

# Final Paper—Wrong Leader, Unequal Society?

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## RESEARCH QUESTION

What best predicts perceptions of inequality, a high GINI index, voting for a left-leaning party, or the leadership of a leader one opposes? Stated as three hypotheses, this means: (1) A high GINI index has the highest probability of predicting perceptions of inequality; (2) Voting for a left-leaning party has the highest probability of predicting perceptions of inequality; (3) The leadership of a leader that goes against one's political views in year of survey has the highest probability of predicting perceptions of inequality.

## DATA

All materials and analyses for this pre-registered study were placed on a public github account: <https://github.com/AlexanderTheAlright/git/tree/main/issp>. The data for this study merges three datasets: The 2019 "Inequality Module" of the *International Social Survey Programme* ( $N = 44,975$ ), the World Bank's *World Development Indicators*, and the *Political Institution Database*. The *International Social Survey Programme* is a cross-national collaboration of annual cross-sectional surveys from all over the world. These three datasets will all be merged on the country\_code identification variable. The "Inequality Module" is one of their sections that is specifically focused on individual perceptions of inequality. The goal of their sample is to represent the national population 18 years or older. The sampling procedure used is a multistage simple random probability sample which collects data through a combination of web-based surveys, telephone, and face-to-face interviews. The *World Development Indicators* and *2020 Political Institutions Database* are collections of national, regional, and global estimates of economic and social development as well as political leadership. It was added as a supplementary component of the data since the inequality module did not include country-level data such as the election of a leader one opposes.

The focal variables are four: (DV) perceived inequality; (IV1) gini; (IV2) left; (IV3) opposed. Any missing data will be dealt with through listwise deletion. In order to meet the merging criteria of the database for political institutions, many countries were excluded from the final analysis, resulting in a final  $N$  of 7,657.

*perceived inequality*. The ordinal variable, perceived inequality, was recoded from the "type of society" question, v48. The type of society question provides five pictorial representations of the distribution of wealth in one's society before asking the respondents to select which society represents their own. TYPE A, "A society with few elite and a mass at the bottom," represents the most inequality, whereas TYPE D and E represent the least (the largest middle class). These response choices were coded from TYPE A = 4, TYPE B = 3, TYPE C = 2, TYPE D = 1, and TYPE E = 0.

*gini*. The GINI index value will be treated as a continuous variable out of 100. The gini value will be appended to the existing ISSP dataset by country. The GINI coefficient is a measure of inequality ranging from 0, perfect inequality, to 100, perfect equality.

*left*. Support for left-wing party was recoded from the PARTY\_LR variable. The ISSP's PARTY\_LR variable classifies the vote of the respondent in the last election on a unified 'left' and 'right' scale. This variable was recoded as dummy variable, 1 = left-wing party and 0 = neutral or right-wing party.

*opposed*. This variable was taken by merging the data from the *Political Institutions Database* on the leader of the country in 2018 that ranks the current leader as 'left' or 'right.' To avoid disjunction in the election, I will code the leader of the country in the year preceding the ISSP survey. This variable was transformed into a dummy code whereby if the leader in 2018 = left and left = 1, then opposed = 0 and vice versa.

*controls*. Seven controls known to effect perceived inequality were used in ascending analyses. Age, sex, education, subjective social status (SSS), and mode of survey. Age was treated as a continuous variable, from 18 onwards. Sex was treated as a binary, female = 1 and male = 0. Education was measured in terms of years from EDUCYRS and was treated as continuous in analysis. Education and leftism have been known to be associated, which would therefore confound the full effect if not controlled for. Income is also included since higher income tends to be associated with perceptions of inequality. Subjective social status measures an individual's sense of where they are relative "to those with the best jobs, highest incomes, and best educations" on a scale from 1 to 10. Subjective social status was included to reduce the effect of personal position in society and emphasize the country or political ideology level indicators of perceived inequality. Subjective social status is commonly found to be associated with perceived inequality. Subjective social status was treated as a continuous variable. Perceived inequality can sometimes be affected by the social desirability, potentially meaning that in-person surveys will lead to lower reports of perceived inequality; as a consequence, survey mode will be treated as a categorical "online," "in-person," and "telephone."

