decide to give to choose a zero donation (Cragg 1971). Thus, in this study, Cragg model is conducted, while the Heckman and the Tobit are adopted as the robustness check.

In the Cragg model, the first-stage dependent binary variables are giving or not, and the logarithm of the amount of giving to charitable causes are used in the second-stage to eliminate the impact of skewed distribution embedded in dependent variables. It is also worth noting that in addition to the impact of social capital correlates, individuals' giving preferences towards various charities also depends on the possibility of giving to other potential causes. Consider the coexistence of the six charitable causes in CGSS of 2012, coupled with the fact that the amount of a person's discretionary income is limited, his or her likelihood of giving and the amount given to certain causes indicate that the donors have given up contributing to other causes. It is therefore necessary to control for the potential of giving to other charities when evaluating both the incidence of giving and the amount given to one charitable cause. $y_{i\_general}$ and y_{i_cause} are the observed (actual) giving amount in general and to specific charitable causes in the last year, respectively, we model them as:

$$y_{i\_general} = \begin{cases} x_i'\beta + \mu_i, \ if \quad y_{i1}^* = \omega_i'\alpha + \nu_i > 0 \quad and \quad y_{i2}^* = x_i'\beta + \mu_i > 0 \\ 0, \qquad otherise \end{cases}$$
$$\nu_i \sim N(0,1) \quad and \quad \mu_i \sim N\left(0, \sigma^2\right) \tag{1}$$

$$y_{i\_cause} = \begin{cases} x_i'\beta + \mu_i, \ if \quad y_{i1\_cause}^* = \omega_i'\alpha + z_i'\gamma + \nu_i > 0 \quad and \quad y_{i2\_cause}^* = x_i'\beta + z_i'\gamma + \mu_i > 0 \\ 0, \qquad otherise \end{cases}$$
$$\nu_i \sim N(0,1) \quad and \quad \mu_i \sim N\left(0, \sigma^2\right) \tag{2}$$

where $y_{i1}^* = \omega_i\alpha + \nu_i$ and $y_{i1\_cause}^* = \omega_i'\alpha + z_i'\gamma + \nu_i$ denote individuals' decision to give in general and to specific charitable causes, $y_{i2}^* = x_i\beta + \mu_i$ and $y_{i2\_cause}^* = x_i'\beta + z_i'\gamma + \mu_i$ represent the level of giving. ω_i is a vector of variables indicating whether an individual give; x_i is a vector of variables indicating the amount an individual give; z_i indicates controlling for the incidence of giving to five of the other charities that might affect the decision to donate to the target cause.ν_i and μ_i are the error terms, which are assumed to be uncorrelated. The likelihood function is written as follows (Cragg 1971).

$$L\left(\alpha, \beta, \sigma^2\right) = \prod_0 \left[1 - \Phi\left(\omega_i'\alpha\right)\Phi\left(\frac{X_i'\beta}{\sigma}\right)\right] \prod_1 \left[\Phi\left(\omega_i'\alpha\right)\sigma^{-1}\emptyset\left(\frac{y_i}{\sigma}\right)\right] \tag{3}$$

where Φ and $\emptyset$ are the standard normal cumulative distribution function and density function, respectively.

To capture the magnitude of the effect of the variables, the interpretable marginal effects are calculated adopting Garcia and Williamsburg (2013)'s approach. Marginal effects for the key variables can be seen from Tables 4 and 6.

Table 3 Results of Cragg' s model for giving in general (N = 5461)

	Incidence of giving		Amount given	
	Coefficients	SE	Coefficients	SE
Regions for control (ref. Eastern)				
Central	− 0.109*	0.045	− 0.133	0.089
Western	− 0.094 +	0.049	− 0.378***	0.097
Gender (female = 1)	0.133***	0.038	0.106	0.074
Age (ref.18–35)				
35–55	− 0.050	0.049	0.177 +	0.095
≥ 55	− 0.315***	0.054	− 0.126	0.112
Married	0.111*	0.049	0.470***	0.100
Political identity (CCP = 1)	0.208***	0.070	0.604***	0.128
Educational attainment (ref. < = 9 years)				
10–12 years	0.216***	0.049	0.448***	0.098
> 12 years	0.448***	0.060	0.965***	0.114
Ln of annual income	0.138***	0.018	0.457***	0.037
Social Networks				
Religious group	0.279***	0.051	0.904***	0.100
Political association	0.191*	0.081	0.211	0.142
Community-based association	0.334***	0.068	0.623***	0.119
Public association	0.340***	0.102	0.303 +	0.163
Norms of generalized reciprocity Trust	0.047***	0.010	0.037 +	0.020
Generalized trust	− 0.012	0.012	− 0.003	0.022
Institutional trust	0.012 +	0.007	0.033**	0.013
Constant	− 2.676***	0.244	− 2.993***	0.535
Log-likelihood	− 5998.77			

Level of significance: ***$p \leq 0.001$; **$p \leq 0.01$; *$p \leq 0.05$; $^{+}p \leq 0.1$

5 Findings

In this section, we first describe the findings on each of the social capital indices and their effects on giving in general as well as giving to specific charities, with both the incidence of giving and the amount given included.

