

A Cross-National Analysis of Individuals' Perceptions, Actual Inequality, and Attitudes Toward Economic Disparities

ABSTRACT:

This paper delves into the intricate relationship between the perception of economic inequality, its objective manifestation measured by the Gini index, and individuals' attitudes towards economic redistribution. Focusing on the global context, the study explores how geographical location influences these dynamics, considering cultural, economic, political, and historical factors. Employing a multilevel model and utilizing data from the ISSP 2019 and the World Bank, the research analyzes the interplay between subjective perceptions, objective measures, and attitudes, offering insights into systematic variations between countries. Findings indicate that citizens in European nations tend to be more supportive of policies contrasting economic inequalities, while the study contradicts the Meltzer-Richard hypothesis, revealing nuanced relationships between actual inequality, perceived inequality, and attitudes towards redistribution.

Keywords: economic inequality, Gini index, economic redistribution, multilevel model, socio-political contexts, ISSP 2019

INTRODUCTION:

In the contemporary socio-economic landscape, the escalating issue of economic inequality stands out as one of the most pertinent and extensively debated challenges. Numerous scholars assert that this inequality has witnessed a surge across societies, with indications pointing toward a probable continuation in the future (Alvaredo et al., 2017). The disparities in income and wealth distributions have ignited profound questions regarding social stability, justice, and economic efficiency. This study focuses on the intricate relationship between the perception of economic inequality, its objective manifestation through measures such as the Gini index, and individuals' attitudes towards economic redistribution. Economic inequality emerges as a paramount challenge for society today, influencing economic development, stability, and overall well-being (Alvaredo, Chancel, Piketty, Saez, & Zucman, 2018).

To mitigate this inequality, policymakers must implement measures targeting wealth redistribution, ensure comprehensive welfare state systems, and advocate for progressive taxation. The role of policymakers is pivotal in executing strategies aimed at transferring wealth from the affluent to the disadvantaged.

Despite the imperative of redistributive policies to reduce inequality, such measures often face public resistance. One distinguishing factor may be geographical location. In our globally interconnected society, perceptions of economic inequality can vary significantly from one country to another, influenced by cultural, economic, political, and historical factors. These disparities can markedly impact individual attitudes and responses to the challenges posed by economic inequality.

Studies indicate that Americans may exhibit a higher inclination to support tax cuts for the wealthiest while generally opposing public spending on social services (Garcia-Sanchez, Willis, Osborne, Rodriguez-Bailon, 2019). In contrast, European countries, such as the Netherlands, showcase situations where the welfare state is expansive, and citizen acceptance is high (Szirmai, 1986). From a broader perspective, the Meltzer-Richard hypothesis posits that "economic inequality should motivate the median voter to demand more

redistribution" (Meltzer & Richard, 1981). However, subsequent studies reveal a nuanced relationship, with findings indicating positive, negative, or null correlations between inequality and attitudes towards redistribution (Garcia-Sanchez, Willis, Osborne, Rodriguez-Bailon, 2019).

Despite the Meltzer-Richards claim assuming voter knowledge about the economic realm, individuals tend to underestimate economic inequality, fostering systematically misguided perceptions of resource allocation in society (Garcia-Sanchez, Willis, Osborne, Rodriguez-Bailon, 2019). Attitudes towards redistribution are shaped by perceived economic inequality in daily life, with studies suggesting that individuals in less equal environments are more likely to support wealth redistribution policies (Kearns et al., 2014). Therefore, the intricate relationship between these factors struggles to unfold and resolve in a straightforward manner. On one hand, individual perception is presumed to have some positive effect on attitudes towards redistribution. On the other hand, actual national-level inequality should be a factor to consider when discussing about economic redistribution.

To address the complex interplay between economic inequality, individual attitudes, and country-specific contexts, this study sets out to analyze divergences in attitudes toward economic inequality across individuals within different countries. Furthermore, it delves into the intricate dynamics through which both perceived and actual economic inequality shape attitudes and stances regarding the redistribution of economic resources. The investigation aims to uncover how individuals' perceptions of economic inequality influence their attitudes toward economic issues, with a specific emphasis on the varying contexts of different countries. Employing a multilevel model that takes into account the distinctiveness between countries as a pivotal analytical factor, the study endeavors to identify systematic variations and evaluate how these disparities contribute to shaping citizens' perceptions and attitudes regarding economic inequality. In essence, this research significantly enriches our understanding of the interplay between perceptions of economic inequality and the unique contexts of different countries, casting light on the reciprocal influences that shape individual attitudes toward economic and social policies.

