

Inequality and Altruism: Explore the effect of inequality on charitable giving across countries

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Introduction & Related Literature

Why people help others?

1: Some theoretical perspective (Ambiguous)

- Pure altruism (Positive)
- Impure altruism: “warm-glow” theory (positive feeling) and public prestige and respect
- Sociology Literature: As income inequality increases, then interaction between different classes decreases and social distance increases (Negative)

2: Religion

- “Ren” in Chinese traditional Confucian value system
- Zakat, the third pillar of Islam, is considered to be the law enforcement
- Buddhism’s noble Eight Fold Path
- Injunctions to be generous and give to the poor in the Jewish religion etc.

3: According to Larsbu et al (2015), there are 8 factors that can improve the charitable giving in a country: a culture of philanthropy, political and economic stability and growth, population changes, international giving, public trust, regulatory and legislative frameworks, fiscal incentive, and the state of the non-profit sector

Literature reviews:

1: McConnell, Campbell R., Brue, Stanley L., and David A. Macpherson: Becker’s Model: the Allocation of Time

- Time-intensive commodities (watching TV) are composed a large amount of time and a small amount of good. Goods-intensive commodities (a meal at a fast-food restaurant) require quite large amounts of good and little time
- As time and good are often substitutable, these two types of commodities play important role in households’ decision on how they might want to allocate their time.

2: Mastromatteo, Giuseppe, and Francesco Flaviano Russo:

- Individual-level data (World Values Survey) and country-level data (WBDI). The multilevel modelling was applied
- Crowd out effect of welfare states have been estimated: There is no crowd out effects of welfare states

3: Einolf, Christopher J. :

- Country-level variables from different years with little time series volatility; Dependent variable: donating money; 17 Independent variable were included in his work;