Of the 5,461 respondents in our analysis sample, approximately 31.3% donated in the past 12 months. As Table 1 shows, among the six specific charitable causes, Poverty cause is the most common one that 26.7% of the respondents have donated to, while Environmental issues are the least common cause, with only 0.56% being engaged in donation. The findings are consistent with the state' structural intervention over various charitable causes, as discussed above.

Table 4 Marginal effects of Cragg' s model for giving in general (N = 5461)

	Incidence of giving	Amount given
Regions for control (ref. Eastern)		
Central	− 0.035*	− 0.015
Western	− 0.030 +	− 0.266***
Gender (female = 1)	0.042***	− 0.033
Age (ref.18–35)		
35–55	− 0.016	0.219***
≥55	− 0.100***	0.188*
Married	0.035*	0.375***
Political identity (CCP = 1)	0.066***	0.391***
Educational attainment (ref. < = 9 years)		
10–12 years	0.069***	0.214***
> 12 years	0.143***	0.491***
Ln of annual income	0.044***	0.312***
Social networks		
Religious group	0.089***	0.601***
Political association	0.061*	0.064*
Community-based association	0.107***	0.281***
Public association	0.108***	− 0.051
Norms of generalized reciprocity	0.015***	0.013+
Trust Generalized trust	− 0.004	0.006
I nstitutional trust	0.004+	0.021*

Level of significance: ***$p \leq 0.001$; ** $p \leq 0.01$; *$p \leq 0.05$; $^{+}p \leq 0.1$

5.1 5.1 Results on Charitable Giving in General

The results of Cragg model for individuals' giving in general and the marginal effects for the explanatory variables are presented in Tables 3 and 4, respectively. For the social network predictors, all of the four forms of social network are significantly associated with individuals' decision to give, and except for being members of political association that have no effect on the amount given in general, attending religious group or being a member of community-based association and public association all have positive relationship with the amount given in general. In addition, norms of generalized reciprocity is positively related to a higher probability of charitable giving and the amount given in general. Unlike generalized trust that has no explanatory power in predicting individuals' decision to give nor how much to give, institutional trust has a positively association with the decision to give at 5% significance level and the amount given at 1%.

Specifically, we note that in Table 4, being a member of a public association and of a community-based have the greatest and second-greatest impact on individuals' decision to give. That is, being membership of public associations is 10.8% more likely to give than those who are not and similarly, being a member of community-based association

Table 5 Results of Cragg's Model for incidence of giving and the amount given to six specific causes

	Religious causes		Poverty causes		Health	
	incidence of giving	Amount given	Incidence of giving	Amount given	Incidence of giving	Amount given
Regions for control (ref. Eastern)						
Central	0.179+	0.397	− 0.145**	− 0.157+	− 0.221*	− 0.448
	(0.096)	(0.366)	(0.048)	(0.084)	(0.113)	(0.362)
Western	0.033	0.296	− 0.136**	− 0.399***	− 0.003	− 0.523
	(0.104)	(0.385)	(0.052)	(0.091)	(0.110)	(0.326)
Gender (female = 1)	0.100	0.135	0.095*	− 0.017	0.071	− 0.038
	(0.081)	(0.322)	(0.040)	(0.069)	(0.086)	(0.247)
Age (ref. 18–35)						
35–55	− 0.117	− 0.451	− 0.031	0.199**	− 0.022	− 0.075
	(0.105)	(0.391)	(0.052)	(0.085)	(0.101)	(0.301)
≥ 55	− 0.067	− 0.322	− 0.290***	0.002	− 0.405**	− 0.865+
	(0.113)	(0.421)	(0.058)	(0.105)	(0.141)	(0.463)
Married	0.094	0.200	0.050	0.363***	0.096	0.774*
	(0.108)	(0.402)	(0.052)	(0.091)	(0.118)	(0.359)
Political identity (CCP = 1)	− 0.054	0.322	0.245***	0.584***	− 0.195	0.522
	(0.159)	(0.592)	(0.073)	(0.116)	(0.152)	(0.409)
Educational attainment (ref. < = 9 years)						
10–12 years	− 0.211+	− 0.789+	0.232***	0.424***	0.219+	0.416
	(0.110)	(0.415)	(0.052)	(0.090)	(0.112)	(0.347)
> 12 years	− 0.403**	− 1.621**	0.425***	0.817***	0.319**	1.130**
	(0.135)	(0.551)	(0.062)	(0.106)	(0.124)	(0.404)
Ln of annual income	0.156***	0.920***	0.113***	0.393***	0.062	0.339**
	(0.044)	(0.176)	(0.020)	(0.034)	(0.048)	(0.145)
Social networks						
Religious group	1.133***	3.693***	− 0.043	0.070	0.130	− 0.073
	(0.082)	(0.529)	(0.058)	(0.101)	(0.118)	(0.359)
Political association	0.102	0.482	0.170*	0.124	0.218	− 0.331
	(0.177)	(0.686)	(0.084)	(0.126)	(0.157)	(0.443)

Table 5 (continued)

