Does the Cultural Strength of Familial Ties Affect the Redistributive Impact of Fiscal Policy?

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1.Introduction

The impact of culture on economic policy is an important area of study when it comes to development economics and the study of markets – especially foreign ones. It is important to predict how successive governments in countries will tackle their fiscal policy, whether a country's government will focus more on income redistribution or private market development. It is important in development economics and aims at helping the developing world for several reasons.

It is important to know how effective a redistributive fiscal policy will be in economies with strong familial ties. Strong familial ties tend to lower trust in the government and tax morale[1], affecting how effective redistributive policies may be. We have also seen how income inequalities affect health inequalities and premature death in Britain.[2] With even lower quality of healthcare in the developing world[3], if redistributive measures are less effective it could have deadly consequences.

Outside of pure economics and focusing on the realm of the political economy, it is important for politicians and their staff to know what groups to target when it comes to campaigning for redistributive goals. It is important to know, so resources on the campaign are used effectively, whether groups with strong familial ties are more or less likely to vote for a campaign that advocates for more redistribution.

This empirical report will provide the evidence needed to conclude that there exists a significant negative relationship between the cultural strength of familial ties in a country and the redistributive impact of its fiscal policy. We will use data from OECD countries (as well as China and Brazil) and value scores generated from answers to the World Value Survey to assess how familial ties affect redistribution. Our econometric analysis will provide two key

[1] (Marè, Motroni and Porcelli, 2020)
[2] (Thomas, Dorling and Smith, 2010)
[3] (Peters et al., 2008)

findings, firstly the significant negative relationship between familial ties and the redistributive impact of fiscal policy. and secondly the positive relationship between being a European country and the redistributive impact of fiscal policy. The report also finds a similar relationship between being a former socialist country and the redistributive impact of fiscal policy.

The report does not imply any moral judgments on either redistributive fiscal policy or family ties. This report aims to assess the relationship between the two. The report will then hypothesise why the negative relationship between redistributive fiscal policy and the strength of family ties in a country, is the case. Although the report will provide little empirical evidence as to cause and effect, due to the lack of room in the report's limits and the scope of the data obtained, it will also hypothesise on this as well. The report has only collected data on countries as a whole, though it would be beneficial to see the redistributive impact on specific groups within countries to attempt to establish cause and effect.

2.1 Empirical Model and Results

This report used the World Values Survey (WVS), Wave 7 2017-2020, survey answers in order to assess the cultural strength of familial ties in a country. We used the following 3 questions:

"For each of the following aspects, indicate how important it is in your life. Would you say it is very important, rather important, not very important or not important at all? Your family."

"I'd like to ask you how much you trust people from various groups. Could you tell me each whether you trust people from this group completely, somewhat, not very much or not at all? Your family." And;

"Do you agree, disagree or neither agree nor disagree with the following statements? It is a child's duty to take care of ill parent."

These questions were selected as they best represented familial connections in the 2017-2020 WVS survey.[4] The first question evaluates how important a person feels their family is to their life; the second evaluates the amount of trust between a person and their family members – if it is high then that implies strong family ties; and the third gives a scenario that

[4] (World Values Survey, 2020)

will evaluate the cultural responsibility a child has to their parents – once again implying strong familial ties in a country if the responsibility is high.

The report then assessed each category of answer on a scale of 1 to 4. 1 representing the most negative response, e.g., "Completely Distrust" or "Not Important at All" and 4 representing the most positive response, e.g., "Completely Trust" or "Very Important". The report then took the percentage of respondents that fell into each category and then gave an average score for each assessed country in each question using the following formula.

$$FTS = \frac{4p_4 + 3p_3 + \cdots + p_1}{4}$$

Where p_4 represented the percentage of answers as a fraction in category 4 and F represented score for that country and that specific question. Then the average of the score from the three question was taken for each country. All these scores were between 3 and 4 so we coded the final score to be between 0 and 1 by taking the original score minus 3.

$$FTS_c = FTS - 3$$

Where F_c is the coded score of the strength of familial ties for each country.

