Global philanthropy: Does institutional context matter for charitable giving?

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Keywords

Global philanthropy, institutional contexts, charitable giving, legal, fiscal incentives

Abstract

In this paper, we examine whether and how the institutional context matters when understanding individuals' giving to philanthropic organizations. We posit that both the individuals' propensity to give and the amounts given are higher in countries with a stronger institutional context for philanthropy. We examine key factors of formal and informal institutional contexts for philanthropy at both the organizational and societal levels, including regulatory and legislative frameworks, professional standards, and social practices. Our results show that while aggregate levels of giving are higher in countries with stronger institutionalization, multi-level analyses of 118,788 individuals in 19 countries show limited support for the hypothesized relationships between institutional context and philanthropy. The findings suggest the need for better comparative data to understand the complex and dynamic influences of institutional contexts on charitable giving. This, in turn, would support the development of evidence-based practices and policies in the field of global philanthropy.

Introduction

There is abundant research showing how individual motivations and resources influence giving to philanthropic organizations[1] (Bekkers & Wiepking, 2011b; Wiepking & Bekkers, 2012). Less is known about how the context in which people live influences this behavior (Barman, 2017). This is surprising as it is "certain that philanthropy would not have the form it currently does in the absence of the various laws that structure it" (Reich, 2006, p. 17). Analogous research on the institutional context for blood and organ donations finds that collection regimes of countries strongly influence individual donation behavior (Healy, 2006; Johnson & Goldstein, 2003), suggesting that philanthropic donations may be influenced by the institutional contexts (Barman, 2007; Galaskiewicz & Burt, 1991; Galaskiewicz & Wasserman, 1989; Mosley & Galaskiewicz, 2010; Sargeant, 1999; Schervish & Havens, 1997).

In this paper, we contribute to the global philanthropy literature by examining how individual charitable giving is associated with the institutional philanthropic context of a country. Specifically, we examine key factors of the formal and informal institutional context for philanthropy at both the organizational and the societal levels, including regulatory and legislative frameworks, professional standards, and social practices. Analyzing how institutional contexts relates to individual charitable giving is instrumental for understanding how societies can be shaped to contribute, through philanthropy, to benefit others and the public good. We test our hypotheses by analyzing merged and synchronized datasets from 19 countries: The International Individual Philanthropy Database (IIPD). The IIPD uniquely includes both incidence and amounts of individual donations as well as relevant individual-level characteristics.

To our knowledge, this is the first paper to empirically examine how the institutional context for philanthropy relates to the individual incidence and level of giving across a range of countries. Lacking individual-level data on the amount of philanthropic donations, past studies typically used aggregated measures or analyzed data with bivariate correlational analyses (CAF, 2017; Einolf, 2016; Sokolowski, 2013). While these studies contributed to an initial understanding of global philanthropy, we show that these studies may have overestimated support for relationships between institutional contexts and philanthropy.

We also show the importance of considering the demographic characteristics of countries when studying the relationship between institutional context for philanthropy and individual giving. We find that if people in countries with less developed philanthropic institutional context (typically developing economies) had the same average age, level of education and income as those in countries with more developed philanthropic institutional contexts, they would be equally likely to give and to give similar amounts. This points to a higher relative importance of individual level resources for charitable giving, rather than the philanthropic infrastructure, at least in relation to the factors of institutionalization included in our study.

Finally, such comparative analysis is critical for the design of evidence-based policies that relate institutions to the practice of philanthropy. Our findings represent a first attempt at understanding what factors are associated with the differences in individual philanthropic giving across 19 countries, and aim to contribute to a new research agenda focused on understanding global differences in philanthropic behavior.

Theory and hypotheses

There are large differences in individual giving to philanthropic organizations in different countries (Wiepking & Handy, 2015; Wiepking & Handy, 2016b). Figure 1 shows that the average annual donation to charity per person ranges from the equivalent of 12 US$ in Russia to 1,427 US$ in the United States.

[Figure 1 here]

What contextual underpinnings can explain these large differences in individual giving across countries? In a qualitative content analysis of 136 contextual factors identified by experts from 26 countries and regions to facilitate or inhibit philanthropy, Wiepking and Handy (2015) identified several key factors. These relate to the institutional context for philanthropy at both the organizational and the societal level, including regulatory and legislative frameworks, professional standards, and social practices.

Our main hypothesis is that the stronger the institutional context for philanthropy is in a country, the more likely people are to give and to give higher amounts to philanthropic organizations. We use the notion of 'institutionalization of philanthropy' to refer to the socially constructed system of norms, beliefs and definitions manifested in different institutions that shapes an individual's philanthropic behavior by providing legitimacy (Scott, 2008) and influences transaction costs for that behavior (North, 1990). We define institutions as "aspects of societal structure or human-devised rules of the game of society which give 'solidity' [to social systems] across time and space" (Giddens, 2004, p. 24). In doing so, institutions consist of both formal rules (e.g., laws backed by authorized powers) and informal ones (e.g., customs or traditions deriving from a set of shared norms), which guide

and constrain individual behavior (Scott, 2008).

Formal institutionalization includes the legal framework in a country: laws, contracts and judicial rules. In a complex society, such rules govern interactions and transactions. Within this class of institutionalization, Ingram and Clay (2000) distinguish public rules made by governmental authorities from private rules made by private organizations. Informal institutionalization, instead, refers to informal norms as constraints that define our set of choices in daily life (North, 1990). Together, public and private institutions that are formal as well as informal provide the context in which individuals make gifts to charitable organizations.

As we elaborate below, the role of institutions, and regulations more generally, can reduce transaction costs for donors (the "supply-side"), and thus positively influence giving. At the same time, such regulations may increase transaction costs for organizations (the "demand-side")[2] and thus could also negatively influence giving, especially for smaller organizations and especially in the short-run as they must adopt regulations regarding reporting, transparency and fundraising. However, over time, as organizations learn and adapt, and become more effective and undertake varied best practices for fundraising, regulations may positively influence giving on the demand side as well. Indeed, research at the level of individual donors has shown that lowering costs of giving and providing more opportunities to give increases philanthropy (Bekkers & Wiepking, 2011a).

Regulations and Fiscal Incentives: Formal-public institutionalization

Regulations that curb the power of philanthropic organizations to commit fraud ensures that only legitimate and trustworthy organizations solicit donations. On the one hand, this enables individuals to donate while reducing their transaction costs related to monitoring the quality of organizations (Hogg, 2017). On the other hand, these and other regulations can increase costs for the establishment and operation of philanthropic organizations, reducing giving (Huck & Rasul, 2010; Knowles & Servátka, 2015). The regulations may increase barriers to entry, and consequently decreases the number of philanthropic organizations and thus provide fewer opportunities for charitable donations, consequently reducing overall philanthropy, especially in the short term. On balance, while government regulation, such as compulsory registration for organizations involved in fundraising, provides legitimacy to the philanthropic sector and lowers transaction costs for individual donors, if too cumbersome for organizations it can also reduce giving.

Regulations, posited by North (1992), are driven by the need to create efficiency and resolve issues and arising from: (1) information and measurement costs (Can the donor be sure the donation will buy the desired service and in the right quantity?); (2) the costliness of the exchange and size of the market (How can donors buying service for an unknown third party ensure it was done as contracted? How to protect the rights of the donor?); (3) enforcement (Who will enforce the rights of the donor?). However, while regulations are designed to efficiently resolve these above-mentioned issues, they are in fact, heavily influenced by political actors and prevailing ideology (North, 1992). Such influence can raise or lower transaction costs for organizations and individuals, change the perception of fairness of the regulations and thereby impact the overall sector, in ways that may or may not promote

efficiency, illustrated by the case of nonprofit reforms in China described by Hu & Guo (2016).

Overall, government regulation is a complex phenomenon varying greatly across countries (Breen, Dunn, & Sidel, 2016). Nevertheless, it does contribute to more efficient philanthropic organizations, making them attractive to donors (Breen, Dunn, & Sidel, 2016; Cagney & Ross, 2013; Marx, 2015). However, if regulations increase transaction costs for nonprofits, if they are opaque or difficult to follow or if they are perceived as unfair or undemocratic, they may have negative effects on their growth as well raise barriers to entry and limit the philanthropic sector (EU Russia Civil Society Forum, 2017; Vandor, Traxler, Millner, & Meyer, 2017; Wiepking & Handy, 2015). Due to the complexity of government regulations, here we focus only on registration for philanthropic organizations, which is easily comparable between countries. We hypothesize:

H1: The ease and fairness in government registration for philanthropic organizations is positively related to the individual level of philanthropic giving to charitable organizations in a country.

Government regulations that offer fiscal incentives for philanthropic donations also suggest that donating is a legitimate, socially desired behavior that is publicly sanctioned. Furthermore, fiscal incentives also reduce the 'price' of donations to the donor, thereby increasing philanthropic activity (Bakija & Heim, 2011; Duquette, 2016; Kingma, 1989). We hypothesize:

H2: The level of fiscal incentives for philanthropic donations is positively related to the individual level of philanthropic giving to charitable organizations in a country.

Education and Training: Formal-private institutionalization

Philanthropic practices are influenced by formal rules made by private institutions. For example, giving may be facilitated by nonprofit education programs and fundraising professionalization. Nonprofit education programs are a private form of institutionalization that legitimizes philanthropy.[3] For example, as the philanthropic sector grows and its activities get more specialized, there is a need for personnel that are specially trained to manage philanthropic organizations and engage in fundraising (Mirabella, Gemelli, Malcolm, & Berger, 2007; Mirabella & Wish, 2001). Thus, the degrees in higher education related to management of nonprofits are an indicator of the professionalization of philanthropy. As trained personnel typically enhances the benefits and impact of donations made to nonprofits, donors are more satisfied and likely to give more (Bekkers & Wiepking, 2011a). We hypothesize:

H3: The number of nonprofit education programs is positively related to the individual level of philanthropic giving to charitable organizations in a country.

A related form of professionalization influencing giving is the training of those soliciting donations. Empirical findings show that solicitation is a critical motivator of giving; the majority of donations are prompted by a request (Bekkers & Wiepking, 2011a; Breeze, 2017; Neumayr & Handy, 2019, Yörük, 2009). Not surprisingly, if individuals are not asked to donate, individuals are unlikely to give. Fundraising, done well, can increase donations by reducing donors' transaction costs and raising awareness for the need for donations

(Schlegelmilch, Love, & Diamantopoulos, 1997; Wiepking & Maas, 2009; Yörük, 2009). When donors are treated well by fundraisers, donors are more satisfied and likely to give more (Breeze, 2017). According to Breeze and Scaife (2015), well trained fundraisers follow relationship-centric and not transactional fundraising approaches, conduct many different types of appeals and are supported by institutions that regulate and promote best practices, all of which promotes successful solicitations. Thus, we expect that a higher degree of development of the fundraising professionals will facilitate fundraising, and hence is associated with greater level of giving. We hypothesize:

H4: Development of the fundraising profession is positively related to the individual level of philanthropic giving to charitable organizations in a country.

Norms: Informal institutionalization

Informal institutionalization usually refers to group norms, i.e., cognitive schemata that are commonly recognized and culturally supported such as customs, taboos or traditions (Ingram & Clay, 2000; Mair & Hehenberger, 2014; North, 1990; Scott, 2008). Such informal norms are both constraints that may limit and sanction transactions (North, 1990) and cultural lenses that give meaning to social phenomena (Scott, 2008). Although government legislation is part of the formal-public institutionalization, we suggest that government funding of nonprofits is the reflection of a group norm. Government grants are used to signal the legitimacy of the nonprofit sector (Handy, 2000; Heutel, 2014) and also signal desired social behavior as government expenditures are the reflection of democratic processes and shared values (Saunders-Hastings, 2018).