	Religious causes		Poverty causes		Health	
	incidence of giving	Amount given	Incidence of giving	Amount given	Incidence of giving	Amount given
Community-based association	0.161	1.067*	0.254***	0.288**	− 0.031	0.133
	(0.131)	(0.485)	(0.071)	(0.107)	(0.136)	(0.398)
Public association	− 0.047	− 0.022	0.330***	0.172	0.321*	1.011*
	(0.196)	(0.698)	(0.106)	(0.141)	(0.162)	(0.469)
Norms of generalized reciprocity	− 0.007	− 0.049	0.046***	0.021	0.011	0.131+
	(0.021)	(0.077)	(0.011)	(0.018)	(0.023)	(0.068)
Trust						
Generalized trust	0.025	0.125	− 0.025*	− 0.041*	− 0.008	− 0.052
	(0.023)	(0.084)	(0.012)	(0.021)	(0.026)	(0.079)
Institutional trust	0.025+	0.042	0.008	0.034**	-0.005	− 0.015
	(0.014)	(0.054)	(0.007)	(0.012)	(0.015)	(0.043)
Constant	− 4.460***	− 11.706***	− 2.386***	− 1.664***	− 3.027***	− 5.367***
	(0.565)	(2.933)	(0.258)	(0.514)	(0.595)	(1.923)
Log-likelihood	− 910.06	− 4981.91	− 718.12	− 767.42	− 182.73	− 854.18
	Education and Culture		Environmental issues		Neighborhood	
	Incidence of giving	Amount given	Incidence of giving	Amount given	Incidence of giving	Amount given
Regions for control (ref. Eastern)						
Central	0.340***	0.111	0.102	0.153	− 0.242*	0.387
	(0.106)	(0.289)	(0.209)	(0.373)	(0.096)	(0.294)
Western	0.403***	0.333	0.390*	0.015	− 0.242*	− 0.105
	(0.110)	(0.301)	(0.194)	(0.464)	(0.103)	(0.342)
Gender (female = 1)	− 0.003	0.062	0.582***	− 0.860	0.053	− 0.115
	(0.086)	(0.232)	(0.177)	(0.531)	(0.078)	(0.229)
Age (ref. 18–35)						

Table 5 (continued)

	Education and Culture		Environmental issues		Neighborhood	
	Incidence of giving	Amount given	Incidence of giving	Amount given	Incidence of giving	Amount given
35–55	0.198 + (0.104)	0.481 + (0.261)	− 0.175 (0.178)	0.132 (0.253)	0.023 (0.106)	0.133 (0.310)
≥55	− 0.237 + (0.143)	0.301 (0.423)	− 0.373 (0.251)	− 0.155 (0.484)	0.153 (0.114)	0.233 (0.339)
Married	0.211 + (0.127)	0.547 (0.343)	− 0.005 (0.199)	− 0.510 (0.315)	0.278* (0.116)	0.654 + (0.362)
Political identity (CCP = 1)	− 0.137 (0.150)	0.366 (0.375)	0.134 (0.251)	0.224 (0.355)	− 0.077 (0.142)	0.761 + (0.399)
Educational attainment (ref. < = 9 years)						
10–12 years	0.100 (0.118)	0.684* (0.329)	0.116 (0.209)	1.075*** (0.391)	0.069 (0.100)	0.159 (0.297)
> 12 years	0.548*** (0.121)	1.613*** (0.363)	0.048 (0.227)	0.912 + (0.511)	− 0.028 (0.123)	0.580 (0.359)
Ln of annual income	0.037 (0.046)	0.399*** (0.124)	0.176 + (0.095)	0.221 (0.234)	0.063 (0.040)	0.268 + (0.138)
Social networks						
Religious group	0.123 (0.119)	0.857*** (0.312)	− 0.493 (0.310)	0.026 (0.449)	-0.117 (0.116)	0.351 (0.333)
Political association	0.076 (0.160)	0.266 (0.398)	− 0.016 (0.273)	0.497 (0.423)	0.100 (0.158)	− 0.299 (0.433)
Community-based association	0.248* (0.124)	0.208 (0.310)	0.210 (0.214)	1.397*** (0.437)	0.422*** (0.113)	1.061*** (0.367)
Public association	− 0.145 (0.174)	− 0.451 (0.403)	0.062 (0.280)	− 0.451 (0.408)	− 0.081 (0.175)	− 0.009 (0.457)
Norms of generalized reciprocity	0.016 (0.023)	0.098 (0.065)	− 0.014 (0.042)	0.121 (0.085)	0.076*** (0.023)	0.182 (0.071)

Table 5 (continued)

	Education and Culture		Environmental issues		Neighborhood	
	Incidence of giving	Amount given	Incidence of giving	Amount given	Incidence of giving	Amount given
Trust						
Generalized trust	0.013 (0.026)	0.060 (0.065)	0.010 (0.049)	− 0.066 (0.095)	0.015 (0.024)	0.208** (0.070)
Institutional trust	− 0.012 (0.015)	− 0.066 + (0.038)	0.016 (0.028)	0.002 (0.053)	0.009 (0.014)	− 0.035 (0.044)
Constant	− 3.514*** (0.594)	− 6.144*** (1.975)	− 5.222*** (1.189)	1.228 (5.149)	− 4.080*** (0.549)	− 6.343 (2.482)
Log-likelihood						