Next, we assessed the redistributive impact of fiscal policy. We did this by following the same calculation used to calculate the redistributive impact of fiscal policy indicator SDG 10.4.2 (developed by the CEQ Institute) as used by the World Bank and the UN. The measure is simply the difference between pre-fiscal and post-fiscal Gini coefficients in a country.[5] We used the OECD data from 2018[6] – as this was in the middle of the Wave 7 WVS - to obtain information about the "Market Income, Pre-Taxes and Transfers Gini Coefficient" and the "Disposable Income, Post-Taxes and Transfers Gini Coefficient" for each country studied and found the difference. This created the variable we would use in the regression called the Redistribution Gini. The larger the Redistribution Gini the more redistributive the fiscal policy in a country was.

$$G_R = G_{bt} - G_{at}$$

[5] (commitmentoequity.org, 2020)
[6] (OECD, 2021)

Where G_R is the Redistribution Gini; G_{bt} is the Gini Coefficient before taxes and transfers; and G_{at} is the Gini Coefficient after taxes and transfers.

We calculated the FTS_c and the G_R for the following countries: Australia, Austria, Brazil*, Canada, Chile*, China*, Denmark, Finland, Iceland*, France, Germany, Greece, Hungary Italy, Japan, Korea, Lithuania, Mexico, Netherlands, New Zealand, Norway, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. These countries were selected as they represented the countries that were in both the WVS, Wave 7 dataset and the OECD data set. Any country market with "*" is where 2018 data was unavailable, so the latest data had to be used (this was usually 2017 but in the case of China it was 2011).

On this dataset of 31 countries the following regression was ran.

$$G_R = a_0 + b_0 FTS_c + b_1 Euro + \varepsilon_R$$

Where $Euro$ represents a European dummy variable. This is to account for the difference as to how European governments operate when compared to the rest of the world. The different European social models, from their development post-WWII in the reconstruction of Europe[7], have a higher rate of redistribution not correlated to familial ties (as they have a correlation lower than ±0.7).

	GR	*FTS*	*Euro Dummy*
GR	1		
FTS	-0.54348198	1	
Euro Dummy	0.57568906	-0.24039185	1

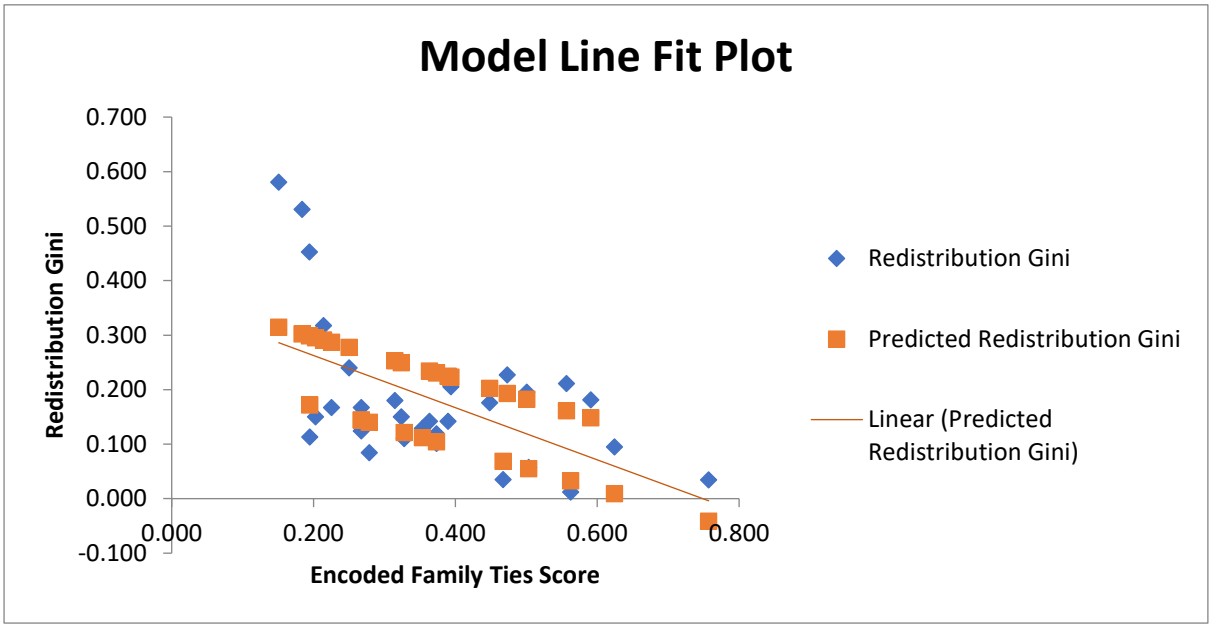
Therefore, multicollinearity is not a problem in our model, as the correlation between the Family Ties Score and the Euro Dummy is -0.24.