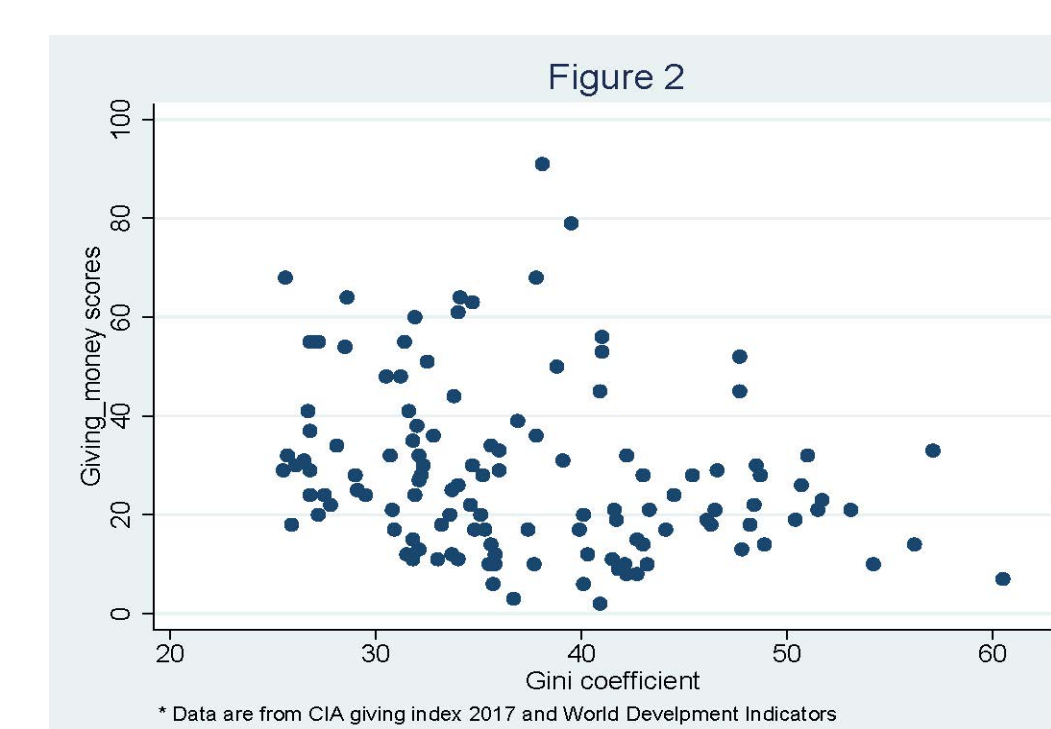
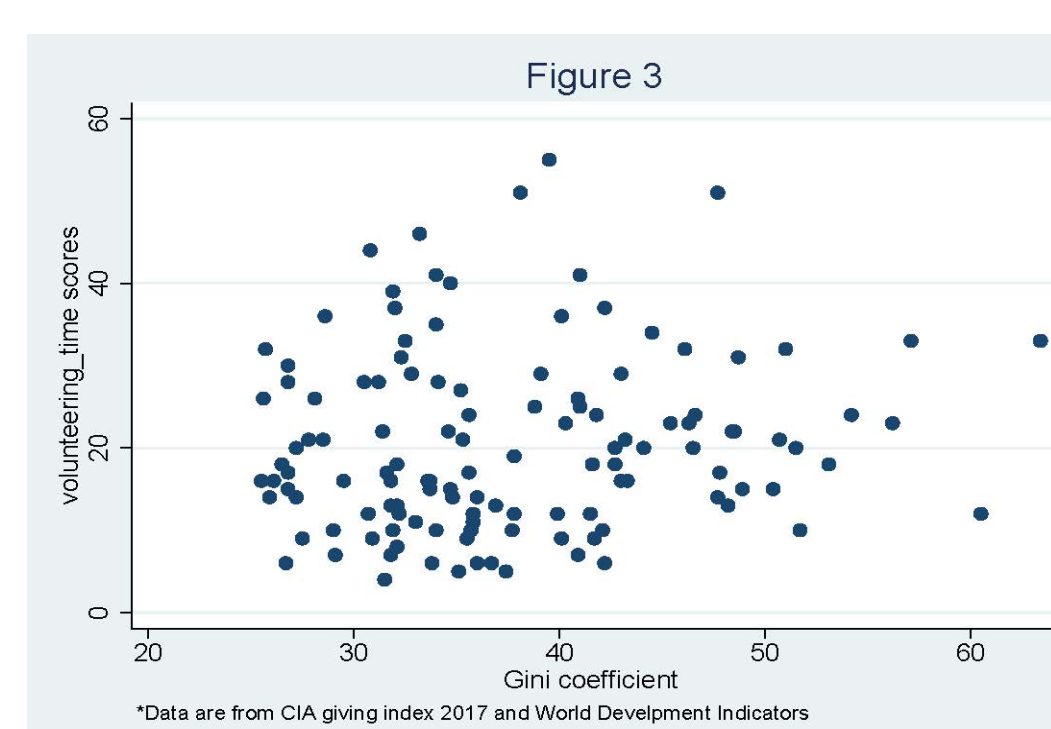
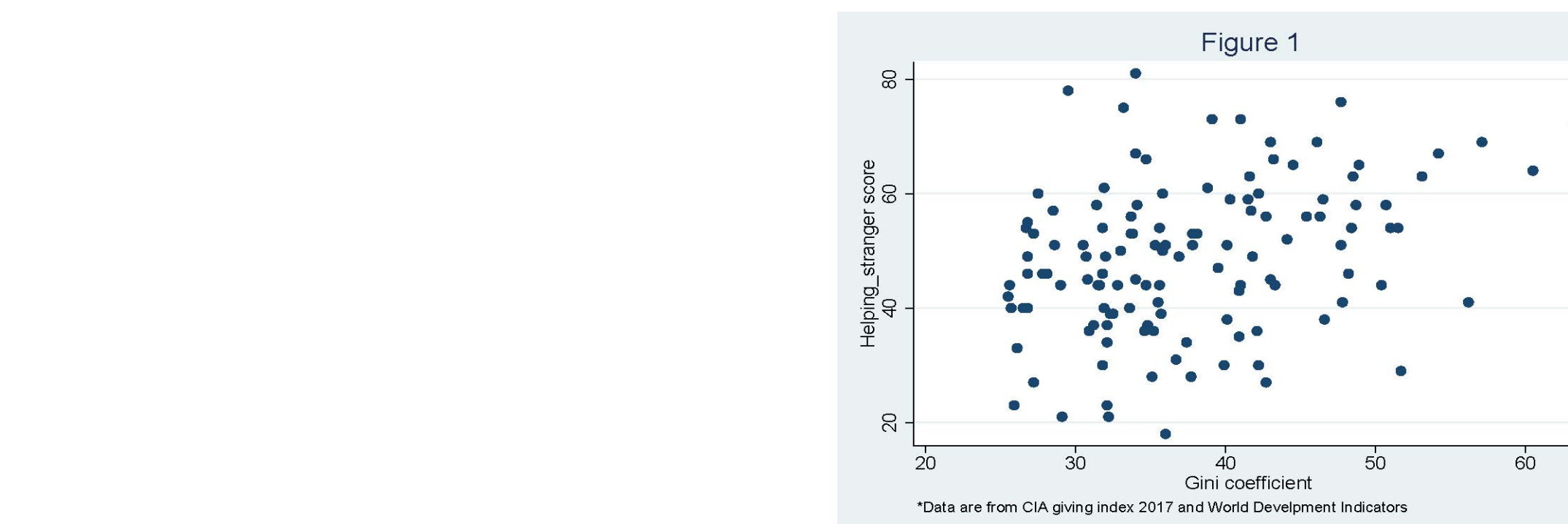
Contribution & Data