Level of significance: ***$p \leq 0.001$; ** $p \leq 0.01$; *$p \leq 0.05$; $^{+}p \leq 0.1$

Table 6 Marginal effects of Cragg's model for the key variables

Variables	Religious causes		Poverty causes		Health	
	Incidence of giving	Amount given	Incidence of giving	Amount given	Incidence of giving	Amount given
Social networks						
Religious group	0.065***	0.138***	− 0.012	0.103	0.006	− 0.302
Political association	0.006	0.251	0.048*	− 0.008	0.010	− 0.715
Community-based association	0.009	0.850*	0.072***	0.093	-0.001	0.187
Public association	− 0.003	0.083	0.094***	− 0.008	0.015+	0.529
Norms of generalized reciprocity	0.000	− 0.033	0.013***	-0.014	0.000	0.112+
Trust						
Generalized trust	0.001	0.068	− 0.008*	− 0.020	0.000	− 0.037
Institutional trust	0.001+	− 0.014	0.002	0.028**	0.000	− 0.006
Variables	Education and Culture		Environmental issues		Neighborhood	
	Incidence of giving	Amount given	Incidence of giving	Amount given	Incidence of giving	Amount given
Social networks						
Religious group	0.006	0.618*	− 0.493	0.039	0.002	0.289
Political association	0.004	0.159	− 0.016	0.496	0.008	− 0.530
Community-based association	0.012*	0.143	0.210	1.381***	0.031***	0.218+
Public association	− 0.007	− 0.245	0.062	− 0.459	− 0.001	0.022
Norms of generalized reciprocity	0.000	0.075	− 0.014	0.121	0.004**	0.043
Trust						
Generalized trust	0.000	0.004	0.010	− 0.067	0.001	0.180
Institutional trust	0.000	− 0.053	0.016	0.001	0.000	− 0.053

Level of significance: ***$p \leq 0.001$; ** $p \leq 0.01$; *$p \leq 0.05$; $^{+}p \leq 0.1$

is associated with a 10.7% increase in the probability of giving relative to others, and conditional on giving, they give 28.1% more to charity in general.

5.2 5.2 Results on charitable giving to specific causes

The findings of giving to the specific causes shown in Tables 5 and 6 suggest that, after controlling for other determinants of giving, three forms of social network, norms of generalized reciprocity, generalized trust and institutional trust have varied impacts on both incidence of giving and the amount given components of the Cragg model.

The effects of predictors on three forms of social network vary by causes. Being religious affiliated is significantly associated with the incidence of giving and the amount given to Religious causes. One unit change in religious group positively affects the probability of giving and amount given to Religious cause by 6.5% and 13.8%, respectively. Thus, the results lend support for *Hypothesis 1a.* Participation in a political association is primarily significant with the decision of giving but not the amount given to Poverty cause, which lend partial support to *Hypothesis 1b*. Being membership of community-based association is conducive to both giving and the amount given to Neighborhood, as hypothesized in ***Ic.*** Attending a public association has a positively significant impact on the decision to give to Health; whereas no correlation is found with Education and Culture, nor with Environmental issues. *Hypothesis 1d* is partially supported.

Norms of generalized reciprocity lend partial support to *Hypothesis 2*, as it is significantly correlated with the incidence of giving to Neighborhood but not the amount given. Increasing norms of generalized reciprocity by one unit is related to a 0.4% increase in the probability of giving to Neighborhood.

Contrary to the prediction, the effect of generalized trust on giving to Environmental issues does not reach statistical significance; *Hypothesis 3* is rejected. *Hypothesis 4* is partially supported, as institutional trust does not influence donors' decision to give to Poverty, but once a decision is made to give, institutional trust has a statistical impact on the amount given at 1% significance level. One unit increase of institutional trust is associated with a 2.8% increase in the amount given to Poverty cause.

With respect to our control variables, results show that political identity is highly positively associated with the likelihood of giving and the amount given to Poverty causes. Individuals with schooling over 12 years are more likely to give to and give more to Health, Education and Culture, respectively, relative to the reference group (<=9 years of education). Moreover, level of income is shown to have great explanatory power in predicting charitable giving to Religious cause and the size of donation to Education and Culture.

5.3 5.3 Robustness check

We use the Heckman model and Tobit model to check the robustness of the Cragg estimates. First, we deploy the Heckman model with the same set of explanatory variables as the Cragg specification, except for the variable on individuals' place of residence. Considering a person's place of residence, whether lives in rural or urban areas, has a stronger influence on his or her preference of giving, but not on the amount given (AFP 2010), this variable is exclusively included in the selection equation of the Heckman model. From the perspective of statistical significance, the results are basically robust across the Heckman and Cragg model, which is consistent with the finding derived from Forbes and Zampelli

(2010). Then, the Tobit model is used as well, which produce quite different results from the Cragg model. The log-likelihood value of the Cragg, Heckman and Tobit model in terms of giving in general are − 5879.22, − 5896.24 and − 7164.31, respectively, the considerably smaller value of Tobit suggests that the parameter estimates of the Tobit are upward biases.