Government funding could be "crowding-out" philanthropic giving (Pennerstorfer & Neumayr, 2017; Sokolowski, 2013; Bekkers & De Wit, 2013; De Wit, Neumayr, Handy, & Wiepking, 2018). This is supported by evidence in laboratory experiments, but studies that use field data generally find little evidence (Bekkers & De Wit, 2013; Lu, 2016). In the practice of philanthropy, it is more likely that decisions are guided by shared beliefs about what are 'good' philanthropic causes, which may result in "crowding-in". We argue that government funding reflects such shared beliefs. We hypothesize that, in general, the larger the share of the funding received from the government by nonprofits, the more their activities are perceived as relevant and necessary, which in turn increases individuals' giving.

H5: A higher share of government funding for philanthropic organizations is positively related to the individual level of philanthropic giving to charitable organizations in a country.

A final form of informal institutionalization of philanthropy relates to the social norms that encourage philanthropy. When social norms are more supportive of giving, it will positively influence individual giving (Ariely, Bracha, & Meier, 2009; Simpson & Willer, 2015). For example, religious norms for giving are especially strong, and exist across almost all religions, inspiring charity in their adherents (Bekkers & Schuyt, 2008; Bennett & Einolf, 2017; Wuthnow, 1991). We hypothesize:

H6: The proportion of people in a country that is religiously affiliated is positively related to the individual level of philanthropic giving to charitable organizations in a country.

In formulating these hypotheses, we are cautious in suggesting that there exists a uni-directionality in these relationships; just as institutions shape individuals' behavior, so too do individuals shape institutions. For example, it may well be that an easy and fair nonprofit registration system will emerge only when there a sufficient level of philanthropic activity, as very low philanthropic activity may not trigger a need for a bureaucratic registration process. However, after a certain threshold of philanthropic activity, governments may decide that registration of nonprofits would reduce fraudulent behaviors as well as information and monitoring costs to donors. Registration reduces transaction costs to donors, and this in itself may spur increased philanthropic activity. Similarly, it can be argued that when philanthropic activity is high, nonprofits can lobby for fiscal incentives (although the governments' resistance may also be high if the cost to the treasury is perceived sufficiently large). Given that the only data currently available to test our hypotheses is cross-sectional, such directionality or causality cannot be determined, and thus our findings needed to be interpreted with caution.[4]

Data and measures

Research documents the ubiquitous presence of philanthropy across the world, but most studies thus far have concentrated on single countries or regions, especially in Western Europe and North America, and typically analyze only aggregated country-level data about individual philanthropic behavior (e.g., Bekkers, Schuyt, & Gouwenberg, 2017; ESS, 2002; Papacostas, 2008; Giving USA, 2016; Hoolwerf & Schuyt, 2017; Philanthropy Age, 2016). One exception is the Gallup World Poll, but these data are not publicly available and only provide the incidence of giving, and not amounts donated (Gallup, 2018), which we argue is

key in understanding the relationship between institutional contexts and individual donating (Wiepking & Handy, 2015a).

A new and unique database, created by Wiepking and Handy (2016b), merged and synchronized micro-level datasets from 19 countries: The Individual International Philanthropy Database (IIPD). It includes the incidence and amounts of individual donations as well as relevant individual-level characteristics: gender, age, marital status, income and level of educational achievement. Data were collected using probability-based sampling in Australia (Lyons & Passey, 2007), Austria (Neumayr & Schober, 2009), Canada (CSGVP, 2004), France (Wiepking, 2009), the Netherlands (Wiepking, Bekkers, Schuyt, & Gouwenberg, 2006), the United Kingdom (Low, Butt, Paine, & Smith, 2007), the United States (Wilhelm, 2005), Norway (Wollebæk & Sivesind, 2010), Finland (Pessi & Grönlund, 2008), Mexico (ENAFI, 2005), South Korea (The Beautiful Foundation, 2006), Japan (Japan Fundraising Association, 2010), Indonesia (Strauss, Witoelar, Sikoki, & Wattie, 2009), Taiwan (TSCS, 2009), Israel (Haski-Leventhal, Katz, & Yogev-Keren, 2011), Ireland (HBS, 2005), Russia (CSCSNS, 2010), Germany (Schupp, 2009; Wagner et al., 2010), and Switzerland (Stadelmann-Steffen & Freitag, 2011). The IIPD is a non-overlapping multiple frame sample (Kaminska & Lynn, 2017).

There exists several methodological weaknesses, i.e., different timeframes, sampling methods (Abraham, Helms, & Presser, 2009) and questionnaires (Bekkers & Wiepking, 2006; Rooney, Steinberg, & Schervish, 2004) were used. These differences may lead to different estimated relationships between factors of institutionalization and philanthropic giving. However, until other micro-level data is collected, the IIPD is the best available data to test relationships between institutional contexts and individual philanthropy across a range of countries. More

information on datasets is available in Online Appendix A, and in the IIPD documentation (Wiepking & Handy, 2016a).

In the IIPD, the proportion of the population surveyed differs strongly between countries. Following Kaminska and Lynn (2017) a cross-national weight, reflecting the relative inclusion probability within each country, was created using population scaling:

$$W^{s}_{ij} = N_j / n_j$$

Where W^{s}_{ij} is the national population weight for the unit i in country j;
N_j is the sample size in country j;
And n_j is the population size[5] of country j.

The IIPD consists of 138,927 respondents in 19 countries. The country datasets in the IIPD were collected between 2004 and 2011, depending on the availability of data at the country-level. List-wise deletion was used for missing values, resulting in 118,788 respondents from 19 countries.

Table 1 provides describes the measurements used; Table 2 provides an overview of the measures of philanthropy and institutionalization; and Table 3 provides descriptive statistics for measures of institutionalization examined.[6]

[Tables 1, 2 and 3 here]

Table 4 shows the bivariate correlation between the measures of institutionalization (with continuous measures) and amounts donated (individual and aggregated country level). When it is easier to form, register, operate, and dissolve philanthropic organizations, when there are more nonprofit education programs, and when the proportion of nonprofit revenue from public sources is higher, people give higher amounts. We find no relationship between the proportion of religiously affiliated in a country and levels of giving. Interestingly, the correlation between country-level average donation and the significantly related measures of institutionalization is between 0.25 (nonprofit revenue from public sources) and 0.45 (ease of forming philanthropic organizations) stronger than for individual-level donations, suggesting that cross-national studies using aggregate measures may overestimate relationships.[7]

Table 5 shows the average proportion of donors and average donations for each of the fiscal incentive categories. Dismissing the results for fiscal incentives represented by only one country (categories 4 to 7), people in countries with a combination of an egalitarian and pragmatic fiscal incentive system are most likely to give and give the highest amounts to charitable organizations. While the likelihood of giving is similar for people in a pure egalitarian or pragmatic fiscal regime, people in a pragmatic regime donate on average higher amounts.

The relationship between fundraising regimes and giving in Table 6, shows that the likelihood of giving does not necessarily increase with advancement of fundraising regimes (i.e., development of the profession, technology, positive public attitudes towards fundraising). People are most likely to give in established fundraising regimes (the fourth category), followed by advanced regimes (only represented by the US), and emerging and

evident regimes. The relationship between a fundraising regime and donations is as expected; the more advanced a fundraising regime, the higher the average amounts people give.

[Tables 4, 5 and 6 here]

Analytical models

To understand the relationships between the institutionalization measures and the incidence and level of giving, we tested the relationship using multilevel mixed-effects logistic regression analyses (Table 7) and Maximum Likelihood (ML) mixed-effects multilevel models (Table 8) using Stata 15. In multilevel analyses, the clustering of individuals within countries is considered to avoid the issues arising in previous studies, which used aggregated data in combination with bivariate correlational analyses. We estimated the predicted probability and linear prediction of donating for different institutional measures (Figure 2 and 3 and Tables 9 and 10).

Results

The relationship between institutional context and the likelihood of giving

Table 7 displays the results from maximum likelihood multilevel mixed-effects regression analyses of the likelihood of giving.[8,9] The first column shows results from a model including only the individual-level control variables.[10] In each subsequent model we include one of the contextual measures of institutionalization. Figure 2 displays the predicted probability of donating, estimated using the results from Table 7. The predicted probability of donating for an individual in a country with various levels of ease of forming philanthropic institutions is calculated based on Model 1 in Table 7, keeping all other covariates at their full sample means. The predicted probabilities in Figure 2 indicates that the relationship between the

number of nonprofit education programs and the proportion of the population religiously affiliated and the likelihood of giving is positive as expected.

Unexpectedly, the relationships between the ease of forming philanthropic organizations and the proportion of nonprofit revenue from public sources and the likelihood of giving are negative. From Figure 2 and the odds ratios in Table 7, we note that most of the measures of institutionalization are not significantly related with the likelihood of giving, showing little support for the hypotheses. Table 7, however, does show a significant relationship between an established fundraising regime (compared to an evident regime) and the likelihood of making donations. Hence these results only provide support for hypothesis 4 and then only specifically for one type of fundraising regime.

[Table 7 and Figure 2 here]

The relationship between institutional context and the level of giving

Table 8 displays the results from a maximum likelihood mixed-effects multilevel linear regression analyses of the natural log of the amount donated.[11] Figure 3 displays the linear prediction of the natural log of the amount donated, estimated using the results from Table 8.

[Table 8 and Figure 3 here]

Figure 3 shows that all relationships are as expected: in countries where it is easier to form philanthropic organizations, with more nonprofit education programs, where a higher proportion of the revenues of nonprofits comes from public sources, or where a higher proportion of the population is religiously affiliated, people are predicted to donate, on

average, higher amounts. However, as can be seen from the coefficient estimates in the models in Table 8, most of our hypotheses were not supported. We do find partial support for hypothesis 2: People in a combination of an egalitarian and pragmatic fiscal system are estimated to donate higher amounts than people in (combinations of) pragmatic, transitional or restrictive systems (Model 2 in Table 8). Hypothesis 4 is also partially supported. People in an established fundraising regime are estimated to give higher amounts than people in an evident fundraising regime (Model 3 in Table 8). To further understand relationships between fiscal incentive systems, fundraising professionalism and incidence and level of giving, we show the predicted probability and the linear prediction of giving for the different categories of fiscal incentive systems (Table 9) and fundraising regimes (Table 10).

[Tables 9 and 10 here]

Table 9 shows that people in a combination of an egalitarian and pragmatic fiscal system are predicted to donate 102 US$, compared with 24 US$ (pure pragmatic system) and 14 US$ (pure egalitarian system). Canada and France are countries classified by CAF (2016) as egalitarian tax incentive regimes where tax credits have equal benefit for all donors; however the weakness of egalitarian regimes is that the fiscal benefits may be more complex and not easily claimed by donors than those in pragmatic regimes. Pragmatic regimes, such as the United States and Australia, are those where fiscal benefits are relatively easier apply for but those with higher incomes receive higher benefits (CAF, 2016). Our results suggest that a combination of an egalitarian and pragmatic regime may be most beneficial to individual philanthropy, partially supporting hypothesis 2. However, as our data includes only two countries classified as a combination between egalitarian and pragmatic regime, Switzerland and the United Kingdom, further research is needed to establish this finding.

People in an established fundraising regime have a predicted probability of donating of 81 percent (Table 10), and are predicted to donate 41 US$, as compared to 13 US$ in an evident fundraising regime. This finding partly supports our fourth hypothesis, suggesting that people in established fundraising regimes are more likely to give and give higher amounts.

