Are Foreign Aid Contributions Associated with Population-Level Altruism?

Research Module Management and Applied Microeconomics

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Abstract

This paper studies whether governmental humanitarian aid contributions are correlated with the altruistic preference in the population and if democratic systems reinforce this association. Based on a globally representative survey on preference, we estimate the relationship between altruism, democracy, and foreign aid which is expected by the political-economic theory proposed by Chong/ Gradstein (2008), using a modified static panel data model. We find that altruism does not have a significant effect on increasing foreign aid, while the socioeconomic preference for trust does. We provide a series of possible explanations for our findings and motivate further research possibilities.

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1 Introduction

Over time, countries have developed many different political systems, some of which are assumed to accumulate preferences and information of citizens through voting and other political processes. These political systems have a major influence on the welfare of the population, with more democratic countries enabling each person to participate more in the political process and thereby influencing government decisions. Yet, it is questionable if socioeconomic preferences of voters are really aggregated by that process, thereby also enabling each citizen to improve his welfare and increasing political participation. While there is much research done on the topics of re-distributive politics or special-interest politics (Persson/Tabellini, 2002), we explore the effectiveness of the political process. More specifically, our research question is, whether altruism, as a basic socioeconomic preference, is correlated with government spending on foreign humanitarian aid and if there is heterogeneity in this effect depending on the political system.

Main objectives to promote humanitarian aid would be significant developments such as the alleviation of poverty, illiteracy or income inequality. More efficient and less corrupt governments would be more conducive to public support for foreign aid. Chong/Gradstein (2008) emphasize that aid generosity is mainly affected by own government's efficiency and less by recipient one. They show that the endogenous determination of official and private aid flows, suggests that government efficiency is an important factor, and relates individual income to aid support, which has the implication that income inequality is damaging for a political support for foreign aid. Based on the evidence that the analysis of individual attitudes, based on the World Values Surveys, reveals that satisfaction with the government performance and the individual income are positively related to the willingness to provide foreign aid (Chong/Gradstein, 2008).

To respond the research question, we start by deriving comparative statics on foreign aid contributions, using the theoretical framework of Chong/Gradstein (2008). Subsequently, we assemble macroeconomic and population data, most importantly altruism and trust data from the Global Preference Survey (GPS) (Falk et al., 2018; Falk et al., 2016), democracy index data from The Economist Intelligence Unit (2006-2019) and macroeconomic data by The World Bank (2020). With this data we run an OLS regression to test for the effect of altruism on humanitarian aid spending, separating between non-OECD and OECD-countries to account for effects of wealth that could also influence the willingness to spend money on humanitarian aid. Secondly, we run additional regressions, we show plots using different measures of humanitarian aid funding, including humanitarian aid per capita, per GDP and relative to government size. We then apply a modified version of the fixed effects filtered (FEF) model, to look for the time-invariant effect of altruism on humanitarian aid spending (Pesaran, 2014).

In all of these regressions we do not find that altruism has a significant effect on governmental humanitarian aid spending, which holds independently of the political system in place. However, we find that trust plays a significant role in increasing foreign aid, using the FEF model. These findings suggest that, contrary to our hypotheses, altruism is not significantly associated with humanitarian aid spending and that trust might have a stronger association. Most importantly this implies, that different confounders could have a diminishing effect on the importance of altruism in humanitarian aid spending. One of these confounders is that although altruism may be a factor in contributing foreign aid, countries may have ulterior strategic motives. Therefore, other drivers such as trade or trust in the aid process could be much more important factors in motivating humanitarian aid spending by the government. One can therefore not conclusively say whether the political process aggregates basic preferences, at least for the preferences of trust and altruism.

Indisputably, increased foreign humanitarian aid is only one way how altruism could affect government decisions. Intra-country transfers, such as social security transfers, or passing more altruistic laws are other such effects. Using foreign humanitarian aid as a measure of the effectiveness of the political process in our paper is due to more altruistic people favouring higher aid contributions and thereby the political process leads to aggregate preferences. A democratic political system would be feeble without the support of the majority of the population. Humanitarian assistance by the government aims at saving lives, reducing suffering, and ensuring that human dignity is protected even during times of crisis. Foreign aid can also have ulterior motives besides humanitarian reasons, which have been together with the effectiveness of foreign aid main subjects of discussion for decades. There have been significant improvements in the management of humanitarian aid responses. International humanitarian aid aiming to alleviate human suffering and economic losses is expected to increase importance. The main focus should not be the support of capitalism but rather the increase of the welfare of the population. Welfare-based altruism addresses a number of practical concerns in the literature, such as providing a unified framework for measuring robustness and heterogeneity of preferences across populations and decision problems (Falk et al., 2016). Aid does not significantly increase investment, nor benefit the poor as measured by improvements in human development indicators, but it does increase the size of government. The impact of aid does not vary according to whether recipient governments are liberal democratic or highly repressive. It plausibly can contribute to democratization in several ways through technical assistance focusing on electoral processes, the strengthening of legislatures and judiciaries as checks on executive power and the promotion of civil society organizations.

The paper is organized as follows. Section 2 provides a conceptual framework, followed by Section 3 describing our data set. Section 4 shows the econometric method and Section 5 presents our results, followed by our discussion in Section 6 and conclusion in Section 7.