Given these premises, the research hypotheses guiding my paper are three:

- Hypothesis 1: Geographical location influences attitudes toward economic redistribution.
- Hypothesis 2: The perception of inequality and personal values positively influence attitudes toward redistribution.
- Hypothesis 3: Finally, given Meltzer and Richard's hypothesis, individuals living in a situation of inequality will have a higher propensity to advocate for economic redistribution.

DATA AND METHODOLOGY:

Like numerous preceding studies on redistribution, in an effort to address the research questions, I employed the dataset provided by ISSP 2019, titled 'Social Inequality V.' This dataset encompasses a multitude of variables pertaining to economic situations and associated values. In addition to this, it was necessary to utilize data related to the Gini index, which I retrieved through the World Bank portal (<https://data.worldbank.org/indicator/SI.POV.GINI>). The countries under examination are a total of 20, spanning across Europe, America, and Asia. These include: Russia, Philippines, Slovenia, Chile, Bulgaria, Thailand, Lithuania, Czech Republic, France, Italy, Austria, Israel, Great Britain, Croatia, Germany, Denmark, Sweden, Finland, United States, and Australia. While the sample consists of 29,370 observations. As mentioned in the introduction, the three essential variables used in this study are a composite index constructed through Principal Component Analysis (PCA) and pertains to the 'Attitude Towards Economic Inequality' index. The second variable addresses actual inequality, utilizing the Gini index, while the third is the perception of economic inequity.

1- Attitude towards economic inequality

The primary and integral part of my work involved constructing the 'Attitude Towards Economic Inequality' index. The previous literature has provided intriguing insights into the issue. In my study, I have therefore chosen to interpret this index as the combination of personal beliefs and opinions on the role of economic actors as the key components for the construction of this index:

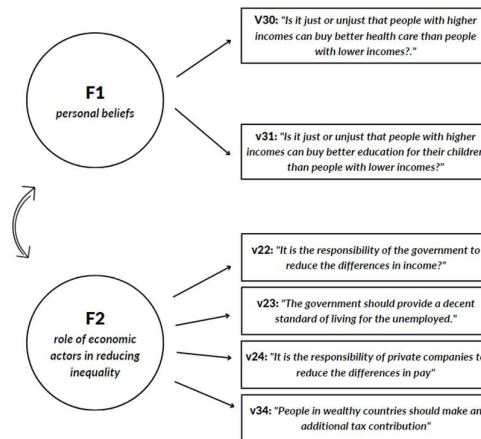


Figure 1 Composition of the two factors contained in the index.

As illustrated in the diagram, Factor 1 pertains to personal beliefs, with questions V30 and V31 used in the questionnaire. For the role that economic actors should play, questions V22, V23, V24, and V34 were employed. These questions all address opinions on taxation, the reduction of inequalities by policymakers, and private economic actors. The variables were recoded to ensure they are ascending (1: strongly disagree, 4: strongly agree) and missing values were removed. The construction of this index was carried out through Principal Component Analysis (PCA) with an oblique rotation (oblimin). More detailed information is provided in the appendix. After extracting the factor loadings and creating the two factors, we decided to sum the factors to create our index of attitude towards economic inequality. This index has a range from 4.681 to 23.405, where a higher value indicates a greater inclination towards economic redistribution.

2- Gini Index

As stated earlier, data regarding the Gini index were obtained from the World Bank website for the year 2018. The Gini index is a measure of the inequality of a distribution and ranges from 0 to 1. Low values of the coefficient indicate a fairly homogeneous distribution, with 0 corresponding to pure equal distribution, while high values indicate a more unequal distribution. In our dataset, the Gini index has a range that spans from 0.249 to 0.44.

3- Perception of economic inequality

As for the perception of economic inequity, I used the variable corresponding to question V21: Differences in income in [Country] are too large. To harmonize it with the other variables, the variable was recoded to ensure it is ascending (1: strongly disagree, 4: strongly agree) and missing values were removed.