Comparing results in Table 9 and 10 with the bivariate statistics in Table 5 and 6 illustrates that countries' demographics influences relationships between fiscal incentive systems, type of fundraising regime, and philanthropic giving. Especially the bivariate results for the 'less institutionalized' countries in fiscal system and fundraising regime seem to be driven, at least partly, by these countries' demographics, which are less favorable for donating (e.g., populations are younger, less wealthy and less educated). If people in transitional and restrictive fiscal systems, and embryonic fundraising regimes in particular, had similar levels of income (and to a lesser extent similar ages and education), they may be just as (or even more) generous than people in countries with more advanced types of fiscal systems and fundraising regimes.

We conducted several robustness tests, controlling for per capita Gross National Income (GNI) in the multilevel analyses, estimating the multi-level models using the amounts donated relative to a country's per capita GNI, leaving potentially influential countries out of the analyses, and including all measures of institutionalization in one model. The results of these tests do not lead to different findings than reported. A description of these robustness tests and results are available through Online Appendices.

Conclusion and discussion

We examined how the institutional context for philanthropy, manifested in different formal and informal institutions, relates to individual philanthropic behavior across a range of 19 countries. We argued that the stronger the institutional context for philanthropy is in a country, the more people are likely to give and to give higher amounts to philanthropic organizations. In other words, the more strongly philanthropy is supported by organizational and societal structures, the more donors will give.

We find that –considering bivariate statistics and simple correlational tests – when there is more ease and fairness in government registration for philanthropic organizations, when the fiscal incentive system for philanthropic giving can be characterized as both egalitarian and pragmatic (e.g., United Kingdom and Switzerland), when there are more formal training opportunities for people working in the philanthropic sector, when fundraising is more developed, when there is proportional more government funding for philanthropic organizations, people are more likely to give, and give higher amounts of money to philanthropic organizations. Thus, at the bivariate level, the institutionalization of philanthropy through formal and informal rules positively relates to more and higher individual giving to philanthropic organizations.

However, these results pertain strictly to bivariate statistics and bivariate correlational tests. When using multilevel analyses, we find less support for our ideas. The results of these more stringent analyses show that only people in an established fundraising regime have a higher probability of donating and give higher amounts compared with people in an evident fundraising regime. In addition, we found that people in a combination of egalitarian and pragmatic fiscal incentive regime are predicted to donate higher amounts than people in

(combinations) of pragmatic, transitional and restrictive fiscal incentive systems. However, as our data includes only two countries classified as a combination between egalitarian and pragmatic regime, Switzerland and the United Kingdom, further research is needed to establish this finding.

The results are also suggestive of a positive relation between the number of nonprofit education programs and the predicted level of giving in a country ($p \leq .10$). We do not find support for any of the other expected relationships. This leads us to the first important message from our study: Past empirical comparative studies of philanthropy, that examined only bivariate correlational relationships using only aggregated measures for individual philanthropic giving, may well have overestimated or over-stated relationships.

Although not hypothesized, a significant finding for the understanding of global philanthropy, is that if people in countries with lower levels of philanthropic institutionalization, typically developing economies, had the same average age and level of education and especially income as those in countries with more advanced levels of philanthropic institutionalization, they would be equally likely to give and give similar amounts. Indeed, a large part of the variation between countries in the individual likelihood of giving and level of giving can be explained by compositional demographic differences between countries' populations. From our results it can be expected that when populations in developing economies start to resemble populations in developed economies more, we expect the likelihood and level of giving in developing economies will go up, independent of the level of philanthropic institutionalization. This is the second key message of our study.

When interpreting the results, we bear in mind the relatively low number of countries included in our study, and thus the limitations in the generalizability of our findings. Nevertheless, our results are the first of their kind and point to relationships that could spur further research. Although the 19 countries in the IIPD represent twenty-one percent of the world's population (United Nations, 2017), there is an overrepresentation of countries situated in Western-Europe, North America and Asia. Furthermore, Elff, Heisig, Schaeffer, and Shikano (2016) suggest that using a REML estimation eliminates the bias in multilevel analyses with a low number of countries. In a robustness test (see Online Appendix C), the REML estimation produced similar results as the multi-level estimation, suggesting that the results are not biased. However, we do expect the results are driven by the selection of countries included in our study. Excluding Germany and Japan, which were the two countries that followed different logics of institutionalization, resulted in somewhat stronger support for our hypotheses (see Online Appendices D1 and D2).

At this time, the IIPD is the only dataset that allows studying how institutional context relates to individual-level philanthropic behavior. Hence, it is not possible to test our data using a larger and less selective range of countries, or data that have been collected using one standardized methodology and survey. We tried to correct the flaws in these data and reported our results conservatively and with caution. Hence, we refrain from policy recommendations based on our results.

Our findings first need to be replicated, in further research using a less selective sample and a higher number of countries, and measurements of philanthropy that capture giving across all countries. To rule out the possibility that our hypotheses were not supported because of measurement problems, future studies should include additional and possibly more direct

measures. Our findings, we hope will spur scholars and philanthropy professionals to engage in global philanthropy research, contributing to the collection of longitudinal data and comparative analyses. With new data, longitudinal analyses become a possibility, which can address some of the problems with causal inference inherent in cross-sectional designs. While formal and informal institutionalization of philanthropy is continuously being shaped, there is a need for evidence-based policies. Through this, future global philanthropy research can contribute to an understanding of how philanthropy can be a source of societal wellbeing for everyone, and not just for selected populations and groups.

Endnotes

[1] Philanthropic organizations are also known as nonprofit organizations or not-for-profit organizations, but we will use the term "philanthropic organizations" consistently to refer to these organizations throughout this article. The definition for philanthropic organizations varies across countries, but according to Salamon and Anheier (1992), the common characteristics are that they are private (non-governmental), self-governing organizations, which on a voluntary basis distribute goods and services to benefit a public purpose, without the primary goal of making profits for their owners.

[2] We thank our anonymous reviewer for this insight.

[3] We acknowledge that depending on the country, education programs for philanthropy professionals could also be part of formal-public institutionalization.

[4] In a previous version of this paper, we examined the proportion of volunteers in a country as a correlate of amounts donated. We did not find a relationship between proportion volunteers in a country and incidence and amounts donated.

[5] We used population size in 2003, the year preceding all measures of giving in the IIPD (United Nations, 2017).

[6] The correlations between measures of institutionalization is displayed in Online Appendix B. Except for the proportion of nonprofit revenue from public sources and the fiscal incentive systems, we included measures of institutionalization that were captured by one source to increase reliability of these measures: ease of forming philanthropic organizations (Adelman, Barnett, & Russell, 2015); number of nonprofit education programs (Mirabella et al., 2007; Mirabella & Wish, 2001); type of fundraising regimes (Breeze & Scaife, 2015); proportion religiously affiliated (Pew Research Center, 2012). For the proportion of nonprofit revenue from public sources, we supplemented the primary data source (Salamon, Sokolowski, & Haddock, 2017) with data from the Palgrave Handbook on Global Philanthropy (Wiepking &

Handy, 2015a). For the fiscal incentive systems, the primary data source (CAF, 2016) was supplemented by country experts (Table 1).

[7] This phenomenon, where an association at the population level may be much weaker or even reversed within subgroups of that population, is documented in the ecological fallacy literature (Kievit et al. 2013; Robinson 2009; Te Grotenhuis, Eisinga, & Subramanian 2011).

[8] Ideally, we would include the six measures of institutionalization in one model in the multilevel analyses. However, with only 19 countries in the study, six contextual level variables may produce biased results. As a robustness test, we did include all measures of institutionalization in one model; see Online Appendix F for the results. We also created a composite measure for the overall level of philanthropic institutionalization in a country, using Factor Analysis on the six contextual level variables measuring institutionalization. From the factor analysis using oblimin rotation we retained one factor with an eigenvalue over 1. We included the factor scores in the maximum likelihood mixed-effects multilevel logistic and linear regression, where it functioned as a composite measurement of all institutionalization measurements. The results showed no relationships between this composite measure and likelihood of giving and amounts donated.

[9] Results are calculated using xtmelogit in Stata 15.

[10] The intraclass correlation (ICC) for the model including only individual control variables is 0.251, indicating that 25 percent of the variance in the likelihood of giving can be explained by the context in which individuals live. We expect that the ICC also captures a design effect, as there are differences in survey design between countries. The ICC likely captures both the 'true' contextual variance in the likelihood of giving as well as variance caused by different survey designs. The ICC of the different models finds the contextual level variance remains unexplained by our institutionalization measures. The likelihood ratio test (LR test) to test the goodness-of-fit of the models including contextual institutionalization measures finds only

the model including the proportion of nonprofit revenue from public sources (Model 5) is significantly a better fit for the data compared with the corresponding model only including individual-level control variables ($p \leq 0.001$).

[11] Results are calculated using xtmixed in Stata 15. The first column in Table 8 shows the results from a model including the individual level control variables. The ICCs of the different models in Table 8 show that only models including fiscal incentive systems (Model 2, Table 8), fundraising regimes (Model 3, Table 8) and number of nonprofit education programs (Model 4, Table 8) explain a little of the contextual level variance in amounts donated, respectively 4.9 percent, 3.9 percent and 1.7 percent. LR tests show that the model including the proportion nonprofit revenue from public sources (Model 5) fits the data significantly better than the corresponding model with individual level control variables only ($p \leq 0.001$).

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Biographical Paragraphs

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Table 1. Measurements

Dependent variables

Incidence and level of philanthropic gifts. Across most datasets included in the IIPD, respondents have been asked whether or not they made any philanthropic donations over the period of a year, and if so, how much they donated.[1] Amount donated is calculated in 2012 US Dollars. To limit the influence of outliers on our results, for each country we *winsorized* the level of philanthropic gifts at 99 percent, thus setting the top one percent donations to the level of the 99th percentile donation (Tukey, 1962; De Wit et al., 2018). We analyze the natural log of amount donated in our analyses, which estimates the relationship between the measures of institutionalization and the relative change in individual amounts donated.

Measures of institutionalization

Ease of forming philanthropic organizations. The Hudson Institute's Index of Philanthropic Freedom 2015 (Adelman et al., 2015) includes a measure for the ease, and to some extend fairness, of forming, registering, operating, and dissolving philanthropic organizations. This measure is based on an opinion survey under experts representing their countries of expertise, providing a score from one to five to each of the following three items: 1) To what extent can individuals form and incorporate the organizations defined?; 2) To what extent are CSOs free to operate without excessive government interference?; 3) To what extent is there government discretion in shutting down CSOs? The average score on these three questions is used as the measure of philanthropic freedom. A higher score indicates more philanthropic freedom. Israel, Norway, Taiwan, South Korea and Switzerland were not included in the 2015 Index of Philanthropic Freedom. The scores for these countries were provided by the philanthropy country experts who participated in this project.

Fiscal incentives system. A report by the Charities Aid Foundation (CAF, 2016) surveyed lawyers across 26 countries and created seven typologies of tax incentive systems: 1) Egalitarian; 2) Egalitarian & Pragmatic; 3) Pragmatic; 4) Pragmatic & Transitional; 5) Transitional; 6) Transitional & Restrictive; 7) Restrictive. The CAF did not classify the Netherlands, Norway, Finland, South Korea, Austria, Indonesia, Japan, Israel, Germany and Switzerland. We asked the country experts involved in this project to classify their country according to this typology. Egalitarian regimes are focused on creating equal fiscal incentives for all donors. This does cause these regimes to be more complex to understand and use by donors than for example pragmatic regimes. Pragmatic regimes, such as the United States and Australia, may be easier to understand, but in those regimes the benefits are not equally distributed. Typically, those with higher incomes receive higher benefits. Transitional systems are categorized as easy to understand, and allowing for future liberalization, but typically have poor incentives for ordinary donors. Restrictive regimes are typically heavily politicized, include a narrow range of causes and discourage individuals to claim tax deduction for donations (CAF, 2016).