2 Political-Economy Model of Foreign Aid Contributions

The theoretical framework we use stems from Chong/Gradstein (2008). Dudley/Montmarquette (1976) is one of the earliest papers using the setting including foreign aid as a public good, which now is commonly used. Chong/Gradstein (2008) assume each individual i could gain utility from 3 sources: personal consumption c_i, aggregated amount of donations A from the belonging country, and private donation z_i. The total utility function could be written as followed:

$$U_i = U(c_i) + V(A) + W(z_i) \tag{2.1}$$

To facilitate understanding, utility is assumed to be an isoelastic function, while they also have proved a more general case. The equation can be rewritten as followed:

$$U(c_i) + V(A) + W(z_i) = c_i^{1-\sigma}/(1-\sigma) + \alpha A^{1-\sigma}/(1-\sigma) + \beta z_i^{1-\sigma}/(1-\sigma), \quad \alpha, \beta > 0 \tag{2.2}$$

In the equation α represents the preference for foreign aid and β is the warm glow motive to make a private donation. σ determines the elasticity of substitution. When σ equals 1, the preference would be logarithmic.

Chong/Gradstein (2008) assume individual i has an exogenous income endowment y_i and a flat tax rate is imposed to finance foreign aids. Then individual income allocation can be defined as:

$$y_i = c_i + Ty_i + z_i, \quad 0 < T < 1 \tag{2.3}$$

The equation means individual i can choose to spend the income on consumption or on private donation. Then the amount of donation at the aggregate level denoted by A can be written as

$$A = TY + Z \tag{2.4}$$

Next, taking the derivate of the personal utility function with respect to the tax rate yields

$$dU/dT = -c_i^{-\sigma} y_i + \alpha A^{-\sigma}(Y + dZ/dT) \tag{2.5}$$

Then proceed to optimize c_i, z_i, Z, A, assuming the tax rate to be exogenous.

$$\begin{aligned} c_i &= \beta^{-1/\sigma} y_i (1-T)/(1+\beta^{-1/\sigma}) \\ z_i &= y_i (1-T)/(1+\beta^{-1/\sigma}) \\ Z = c_i &= Y(1-T)/(1+\beta^{-1/\sigma}) \\ A &= TY + Y(1-T)/(1+\beta^{-1/\sigma}) \end{aligned} \tag{2.6}$$

Plugging the result of equation 2.6 into equation 2.5 and reorganizing it, the equation can be written as:

$$dU/dT = -(1-T)^{-\sigma}(yi/Y)^{1-\sigma} + \alpha[T + (1-T)/(1+\beta^{-1/\sigma})]^{-\sigma} \leq 0 \tag{2.7}$$

If the preferred tax rate is zero, the equation would be strictly negative. The second-order condition of equation 2.7 would be smaller or equal to zero implying that the function is single-peaked, which guarantees the existence of an equilibrium. Past research, for example, Fernandez/Rogerson (2003), implies the value of σ to be slightly larger than one. If we replace the σ in equation 2.7 with a number that is slightly larger than one, such as 1.01, then it would be clear that when the FOC equals zero, the marginal utility of the tax would be positively correlated with α which is the preference for foreign aid. Under the assumption that a direct democratic system exists, personal preferences should be aggregated through the voting system. We expect to see that the altruistic level in countries is reflected in the humanitarian aid donations. However, after plugging in the σ to equation 2.7, we could also see that the marginal utility of the tax is negatively correlated with β, which is the preference for private donations. Altruism in GPS data may capture β instead of α, or more likely it captures a mixture of both. The UN humanitarian data we use contains both government and NGO donations in order to include both private institutional and public financial aids.

3 Data Description

We use data from five different sources to analyze whether the political process aggregates preferences on altruism within a country resulting in higher humanitarian aid contributions.

Firstly, we use country-level data from the Global Preference Survey (GPS) on altruism, time and risk preference, positive and negative reciprocity, and trust (Falk et al., 2018; Falk et al., 2016). The data was collected in 2012 for 80,000 people in 76 countries. The preference measures in the data set are standardized so that each measure has a mean of zero and a standard deviation of one. Altruism was measured through two items in the survey, both related to donations. One question asked respondents how willing they would be to give to good causes without expecting anything in return on an 11-point scale. The other scenario depicted a situation in which the respondent unexpectedly received 1,000 euros and asked them to state how much of this amount they would donate (Falk et al., 2018).

Secondly, we use yearly data on humanitarian aid funding in US$ from the Financial Tracking Service (2020) of the United Nations Office for the Coordination of Humanitarian Affairs (OCHA). They define humanitarian aid as an intervention to help people affected by natural disasters and conflict to meet their basic needs and rights. It includes data from Government donors, UN-administered funds, UN agencies, NGOs and other humanitarian actors and partners. While other papers, for example Chong/Gradstein (2008), use the series official development assistance (ODA) of the OECD,

Table 3.1: Summary Statistics

	Obs	Mean	Sd	Min	Max	Missing Values
Altruism	1368	-0.038	0.341	-0.940	0.906	0
Humanit. Aid Funding	916	0.213 bn	0.775 bn	1000	8.540 bn	452
Humanit. Aid Funding / Capita	874	5.417	14.796	0.000029	225.206	494
GDP	1284	818.8 bn	2 206 bn	1.274 bn	21 370 bn	84
Gov. Expenditure	1289	31.832	11.669	3.787	91.450	79
Democratization Index	912	61.048	19.882	17.1	98.8	456
Gini Index	635	37.193	7.837	24	64.8	733

Humanitarian Aid Funding in US$, GDP in current US$, Government Expenditure as % of GDP

which is defined as government aid designed to promote the economic development and welfare of developing countries (OECD, 2021), the data of the OCHA has the advantage that it is accessible for a larger set of countries. In addition to government donations it incorporates private institutional donors. Depending on the year the data set includes between 67 to 153 national governments.