Contributions:

- Using Becker’s model to interpret the relationships between income inequality and three charitable behaviors: Helping strangers, donating money and volunteering time to an organization
- Using country-level data verifies the individual-level studies that the behaviors of donating money and volunteering one’s time to an organization are two complements
- Data from different sources and in closer years are used to testify the results of related literature like three different public expenditures are used to analyze the crowd out effects of welfare states

Data Sources:

- Dependent variable: helping a stranger or someone you didn’t know who needed help, donating money to a charity and volunteering your time to an organization (Gallup pull group 2016-2017)
- Independent variable: Gini Coefficient (WBDI,2014); GDP per capita(WBDI,2015); Government Effectiveness(WBDI,2013); Control of Corruption(WBDI,2013); Voice and Accountability(WBDI,2013); Political stability(WBDI,2013); Ethnic Diversity(Alesina et al. 2003); Linguistic Diversity(Alesina et al. 2003); Religious Diversity(Alesina et al. 2003); Health expenditure in public sector (WBDI,2014); Government expenditure on education(WBDI,2013); Public social protection expenditure as a percent of GDP excluding health care(ILO,2011)



Empirical Strategies & Models

Single regressions first:

$$Y_{volunterred,i} = \beta_0 + \beta_{gini}X_i + \mu_i; Y_{helpedpeopls,i} = \beta_0 + \beta_{gini}X_i + \mu_i; Y_{donated_mon,i} = \beta_0 + \beta_{gini}X_i + \mu_i$$

Complements or Substitutions:

$$Y_{volunterred,i} = \beta_0 + \beta_{donated_mon}X_{donated_mon,i} + \beta_{helpedpeopls,i}X_{helpedpeopls,i} + \mu_i$$

$$Y_{donated_mon,i} = \beta_0 + \beta_{volunterred,i}X_{volunterred,i} + \beta_{helpedpeopls,i}X_{helpedpeopls,i} + \mu_i$$

$$Y_{helpedpeopls,i} = \beta_0 + \beta_{volunterred,i}X_{volunterred,i} + \beta_{donated_mon,i}X_{donated_mon,i} + \mu_i$$

Multivariable regressions:

- Assumption: The independent variables predict the volunteered to an organization also predicts other two dependent variables, donated money and helped strangers. Multivariable regressions is constructed based on this Assumption and is displayed in the results
- Three Multivariable regressions are left out here as the equations are too long for the post

Result & Analysis

- As there is an increase in households’ income, households will increase more in their production of goods-intensive commodities (donating money) and increase less or decrease in their production of time-intensive commodities (volunteering time to an organization or helping strangers); As income inequality increases, low-income groups will become the larger proportion of the entire population. Because the low-income groups’ time is relatively less valuable and less rare compared to the money, they would prefer time-intensive commodities (helping strangers or volunteering time to an organization) than goods-intensive commodities (donating money).
- The positive and significant relationship between donating money/helping strangers and volunteering could be explained by either a causal relationship or as the results of shared determinants. The strong and positive correlations explained by the latter one could mean most variables affecting donating money/helping strangers are also affecting volunteering time, which partly verifies our assumption. And this strong and positive correlation using the country-level data also confirms those individual-level studies that donating money and volunteering time are complements.
- From the overall perspective, there is no crowd out effect of welfare states towards donating money, volunteering one’s time to organizations, and helping strangers. The reason could be the total amount of public expenditure is not a good indicator of the amount of goods and services that states supply. However, by looking into the subdivided public expenditure, social protection expenditure in public sector crowds out the behavior of donating money while the health expenditure crowds in the behavior of donating money.