Number of nonprofit education programs. The number of professional training venues for philanthropy professionals is based on research done by Mirabella and colleagues (Mirabella & Wish, 2001; Mirabella et al., 2007). For the United States, they inventoried the number of graduate degree programs with at least one course in the management of nonprofit organizations (Mirabella & Wish, 2001). In a study from 2007, they surveyed universities and colleges worldwide to locate programs in nonprofit management education. For Indonesia, which was not included in these studies, we conducted an online search in 2016 and found no evidence for nonprofit management education programs.

Type of fundraising regime. Breeze & Scaife (2015) designed a typology of five types of fundraising regimes indicating the level of development of the fundraising profession and fundraising technology and more positive public attitudes towards fundraising among the public. Based on these characteristics, they classified the countries included in the IIPD according to this typology of fundraising regimes, where countries with the lowest levels of development on these criteria were classified as embryonic regimes, and countries with the highest level of development were classified as advanced regimes. The five types of fundraising regimes:: 1) Embryonic fund-raising regimes; 2) Emerging fund-raising regimes; 3) Evident fund-raising regimes; 4) Established fund-raising regimes; 5) Advanced fund-raising regimes.

Proportion nonprofit revenue from public sources: We use the proportion of philanthropic organizations' revenue coming from public sector sources, as estimated in the John Hopkins Comparative Nonprofit Sector Project (Salamon et al., 2017, appendix B, p. 277). Across the 41 countries included in this project, governments provided on average 35.3% of the funding for philanthropic organizations in the late twentieth and early twenty-first century (Salamon et al., 2017)[2]. No information was available for Taiwan and Indonesia. For Taiwan the *Palgrave Handbook on Global Philanthropy* (Wiepking & Handy, 2015) provides an estimation of percentage of philanthropic organizations' revenue coming from public sector sources. For Indonesia we could not find any information about public sector support for philanthropic organizations.

Proportion religiously affiliated. We were unable to locate a measure for the proportion of people indicating to have a religious affiliation in a country for years preceding the measures for giving in the IIPD. We were able to locate the proportion of people estimated to not belong to any religious affiliation in all countries in the IIPD for 2010 (Pew Research Center, 2012). We used (1 – the proportion religiously unaffiliated to estimate the proportion religiously affiliated).[3]

Individual level control variables
The analyses control for individual level measures of age in years, gender, educational level in three categories, whether or not the respondent is married, and the natural log of income.

Notes: [1] In the datasets from the United Kingdom and Indonesia the reference period was four weeks and in the dataset from Ireland, the average weekly donation was included (based on a reference period of two weeks), we recalculated this to the total amount donated over the course of a year, by multiplying the amount donated with respectively 13 and 52. Of course this also has consequences for the proportion of donors in those countries, which is likely underestimated compared to the other countries in the IIPD, which use a yearly reference period for measuring donations. The dataset from the United States only captures donations above 25 U.S. dollar; [2] This measure is based on the "Government share of CS revenue (%)" in Salamon, Sokolowski and Haddock (2017:279). They provide the following definition: "The revenues of civil society organizations come from a variety of sources. For the sake of convenience, we have grouped these into three categories: fees, which includes private payment for services, membership dues, and investment income; philanthropy, which includes individual giving, foundation giving and corporate giving; and government or public sector support, which includes grants, contracts, and voucher or third-party payments from all levels of government, including government financed social security systems that operate as quasi-nongovernmental organizations." (Salamon et al. 2017:274). The last category is the "Government share of CS revenue (%)". We could not find the exact years the proportion nonprofit revenue from public sources pertain to for the various countries included in the John Hopkins Comparative Nonprofit Sector Project. Salamon, Sokolowski & Haddock state that the data for the project have been "collected at different time periods (between 1995 and 2008) […]" (Salamon et al., 2017:274); [3] Pew Research Center (2012) derived the proportion of religiously unaffiliated from the 2010 revision of the United Nations World Population Prospects Data 2010 (United Nations 2011), which we were unable to gain direct access to. We acknowledge that the proportion of religiously affiliated may differ from the proportion we estimate by using (1 – the proportion of religiously unaffiliated), and that there may be differences across countries in whether someone who is identified as 'not religiously unaffiliated' is religiously affiliated.

Table 2. Measures of philanthropy and institutionalization of philanthropy in a country

Country	N	Proportion donors	Amount donated[1]	Ease of forming philanthropic organizations[a]	Fiscal incentives system[b]	Number of nonprofit education programs[c]	Type of fund-raising regime[d]	Proportion nonprofit revenue from public sources[e]	Proportion religiously affiliated[f]
Australia	6,175	0.88	480	4.9	3	9	4	0.31	0.76
Austria	816	0.65	53	4.4	3	1	3	0.50	0.87
Canada	19,486	0.89	374	4.7	1	19	4	0.50	0.76
Finland	755	0.74	29	4.9	4	3	3	0.36	0.82
France	1,195	0.66	158	4.3	1	1	4	0.58	0.72
Germany	15,194	0.43	127	5.0	3	5	4	0.64	0.75
Indonesia	10,412	0.49	34	3.0	7	0	1	n/a	1.00
Ireland	6,884	0.62	556	4.7	1	2	3	0.77	0.94
Israel	830	0.51	362	4.5	3	5	3	0.64	0.97
Japan	5,072	0.35	30	4.7	1	8	3	0.45	0.43
Mexico	2,972	0.84	27	4.0	5	1	2	0.09	0.95
Netherlands	1,365	0.94	326	5.0	3	2	4	0.59	0.58
Norway	1,937	0.66	228	5.0	3	1	3	0.35	0.90
Russia	28,176	0.40	12	2.1	6	1	2	0.11	0.84
South Korea	995	0.78	183	3.3	1	7	3	0.24	0.54
Switzerland	5,719	0.80	539	5.0	2	3	4	0.35	0.88
Taiwan	1,869	0.63	159	4.7	3	1	2	0.28	0.87
United Kingdom	1,685	0.95	989	4.7	2	22	4	0.47	0.79
United States	7,251	0.65	1427	4.7	3	137	5	0.31	0.84

Notes: for a description of the variables, see Table 1; [1] in 2012 US Dollar (winzorized).
Sources: IIPD (2016); [a] Hudson Institute's Index of Philanthropic Freedom (Adelman et al., 2015), from no philanthropic freedom (1) to complete philanthropic freedom (5); [b] Charities Aid Foundation (CAF, 2016), seven systems, from egalitarian to restrictive: 1 "Egalitarian" 2 "Egalitarian & Pragmatic" 3 "Pragmatic" 4 "Pragmatic & Transitional" 5 "Transitional" 6 "Transitional & Restrictive" 7 "Restrictive"; [c] United States: Mirabella & Wish (2001); all other countries (except Indonesia): Mirabella et al. (2007); [d] Palgrave Handbook on Global Philanthropy

(Breeze & Scaife, 2015), from embryonic to advanced: 1 "Embryonic fund-raising regimes" 2 "Emerging" 3 "Evident" 4 "Established" 5 "Advanced"; [e] John Hopkins Comparative Nonprofit Sector Project (Salamon, Sokolowski, & Haddock, 2017) and Palgrave Handbook on Global Philanthropy (Wiepking & Handy, 2015) (for Taiwan); [f] Pew Research Center (2012).

Table 3. Descriptive statistics for the measures of institutionalization

Variable	$N_{individual}$	$N_{country}$	Mean	Std. Dev.	Min	Max
Ease of forming philanthropic organizations	118,788	19	4.04	1.06	2.4	5
Fiscal incentives system	118,788	19	3.49	2.14	1	7
Number of nonprofit education programs[1]	111,537	18	5.95	6.90	0	22
Type of fundraising regime	118,788	19	3.10	1.14	1	5
Proportion nonprofit revenue from public sources[2]	108,376	18	0.39	0.20	0.11	0.75
Proportion religiously affiliated	118,788	19	0.81	0.12	0.43	1.00

Notes: [1] without US, as US has 137 NP programs, outlier; [2] no information available for Indonesia.

Sources: IIPD (2016); Adelman et al. (2015); Charities Aid Foundation (2016); Breeze & Scaife (2015); Mirabella & Wish (2001); Mirabella et al. (2007); Pew Research Center (2012); Salamon, Sokolowski, & Haddock (2017); Wiepking & Handy (2015).

Table 4. Correlation between measures of institutionalization and amount donated to charitable organizations

	Amount donated[1]- individual level measure	Amount donated[1]- aggregated country level measure
Ease of forming philanthropic organizations	0.37***	0.82***
Number of nonprofit education programs[2]	0.22***	0.50***
Proportion nonprofit revenue from public sources[3]	0.19***	0.44***
Proportion religiously affiliated	-0.00	0.00

Notes: [1] natural log of the amount donated (winsorized) in 2012 US Dollars; *** $p \leq .001$ (two-tailed tests); [2] without US (N=111,537); [3] without Indonesia (N=108,376); results weighted by population scaling weight to represent the relative inclusion probability within each country.

Sources: IIPD (2016); Adelman et al. (2015); Charities Aid Foundation (2016); Breeze & Scaife (2015); Mirabella & Wish (2001); Mirabella et al. (2007); Pew Research Center (2012); Salamon, Sokolowski, & Haddock (2017); Wiepking & Handy (2015).

Table 5. Fiscal incentive system and average incidence of giving and amount donated to charitable organizations

Fiscal incentive system	**Countries**	**Average proportion donors**	**Average amount donated[1]**
1 Egalitarian	France, Canada, South Korea, Japan, Ireland	0.66	260
2 Egalitarian & Pragmatic	United Kingdom, Switzerland	0.88	764
3 Pragmatic	Australia, Netherlands, United States, Norway, Austria, Taiwan, Israel, Germany	0.67	395
4 Pragmatic & Transitional	Finland	0.73	29
5 Transitional	Mexico	0.84	27
6 Transitional & Restrictive	Russia	0.40	12
7 Restrictive	Indonesia	0.49	34

Notes: [1] amount donated in 2012 US dollars (winsorized); results weighted by relative weight to represent an equal number of cases for each country (1/(number of cases country / number of total cases))/100). Not weighting the data or using the population weight drives the results respectively towards the overrepresented or underrepresented countries in the IIPD. Here we want to know what the average likelihood of giving is and amounts donated, based on the fiscal system, and weight all countries evenly.
Sources: IIPD (2016); Charities Aid Foundation (2016).

Table 6. Type of fundraising regime and average incidence of giving and amount donated

Type of fundraising regime	**Countries**	**Average proportion donors**	**Average amount donated[1]**
1 Embryonic fund-raising regimes	Indonesia	0.49	34
2 Emerging fund-raising regimes	Mexico, Taiwan, Russia	0.62	66
3 Evident fund-raising regimes	Norway, Finland, South Korea, Japan, Austria, Ireland, Israel	0.61	206
4 Established fund-raising regimes	Australia, France, United Kingdom, Netherlands, Canada, Germany, Switzerland	0.79	428
5 Advanced fund-raising regime	United States	0.65	1,427

Notes: [1] amount donated in 2012 US dollars (winsorized); results weighted by relative weight to represent an equal number of cases for each country (1/(number of cases country / number of total cases))/100). Not weighting the data or using the population weight drives the results respectively towards the overrepresented or underrepresented countries in the IIPD. Here we want to know what the average likelihood of giving is and amounts donated, based on the fundraising regime, and weight all countries evenly.
Sources: IIPD (2016); Breeze & Scaife (2015).