Thirdly, we use data on the Democracy Index of 167 countries from 2006 to 2019 by The Economist Intelligence Unit (2006-2019). The index was not calculated in 2007 and 2009. It is based on the categories electoral process and pluralism, the functioning of government, political participation, political culture, and civil liberties and classifies each country as "full democracy", "flawed democracy", "hybrid regime" or "authoritarian regime". The index has a range from zero to 100. Lastly, we include macroeconomic data on GDP (in current US$), GDP per capita, population size, region and income group data and the Gini index from the World Development Indicators (WDI) by The World Bank (2020) and data on the government expenditure as percent of GDP from the World Economic Outlook Database from the International Monetary Fund (2019)[1].

Table 3.1 shows summary statistics of the main variables we use. Our final data set includes data from 2006 to 2018, except 2007 and 2009, on 75 countries[2]. The data set has a large amount of missing values. To further investigate the missing value condition, we exclude years for which we have no data on the democratic index and then look at the pattern of the missing values. The result is showed in Table 3.2. We could see that the missing of the Gini index alone, while other data are intact, accounts for 27% of the total variables.

As Chong/Gradstein (2008) conclude, that the Gini index is highly significant in predicting donation, the missing of a great portion of Gini index raises concerns of a potential bias. The reason why the

[1]We are aware of the issue that the different scales, current US$ and US$ of other years, affect the interpretation of our results. We did not have enough time to pursue this problem.

[2]Afghanistan, Algeria, Argentina, Australia, Austria, Bangladesh, Bolivia, Botswana, Brazil, Cambodia, Cameroon, Canada, Chile, China, Colombia, Costa Rica, Croatia, Czech Republic, Egypt, Estonia, Finland, France, Georgia, Germany, Ghana, Greece, Guatemala, Haiti, Hungary, India, Indonesia, Iran, Iraq, Israel, Italy, Japan, Jordan, Kazakhstan, Kenya, Lithuania, Malawi, Mexico, Moldova, Morocco, Netherlands, Nicaragua, Nigeria, Pakistan, Peru, Philippines, Poland, Portugal, Romania, Russia, Rwanda, Saudi Arabia, Serbia, South Africa, South Korea, Spain, Sri Lanka, Suriname, Sweden, Switzerland, Tanzania, Thailand, Turkey, Uganda, Ukraine, United Arab Emirates, United Kingdom, United States, Venezuela, Vietnam, Zimbabwe

Gini index was not calibrated for a given year is not specified in the data description, so examining the problem quantitatively becomes the only option.

Table 3.3 shows the t-test for funding per capita and altruism in groups that have and do not have Gini index data. The null hypothesis is, that the two groups are approximately the same. For humanitarian aid funding per capita, with the p-value equal to 0.4786, we could reject the H_0. However, the t-test for altruism with and without the Gini index has a p-value equal to 0.045, which suggests that there exists a statistically significant difference in the two groups which means the data is not missing completely at random (MCAR). When the data is not MCAR, listwise deletion might cause biased estimation. Therefore we conducted multiple imputations to minimize the impact. Variables, that are effective in predicting the Gini index, are used to estimate missing values. Because the results do not differ much if we include incomplete observations with imputed Gini values, the main analysis in section 5 is based on complete observations only.

Table 3.2: Missing Value Pattern

Percent	GDP per Capita	Funding per Capita	Gini index
43	1	1	1
27	1	1	0
19	1	0	0
10	1	0	1
<1	0	0	0
100%			

1 means complete, 0 means missing

Table 3.3: t-Test

	Obs	Mean	SE	t (for H_0: diff = 0)	H_a: diff > 0
Humanitarian Aid Funding per Capita	874	0.054	1.011	0.054	0.479
Altruism	1368	0.031	0.018	1.702	0.044

Last column: $Pr(T > t)$ (p-value)

4 Empirical Strategy

We specify our OLS model as followed

$$aid_{it} = \varepsilon_{it} + altruism_i^{'}\pi + demo_{it}^{'}\delta, \quad i = 1, 2, \cdots, N; t = 1, 2, \cdots, T \tag{4.1}$$

$altruism_i$ represents altruism measured in the GPS data, $demo_{it}$ represents democratization indexes. aid_{it} represents the overall donation from country i in year t. Each i represents a country and each t a year. ε_i represents the error term. The standard errors are assumed to cluster on country level. This is not an optimal way to estimate, since the countries could correlate across years.

Our main research focus is to identify how altruism affects the donation of humanitarian aid. The humanitarian aid data is recorded on yearly basis, while the General Preference Survey is not conducted repeatedly. In this paper, the preference of a country is assumed to be stable across time. We introduce the fixed effect model since the data set has the structure of panel data. However, the traditional fixed-effect model subtracts the mean from each variable and is not appropriate for estimating the coefficient of time-invariant factors. Therefore, we apply a modified version of the fixed-effect model, Fixed Effects Filtered (FEF), proposed by Pesaran (2014). The base model can be written as follows:

$$aid_{it} = \alpha_i + z_i^{'}\gamma + x_{it}^{'}\gamma + +\varepsilon_{it}, \quad i = 1, 2, \cdots, N; t = 1, 2, \cdots, T \tag{4.2}$$

where

$$\alpha_i = \alpha + \eta_i \tag{4.3}$$

In equations 3.1, x_{it} are the variables that vary with time such as democratization index and Gini index and z_i are time-invariant variables such as altruism and other preferences. aid_{it} represents the overall donation from country i in year t. Each i represents a country and each t represents a year. α_i represents country specific effects.