6 Discussion

This study aims at addressing the primary research question that in an authoritarian regime with the state's differentiated controlling strategies in the charitable domain, how individuals decide to give and the amount given between charitable causes. By incorporating the state's structural intervention into the analysis of individuals' giving preferences, this study finds that the hypotheses regarding the relationship between social capital correlates and giving preferences, together with the amount given, to various charitable causes implied by general literature about charitable behaviors are partially supported while others rejected, which suggests that individuals' giving preferences are not only driven by individual-level social capital, but closely related to the degree to what charitable causes are opened up or being controlling by the state.

Specifically, as shown in Tables 3 and 4, the findings show that different forms of social network indeed increase the incidence of giving and the amount given in general. This study further explicates the variance across subgroups under social network and reveals that each of which has markedly divergent social motives and inclination towards charitable giving. The results offer strong evidence that even religious charities have been under the restrictive control of the state, attending religious group is a significant predictor influencing giving to Religious causes relative to others, people who are religiously affiliated are more likely to give and give higher amount to religious cause. This finding is consistent with prior empirical work taken in China (Liu and Ruan 2018). Interestingly, attending each of the three types of associations is positively associated with poverty alleviation, even after controlling for being members of CCP, which reveals prevailing and dominant the role that the state could play in the public's associational life.

Norms of generalized reciprocity in neighborhoods turns out to be an important facilitator of the decision to give to Neighborhood, which is in line with previous study undertaken by Lelieveldt (2004). The research finding explicitly suggests that norms of reciprocity in neighborhood is a great stimulant of neighborhood-oriented participation, such as donating to neighborhoods programs that is dedicated to addressing neighborhood issues by community members themselves.

Institutional trust is found to be a positive predictor for giving in general, corresponding to prior research conducted by Wu et al. (2018) and affirms that individuals' willingness to give depends on their trustworthiness in institutional system (Howell 2007). A further exploration with respect to the specific charitable causes reveals that, institutional trust has no correlation with the decision to give to Poverty cause, which is possibly due to fact that in China, poverty relief has long been a national priority, on which the public has widely reached a consensus. Thus, people hold an intangible "contract" type of agreement with poverty-alleviation organizations, and the decision to give is a matter of convention rather than a result after careful consideration (Evers and Gesthuizen 2011; Lyons 1994). Once individuals have entry in the charitable market, however, the Cragg model shows the size of giving in Poverty cause increases with the increasing of institutional trust, suggesting

that donors would like to give more to the domain that the state predominantly oriented and focus on.

Taking the state's differentiated controlling strategies towards various charitable causes into account, some of the hypotheses are found to be quite surprising. Although being members of public association raise public awareness for the public goods and thus, would like to donate more to charitable domains focusing on social welfare, a nuanced divergence between causes are revealed from this empirical study that, attending public association has no impact on giving to Education and Culture nor to Environmental issues, but only to health cause, since which might be more easily to evoke profound empathy with people who are unfortunate and in need.

Similarly, the results concerning the effects of generalized trust on charitable giving are puzzling, as generalized trust has no significant correlation with either charitable giving in general or giving to Environmental issues. Such a finding essentially arrives at the opposite conclusion with previous studies, in which generalized trust, or trust in anonymous others, is a key factor affecting giving. As aforementioned, environmental affairs are rather new to China. They have not aroused adequate charitable attention and giving willingness among individuals until recent years, particularly since the process of constructing ecological civilization accelerated in 2012. Meanwhile, as the Chinese government intervenes in environmental causes extensively, little space is left for social forces. Consequently, it is difficult for Chinese donors to seek a suitable avenue for giving.

7 Conclusion

This study employs the nationally representative data, 2012 CGSS, to investigate in the authoritarian regime where the state intervenes in charitable domain, the impact of social capital on individuals' charitable giving. To be more specific, using a more comprehensive approach, the Cragg model, we empirically examine the extent to which various social capital indices, including social networks, norms of generalized reciprocity, generalized trust and institutional trust affect individuals' decision to give and the amount given to six various charitable causes. Concerning the magnitude of the effect of social network on charitable giving, our study reveals the variance across different associations in detail. Particularly, attending religious group serves as strong contributors to religious causes, being membership of political associations is found to be significantly correlated with the decision of giving to poverty alleviation while attending community-based association has a substantial impact on both the incidence of giving and amount given to neighborhood. Public association members are shown to be significantly correlated with contributions to charities focusing on Health. In addition, norms of generalized reciprocity in neighborhoods has great explanatory power in predicting the incidence of giving to Neighborhood, and institutional trust is found to be a predictor for the amount given to Poverty cause.

Our study contributes to a better understanding of the complexity of individual charitable behavior, while such differentiated controlling approaches taken in the charitable causes can actually be captured from the data structure, in which donations in each cause is imbalanced. By segmenting the charitable causes and investigating individuals' giving choices across various causes, this study generates a full explanation that in addition to social capital correlates, the dominating state shapes individual citizen's personal charitable giving preferences through monopolizing or opening-up various charitable areas and space for CSOs. For instance, being membership of any associations are likely to give to

Poverty cause, and individuals holding higher institutional trust give more, the charitable cause prioritized by the state's political agenda and where donation is predominantly channeled through the state; whereas except for individuals attending community-based association donate higher amounts, others are relatively less likely to donate to the domain of Environmental issues, the newly emerged causes whereas still suppressed by the state.