Table 7. Maximum likelihood multilevel mixed-effects regression analyses of the likelihood of giving to charitable organizations ($N_{individual}$=118,788; $N_{country}$=19)

	(Only individual controls)		(1)		(2)		(3)	
	OR	*S.E.*	OR	*S.E.*	OR	*S.E.*	OR	*S.E.*
Intercept	0.341***	0.083	0.357	0.535	0.429(+)	0.209	0.207***	0.074
Contextual measure of institutionalization								
Ease of forming philanthropic organizations			0.990	0.332				
Fiscal incentives system[1]								
Egalitarian					0.531	0.346		
Egalitarian & Pragmatic					2.112	1.780		
Pragmatic					0.714	0.425		
Pragmatic & transitional, transitional, transitional & restrictive and restrictive (ref.)					-			
Type of fundraising regime								
Embryonic							1.678	1.689
Emerging							2.002	1.302
Evident (ref.)							-	
Established							2.743*	1.382
Advanced							0.851	0.857
Country-level variance	1.101**	0.359	1.101**	0.359	0.942**	0.307	0.885**	.288
ICC	0.251***	0.061	0.251***	0.061	0.223***	0.056	0.212***	0.054
loglikelihood model (df)	-65,421	(8)	-65,421	(9)	-65,419	(11)	-65,418	(12)
AIC	130,857		130,860		130,860		130,861	
BIC	130,935		130,947		130,967		130,977	

Table 7 - continued. Maximum likelihood multilevel mixed-effects logistic regression analyses of likelihood of giving to charitable organizations ($N_{individual}$=118,788; $N_{country}$=19)

	(4)		(5)		(6)	
	OR	*S.E.*	OR	*S.E.*	OR	*S.E.*
Intercept	0.311***	0.095	0.460	0.312	0.162	0.216
Contextual measure of institutionalization						
Number of nonprofit education programs[2]	1.060	0.041				
Proportion nonprofit revenue from public sources[3]			0.567	0.835		
Proportion religiously affiliated					2.527	4.126
Country-level variance	0.967**	0.324	1.146**	0.384	1.082**	0.353
ICC	0.227***	0.059	0.258***	0.064	0.248***	0.061
loglikelihood model (df)	-61,433	(9)	-58,379	(9)	-65,420	(9)
AIC	122884		116,778		130,859	
BIC	122971		116,864		130,946	

Notes: $^{(+)}$ $p \leq .10$; * $p \leq .05$; ** $p \leq .01$, *** $p \leq .001$ (two-tailed tests); OR= Odds Ratio; [1] Because the (combinations of) pragmatic, transitional and restrictive fiscal incentive systems only relate to one country in our sample, we used these categories as reference category; [2] without US (N=111,537); [3] without Indonesia (N=108,376); individual control variables included in the analyses (but not presented in the table): age, gender, educational level, marital status and the natural log of income.

Sources: IIPD (2016); Adelman et al. (2015); Charities Aid Foundation (2016); Breeze & Scaife (2015); Mirabella & Wish (2001); Mirabella et al. (2007); Pew Research Center (2012); Salamon, Sokolowski, & Haddock (2017); Wiepking & Handy (2015).

Table 8. Maximum likelihood mixed-effects multilevel linear regression analyses of the natural log of the amount donated to charitable organizations ($N_{individual}$=118,788; $N_{country}$=19)

	(Only individual controls)		(1)		(2)		(3)	
	B	*S.E.*	B	*S.E.*	B	*S.E.*	B	*S.E.*
Intercept	0.074	0.262	-0.819	1.607	-0.335	0.488	-0.471	0.382
Contextual measure of institutionalization								
Ease of forming philanthropic organizations			0.202	0.359				
Fiscal incentives system[1]								
Egalitarian					-0.028	0.654		
Egalitarian & Pragmatic					1.954*	0.844		
Pragmatic					0.502	0.597		
Pragmatic & transitional, transitional, transitional & restrictive and restrictive (ref.)					-			
Type of fundraising regime								
Embryonic							0.432	1.077
Emerging							0.253	0.695
Evident (ref.)							-	
Established							1.140*	0.539
Advanced							1.169	1.077
Country-level variance	1.288***	0.034	1.266***	0.033	0.947***	0.025	1.012***	0.027
Individual-level variance	4.385***	0.000	4.385***	0.000	4.385***	0.000	4.385***	0.000
ICC	0.227***	0.057	0.224***	0.056	0.178***	0.047	0.188***	0.050
loglikelihood model (df)	-256,437	(9)	-256,436	(10)	-256,434	(12)	-256,434	(13)
AIC	512,891		512,893		512,891		512,895	
BIC	512,978		512,990		513,008		513,020	

Table 8 - continued. Maximum likelihood mixed-effects multilevel linear regression analyses of the natural log of the amount donated to charitable organizations ($N_{individual}$=118,788; $N_{country}$=19)

	(4)		(5)		(6)	
	B	*S.E.*	B	*S.E.*	B	*S.E.*
Intercept	0.011	0.322	-0.290	0.732	-1.885	1.364
Contextual measure of institutionalization						
Number of nonprofit education programs[2]	0.076(+)	0.041				
Proportion nonprofit revenue from public sources[3]			0.854	1.588		
Proportion religiously affiliated					2.653	1.672
Country-level variance	1.090***	0.030	1.334***	0.037	1.157***	0.031
Individual-level variance	4.088***	0.000	4.490***	0.000	4.387***	0.000
ICC	0.210***	0.055	0.229***	0.059	0.212***	0.054
loglikelihood model (df)	-236,834	(10)	-235,239	(10)	-256,435	(10)
AIC	473,688		470,498		512,891	
BIC	473,783		470,594		512,988	

Notes: (+) $p \leq .10$; * $p \leq .05$; ** $p \leq .01$, *** $p \leq .001$ (two-tailed tests);); [1] Because the (combinations of) pragmatic, transitional and restrictive fiscal incentive systems only relate to one country in our sample, we used these categories as reference category; [2] without US (N=111,537); [3] without Indonesia (N=108,376); individual control variables included in the analyses (but not presented in the table): age, gender, educational level, marital status and the natural log of income.

Sources: IIPD (2016); Adelman et al. (2015); Charities Aid Foundation (2016); Breeze & Scaife (2015); Mirabella & Wish (2001); Mirabella et al. (2007); Pew Research Center (2012); Salamon, Sokolowski, & Haddock (2017); Wiepking & Handy (2015).

Table 9. Predicted probability of making a charitable donation and linear prediction of the amount donated to charitable organizations across nineteen countries estimated for the different fiscal incentive systems

Fiscal incentive system	**Countries**	**Predicted probability of making a charitable donation**	***S.E.***	**Linear prediction of amount donated[1]**	***S.E.***
1 Egalitarian	France, Canada, South Korea, Japan, Ireland	.62***	.10	14.11***	1.52
2 Egalitarian & Pragmatic	United Kingdom, Switzerland	.87***	.07	102.42***	1.94
3 Pragmatic	Australia, Netherlands, United States, Norway, Austria, Taiwan, Israel, Germany	.69***	.07	23.97***	1.39
4 Pragmatic & Transitional	Finland	.72***	.18	9.03*	2.56
5 Transitional	Mexico	.92***	.07	32.88***	2.55
6 Transitional & Restrictive	Russia	.57**	.22	7.64*	2.55
7 Restrictive	Indonesia	.72***	.18	19.53***	2.55

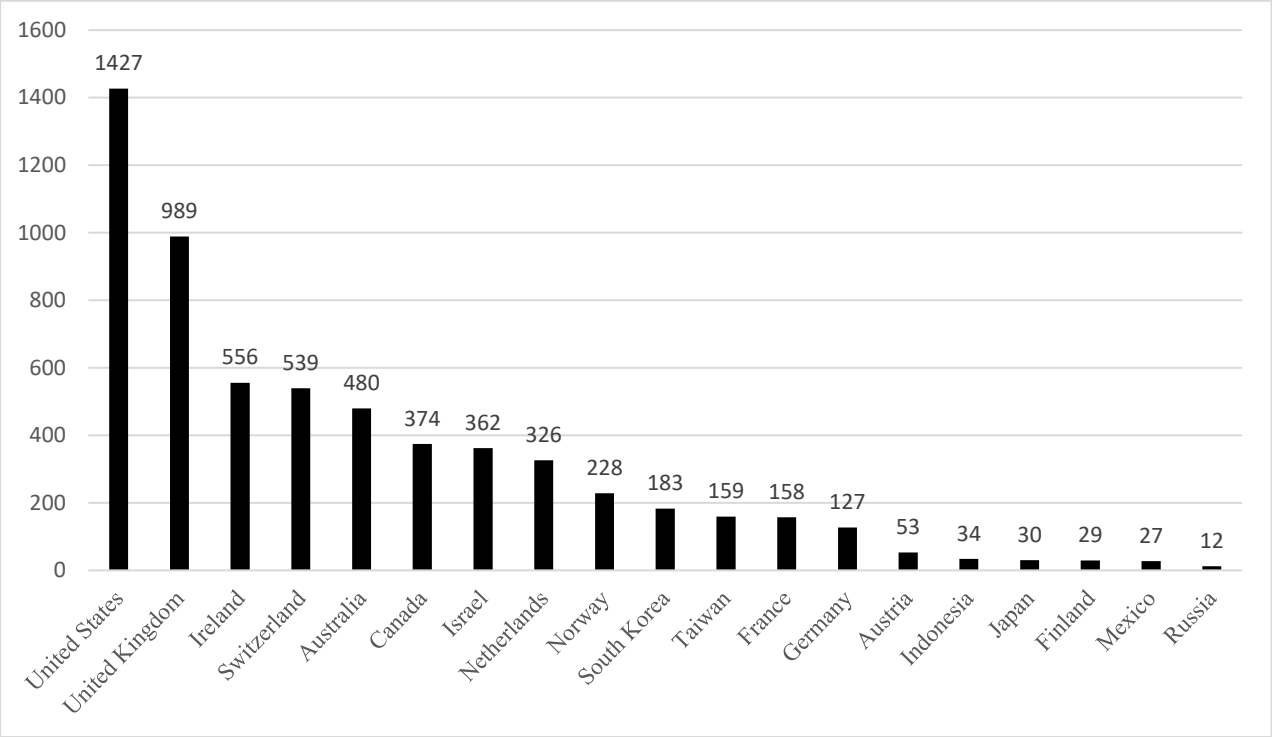
Notes: $^{(+)}$ $p \leq .10$; * $p \leq .05$; ** $p \leq .01$, *** $p \leq .001$ (two-tailed tests which indicate that the estimations are significantly different from 0); Results based on estimations in Model 2 in Table 7 and Table 8 (only difference is that all categories of the fiscal incentive system were estimated, with "2 Egalitarian & pragmatic" as reference category), all other covariates fixed at their fullsample mean; [1] Ln amount donated calculated to absolute 2012 US dollars (winsorized).
Sources: IIPD (2016); Charities Aid Foundation (2016).