In the Monte Carlo simulation in Pesaran (2014), the FEF estimator is shown to be robust, asymptotically normal, applicable for data with more cross-sectional observation than time-series dimensions, and also permits serial correlation and cross-sectional heteroskedasticity.

The other common estimation for time-invariant variables is using instrumental variables, brought out by Hausman/Taylor (1981). This method could treat the problem of one or more endogenous time-invariant variables. Pesaran (2014) also brought up the FEF-IV model, that incorporates the instrumental variable approach into FEF. The downside of the models is, that they require more assumptions.

For the estimation of β to be valid, we still need to assume x_{it} is uncorrelated with the residual in equation (3.1) regardless of time periods. There are 2 steps to conduct the FEF estimation, first we regress time-varying variables on aid_{it} and acquire the residual $\hat{u}_{it}$.

$$\hat{u}_{it} = aid_{it} - \hat{\beta}^{'} x_{it} \tag{4.4}$$

Then we average $\hat{u}_{it}$ over time and regress z_i on it:

$$\bar{\hat{u}}_i = \hat{\gamma}'_{FEF}\bar{z}_i + \hat{\alpha}_{iFEF} \tag{4.5}$$

where

$$\bar{\hat{u}}_i = T^{-1}\sum_{t=1}^{T}\bar{\hat{u}}_{it} \tag{4.6}$$

As the result, we obtain the estimated coefficient on time-invariant variables:

$$\hat{\gamma}_{FEF} = [\sum_{i=1}^{N}(z_i - \bar{z})(z_i - \bar{z})']^{-1}\sum_{i=1}^{N}(z_i - \bar{z})(\bar{\hat{u}}_i - \bar{\hat{u}}) \tag{4.7}$$

5 Results

This chapter presents the results of our analysis. We start with basic scatter plots and then present results regarding altruism and trust.

5.1 Descriptive Results

Figure 5.1 shows that no matter which measure we use for humanitarian aid funding, the relationship between foreign aid and altruism is not strong. The figure presents scatter plots and fitted values of average humanitarian aid funding between 2010 and 2019 on the altruism measure for several countries. Using total humanitarian aid funding as measure for foreign aid does not take into account that governments might contribute more to foreign aid because the country has a larger population, government size or a higher GDP. Therefore, we use four different measures of average humanitarian aid funding. OECD countries are marked with a different color, since we expect those to spend more on humanitarian aid.

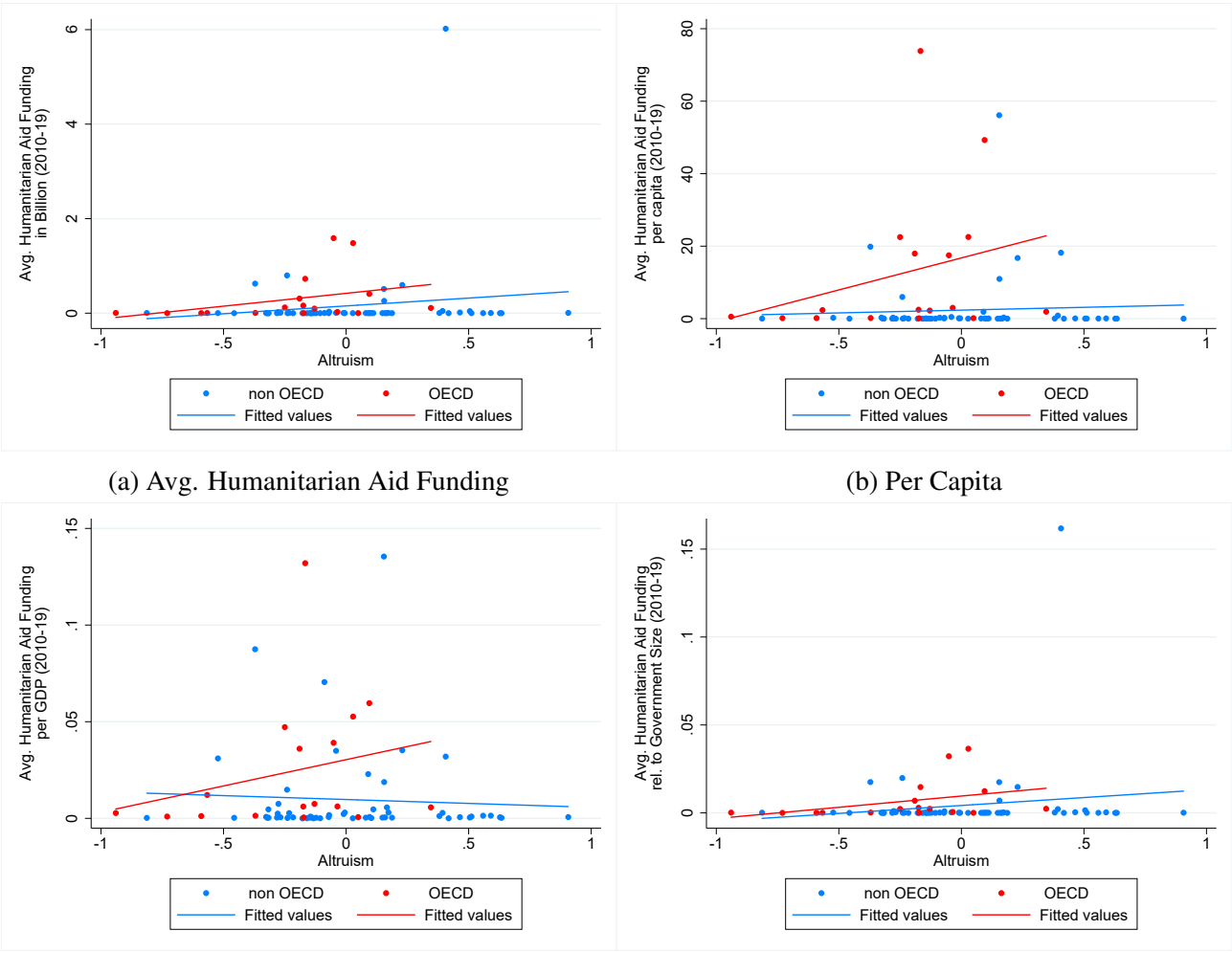
Firstly, Figure 5.1a plots average total humanitarian aid funding on altruism. The result suggests a slightly positive relationship, which seems a little stronger for OECD countries than for non OECD countries. This observation is biased if countries with larger population contribute more to foreign aid and also have a more altruistic population.