## PLAN OF ANALYSIS

Many changes took place from the original research protocol. Given the complexity of calculating bayes factors for an ordinal logistic regression, I decided to instead run only ordinal logistic regression and interpret the p-values and effect sizes of the result to determine which independent variable had the strongest association with perceived inequality. Given that perceived inequality tends to conform to a normal distribution, I believe this method is unideal but appropriate. Below are my four models:

1. **Model one, gini:** perceivedinequality – gini + age + sex + education + sss + survey\_mode
2. **Model two, lefty:** perceivedinequality – lefty: age + sex + education + sss + survey\_mode
3. **Model three, opposed:** perceivedinequality – opposed + age + sex + education + sss + survey\_mode
4. **Model four, combined:** perceivedinequality – gini + left + opposed + age + sex + education + sss + survey\_mode

These four basic models were all interpreted to whether the focal independent variable was strongly associated with perceived inequality and whether this changed on its own vs. in the combined model. After the initial analyses, sensitivity analyses were also conducted using different variations of the controls (available on github).

## RESULTS

For ease of interpretation, I present only the results of the focal variables. There were three controls, however, that had interesting results. For instance, 'age' consistently shows a small but significant positive effect across all models (coefficient = 0.005,  $p < 0.01$ ), indicating that older individuals tend to perceive more inequality. Subjective social status (sss), with categories from

1 to 10, shows a strong gradient. Lower status (e.g., 'sss1') is associated with higher perceptions of inequality, whereas higher status correlates with lower perceptions. This gradient is significant and consistent across models.

*Regression results by on merged ISSP dataset by model (N = 7,657).*

| Key IV's         | Model 1             | Model 2             | Model 3              | Model 4              |
|------------------|---------------------|---------------------|----------------------|----------------------|
| Gini coefficient | 0.024***<br>(0.002) |                     |                      | 0.022***<br>(0.002)  |
| Left ideology    |                     | 0.329***<br>(0.044) |                      | 0.378***<br>(0.049)  |
| Opposed leader   |                     |                     | -0.236***<br>(0.064) | -0.213***<br>(0.074) |
| Constants        |                     |                     |                      |                      |
| 1/2              | -1.969***           | -2.578***           | -2.733***            | -1.952***            |
| 2/3              | -0.651***           | -1.281***           | -1.442***            | -0.623***            |
| 3/4              | 1.482***            | 0.834***            | 0.669***             | -1.517***            |

*Note:* Age, sex, education, subjective social status (SSS), and mode of survey are included as controls in all models. *P-values* are \* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ .

The Gini coefficient in both Model 1 and Model 4 shows positive and significant coefficients (0.024\*\*\* and 0.022\*\*\* respectively), indicating a strong relationship between higher Gini coefficients (representing higher income inequality) and the perception of inequality. The constants in these models help us understand at what thresholds these perceptions change. The negative values for the lower thresholds (1/2 and 2/3) indicate that at lower levels of perceived inequality, the effect of the Gini coefficient is more pronounced. The positive value for the higher threshold (3/4) in Model 1 indicates a different dynamic at the upper end of perceived inequality. The effect size, however, is fairly small, representing a small effect for objective inequality on perceived inequality,