Conclusion

Limitations:

- The question on the three measures of altruism is a simple Yes or No question. More extensive questions have not been given during the data collection.
- Since there is not much time series volatility in Gini coefficient, I filled out some countries’ missing data of Gini coefficient in 2014 with data from 2010 to 2015. I also used this technique for other variables like GDP per capita. However, this technique causes certain damage to data’s integrity
- As it is a country-level study, the small sample size is inevitable, and it will largely affect the statistical significance in the regressions

Further Studies:

- Internal remittances
- Tax deduction

Independent variable	-1	-2	-3	-4	-5	-6	-7
Gini	0.148	0.168*	0.241*	0.163	0.198	0.086	
	-0.119	-0.104	-0.127	-0.134	-0.132	-0.147	
Helped a stranger	0.27***	0.26***					
	-0.053	-0.052					
Donated money		-0.04	-0.0534				
		-0.029	0.211*	0.2*	0.2**	0.171	
GDP per capita		-0.0544	-0.119	-0.12	-0.094	-0.13	
Government Effectiveness			-8.586**	-5.801		-4.391	
			-3.392	-3.571		-3.739	
Control of Corruption			4.007	2.932		1.139	
			-2.918	-3.019		-3.176	
Voice and Accountability			4.580*	3.964		4.08	
			-2.379	-2.537		-2.856	
Political stability			-6.81*	-0.099		0.638	
			-1.694	-1.79		-1.922	
Ethnic Diversity				3.062		3.134	
				-6.375		-6.563	
Linguistic Diversity				9.969*		11.00*	
				-5.307		-5.626	
Religious Diversity				-0.85		-0.158	
				-4.672		-5.045	
Health expenditure						1.084	
						-0.864	
Education expenditure						-0.328	
						-0.692	
Social expenditure						-0.246	
						-0.276	
Total expenditure						-0.17	
						-0.169	
Constant	14.97***	-1.399	-7.845*	8.069	6.4139	19.12***	8.232
	-4.578	-2.76	-4.441	-5.866	-6.075	-2.736	-8.111
R ²	0.0125	0.417	0.4585	0.1213	0.1832	0.08	0.2201
Number of Observations	124	139	123	123	116	115	105

Note: * 1-statistics are in parentheses.
^a *** p < 0.01, ** p < 0.05, * p < 0.1.
^c GDP per capita in thousands of dollars

Independent variable	-1	-2	-3	-4	-5	-6	-7
Gini	-0.52***	-0.37**	-0.148	-0.145	-0.083	-0.241	
	-0.182	-0.151	-0.176	-0.188	-0.169	-0.187	
Helped a stranger	-0.079	0.0701					
	-0.163	-0.098					
Volunteered	0.96***	0.76***					
	-0.13	-0.117					
GDP per capita	0.381***	0.454***	0.453***	0.685***	0.452***		
	-0.073	-0.164	-0.168	-0.121	-0.166		
Government Effectiveness			-5.24	1.47		4.863	
			-4.69	-5.012		-4.767	
Control of Corruption			6.694*	5.517		0.564	
			-4.044	-4.237		-4.048	
Voice and Accountability			3.696	2.37		2.134	
			-3.297	-3.561		-3.641	
Political stability			-4.934**	-4.827*		-3.912	
			-2.347	-2.514		-2.451	
Ethnic Diversity				-0.0248		-0.348	
				-8.948		-8.366	
Linguistic Diversity				10.92		10.954	
				-7.448		-7.172	
Religious Diversity				0.323		-0.489	
				-6.56		-6.431	
Health expenditure						1.94*	
						-1.1	
Education expenditure						-0.5	
						-0.882	
Social expenditure						-0.820**	
						-0.352	
Total expenditure						-0.285	
						-0.217	
Constant	48.07***	13.77***	17.07***	25.87***	21.03**	17.22***	25.11*
	-7.01	-4.82	-6.47	-8.13	-8.53	-4.04	-10.34
R ²	0.0637	0.31	0.5208	0.3169	0.3568	0.2496	0.4816
Number of observations	124	139	123	123	116	115	105

Note: * 1-statistics are in parentheses.
^a *** p < 0.01, ** p < 0.05, * p < 0.1.
^c GDP per capita in thousands of dollars