ANALYSIS AND RESULTS:

The structure of my analysis unfolds as follows: tracing the logical thread of the hypotheses that form the foundation of my research, I will explore the distribution of attitudes towards inequalities across the countries in question. To achieve this, I will undertake a univariate analysis utilizing the composite index I have developed. Subsequently, I will progress to a bivariate analysis examining the relationship between perception and attitudes towards economic inequalities. I posit that this effect is not random but influenced by socio-political contexts. To address potential random effects, I will employ a multilevel model. Finally, I will integrate the Gini index into the model to evaluate the impact of actual inequality.

1. Univariate distribution of the variable 'Attitude Towards Economic Inequality,' divided by country.

Recalling the first hypothesis, which states, 'Geographical location influences attitudes toward economic redistribution', I will base the univariate analysis on ANOVA and distribution by grouping the data according to the nation.

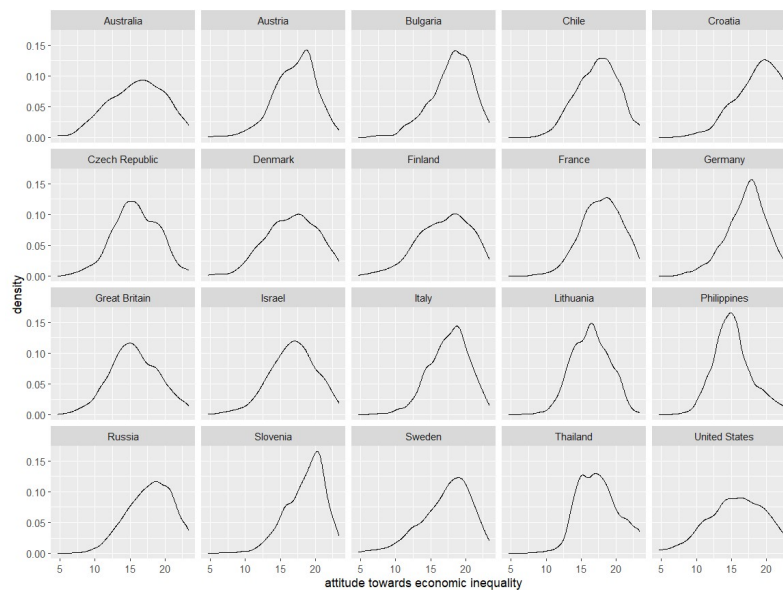


Figure 2 Density plot of the dependent variable divided by countries.

The density plots divided by country in Figure 2 are highly illustrative in this regard. Thanks to these, we can observe the distribution of the variable in each context. It is therefore assumed that countries with a distribution heavily skewed to the left have a citizenry more inclined to tackle economic inequalities. The Anglo-Saxon countries and the Philippines exhibit a distribution with a normal shape, where the majority of observations cluster around the mean. In contrast, the pattern in other cases appears more skewed to the left, indicating a greater inclination to contrast economic inequalities. Revisiting the previous theory upon which our assumptions are based, the results do not surprise me at all: European citizens are historically and socially more inclined to accept systems for fight inequalities, using tools such as progressive taxation and welfare systems.

Figure number 3 displays box-plots divided by nation for the variable 'Attitude Towards Economic Inequality.' They are arranged based on national means regarding this variable. After verifying that the results of the ANOVA test were significant (F Statistic = 163.3, P Value = $<2e-16$ ***), we can assert that countries with a higher average of citizens favourable to combating economic inequalities are generally European (such as Croatia, Slovenia, Bulgaria, France, Russia, and Italy, ranking among the top 6). On the contrary, countries with

a lower average are Anglo-Saxon nations (Great Britain, Australia, the United States), as well as the Philippines and the Czech Republic.