Table 10. Predicted probability of making a charitable donation and linear prediction of the amount donated to charitable organizations across nineteen countries estimated for the different types of fundraising regimes

Type of fundraising regime	**Countries**	**Predicted probability of making a charitable donation**	***S.E.***	**Linear prediction of amount donated (ln calculated to USD)**	***S.E.***
1 Embryonic fund-raising regimes	Indonesia	.72***	.191	19.53**	2.74
2 Emerging fund-raising regimes	Mexico, Taiwan, Russia	.75***	.102	16.33***	1.79
3 Evident fund-raising regimes	Norway, Finland, South Korea, Japan, Austria, Ireland, Israel	.60**	.085	12.68***	1.46
4 Established fund-raising regimes	Australia, France, United Kingdom, Netherlands, Canada, Germany, Switzerland	.81***	.056	39.65***	1.46
5 Advanced fund-raising regime	United States	.56*	.232	40.82**	2.73

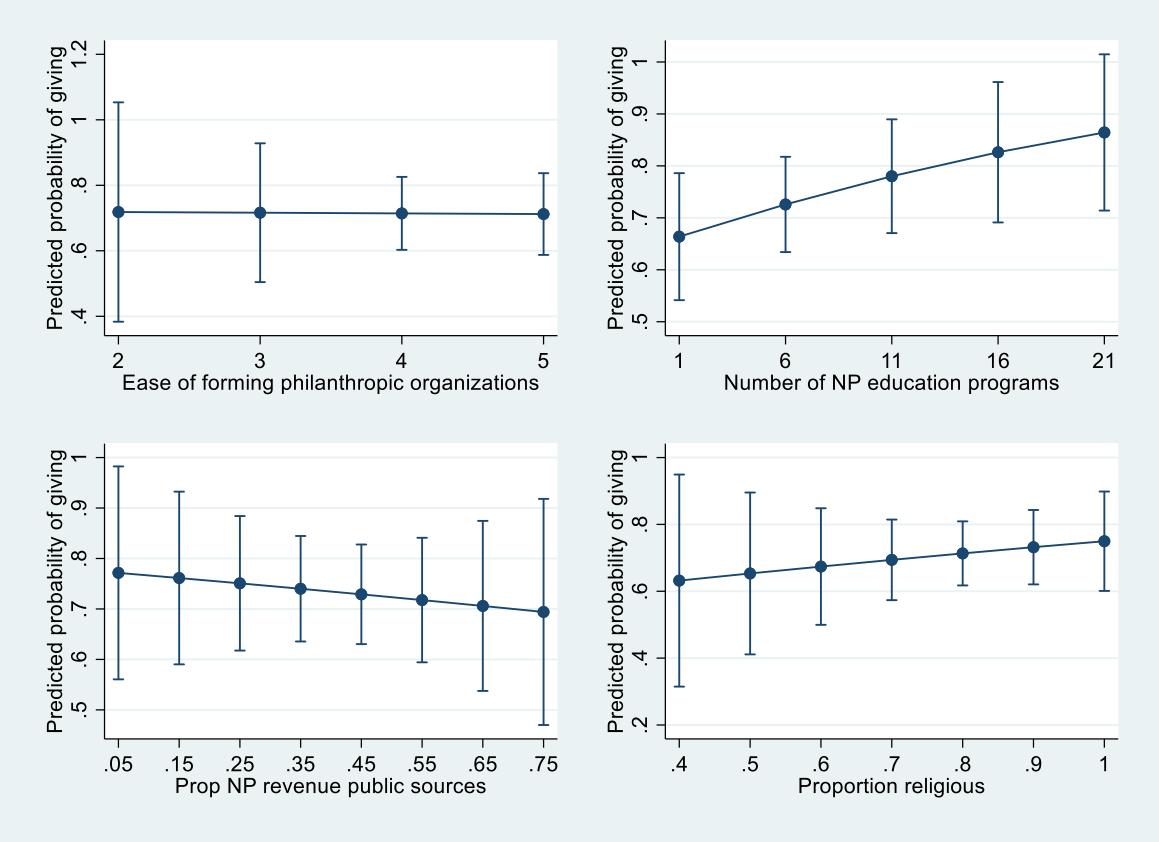
Notes: $^{(+)}$ $p \leq .10$; * $p \leq .05$; ** $p \leq .01$, *** $p \leq .001$ (two-tailed tests which indicate that the estimations are significantly different from 0); Results based on estimations in Model 2 in Table 7 and Table 8, all other covariates fixed at their fullsample mean; [1] Ln amount donated calculated to absolute 2012 US dollars (winsorized).
Sources: IIPD (2016); Breeze & Scaife (2015).

Figure 1. Average annual philanthropic donation in 2012 US Dollars per person in nineteen countries (Source: IIPD, 2016)



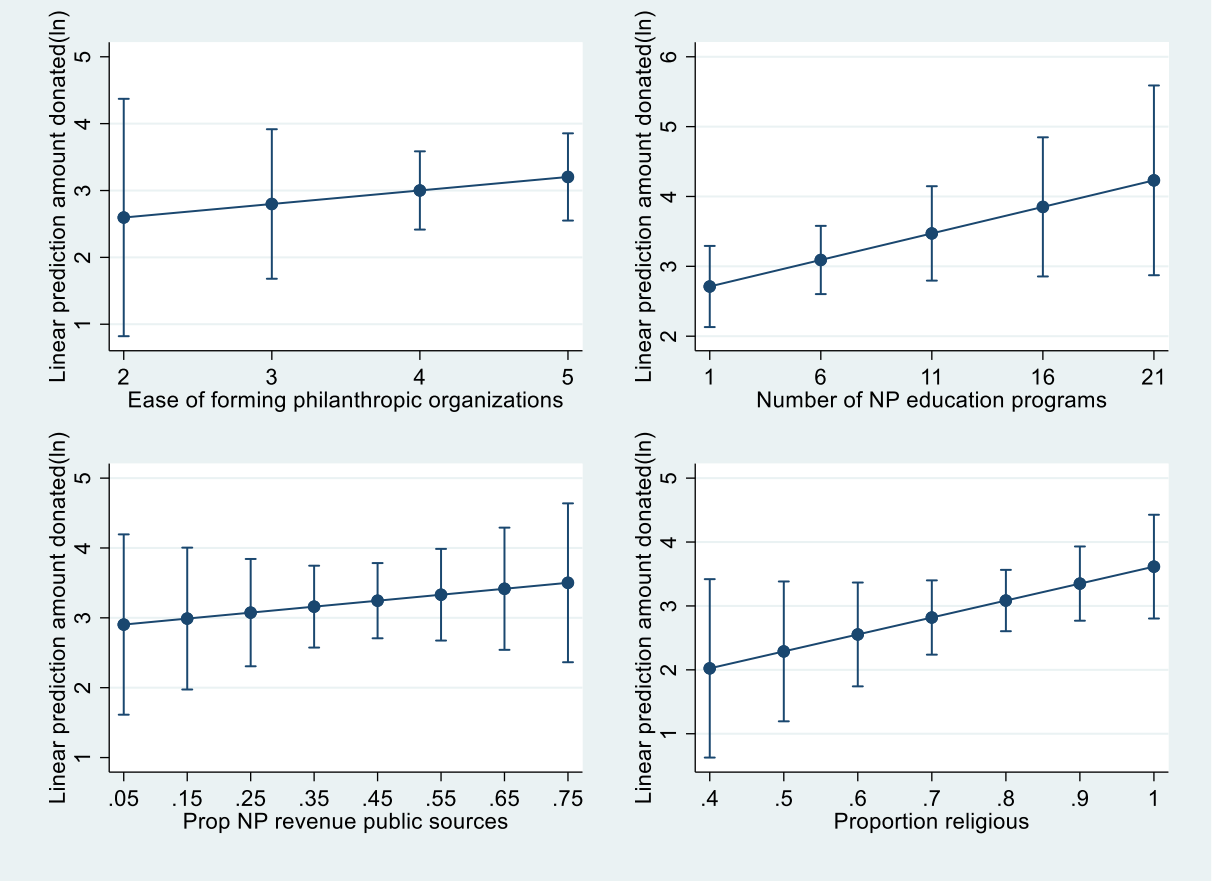
Note: The philanthropic donations per person have been measured in the local currency of each country, and have been converted to the value of 2012 U.S. dollars using historical exchange rates (Oanda 2014) and the Consumer Price Index (CPI-U) (U. S. Bureau of Labor Statistics 2014). More information can be found in Online Appendix A and the IIPD documentation (Wiepking & Handy, 2016).

Figure 2. Predicted probability of giving to charitable organizations for the different continuous measures of institutionalization (Adjusted Predictions with 95% Cis; all other variables at mean)



Note: Based on results in Table 7.

Figure 3. Linear prediction of the natural log of the amount donated to charitable organizations for the different measures of institutionalization (Adjusted Predictions with 95% Cis; all other variables at mean)



Note: Based on results in Table 8.

Online Appendices

Appendix A includes a description of the individual datasets included in the International Individual Philanthropy Database (IIPD, 2016).

<<Insert Appendix A about here>>

Appendix B includes the correlations between contextual measures of institutionalization.

<<Insert Appendix B about here>>

Appendices C through F include robustness tests to investigate potential bias in the reported result resulting from our data.

Rationale behind robustness tests and results of robustness tests
In order to investigate the potential bias from the low number of countries included in our study, we used restricted maximum likelihood (REML) estimation in the analyses of amounts donated, as suggested by Elff et al. (2016). Appendix C includes the results of a REML mixed-effects multilevel linear regression analyses of the natural log of the amount donated to charitable organizations.[1] Comparing the results of the REML estimation in Appendix C and the maximum likelihood (ML) estimation in Table 8, we do not find significantly different results.

<<Insert Appendix C about here>>

Still, we feel that the low number and especially selective sample of countries included in this study may be driving the results. Therefore, we also conducted the analyses displayed in Table 7 and 8 without the two countries that appeared most influential from bivariate scatterplots, Germany and Japan. The results of these analyses are displayed in Appendices D1 and D2, and show that leaving out Germany and Japan, the results are a little more in line with what we expected from our hypotheses. Without Japan and Germany, the relationship between number of nonprofit programs and likelihood of giving and amounts donated is positive as expected, and people living in an established fundraising regime are more likely to give and give higher amounts than those living in an evident fundraising regime.[2]

<<Insert Appendices D1 and D2 about here>>

In order to control for the level of economic development in a country, which can also drive philanthropic giving and factors of institutionalization, Appendices E1 and E2 control for per capita Gross Net Income, Purchasing Power Parity (Current international dollars) in 2003 (divided by 1,000), which precedes the collection of giving data across all countries (Worldbank, 2019).[3] The results of the multilevel analyses including per capita GNI do not differ from the results in Tables 7 and 8, indicating that level of economic development does not influence the relationship between our measures of institutionalization and philanthropic giving. Also, we find no relationship between level of economic development and likelihood of giving and amounts donated.

<<Insert Appendices E1 and E2 about here>>

Finally, Appendix F shows the results for maximum likelihood mixed-effects multilevel logistic and linear regression analyses including all contextual variables simultaneously. Because of the high correlation between the different measures of institutionalization, and because of the low number of countries included in the study, these models including six contextual factors are likely not very robust, the very strong estimated Odds Ratio's and coefficients are also an indication for this.

<<Insert Appendix F about here>>

Endnotes

[1] In Stata 15 it is not possible conduct multilevel mixed-effects logistic regression analyses with REML.

[2] Excluding one of the nineteen countries each time, we found that excluding most of the countries resulted in similar effect sizes. The main exception is the United Kingdom. When we exclude the United Kingdom from the analyses, the effect sizes are comparable with those reported with Tables 7 and 8, but the relationships are not significant. When excluding the Netherlands, the relationship between the likelihood of giving and established fundraising regime and evident fundraising regime is not significantly different. Excluding either Germany, Switzerland or Japan resulted in a positive significant relationship between the number of nonprofit education programs and level of giving (at $p \leq .05$). Overall, our findings appear robust against the exclusion of one country, although in the case of the United Kingdom caution is warranted.