Secondly, we use average humanitarian aid funding per capita as measure for humanitarian aid contribution in Figure 5.1b. Including the information on how much foreign aid can be attributed to each individual citizen rules out the problem that more altruistic countries might have a larger population and therefore might contribute more to foreign aid. The plot shows a stronger relationship for OECD countries than in Figure 5.1a and a nearly horizontal line for non OECD countries. Thirdly,

Figure 5.1c shows the relationship between average humanitarian aid funding per GDP and altruism. We use funding relative to GDP to assess the problem that more altruistic countries might have a higher GDP and therefore might contribute more to foreign aid. For the OECD countries the plot indicates a positive relationship, similar as in Figure 5.1b. For the non OECD countries the slope of the lines of the fitted values is slightly negative.

Lastly, in Figure 5.1d we plot average humanitarian aid relative to the government size of the countries on altruism and find a very similar pattern as in Figure 5.1a. This suggests that in our data there is no strong relationship between altruism and government size.

Overall, the plots do not show a strong relationship between humanitarian aid and altruism. We follow Chong/Gradstein (2008) and choose humanitarian aid funding per capita as dependent variable for our regressions.



(a) Avg. Humanitarian Aid Funding

(b) Per Capita

(c) Per GDP

(d) Relative to Government Size

Figure 5.1: Measures for Humanitarian Aid Funding

Table 5.1: OLS Estimates

	(1)	(2)	(3)	(4)	(5)
Altruism	0.938	0.938	2.497	0.862	-5.038
	(1.412)	(2.619)	(2.949)	(4.501)	(5.281)
Democratization Index			0.168	-0.043	-0.032
			(0.138)	(0.101)	(0.100)
Altruism*High Democratization					9.363*
					(4.874)
Constant	5.460***	5.460***	-4.695	6.530	6.598
	(0.505)	(1.652)	(8.877)	(8.439)	(8.341)
Controls	No	No	No	Yes	Yes
Clustered SE	No	Yes	Yes	Yes	Yes
R-squared	0.001	0.001	0.042	0.411	0.418
N	874	874	636	635	635

The dependent variable is humanitarian aid funding per capita. Standard errors (clustered at country level) in parentheses. Additional controls include positive reciprocity, risktaking, patience, trust, negative reciprocity, government expense, population size, GDP and income, year and region FE. * p<0.1, ** p<0.05, *** p<0.01

5.2 Altruism

We run OLS regressions with average humanitarian aid funding per capita as dependent variable to figure out whether there is a significant effect of the level of altruism within the population of a country and humanitarian aid contributions of that country. Table 5.1 shows that there is no clear relationship between altruism and humanitarian aid funding per capita in our data.

Column 1 is a basic regression of humanitarian aid funding per capita on altruism. We estimate a coefficient of 0.94, which is statistically insignificant. Since it is reasonable that the data is correlated at the country level, in column 2 we cluster standard errors by countries, which increases the standard error from 1.41 to 2.61.

Column 3 includes the democratization index in the regression, since we want to control for whether more democratic countries contribute more to humanitarian aid funding, which biases our estimation if these countries are more altruistic. The coefficient for altruism increases to 2.5 and remains statistically insignificant. The estimate of the effect of the democratization index on humanitarian aid funding is 0.14 and also statistically insignificant.

In column 4 we include income, year and region fixed effects and control for positive reciprocity, risktaking, patience, trust, negative reciprocity, government expense, population size and GDP. The estimate for the effect of altruism on humanitarian aid funding drops to 0.86, while the effect of the democratization index changes to -0.04. Both remain statistically insignificant.

In column 5 we identify whether the association between humanitarian aid funding and altruism is stronger in more democratic countries. Therefore, we add an interaction term of altruism with

Table 5.2: Fixed Effects Filtered First Stage

	Baseline	Gini
Electoral Process	-0.025	-0.004
	(0.042)	(0.036)
Functioning of Government	0.054	-0.078
	(0.112)	(0.066)
Political Participation	0.259*	0.101
	(0.149)	(0.064)
Political Culture	-0.041	-0.025
	(0.042)	(0.044)
Civil Liberties	0.044	0.089
	(0.066)	(0.067)
Government Expenditure	0.184	(0.0673)
	(0.186)	(0.129)
GDP per capita	0.001***	0.001**
	(0.0002)	(0.0002)
Gini		0.162
		(0.151)
Constant	-27.640	-18.544*
	(17.309)	(10.996)
R-squared	0.055	0.156
N	635	361

The dependent variable is humanitarian aid funding per capita. * p<0.1, ** p<0.05, *** p<0.01, standard errors in parentheses

a binary variable indicating whether the democratization level is below or above the median to the regression. We estimate a coefficient of 9.36 for the interaction term, which indicates that more democratic countries aggregate individuals preference for altruism more strongly than less democratic countries. The estimate is statistically significant at the 10% level.