From our regression we then obtain the following results:

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	0.245399503	0.058124263	4.22198	0.000245
Encoded Family Ties Score	-0.378550614	0.122747087	-3.08399	0.004672
Euro Dummy	0.126443618	0.037319628	3.388126	0.002175

[7] (Obinger and Schmitt, 2018)

We see a statistically significant negative correlation between the encoded family ties score and the redistribution Gini. We also see a statistically significant positive correlation between the European dummy variable and the redistribution Gini. However, it should be pointed out that the fit of this model isn't perfect, as is shown by the residuals of the actual and predicted data.

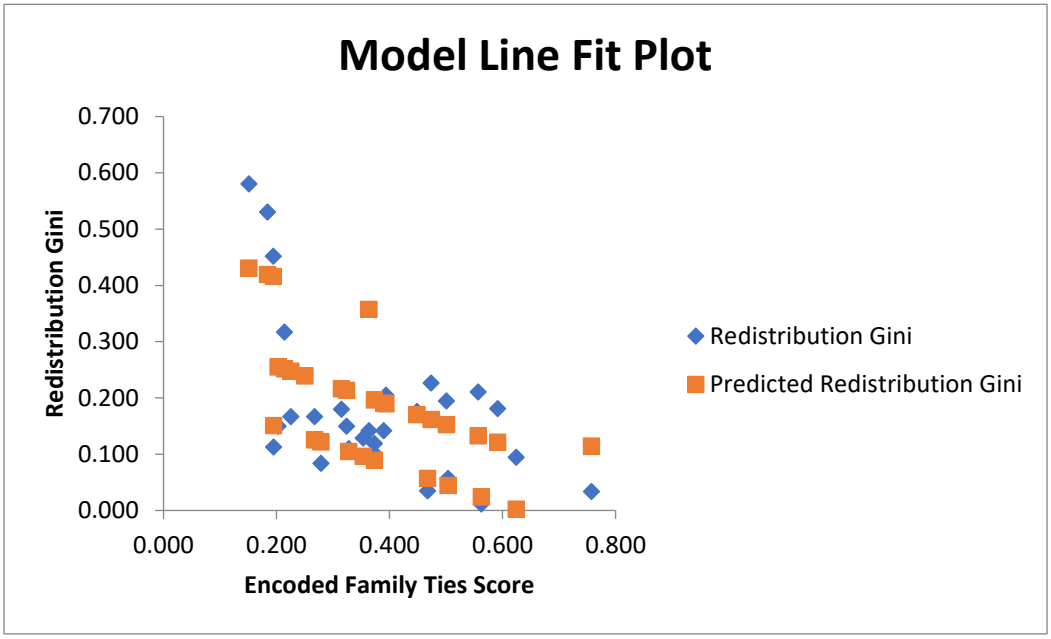


It is clear that a few outliers exist in the data. Hungary, Slovakia, and Slovenia's data points all lie way outside the bounds of the model. Their predicted redistribution Gini's are significantly lower than their actual redistribution Gini's; these countries' fiscal policies have a much greater redistributive impact than what the model predicted. This can be explained simply: the highlighted countries were all former socialist republics. By virtue of being former socialists, their redistribution Gini's are going to be much higher due to the cultural impacts of being a Socialist Republic for decades.

A second dummy variable, $b_2 Socialist$, accounting for a country being formerly socialist (for a decades, brief periods during civil wars and other events won't count for our purposes) is used to run the following second regression:

$$G_R = a_0 + b_0 FTS_c + b_1 Euro + b_2 Socialist + \varepsilon_R$$

This creates a much better fit in the model:



Now the only major outlier is Lithuania. It should be argued that this is the case due to Lithuania's complex history with the Soviet Union and current animosity towards percieved socialist policy. If Lithuania was given a value of 0, instead of 1, under the $Socialist$ dummy variable then this error would not exist. However, overall the model is a better fit. As seen by its superior adjusted R-squared value (0.664 compared to 0.469.) The new coefficients are as shown below:

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	0.218550794	0.046730932	4.676790795	7.889E-05
Encoded Family Ties Score	-0.345495184	0.098037423	-3.524115304	0.001595335
Euro Dummy	0.106958229	0.030086985	3.554966699	0.001474764
Former Socialist Dummy	0.157689666	0.0386835	4.076406359	0.000382949

Regression Statistics	
Multiple R	0.835681196
R Square	0.698363061
Adjusted R Square	0.663558799
Standard Error	0.077369148
Observations	30

Here the Family Ties Score has a less of an effect on the redistributive impact of fiscal policy in a country. Same can be said of the European dummy. However, all variables remain statistically significant, and with a better model fit we will use this regression for further analysis. The coefficient for FTS_c suggests a decrease of 0.345 for every unit increase in the

strength of the family ties in a country. The only point of concern for the model should be the high standard errors in relation to the size of the coefficients. Overall, the model has a standard error of 0.077, relatively high when dealing with coefficients of 0.107. However, the Sum of the Squared Residuals being 0.156 suggests that there exist additional factors that may help explain the variance in the redistribution Gini, however, most of the variance is explained by the model.

2.2 Cause and Effect

Although our model doesn't provide any evidence for cause and effect due to the lack of data concerning internal groups within countries, this report will attempt to hypothesise on why this is the case. Is it the case that the strength of family ties affects the redistributive impact of fiscal policy or is it the other way round? There already exists literature on how culture affects preferences for redistribution[8], considering most of the countries in the dataset used are considered democracies it is understandable that these preferences would manifest themselves in the fiscal policies of governments voted in. We can see from the relationship between family ties and government redistribution that this may also affect this preference. Having strong familial ties in a country changes how the economy operates. The smallest unit is not an individual agent but a family. A family that supports every member essentially redistributes income among themselves, a high-income father may support a lower-income son by letting him live at his house. For example, post-pandemic 32% of Brazil's households contain three or more generations (reported by Globo TV).[9]

This implies a causal effect: there is no need for the son to claim benefits if he has the safety net of his family. This lessens the demand on the welfare state and reduces the redistributive impact of fiscal policy. We can imagine countless similar scenarios, that would show how a family operating as an economic unit would reduce the preferences and the need for redistribution and therefore the redistributive impact of fiscal policy.

3. Conclusions, Qualifications and Policy Implications

This report doesn't provide a cause and effect for the relationship between the redistributive impact of fiscal policy and the strength of family ties; however, it does provide

[8] (Alesina and Giuliano, 2009)

[9] (Lauterjung, F. 2022)

econometrically significant empirical evidence for the existence of that relationship. It is clear from the analysis that the relationship between the redistributive impact of fiscal policy and family ties is negative. The model that is provided in this report is a decent fit for the data, explaining around 85% of the variance in the data. This report has also shown weaker but econometrically significant relationships between other aspects of culture and redistribution, namely, whether a country is European and whether or not it has a history of being under socialist rule. These secondary relationships were explained by the post-WWII reconstruction and the creation of the European welfare models, along with a cultural change in the former socialist countries over decades to favour redistribution more.

The main policy implications of these results suggest that policymakers should look closely at the average family structures and ties within the country before designing their fiscal policy. The redistributive impact of fiscal policy (at least in OECD countries) seems to be decided by the strength of family ties. There is no need for policymakers to seek additional redistribution if the economic unit of the family is strong and can support itself. There seems to be less need for the welfare state and fiscal redistribution if family ties are strong.

However, this report only looked at OECD countries (as that's where the data was most readily available), most of the countries in the OECD database are democracies. This raises the question of whether strong family ties demand less fiscal redistribution or if somehow strong family ties inhibit the redistributive impact of fiscal policy? A scenario explaining the former is shown in section 2.2. Still, the latter is also likely as economic literature has shown that there exists a relationship between the strength of family ties and the underground economic activity[10], which in turn could limit the amount of fiscal redistribution taking place in a country by making income less taxable.

Despite the additional questions that this report raises and recommends further investigation into, it is clear that policymakers must take into account the strength of family ties within a nation when designing fiscal policy due to the significant negative relationship between the strength of family ties and the redistributive impact of fiscal policy as shown in this report. The family is a key cultural and economic unit and should not be ignored by policymakers.

[10] (Marè, Motroni and Porcelli, 2020)

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