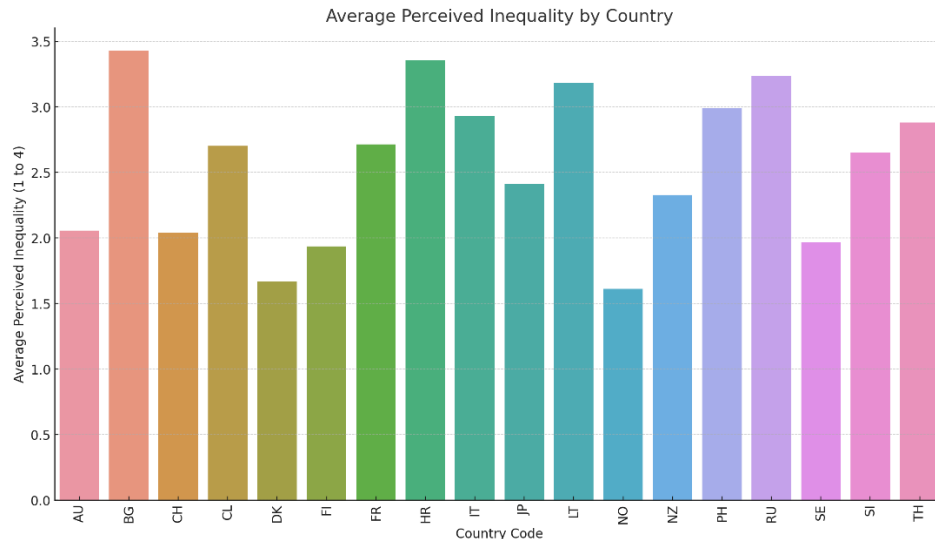
The variable 'Left ideology' shows significant positive coefficients in both Model 2 (0.329\*\*\*) and Model 4 (0.378\*\*\*). The shifts in the constants, particularly the increase in the negative values from Model 1 to Model 2 and Model 4, suggest that the addition of left ideology as a variable significantly changes the thresholds at which perceptions of inequality change. This indicates that identifying with or voting for a left-leaning party is positively associated with higher perceptions of inequality. Therefore, this finding supports Hypothesis 2, demonstrating that left-leaning political views are likely to increase the probability of perceiving higher levels of inequality. The increase in the coefficient from Model 2 to Model 4 also suggests that this effect is robust even when the combined independent variables are considered.

The variable 'Opposed leader' in Model 3 and Model 4 shows significant negative coefficients (-0.236\*\*\* and -0.213\*\*\* respectively). This indicates that opposition to the leader (presumably measured in the year of the survey) is inversely related to the perception of inequality. The constants in these models, especially the negative values for the lower thresholds, suggest that opposition to the leader is associated with lower perceptions of inequality at these thresholds. The change in constants from Model 2 to Model 3 and Model 4 indicates how the inclusion of opposition to the leader shifts the overall distribution of perceived inequality. In other words, those who oppose the leader tend to perceive less inequality. This result does not support Hypothesis 3, which posited that opposition to the leader would be associated with a

higher probability of predicting perceptions of inequality. Instead, the data suggests the opposite effect.

## EXPLORATORY ANALYSES

In addition to the ordinal regression analysis, I also explored some of the breakdowns of perceived inequality by country. To conduct this comparison, I created a chart of the average perceived inequality for each country code (represented in short form at the bottom of the graph).



## DISCUSSION

The findings for this study indicate that perceived inequality is most influenced by left wing views rather than by objective inequality or by the leadership of a leader one opposes. Many study limitations, however, dilute the ability of this study to draw firm conclusions.

The leadership of a leader with a viewpoint different from one's own (measured by the database of political institutions), turned out to have the opposite effect. This could be due to a variety of unexplored factors, such as there tending to be less left ideology for countries with right leaders, the effects of 2018 leadership wearing off by 2019, or by measurement error of the database of political institutions. The measurement of the "execrlc" variable also only includes the rated ideology of the executive of state, potentially reducing or inverting the effects of the power of parliament (which may have an ideology different from the executive). It is also worth noting that the addition of left-wing ideology in the combined model reduced its effect further, suggesting that some of its effect was due to the prevalence of left-wing views. Still, the continued negative effect of a leader one opposes on perceived inequality prompts much further exploration.

In order to meet the merging criteria of the database for political institutions, many countries were excluded from the final analysis. This exclusion significantly reduced the power of the results, crippled as they already were by the deletion of non-responses. The exploratory analyses show that there was already significant variation by country. Future studies should rectify this error by collecting more data on the leadership and ideology of other country leaders.