Taken together, the results of the OLS regressions do not suggest a relationship between altruism and humanitarian aid funding per capita. In the following we proceed with Fixed Effect Filtered regressions.

Table 5.2 shows the result of the first step in the FEF model, column 1 represents the model excluding the Gini Index, column 2 shows the result of including Gini Index. Among all variables, GDP per capita is the only one that has a statistically significant effect on funding. We break apart the democratization index to each subsection to further capture the effect of political aggregations.
Different from the result in Chong/Gradstein (2008), the Gini index is not a strong predictor of foreign aid. A reason could be that we include more countries than them and the dataset they use is limited to ODA. The 22 countries[1] they include are mostly conventionally considered as wealthy western coun-

[1]Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg,

Table 5.3: Fixed Effects Filtered Second Stage

	(1)	(2)	(3)	(4)
Altruism	-0.325	-0.904	-2.686	-2.052
	(1.9672)	(2.2019)	(3.8203)	(3.8189)
Constant	-2.698	-4.537	-3.466	-7.385
	(2.6385)	(3.3095)	(2.3285)	(4.4749)
Income	Yes	Yes	Yes	Yes
Region	No	Yes	No	Yes
Other Preferences	No	No	Yes	Yes
R-squared	0.160	0.218	0.285	0.355
N	59	59	59	59

* p<0.1, ** p<0.05, *** p<0.01, standard errors in parentheses

tries. Moral universalism connects with how much an individual deferentially trusts and is altruistic to people that he or she is social-differently distanced to. According to Enke/Rodríguez-Padilla/Zimmermann (2020), moral universalism is highly associated with education and wealth, correlates with policy views in western countries, and is only observed to be correlated with policy views on elites in non-western countries. Including countries, that are generally poor but still donate out of dictatorship and countries, that are well-off financially but lack moral universalism might disturb the expected effect of the Gini index.

Table 5.3 shows the result of the second step in the FEF model. Column 1 includes income types (low, high, lower-middle, higher-middle) defined by the world bank, to control the remaining effect besides GDP per capita. Column 2 controls for income type and regions. As stated in the previous paragraph, we add regions in the hope of capturing region-specific differences such as potential heterogeneity in moral universalism. However, only south Asia in the Gini index included estimation shows a p-value that is smaller than 0.1, none of the rest region indicators end up having a significant effect. Column 3 takes into account the other preference measures in the GPS data, and column 4 controls for all of the above-mentioned variables. None of the estimations find that altruism has a significant effect.

Table 5.4 presents the result conditional on specific subsets of countries. We try to locate the effect by confining the estimation on the country sets, that we expect to have a stronger connection between altruism, democracy, and donation. OECD means the country is an OECD member in 2019, G20 means the country is a member of the G20 in 2019, donor means the country has donated at least once to net official development assistance (ODA) between 2003 to 2009 to any country. Non-aid means the country has not received ODA between 2003 to 2009. Including ODA is due to a lot of research papers we consult being based on ODA, one of them being Chong/Gradstein (2008), and we want to examine whether restricting to the same countries leads to similar results. And indeed, altruism only

Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States

Table 5.4: Fixed Effects Filtered Country Groups

	OECD	G20	Donor	Non Aid
Altruism	-9.450	-6.491	-12.764*	-7.875
	(7.8573)	(4.8814)	(6.3916)	(4.8689)
Constant	-8.876	-9.438	-17.370	-13.812**
	(8.8311)	(8.5242)	(12.6888)	(6.1371)
Income	Yes	Yes	Yes	Yes
Region	Yes	Yes	Yes	Yes
Other Preferences	Yes	Yes	Yes	Yes
R-squared	0.332	0.295	0.419	0.501
N	17	32	22	47

* p<0.1, ** p<0.05, *** p<0.01, standard errors in parentheses

shows to be significantly correlated with humanitarian donations if we restrict our sample to ODA donors, while none of the rest subgroups turn out to be significant.

5.3 Trust

Table 5.5 reports how each preference in the GPS data set affects funding per capita for a model including the Gini index and controlling for region effects. Even though we failed to find a significant result in altruism, we found that trust is a prominent factor to increase foreign aid. In the GPS data, it is acquired by asking the participant to rate whether others only have best intentions between 1 to 10. According to the GPS data description, this is often a strong predictor in incentivized trust games. In incentivized trust games, participants usually ask to transfer parts of their fund to another person. The sum would be a multiple after transformation but the receiver has the choice to keep the sum themselves or to share it with the fund-giver. In a sense, the givers in the trust game might give because they like to share with others, or because they expect to be returned more than they gave away, or even both, which is conceptually close to foreign aid.