[3] The Worldbank's description of this measure: "GNI per capita based on purchasing power parity (PPP). PPP GNI is gross national income (GNI) converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GNI as a U.S. dollar has in the United States. GNI is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad. Data are in current international dollars based on the 2011 ICP round." (Worldbank, 2019). The correlations between the different measures of institutionalization and per capita GNI is displayed in Appendix B. Typically, a higher level of economic development corresponds with higher levels of institutionalization.

Appendix A. International Individual Philanthropy Database (IIPD)

Individual International Philanthropy Database

The Individual International Philanthropy Database is a harmonized dataset composed of microdata from 19 countries: Australia, France, United Kingdom, Netherlands, United States of America, Canada, Norway, Finland, Mexico, South Korea, Japan, Austria, Indonesia, Taiwan, Ireland, Israel, Russia, Switzerland and Germany. The datasets were collected between 2004 and 2010 (see Table 1).

Table 1 Dataset per country

Country	**Dataset**	**Acronym**	**Year**	**Research study**	**Wave**	**Total waves[1]**
Australia	Giving Australia, Individual and Household Survey 2005	-	2005	Cross-sectional (one-off study)	-	-
France	The Giving France Study	-	2009	One-off study	-	-
United Kingdom	Helping Out		2006-2008	One-off study	-	-
Netherlands	Giving in the Netherlands Panel Study 2005	GINPS 2005	2005	Longitudinal	2nd wave	4
United States	Philanthropy Panel Study	PPS	2004	Longitudinal	3rd wave	5
Canada	Canada Survey of Giving, Volunteering, and Participating	CSGVP	2004	Cross-sectional	3rd wave	5
Norway	Population survey on giving and volunteering Statistics Norway	-	2009	Cross-sectional (one-off study)	-	-
Finland	Auttaminen, RAY	-	2008	Cross-sectional (one-off study)	-	-
Mexico	National Survey on Philanthropy	ENAFI	2005	Cross-sectional	1st wave	2

	and Civil Society					
South Korea	Giving Korea 2006	-	2006	Cross-sectional	3rd wave	Unknown
Japan	Japan Giving and Volunteering Study	JGVS	2009	Longitudinal	1st wave	Unknown
Austria	Findings on giving in Austria from a representative population survey		2008	Cross-sectional	3rd wave	4
Indonesia	Indonesia Family Life Survey	IFLS4	2007	Longitudinal	4th wave	4
Taiwan	Taiwan Social Change Survey'	TSCS	2009	Cross sectional	5th wave (from phase 5)	Unknown
Ireland	Irish Household Budget Survey	HBS	2005	Cross sectional	4th wave	5
Israel	Giving, Volunteering and Organ Donations in Israel,	GiVOD-IL	2009	Longitudinal	3rd wave	3
Russia	Population survey Centre for Studies of Civil Society and the Nonprofit Sector NRU HSE	-	2010	One-off study	-	-
Germany	German Socio Economic Panel Study	G-SOEP	2010	Longitudinal	27th wave	30
Switzerland	Freiwilligen-monitor	-	2006	Cross sectional	1st wave	3

[1] Current number of waves refers to the number of waves conducted before May 2014.
Source: Wiepking & Handy (2016).

Sample composition (overview)
Below an overview is given of the sample composition for every country (see Table 2).

Table 2 Overview sample composition

Country	Number of cases	Response rate	Type of data collection	Weighting variable
Australia	N=6,209	40%	Telephone interview	Yes, based on age, gender and education
France	N=1,195	-	CASI	Yes based on age, gender, social class, region, and household size to make it representative of the French population.
United Kingdom	N=2,705	60%	CAPI	Yes, weighting to correct for bias due to sampling methods
Netherlands	N=1,367	79%	CASI	Yes, excluding the Protestant oversample
United States	N=7,251	-	CATI	Yes, weighted to adjust for the unequal probability of selection into the original 1968 low-income over-sample, the 1997 immigrant refresher, and attrition.
Canada	N= 20,832	-	CATI	Yes, based on age and province
Norway	N=1,937 (N=1,579 and N=359 respondents from Africa and Asia)	53% and 36%	Telephone interviews	Yes, a weighed-in sub-sample of 359 respondents from Africa and Asia
Finland	N=701	-	Telephone interviews	No
Mexico	N=2990	-	Face-to-face interviews	No
South Korea	N=1,005	-	-	No
Japan	N=5,121	-	-	No
Austria	N=1,019	-	Computer-assisted face-to-face interviews	Yes, based on age, sex, federal state, and size of municipality
Indonesia	N=12,692	-	-	No
Taiwan	N=1,927	43%	Face-to-face interviews	Yes

Ireland	N=6,884		www.ucd.ie/issda/	Yes, based on the CSO weighting system
Israel	N=1,498	52%	Telephone survey	No
Russia	N= 41,500	-	Face to face interviews	No
Germany	N=25,456	-	Face-to-face interviews	Yes, applying frequency weights using the expansion factor
Switzerland	N=7,410	58.7	CATI	Yes, a post stratification weight variable that corrects for different selection probabilities in respect to cantons and household size. It also extrapolates the sample with respects to age, nationality, gender and education to the Swiss resident population parameters.

Source: Wiepking & Handy (2016).

A detailed sample composition is provided for every country in the IIPD Data documentation (Wiepking & Handy, 2016).

Table 3 Country specific information to take into account when working with the IIPD (2016)

Country	**Country specific information**
Australia	-
France	-
United Kingdom	• The number of non-donors in cidont and cadont did not match because of 6 very small donors (amount donated was rounded down to 0), we recoded these 6 cases donating virtually nothing to non-donors on cidont; • The amount question was only asked for donors who donated during the previous four weeks, amounts donated were not asked to respondents that only donated over the course of last year, for which incidence was measured. Hence those not donating last four weeks, but donated last year (N=282) are missing (999999) on cadont. • Amount donated was asked for past four weeks, and then multiplied by 13 to get the amount donated on a yearly basis.
Netherlands	-
United States	-
Canada	-

Norway	Description weight variable Vekt 1 is used because there is an oversampled group of immigrants from Africa and Asia in the data set. With Vekt 1, they are weighted according to their share of the population.
Finland	Amount donated and income is based on categorical var, top category recoded as lowest boundary ("over 100 euros", coded as 100)
Mexico	Data submitted was automatically weighted, set weight off.
South Korea	Researchers have to mention that the Korean data is Giving Korea, constructed by the Beautiful Foundation in Korea.
Japan	Researchers wanting to use the Japanese data need to ask Naoto Yamauchi.
Austria	-
Indonesia	-
Taiwan	Table 25.5 in Palgrave book (Tobit) is wrong, because of the coding error (999997 and 999998) were treated as amounts rather than missings: "1. Religious giving: 30 cases indicating "forgot", 7 cases indicating "refused"; 2. Secular donations: 15 cases indicating "forgot", 2 cases indicating "refused". Therefore, there are 37 cases with incorrect values of religious giving and 17 cases with incorrect values of secular giving, respectively. For total giving, the number of cases with incorrect value of total giving is 46 because eight cases have incorrect values for both religious and secular giving." Data included in the IIPD is corrected and correct.
Ireland	• age is measured in categories 10-20-30-40-50-60-70-80 converted to <35;36-65;>65 using midpoints of original data, except for lowest category (=14) and highest (=80). Weight is absolute weight, but statistical software accounts for this.
Israel	Religion in Israel is different. recoded the Jewish, the Muslims and the Christians to “other”, as we also do not know whether they are Orthodox or Roman Catholic (or Protestant). We made an exception and included the original religious affiliation variable with the data for Israel (treligion). we set Tromcat and tprot to 999999 as we do not know whether christians are roman catholic or protestant / Note the big outlier in amounts donated. The highest value on “tadont” is 5,868,622, which is a lot higher than the second highest value of 293,431, Trespnr=415 was extreme outlier, with donation of 5,868,622 US Dollar, while only 19 years old. It could always be a possibility that it is a correct donation, but following the advice of the Israeli authors, we have set the donation value for this respondent to "999999", missing.

Russia	Income in seven categories: below 172 US Dollar in 2012; 172 – 344; 344 – 516; 516 - 860; 860 – 1548; 1548 – 2064; over 2064 2012 US dollar. The only condition for using the data is to mention our Centre as an institution which elaborated the methodology and questionnaire for Russian data and conducted the data collection. The complete name of the Centre is The Center for Studies of Civil Society and the Nonprofit Sector, National Research University Higher School of Economics.
Germany	The religious affiliation variables "wromcat", "wprot" and "wothrel" are adopted from the 2007 wave of the survey The religious attendance variable "wrelatt" is adopted from the 2009 wave. The generalized social trust measure "wtrust" is adopted from the 2008 wave. Arjen de Wit and Marius Mews took a closer look at the weighting variable and found out that there is an independent sample in the data (in the SOEP documentation it is referred to as the 'Incentive Sample', which is included in the 'Innovation Sample' after 2012). These households distort the distribution and score 0 on the weighting variable. the ~2,000 respondents from the oversample are excluded in the data prepared for IIPD.
Switzerland	Only the post stratification weight is needed. The design weight weighs for selection probability after canton (state) and household size. The post stratification weight extrapolates the sample to be representative for the population as measured in the 2000 census and hast the design weight included. From the method report: (Um Stichprobenverzerrungen für Auswertungen zu korrigieren, wurden zwei Gewichte berechnet. Das Designgewicht (Variable des_gew) gewichtet für die unterschiedlichen Auswahlwahrscheinlichkeiten nach Kanton und Haushaltsgrösse. Das Poststratifikationsgewicht kombiniert das Designgewicht mit einer Poststratifikation, welche die gewichteten Bevölkerungsanteile hinsichtlich Alter, Nationalität, Geschlecht und Bildung auf die Eckwerte der Wohnbevölkerung über 15 Jahren gemäss Volkszählung 2000 hochgerechnet (Variable gew_tot).

Source: Wiepking & Handy (2016).

Appendix B. Correlations between contextual measures of institutionalization ($N_{individual}$=118,788; $N_{country}$=19)

	(1)	(2)	(3)	(4)[1]	(5)[2]	(6)	(7)[3]
(1) Ease of forming philanthropic organizations	1						
(2) Fiscal incentives system	-0.847	1					
(3) Number of nonprofit education programs[1]	0.514	-0.690	1				
(4) Fundraising regime	0.819	-0.788	0.668	1			
(5) Proportion nonprofit revenue from public sources[2]	0.753	-0.742	0.330	0.591	1		
(6) Proportion religiously affiliated	-0.342	0.509	-0.422	-0.447	-0.166	1	
(7) Per capita GNI[3]	0.884	-0.854	0.558	0.923	0.658	-0.382	1

Notes: All correlations are significant at $p < 0.001$; [1] without US (N=111,537); [2] without Indonesia (N=108,376); [3] Per capita GNI based on PPP in 2003 in current international Dollars/1,000.
Sources: IIPD (2016); Adelman et al. (2015); Charities Aid Foundation (2016); Breeze & Scaife (2015); Mirabella & Wish (2001); Mirabella et al. (2007); Pew Research Center (2012); Salamon, Sokolowski, & Haddock (2017); Wiepking & Handy (2015); Worldbank (2019).