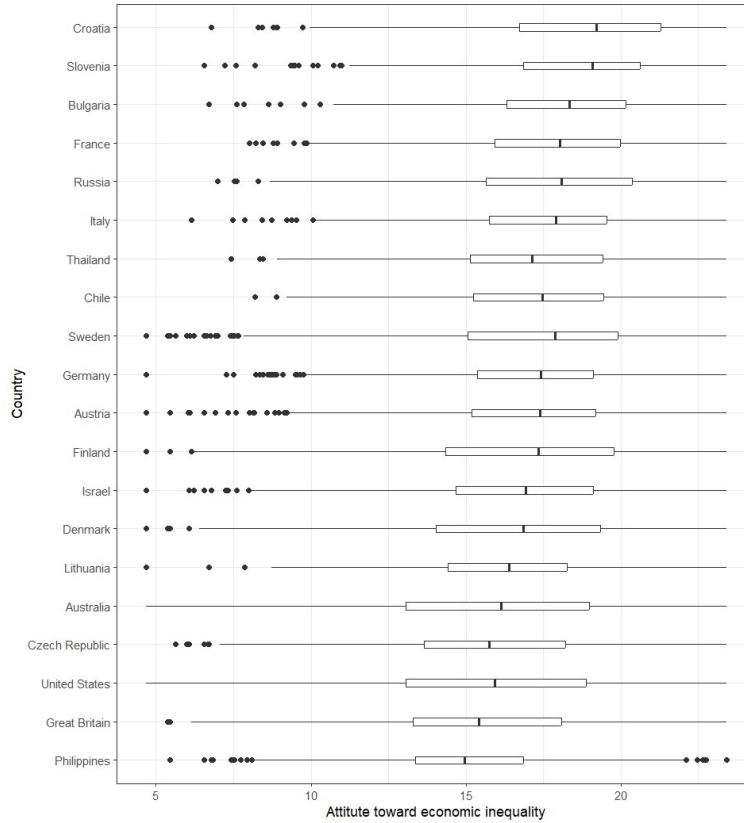


Figure 3 box-plots, divided by country

Considering these results, we can already assert that the national means are significantly different. Let's proceed with our analysis by constructing the bivariate model.

2. Multivariate models

To address the other two research hypotheses, I have constructed a multivariate multilevel model. I relate the variables perception and attitude toward economic inequality by controlling the results with the value of the gini index. This multilevel model is a random slope model built following this equation:

$$Y_{ij} = \gamma_{00} + \gamma_{10}x_{ij} + U_{0j} + U_{1j}x_{ij} + R_{ij}$$

Where:

- Y_{ij} is the outcome variable ("att_eco" in our case) that varies by individual, i , and country, j .
- γ_{00} is the intercept, or the expected value of the outcome over all the individuals and countries.
- x_{ij} is the effect of the independent variable, that varies by individual, i , and country, j .
- U_{0j} is the between country variation.
- U_{1j} is a random effect (i.e., random slope) that summarizes the variation between countries in the effect of x_{ij} .
- R_{ij} is the residual of the regression, or in this case, the individual level variation.

I decided to use a random slope model because it takes into consideration the effect of the nation more comprehensively. It allows us to determine if one level of perception is more 'effective' in some countries than others in garnering support for economic redistribution policies.

Results:

Linear mixed model fit by REML ['lmerMod']				
Formula: att_eco ~ 1 + Value + 1 + perception + (1 + perception country)				
Scaled residuals:				
Min	1q	Median	3q	Max
-4,7656	-0,6491	0,0252	0,6884	4,8113
Fixed effects:				
	Estimate	Std. Error	T value	
(intercept)	12,2527	1,0706	11,445	
Value	-5,925	2,837	-2,089	
Perception	1,6175	0,1109	14,591	
Random effects				
Groups	Name	Variance	Std.Dev.	Corr
country	(Intercept)	4,8158	2,1945	
	perception	0,2368	0,4866	-0,94
Residual		8,0848	2,8434	
Number of obs: 29370, groups: country, 20				

The mixed-effects model I adapted aims to explore the association between the 'Attitude towards economic inequality' index (att_eco), the Gini index variable (here called Value), and individual perception of economic inequality (perception). Before delving into the analysis, I want to focus on the interpretation of the residuals. The symmetric distribution of residuals around zero suggests that the model is adequately capturing the central tendency of the data. This is a positive sign, as it is assumed that the residuals follow a normal distribution

Fixed effects interpretation:

The intercept represents the average attitude towards economic inequality when other variables are zero. In this case, the intercept is positive (12.2527), suggesting a baseline positive inclination towards reducing economic inequality. The negative coefficient for 'Value' indicates that, holding other variables constant, an increase in the Gini index is associated with a decrease in the attitude towards reducing economic inequality. This relationship contrasts with the Meltzer-Richard hypothesis (and our third research hypothesis), which assumes that individuals living in conditions of high inequality would demand more redistribution. Finally, the positive coefficient for 'Perception' suggests that an increase in individual perception of economic inequality is associated with a more favorable attitude towards its reduction.