To discern whether the political process aggregates the basic preference, we split the sample by the average of the democratization index being above or below the sample median and see how this would change coefficients. The result is presented in the first two columns in Table 5.6. For altruism, we do not observe such an effect. The coefficients drop as the samples switches to above the median. For trust, the coefficient increases from 0.432 to 12.349, which suggests the potential that the democratic process aggregates the trust preference of people. However, the estimation is not statistically robust and the sample size is halved after splitting. The imbalance sample size in above and below median results from some countries contributing nothing to humanitarian aid at all. This finding only serves as a sneak peek of the desired relationship we are looking for instead of a concrete conclusion we could make.

Table 5.5: Fixed Effects Filtered Other Preferences

	(1)
Altruism	-2.052
	(3.8189)
Positive Reciprocity	-2.877
	(3.7828)
Risktaking	-0.211
	(4.5456)
Patience	3.154
	(9.1582)
Trust	15.820**
	(6.3997)
Negative Reciprocity	-3.976
	(4.5377)
Constant	-7.385
	(4.4749)
Income	Yes
Region	Yes
R-squared	0.355
N	59

* p<0.1, ** p<0.05, *** p<0.01, standard errors in parentheses

Table 5.6: Fixed Effects Filtered Democracy Level

	Democratization Below Median	Above Median	Flawed & Full Democracy
Altruism	0.238**	-6.460	-6.950
	(0.114)	(6.041)	(5.573)
Trust	0.432	12.349	11.724*
	(0.269)	(7.604)	(6.759)
Constant	37.983***	-5.602	-7.847
	(0.144)	(9.398)	(5.482)
Income	Yes	Yes	Yes
Region	Yes	Yes	Yes
Other Preferences	Yes	Yes	Yes
R-squared	0.999	0.286	0.297
N	23	36	40

* p<0.1, ** p<0.05, *** p<0.01, standard errors in parentheses

Furthermore, since in our theoretical framework, altruistic preference would be aggregated is derived under the assumption of a democratic system, we also tried to limit the observation to countries that have a certain level of democracy. Column 3 of table 5.6 shows countries, whose average demo-

cratic score is above 60.1, which is the threshold for flawed democracy defined by The Economist. Flawed democracy means, that the nations have fair elections and ensure basic civil liberties but there may exist some faults. Though the sample size here is also modest, only 40 countries, the result suggests that in countries which have a functioning democracy system population trust does increase humanitarian aid.

6 Discussion

The different regressions from our results do not show a significant correlation between altruism and the amount of money spent on humanitarian aid. This could suggest that political processes do not aggregate basic individual preferences, at least in the case of altruism, but there also exist many caveats that preclude us from making this our definitive conclusion. In the following, we therefore look at how these caveats change the willingness for government spending on humanitarian aid and why altruism may be aggregated through the political process but is not associated with humanitarian aid by the government.

One of the caveats that may prevent us from finding a significant correlation between altruism and humanitarian aid spending is our assumption of a constant altruism level. If, however, altruism changes over time through factors such as education or personal experiences, altruism on the country level changes too, leading to an unobserved effect on foreign aid. This is modeled by Krebs/Van Hesteren (1994), who see altruism as the outcome of dynamic person-situation interactions, with latter forms of altruism being more altruistic than earlier forms. Therefore, if altruism changes over time, this introduces measurement bias that could lead to the insignificant results we find.

For another variable we use, the Gini index, we only have incomplete data which seems to not be missing completely at random and could be very important in explaining humanitarian aid support. Strong inequality in donor countries is believed to lead to decreased aid support (Chong/Gradstein (2008)), which we cannot control for in the case of missing observations. Obtaining this missing Gini index data would be helpful in better controlling for changes in aid contributions that come from varying inequality and minimizing observation bias caused by missing observations.

Additionally, one possible explanation for our findings stems from the fact that altruism may be non-universal in different countries. This is based on the work of Enke/Rodríguez-Padilla/Zimmermann (2020), where they use the concept of moral universalism to motivate how the influence of social distance on people's altruism and trust is different across countries. More specifically, people in fully universal countries care as much for people close to them as for foreigners, while people in less universal countries care more about people close to them than about domestic or foreign strangers. Applying this to our framework, people in more universal countries weigh the importance of foreign aid and domestic aid nearly the same. On the other hand, people in less universal countries prioritize domestic aid over foreign aid. Therefore, when the GPS (Falk et al., 2018) asks about altruism with

two questions concerning how willing people were to "donate to a good cause", people in morally universal countries probably thought about donating to foreign aid more than people in less morally universal countries. Interestingly, Kopczuk/Slemrod/Yitzhaki (2005) find that the US places much less value on the welfare of foreigners, with the welfare of people in Ethiopia being weighted at 1/2000 of the weight of Americans and other very poor countries also below 1%. The authors give multiple explanations for the low weight given to people in the very poor countries, one being that the US is not morally universal, another one being that transfers into these countries are not used efficiently, and lastly that there is a free-rider problem in countries receiving such transfers, also mentioned by Svensson (2000). More specifically, this free-rider problem stems from the fact that in some cases the recipient country, due to corruption and bad institutions and in hopes of receiving even more aid money, does not use aid contributions as intended, instead continuing to uphold the bad situation that caused these aid contributions (Chong/Gradstein, 2004). In summary, the correlation between altruism and humanitarian aid could be strongly diminished through the social distance between donors and recipients, with some countries acting non-universal with regards to altruism.