The limitation of study is that we rely on cross-sectional data. Due to the lack of follow-up data on individual charitable behavior, longitudinal charitable giving studies in any country is rare, let alone on a national scale. Future studies on charitable giving behavior, especially those about non-Western societies in which the state's influence on philanthropy varies across causes significantly, will greatly benefit from the analysis of longitudinal data with multiple waves of measures included.

In sum, despite the limitations, this study is of theoretical and empirical prominence as it analyzes individual-level giving preferences through the lens of the state's structural intervention and based upon which, builds a better understanding of individual giving choices from the social capital perspective. Besides, the study provides a useful foundation for further investigating individual giving preferences as a response to the state's structural intervene in other contexts. Consider the significant divergence of political sensitivity and social needs alongside other factors such as the state-civil society relationship among countries, the degree to which the state responding to the social needs and the differentiated controlling strategies adopted in the charitable domains vary a lot. As such, a more critical research purpose of this paper lies in shedding lights on studies that explore the state's shaping role in individuals' giving preferences in other authoritarian regimes.

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Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

References

(1949a) Changzhi ganbu qunzhong juanqian zhumi jiuji yubei zaibao [Changzhi cadres and the public donate to help save rice and to aid the needy in the northern Henan] People's Daily.

(1949b) Hebei guangda chengxiang pubian kaizhan jieyue jiuzai anzhi zaimin gongzuo zheng tuoshan jinxing [The vast urban and rural areas in Hebei province have carried out conservation and disaster relief, the resettlement of the victimes is being properly carried out]. People's Daily.

(1950) Jiuzhu wanbei subei hebei henan zaimin hanyi quanmu zonghui chengli [Rescuing the victims of north Jiangsu, Hebei, Henan, the cold cloths fundraising group is being founded]. People's Daily.

(1953) Summary of readers' letters. People's Daily.

AFP (2010) Charitable giving by type of community: Comparing donation patterns of rural and urban donors. Indiana University.

Andreoni, J., & Vesterlund, L. (2001). Which is the fair sex? Gender differences in Altruism. *The Quarterly Journal of Economics, 116*(1), 293–312.

Andrews, R. (2009). Civic engagement, ethnic heterogeneity, and social capital in urban areas: Evidence from England. *Urban Affairs Review, 44*(3), 428–440.

Bekkers, R. (2003). Trust, accreditation, and philanthropy in the Netherlands. *Nonprofit and Voluntary Sector Quarterly, 32*(4), 596–615.
Bekkers R (2006) Traditional and Health-Related Philanthropy: The Role of Resources and Personality. *Social Psychology Quarterly* 68(4).
Bekkers, R., & Wiepking, P. (2011). Who gives? A literature review of predictors of charitable giving part one: Religion, education, age and socialisation. *Voluntary Sector Review, 2*(3), 337–365.
Bi, X., Jin, J., Ma, M., et al. (2010). The reach of Danwei mobilization: An analysis on urban residents' charitable giving to Project Hope. *Sociological Studies, 6,* 149–177. (**in Chinese**).
Bian, Y., & Li, L. (2012). The Chinese general social survey (2003–8). *Chinese Sociological Review, 45*(1), 70–97.
Bourdieu, P. (1986). The forms of capital. In J. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241–258). Greenwood: New York, NY.
Brooks, A. (2006). *Who really cares? The surprising truth about compassionate conservatism*. New York, NY: Basic Books.
Brooks, A. C., & Lewis, G. B. (2001). Giving, volunteering, and mistrusting government. *Journal of Policy Analysis and Management, 20*(4), 765–769.
Brown, E., & Ferris, J. M. (2007). Social capital and philanthropy: An analysis of the impact of social capital on individual giving and volunteering. *Nonprofit and Voluntary Sector Quarterly, 36*(1), 85–99.
Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology, 94,* S95–S120.
Cox, J., Oh, E. Y., Simmons, B., et al. (2018). Getting connected: An empirical investigation of the relationship between social capital and philanthropy among online volunteers. *Nonprofit and Voluntary Sector Quarterly.*, *48*(2_suppl), 151S–173S.
Cragg, J. G. (1971). Some statistical models for limited dependent variables with application to the demand for durable goods. *Econometrica, 39*(5), 829–844.
Deng, G. (2015). The influence of elite philanthropy on NGO development in China. *Asian Studies Review, 39*(4), 554–570.
Diop, A., Johnston, T., Le, K. T., et al. (2018). Donating time or money? The effects of religiosity and social capital on civic engagement in Qatar. *Social Indicators Research, 138,* 297–315.
Evers, A., & Gesthuizen, M. (2011). The impact of generalized and institutional trust on donating to activist, leisure, and interest organizations: individual and contextual effects. *International Journal of Nonprofit and Voluntary Sector Marketing, 16,* 381–392.
Fan, X. (2019). Discrimination experience, family relations, and generalized trust in China. *Social Science Research, 77,* 115–129.
Farrell, H., & Knight, J. (2003). Trust, institutions and institutional evolution: Industrial districts and the social capital hypothesis. *Politics and Society, 31,* 537–556.
FL4C (2011). *Mianfei wucan* [*Free Lunch for Children*]. Available at: http://www.mianfeiwucan.org/donate/charity-desktop/ (Accessed July).
Forbes, K. F., & Zampelli, E. M. (2010). An assessment of alternative structural models of philanthropic behavior. *Nonprofit and Voluntary Sector Quarterly, 40*(6), 1148–1167.
Garcia, B., & Williamsburg, V. (2013). Implementation of a double-hurdle model. *The Stata Journal, 13*(4), 776–794.
Gittell, R. & Tebaldi, E. (2006). Charitable giving: Factors influencing giving in U.S. States. *Nonprofit and Voluntary Sector Quarterly*, 35(4): 721–736.
Glanville, J. L., Paxton, P., & Wang, Y. (2015). Social capital and generosity: A multilevel analysis. *Nonprofit and Voluntary Sector Quarterly*, 45(3).
Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica, 47*(1), 153–161.
Herzog, P. S., & Yang, S. (2018). Social networks and charitable giving: trusting, doing, asking, and alter primacy. *Nonprofit and Voluntary Sector Quarterly, 47*(2), 376–394.
Ho, P. (2001). Greening without conflict? Environmentalism, NGOs and civil society in China. *Development and Change, 32*(5), 893–921.
Howell, J. (2007). Civil society in China: Chipping away at the edges. *Development, 50,* 17–23.
Hsu, C. L. (2009). 'Rehabilitating Charity' in China: The case of project hope and the rise of non-profit organizations. *Journal of Civil Society, 4*(2), 81–96.
Hustinx, L., Handy, F., Cnaan, R. A., et al. (2010). Social and cultural origins of motivations to volunteer–a comparison of university students in Six Countries. *International Sociology, 25*(3), 349–382.
Hustinx, L., Handy, F., & Cnaan, R. (2012). Student volunteering in China and Canada: Comparative perspectives. *Canadian Journal of Sociology, 37,* 55–83.