Appendix C. Restricted maximum likelihood (REML) mixed-effects multilevel linear regression analyses of the natural log of the amount donated to charitable organizations ($N_{individual}$=118,788; $N_{country}$=19)

	0	1	2	3	4	5	6
Ease of forming philanthropic orgs		0.202					
		(0.380)					
Egalitarian			-0.0282				
			(0.736)				
Egalitarian & pragmatic			1.954*				
			(0.950)				
Pragmatic			0.502				
			(0.672)				
Taxtypes 4,5,6,7 (ref.)[1]			-				
# np educ progs[2]				0.0760~			
				(0.0431)			
embryonic					0.432		
					(1.254)		
Emerging					0.253		
					(0.810)		
Evident (ref.)					-		
established					1.140~		
					(0.628)		
Advanced					1.169		
					(1.254)		
Proportion np revenue from public sources[3]						0.854	
						(1.684)	
Proportion religiously affiliated							2.652
							(1.767)
Constant	0.0738	-0.819	-0.335	0.0108	-0.470	-0.290	-2.094
	(0.269)	(1.699)	(0.549)	(0.341)	(0.445)	(0.776)	(1.438)
Observations	118,788	118,788	118,788	111,537	118,788	108,376	118,788
Number of groups	19	19	19	18	19	18	19

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, ~ p<0.10

Notes: [1] Because the (combinations of) pragmatic, transitional and restrictive fiscal incentive systems only relate to one country in our sample, we used these categories as reference category; [2] without US (N=111,537); [3] without Indonesia (N=108,376); individual control variables included in the analyses (but not presented in the table): age, gender, educational level, marital status and the natural log of income.

Sources: IIPD (2016); Adelman et al. (2015); Charities Aid Foundation (2016); Breeze & Scaife (2015); Mirabella & Wish (2001); Mirabella et al. (2007); Pew Research Center (2012); Salamon, Sokolowski, & Haddock (2017); Wiepking & Handy (2015).

Appendix D1. Maximum likelihood multilevel mixed-effects logistic regression analyses of likelihood of giving to charitable organizations, without Germany and Japan

VARIABLES	0 odds ratio	1 odds ratio	2 odds ratio	3 odds ratio	4 odds ratio	5 odds ratio	6 odds ratio
Ease of forming philanthropic orgs		1.188					
		(0.320)					
Egalitarian			0.854				
			(0.475)				
Egalitarian & pragmatic			2.077				
			(1.418)				
Pragmatic			0.877				
			(0.433)				
Taxtypes 4,5,6,7 (ref.)[1]			-				
# np educ progs[2]				1.074**			
				(0.0288)			
embryonic					1.253		
					(0.898)		
Emerging					1.484		
					(0.697)		
Evident (ref.)					-		
established					2.849**		
					(1.096)		
Advanced					0.614		
					(0.440)		
Proportion np revenue from public sources[3]						1.001	
						(1.242)	
Proportion religiously affiliated							0.0778
							(0.118)
Constant	0.479***	0.226	0.481~	0.448***	0.313***	0.531	3.936
	(0.0981)	(0.269)	(0.190)	(0.0975)	(0.0859)	(0.297)	(5.001)
Observations	98,522	98,522	98,522	91,271	98,522	88,110	98,522
Number of groups	17	17	17	16	17	16	17

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, ~p<0.10

Notes: [1] Because the (combinations of) pragmatic, transitional and restrictive fiscal incentive systems only relate to one country in our sample, we used these categories as reference category; [2] without US; [3] without Indonesia; individual control variables included in the analyses (but not presented in the table): age, gender, educational level, marital status and the natural log of income.

Sources: IIPD (2016); Adelman et al. (2015); Charities Aid Foundation (2016); Breeze & Scaife (2015); Mirabella & Wish (2001); Mirabella et al. (2007); Pew Research Center (2012); Salamon, Sokolowski, & Haddock (2017); Wiepking & Handy (2015).

Appendix D2. Maximum likelihood mixed-effects multilevel linear regression analyses of the natural log of the amount donated to charitable organizations, excluding Germany and Japan

VARIABLES	0	1	2	3	4	5	6
Ease of forming philanthropic orgs		0.420~					
		(0.235)					

Egalitarian			0.636				
			(0.400)				
Egalitarian & Pragmatic			1.928***				
			(0.489)				
Pragmatic			0.727*				
			(0.354)				
Taxtypes 4,5,6,7 (ref.)[1]			-				
# np educ progs[2]				0.0926***			
				(0.0233)			
Embryonic					0.0149		
					(0.621)		
Emerging					-0.172		
					(0.407)		
Evident (ref.)					-		
Established					1.057**		
					(0.333)		
Advanced					0.704		
					(0.621)		
Proportion np revenue from public sources[3]						1.511	
						(1.094)	
Proportion religiously affiliated							-1.066
							(1.520)
Constant	0.418* (0.192)	-1.414	-0.256	0.387*	0.0347	-0.184	1.297
		(1.038)	(0.283)	(0.189)	(0.238)	(0.494)	(1.268)
Observations	98,522	98,522	98,522	91,271	98,522	88,110	98,522
Number of groups	17	17	17	16	17	16	17

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, p<0.10

Notes: [1] Because the (combinations of) pragmatic, transitional and restrictive fiscal incentive systems only relate to one country in our sample, we used these categories as reference category; [2] without US; [3] without Indonesia; individual control variables included in the analyses (but not presented in the table): age, gender, educational level, marital status and the natural log of income.

Sources: IIPD (2016); Adelman et al. (2015); Charities Aid Foundation (2016); Breeze & Scaife (2015); Mirabella & Wish (2001); Mirabella et al. (2007); Pew Research Center (2012); Salamon, Sokolowski, & Haddock (2017); Wiepking & Handy (2015).

Appendix E1. Maximum likelihood multilevel mixed-effects regression analyses of the likelihood of giving to charitable organizations, controlling for per capita GNI

	0	1	2	3	4	5	6
ease of forming philanthropic orgs		1.050					
		(0.489)					
Tax system							
Egalitarian			0.574				
			(0.436)				
Egalitarian & Pragmatic			2.371				
			(2.418)				
Pragmatic			0.775				
			(0.556)				
Tax systems 4,5,6,7 (ref.)[1]							
# np educ progs[2]				1.063			
				(0.0424)			
Fundraising regime							
Embryonic					1.979		
					(3.155)		
Emerging					2.314		
					(2.928)		
Evident (ref.)							
Established					2.691~		
					(1.408)		
Advanced					0.792		
					(0.904)		
Proportion np revenue from public sources[3]						0.569	
						(0.935)	
Proportion religiously affiliated							2.517
							(4.251)
GNI	0.997	0.994	0.995	0.995	1.007	1.000	1.000
	(0.0221)	(0.0306)	(0.0262)	(0.0225)	(0.0517)	(0.0283)	(0.023)
Constant	0.373	0.318	0.461	0.350~	0.169	0.461	0.164
	(0.234)	(0.516)	(0.278)	(0.210)	(0.261)	(0.379)	(0.266)
Observations	118,788	118,788	118,788	111,537	118,788	108,376	118,788
Number of groups	19	19	19	18	19	18	19

*** p<0.001, ** p<0.01, * p<0.05, ~ p<0.10
Standard errors in parentheses; Odds ratio's

Notes: [1] Because the (combinations of) pragmatic, transitional and restrictive fiscal incentive systems only relate to one country in our sample, we used these categories as reference category; [2] without US (N=111,537); [3] without Indonesia (N=108,376); individual control variables included in the analyses (but not presented in the table): age, gender, educational level, marital status and the natural log of income.
Sources: IIPD (2016); Adelman et al. (2015); Charities Aid Foundation (2016); Breeze & Scaife (2015); Mirabella & Wish (2001); Mirabella et al. (2007); Pew Research Center (2012); Salamon, Sokolowski, & Haddock (2017); Wiepking & Handy (2015); Worldbank (2019).

Appendix E2. Maximum likelihood mixed-effects multilevel linear regression analyses of the natural log of the amount donated to charitable organizations, controlling for per capita GNI

	0	1	2	3	4	5	6
Ease of forming philanthropic orgs		0.0374					
		(0.496)					
Egalitarian			0.0479				
			(0.762)				
Egalitarian & Pragmatic			2.066*				
			(1.021)				
Pragmatic			0.580				
			(0.720)				
Taxtypes 4,5,6,7 (ref.)[1]							
# np educ progs[2]				0.0703~			
				(0.0421)			
Embryonic					0.424		
					(1.705)		
Emerging					0.246		
					(1.354)		
Evident (ref.)							
Established					1.141*		
					(0.560)		
Advanced					1.173		
					(1.222)		
Proportion np revenue from public sources[3]						0.415	
						(1.755)	
Proportion religiously affiliated							3.193~
							(1.660)
GNI	0.017	0.016	-0.005	0.011	-0.000	0.017	0.028
	(0.024)	(0.033)	(0.026)	-0.0239	(0.055)	(0.030)	(0.022)
Constant	-0.382	-0.502	-0.266	-0.251	-0.461	-0.570	-3.225*
	(0.669)	(1.730)	(0.604)	-0.633	(1.649)	(0.879)	(1.600)
Observations	118,788	118,788	118,788	111,537	118,788	108,376	118,788
Number of groups	19	19	19	18	19	18	19

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, ~ p<0.10

Notes: [1] Because the (combinations of) pragmatic, transitional and restrictive fiscal incentive systems only relate to one country in our sample, we used these categories as reference category; [2] without US (N=111,537); [3] without Indonesia (N=108,376); individual control variables included in the analyses (but not presented in the table): age, gender, educational level, marital status and the natural log of income.

Sources: IIPD (2016); Adelman et al. (2015); Charities Aid Foundation (2016); Breeze & Scaife (2015); Mirabella & Wish (2001); Mirabella et al. (2007); Pew Research Center (2012); Salamon, Sokolowski, & Haddock (2017); Wiepking & Handy (2015); Worldbank (2019).

Appendix F. Maximum likelihood mixed-effects multilevel logistic (Model 1) and linear (Model 2) regression analyses, including all measures of institutionalization simultaneously

	(1)	(2)
VARIABLES	Odds ratio	B
Ease of forming philanthropic organizations	0.860	-0.376
	(0.383)	(0.390)
Tax system		
Egalitarian	0.442	0.347
	(0.424)	(0.841)
Egalitarian & pragmatic	0.691	1.188
	(0.746)	(0.946)
Pragmatic	0.674	0.589
	(0.554)	(0.720)
Tax systems 4,5,6,7 (ref.)[1]		
# np educ progs	1.055	0.0507
	(0.0475)	(0.0394)
Fundraising regime		
emerging	1.045	-0.119
	(1.020)	(0.856)
Embryonic, evident and advanced (ref.)		
established	2.317	0.878~
	(1.387)	(0.524)
Proportion np revenue from public sources	0.712	0.463
	(1.539)	(1.893)
Proportion religiously affiliated	3.198	3.914*
	(6.318)	(1.729)
Constant	0.341	-2.267
	(0.781)	(2.010)
Observations	101,125	101,125
Number of groups	17	17

Standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05, ~ p<0.10

Notes: Because the United States is excluded from the measure number of nonprofit education programs, and because Indonesia does not have a value for proportion of nonprofit revenue from public sources, these two countries were excluded from the analyses; [1] Because the (combinations of) pragmatic, transitional and restrictive fiscal incentive systems only relate to one country in our sample, we used these categories as reference category; individual control variables included in the analyses (but not presented in the table): age, gender, educational level, marital status and the natural log of income.

Sources: IIPD (2016); Adelman et al. (2015); Charities Aid Foundation (2016); Breeze & Scaife (2015); Mirabella & Wish (2001); Mirabella et al. (2007); Pew Research Center (2012); Salamon, Sokolowski, & Haddock (2017); Wiepking & Handy (2015); Worldbank (2019).

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