As mentioned in the introduction, altruism is only one of many possible reasons for humanitarian aid. Ulterior motives for humanitarian aid can have a huge effect on our findings too, as well as other factors negating the positive effect that humanitarian aid has. First, consider the ulterior motives as mentioned by Dudley/Montmarquette (1976) and Hosein/Nyst (2013), namely diplomatic influence, trade and surveillance. More specifically, Dudley/Montmarquette (1976) mention that donor countries may expect positive repercussions, e.g. through the recipient country supporting them in their political interests or increased buying of the donor country's export goods. Since most of the humanitarian aid spending is oriented at long-term goals, such as eradication of poverty, hunger or disease, aid is needed more than once. Therefore, recipients of humanitarian aid could face a decrease of aid contributions in the future, if such strategic motives are ignored. Hosein/Nyst (2013) look more closely at the effect of increased surveillance and information gathering in recipient countries, with developing countries opening themselves up to the possibility of gathering sensitive private information without any legal safeguards. One prominent example of this art of surveillance is the case of Dr. Shakil Afridi, a Pakistani physician, who through a fake vaccination program helped the CIA locate Osama bin Laden (Mullaney/Amna Hassan, 2015). This subsequently also led to an increase effort of the Pakistani Talibans against polio vaccination, resulting in lower humanitarian aid in form of vaccines and health care workers and making humanitarian aid in that region much more inefficient. Summing up, strategic motives like increased trade or surveillance can have such a strong effect on humanitarian aid that the effect from altruism on humanitarian aid becomes insignificant.

In addition, one of the most important effects we did not look at in more detail is the effect that private aid contributions, of which there is little data available, have on governmental aid contributions. However, there is research looking more closely at this subject by Andreoni (1990), who list guilt, social pressure, sympathy, and yearning for a 'warm glow' from donating as potential motivations for private aid spending. Based on this 'warm glow' theory, Chong/Gradstein (2008) developed a model

on which we touch in our conceptual framework. In the model individuals receive utility from governmental aid spending, which in our context represents utility from 'pure altruism', while private aid spending leads to utility in form of a 'warm glow', which is not purely altruistic. The questionnaire for the GPS gathering altruism data is constructed in such a way, that it includes this 'warm glow', which cannot be separated from 'pure altruism', which has no motive of positive feelings. Therefore, one could expect that more altruistic people spend a much bigger fraction on aid privately, since we assume the feeling of 'warm glow' to have a stronger positive effect on the individual's utility than 'pure altruism'. Considering this, one could hypothesize, that more altruism is associated with more private aid spending and has only a minimal association with governmental aid spending, since private aid can be seen as a substitution good. However, without private aid spending data available, we are unable to control for this substitution effect, which could also explain our insignificant results.

Lastly, one important result we find is the significant correlation between trust and humanitarian aid in our fixed effects regression. Looking at this relationship more closely, since we do not find a significant correlation between altruism and humanitarian aid, it may be that the driving factor between humanitarian aid spending is a mixture of strategic motivations and trust in the population. In line with our findings, a more trusting donor country may be more optimistic in reaching its goals through donating humanitarian aid and therefore spends more on humanitarian aid. We would expect this to be even more for the case of strategically motivated aid but it can also be due to people trusting, that the aid is used towards the humanitarian goal in an efficient and goal-oriented manner. However, there exist different factors, that can have adverse effects on this relationship too, since they lower trust in the humanitarian aid process, which in turn could lead to lower aid donations. One of those factors are negative experiences with humanitarian aid, which lowers people's trust in government-controlled humanitarian aid resorting to spending to non-governmental organisations (NGOs) or celebrities instead, if at all. One additional example of such mistrust can be found in the recent catastrophes in Iran, where instead of spending through governmental organizations people gave NGOs and even celebrities their money, because mistrust was too high (Seddighi, 2020; Safarpour, 2018). Other possible factors with the same effect are the free-rider problem, corruption of involved governments or aid recipients and general structural inefficiencies. These lower the trust in the humanitarian aid process and thereby decrease the correlation between trust and humanitarian aid, with people possibly resorting to private aid donations or no donations at all. One last factor with a possible effect on the relationship between trust and humanitarian aid is moral universalism, whereby social distance could lead to decreased trust in the effectiveness of aid donations to socially distant recipients. This could be through increased mistrust in the recipient or the general helpfulness of sending money to socially distant people. Nonetheless, even with all these adverse effects, we find a significant correlation between trust and humanitarian aid, which could suggest that the driving force between humanitarian aid donations is not altruism but rather trust, explaining the insignificant results we find.

In summary, humanitarian aid could have different motives than altruism and different caveats could have an influence on the correlation between altruism and governmental humanitarian aid

spending, which could be the reason for the insignificant results we find.

7 Conclusion

In this paper we look at the correlation between altruism on the individual level and the amount of humanitarian aid the government is donating. We do not find a significant correlation, which also holds when controlling for differences in democratization and political or economic factors. Possible explanations are that more altruistic people do not necessarily favour higher humanitarian aid contributions, maybe due to substitution goods or social distance to the recipients, or that the political process does not aggregate preferences, or possibly both. Further research on this relationship is warranted, although, to find more robust and significant results, one would need to account for missing data, substitution effects and other confounders that have an unobserved and sometimes hardly measurable effect on the relationship between altruism and humanitarian aid.

More generally and in line with our findings, altruism may be aggregated through the political process but not correlate with humanitarian aid spending by the government. In further research one could therefore focus on the aggregation of other basic preferences such as trust and their association with public policy, considering the significant correlation between trust and humanitarian aid spending we find. This could also help in explaining if the insignificant relationship between altruism and humanitarian aid we find is due to confounders or rather because of missing aggregation of preferences through the political process.

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