Irwin, K. (2009). Prosocial behavior across cultures: The effects of institutional versus generalized trust. In S. R. Thye & E. J. Lawler (Eds.), *Altruism and prosocial behavior in groups (Advances in group processes volunme 26)*. Bingley: Emerald Group Publishing Limited.

Jackson, E. F., Bachmeier, M. D., Wood, J. R., et al. (1995). Volunteering and charitable giving: Do religious and associational ties promote helping behavior? *Nonprofit and Voluntary Sector Quarterly, 24*(1), 59–78.

Johnson, P. D. & Saich, T. (2017) Values and vision: Perspectives on philanthropy in 21st century China. Reportno. Report Number, Date. Place Published: Institution.

Kang, X., & Han, H. (2008). Graduated controls—the state-society relationship in contemporary China. *Modern China, 34*(1), 36–55.

Leigh, A. (2006). Trust, inequality and ethnic heterogeneity. *Economic Record, 82*(258), 268–280.

Lelieveldt, H. (2004). Helping citizens help themseleves neighborhood improvement programs and the impact of social networks, trust, and norms on neighborhood-oriented forms of participation. *Urban Affairs Review, 39*(5), 531–551.

Lin, T.-C. (2007). Environmental NGOs and the anti-dam movements in China: a social movement with Chinese characteristics. *Issues and Studies-English Edition, 43*(4), 149.

Lin, W. (2019). Social capital and individual charitable behaviours in China. *Applied Research in Quality of Life*. https://doi.org/10.1007/s11482-019-09760-x.

Liu, C.-J. (2018). Expectation, commitment and charitable giving: The mediating role of trust and the moderating role of social status. *Voluntas: International Journal of Voluntary and Nonprofit Organizations, 30,* 754–767.

Liu, F., & Lu, W. (2013). Influence of social economical status upon charity donation behavior. *Journal of Beijing Normal University (Social Science), 3,* 113–120. (**in Chinese**).

Liu, L., & Ruan, R. (2018). Does religion make people more generous? *Sourth China Journal of Economics, 11,* 103–120. (**in Chinese**).

Lu, Y., Jung, J. H., & Bauldry, S. (2019). Explaining the cross-national variation in the relationship between religious organization membership and civic organization participation. *Social Science Research, 83,* 102310.

Lyons, B. R. (1994). Contracts and specific investment: An empirical test of transaction cost theory. *Journal of Economics and Management Strategy, 3*(2), 257–278.

Marsden, P. V., & Friedkin, N. E. (1993). Network Studies of Social Influence. *Sociological Methods and Research, 22*(1), 127–151.

McCarthy, S. K. (2013). Serving society, repurposing the state: Religious charity and resistance in China. *The China Journal, 70,* 48–72.

McKnight, D. H., Cummings, L. L., & Chervany, N. L. (1998). Initial trust formation in new organizational relationships. *Academy of Management Review, 23*(3), 473–490.

Nieminen, T., Martelin, T., Koskinen, S., et al. (2008). Measurement and socio-demographic variation of social capital in a large population-based survey. *Social Indicators Research, 85,* 405–423.