Random effects interpretation:

The variance of the intercept effect among countries is significant (4.8158), indicating that there is substantial variability in attitudes toward economic inequality among different countries. As for the variability between countries, the variance of the effect of perception among countries is relatively low (0.2368), but the

significant negative correlation (-0.94) with the intercept suggests that in countries with a more positive initial inclination, individual perception might have a less pronounced impact.

In summary, it can be stated that, overall, the perception variable has a positive effect, while the Gini index has a negative effect within our model. However, the negative correlation between individual perception and the initial attitude suggests that people in countries with a greater inclination to reduce economic inequality may be less influenced by their individual perception.

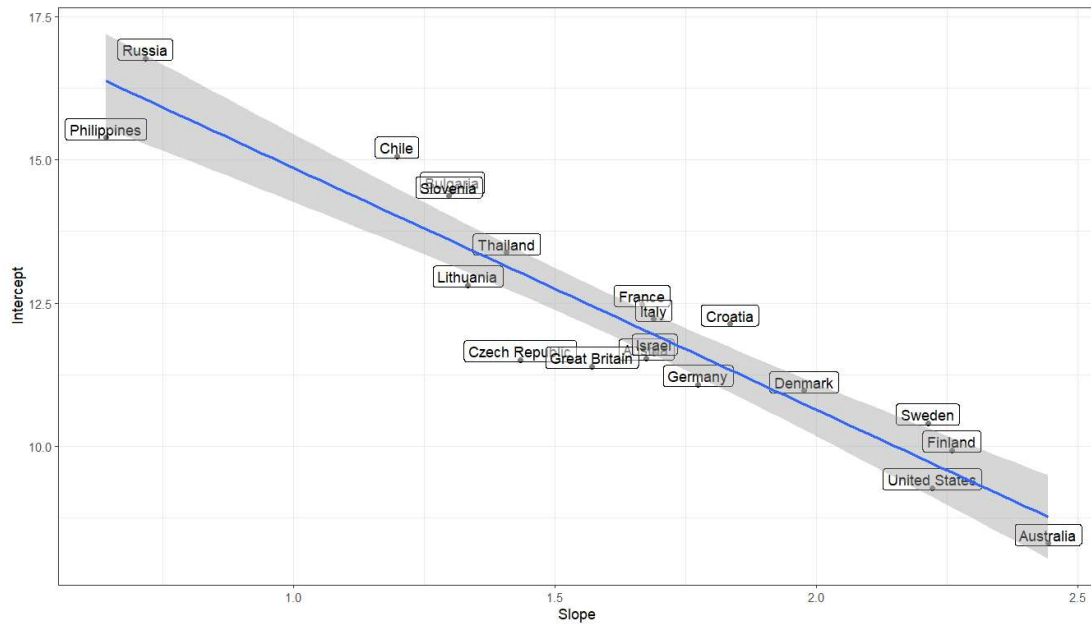


Figure 4 perception' random effects on the dependent variable

The graph in Figure 4 aids in better understanding the random effect of the perception variable on the 'Attitude toward Economic Inequality.' The negative relationship, as mentioned earlier, suggests that people in countries with a greater inclination to reduce economic inequality may be less influenced by their individual perception. In the graph, the intercept of the line for each country is represented on the y-axis, while the slope is on the x-axis. The line follows the strong negative inclination indicated by the correlation of -0.94.

The interpretation is as follows: a country like Australia and the United States has, on average, a low favorable attitude towards economic redistribution, but the effect on individuals of individual economic perception is very strong. In these countries, those with a strong perception of inequality tend to have more favorable attitudes towards redistribution. On the contrary, the opposite can be said for the Philippines and Russia: generally, individuals are more favorable towards economic redistribution, but the effect of perception is decidedly lower at the individual level.