Paxton, P. (1999). Is social capital declining in the United States? *A Multiple Indicator Assessment American Journal of Sociology, 105*(1), 88–127.

Putnam, R. D. (1995). Bowling alone: America's declining social capital. *Journal of Democracy, 6,* 65–78.

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of american community*. New York: Simon & Schuster.

Read, B. L. (2008). Assessing variation in civil society organizations: China's homeowner associations in comparative perspective. *Comparative Political Studies, 41*(9), 1240–1265.

Ren, Q., & Ye, M. (2017). Donation make people happier: Evidence from the Wenchuan Earthquake. *Social Indicators Research, 132,* 517–536.

Ryan, J., Chen, L. C., & Saich, T. (2014). Philanthropy for Health in China: Distinctive roots and future prospects. In J. Ryan, L. C. Chen, & T. Saich (Eds.), *Philanthropy for Health in China* (pp. 1–15). Bloomington: Indiana University Press.

Schervish, P. G., & Havens, J. J. (1997). Social participation and charitable giving: a multivariate analysis. *Voluntas: International Journal of Voluntary and Nonprofit Organizations, 8*(3), 235–260.

Slyke, D. M. V., & Brooks, A. C. (2005). Why do people give? New evidence and strategies for nonprofit managers. *American Review of Public Administration, 35*(3), 199–222.

Spires, A. J. (2011). Contingent symbiosis and civil society in an authoritarian state: understanding the survival of China's grassroots NGOs. *American Journal of Sociology, 117*(1), 1–45.

Steinhardt, H. C. (2012). How is high trust in China possible? Comparing the origins of generalized trust in three Chinese societies. *Political Studies, 60,* 4344–4454.

Tan, S. J., & Tamnyah, S. K. (2011). Generalized trust and trust in institutions in confucian Asia. *Social Indicators Research, 103,* 357–377.
Taniguchi, H., & Marshall, G. A. (2012). The effects of social trust and institutional trust on formal volunteering and charitable giving in Japan. *Voluntas: International Journal of Voluntary and Nonprofit Organizations, 25,* 150–175.
Tomba, L. (2014). *The government next doo: Neighborhood politics in Urban China*. Ithaca: Cornell University Press.
Uslaner, E. M. (2002). *The moral foundations of trust*. New York: Cambridge University Press.
Vamstad, J., & Jv, E. (2012). Charitable giving in a universal welfare state—charity and social rights in Sweden. *Nonprofit and Voluntary Sector Quarterly, 42*(2), 285–301.
Wang, L., & Graddy, E. (2008). Social capital, volunteering and charitable giving. *Volunta: International Journal of Voluntary and Nonprofit Organizations, 19,* 23–42.
Wang, L., & Handy, F. (2013). Religious and secular voluntary participation by immigrants in Canada: How trust and social networks affect decision to participate. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*. https://doi.org/10.1007/s11266-013-9428-8.
Wang, X., Liu, F., Nan, F., et al. (2015). Giving in China: An emerging nonprofit sector embedded within a strong state. In P. Wiepking & F. Handy (Eds.), *The palgrave handbook of global philanthropy*. London: Palgrave Macmillan.
Wiepking, P. (2010). Democrats support international relief and the upper class donates to art? How opportunity, incentives and confidence affect donations to different types of charitable organizations. *Social Science Research, 39*(6), 1073–1087.
Wiepking, P., & Maas, I. (2009). Resources that make you generous: effects of social and human resources on charitable giving. *Social Forces, 87*(4), 1973–1995.
Willer, R., Wimer, C., & Owens, L. A. (2015). What drives the gender gap in charitable giving? Lower empathy leads men to give less to poverty relief. *Social Science Research, 52,* 83–98.
Wong, L. (1994). Privatization of Social Welfare in Post-Mao China. *Asian Survey, 34*(4), 307–325.
Wu, S.-Y., Huang, J.-T., & Kao, A.-P. (2004). An analysis of the peer effects in charitable giving: The case of Taiwan. *Journal of Family and Economic Issues, 25*(4), 483–505.
Wu, X. (2013). Redrawing the boundaries: Work units and social stratification in urban China. *Chinese Sociological Review*, *45*(4), 6–28.
Wu, Z., Zhao, R., Zhang, X., et al. (2018). The impact of social capital on volunteering giving: Evidence from urban China. *Nonprofit and Voluntary Sector Quarterly*. https://doi.org/10.1177/0899764018784761.
Yamagishi, T., & Yamagishi, M. (1994). Trust and commitment in the United State and Japn. *Motivation and Emotion, 18,* 129–166.
Yan, M. C., Huang, X., Foster, K., et al. (2007). Charity development in China an overview. *Asia Pacific Journal of Social Work and Development, 17*(1), 79–94.
Zhao, R., Wu, Z., & Tao, C. (2016). Understanding Service Contracting and Its Impact on NGO Development in China. *Voluntas: International Journal of Voluntary and Nonprofit Organizations, 27,* 2229–2251.
Zhou, Q., & Zeng, G. (2006). *Zhongguo Cishan Jianshi [A brief history of philanthropy in China]*. Beijing: Renmin Publisher.