In conclusion, regarding hypotheses 2 and 3: hypothesis 2 is confirmed, but partially. The perception of inequality has a positive effect on the attitude toward redistribution, but at the individual level, it seems to be stronger in countries where the average level of 'Attitude towards economic inequality' is lower. However, hypothesis 3 is contradicted, as in countries with high actual inequality, calculated through the Gini index (exogenous variable), the attitude towards economic inequality is lower.

CONCLUSION:

In summary, this study adds to the diverse literature on economic inequality, revealing the connections between subjective perceptions, objective measures, and societal attitudes towards redistribution. The

results partially confirm conventional hypotheses, showing a positive interaction between perceived and actual inequality, while partially refuting the relationship between attitudes towards redistribution and actual inequality contained in the Meltzer-Richards hypothesis. Through the lens of univariate analysis, I demonstrated that attitudes towards redistribution vary significantly from one country to another, indicating that citizens in Anglo-Saxon countries are less inclined to accept redistributive policies.

Using a multilevel model, the research contributes to a deeper understanding of global variations in responses to economic inequality, emphasizing the importance of considering both individual perceptions and country-specific factors to assess individual attitudes in this matter.

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APPENDIX:

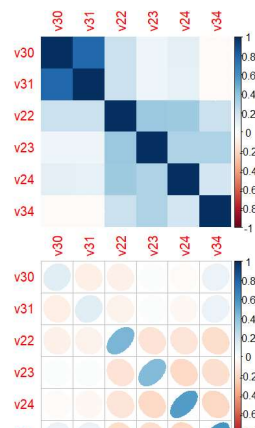


Figure 6 corplot and residual corplot

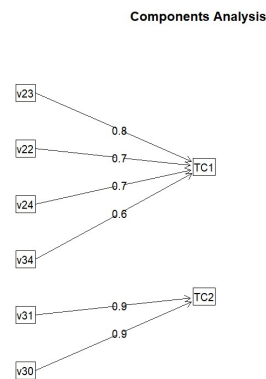


Figure 5 component analysis diagram

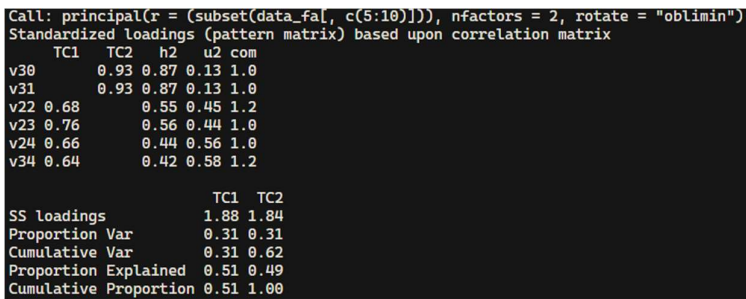


Figure 7 principal component analysis

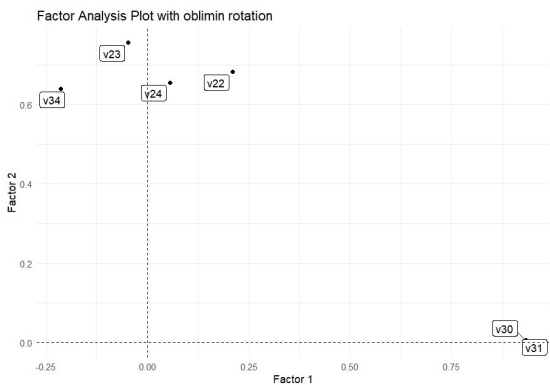


Figure 9 factor analysis plot

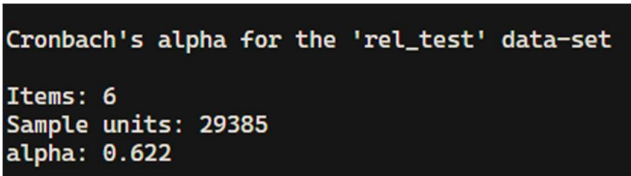


Figure 8 cronbach' alpha

