

Supporting Information for Inequality and the
Dynamics of Public Opinion: The Self-Reinforcing
Link Between Economic Inequality and Mass
Preferences

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In the published version of our article, there were a few important points that we were unable to include due to space limitations. In this supporting information document, we elaborate on two specific items. First, we provide a more detailed discussion of error correction models in order to help readers unfamiliar with this technique understand our analysis in greater detail. Second, we discuss supplementary analyses that addresses alternative hypotheses that we were not able to fully address in the article.

Time-Series Analysis: A Brief Explanation of Error Correction

One way to express a single-equation error correction model is as follows:

$$\Delta Y_t = \alpha_0 + \alpha_1 Y_{t-1} + \beta_1 \Delta X_t + \beta_2 X_{t-1} + \epsilon_t$$

For each independent variable X we have up to two parameter estimates— β_1 for the differenced variable, its change from one point in time to the next, and β_2 for the lagged level of the variable, which can be dropped from the equation if we find that it has no statistically significant impact. But what do these two parameter estimates mean? In this simple bivariate example, β_1 provides an estimate of the initial change in the dependent variable produced in the short term by a shock to the independent variable. For example, if unemployment increases and public opinion responds, the short term coefficient, β_1 , provides an estimate of the size of this shift. This is called the “short term” effect, which does not mean that the effect is impermanent but that the effect occurs wholly at a specific point in time.

β_2 and α_1 provide the information needed to estimate the slightly more complicated “long term” impact. This is also called the error correction component of the model. The long term impact is the portion of the connection between X and Y that does not occur at one particular point in time but is distributed temporally such that a portion of the impact is felt in each period over a time span. The size of this long run impact is a function not only of β_2 but also of α_1 , which is known as the error correction rate. The total long term impact of a shock to X on Y via the error correction component, the long run multiplier,

is computed by dividing β_2 by α_1 . Returning to a substantive example, if the impact of unemployment is linked to public preferences via an error correction mechanism, a shock to unemployment disturbs the long run equilibrium between unemployment and public mood, and this divergence from the equilibrium will eventually be corrected over time. β_2 and α_1 together determine the total size of the impact accumulated over time, via the error correction component.

Aside from being a component in the computation of the impact of the independent variable on the dependent variable, the error correction rate also tells us how quickly a disturbance from the long run equilibrium is eliminated. Estimates of α_1 will be between 0.0 and -1.0 in appropriately specified ECMs, and the closer this parameter is to -1.0 , the more quickly errors are corrected. The substantive interpretation of the coefficient is the proportion of the disequilibrium that will be corrected in each time period, beginning at $t + 1$. From this error correction rate, we can make inferences about how quickly the total long run impact is felt. To summarize, the size of a short term (but not impermanent) impact of X on Y is provided by the estimate of β_1 , and the size of the long term (temporally distributed) impact is determined jointly by β_2 and α_1 .

Additional Analyses

We mention only briefly in the paper that elites may be driving both inequality and opinion. One mechanism for this would be if the president both shapes inequality (which we know from the existing literature) and shapes public opinion (which is also at least suggested in previous work). If policy liberalism and party of president are highly correlated, then we have at least partially accounted for this possibility in the models reported in the article. But since these two variables are only moderately correlated, we estimated additional models with the party of the president included as an explanatory variable. We have reported these results in Table 1. These models, which replicate the most fully specified models from Tables 1 and 2 in the article show that the central results continue to hold with a control for presidential party added. The first column of results corresponds

to the analysis in Table 1 from the article, while the second two models correspond with Table 2 from the article. Inequality is still inversely related to liberal public opinion for the rich, the poor, and the public in general.

Table 1: Models of Public Mood Liberalism by Income Level

| Independent Variables | Δ Liberal Mood | | |
|------------------------------------|-----------------------|---------------------|----------------------|
| | All Respondents | Low Income | High Income |
| Liberal Mood $_{t-1}$ | -0.25*** (0.07) | -0.56*** (0.15) | -0.60*** (0.11) |
| Δ Policy Liberalism $_t$ | 0.09 (0.12) | -0.16 (0.18) | 0.01 (0.14) |
| Policy Liberalism $_{t-1}$ | -0.07** (0.03) | -0.25*** (0.08) | -0.22*** (0.05) |
| Δ Income Inequality $_t$ | -37.3 (37.8) | -4.03 (61.60) | -21.82 (46.47) |
| Income Inequality $_{t-1}$ | -15.5* (9.4) | -59.38** (24.51) | -62.13*** (17.75) |
| Δ Unemployment $_t$ | -0.41 (0.43) | -0.03 (0.75) | -0.58 (0.57) |
| Unemployment $_{t-1}$ | -0.23 (0.32) | -0.44 (0.55) | -1.04** (0.43) |
| Δ Inflation $_t$ | -0.18 (0.19) | -0.47 (0.33) | -0.32 (0.24) |
| Inflation $_{t-1}$ | -0.02 (0.18) | -0.39 (0.33) | -0.36 (0.25) |
| Δ Democratic President $_t$ | 0.34 (0.98) | -1.34 (1.58) | -1.26 (1.19) |
| Democratic President $_{t-1}$ | -1.21* (0.63) | -1.49 (1.08) | -3.29*** (0.83) |
| Constant | 23.3*** (6.25) | 64.16*** (19.82) | 68.11*** (13.87) |
| N | 54 | 50 | 50 |
| Adj. R ² | 0.28 | 0.17 | 0.38 |

Note: Entries are OLS coefficients with standard errors in parentheses.
Two-Tailed Significance Levels: * $p \leq .10$; ** $p \leq .05$; *** $p \leq .01$

Reiterating what we said in the article, not only do the results reported here continue to support the conclusions discussed in the article, but the sign of the coefficient for party of president also explicitly contradicts the hypothesis that Republican presidents produce both more inequality and more conservative public opinion. In fact, the public appears to respond thermostatically to the party of president as well as to policy. When Democrats

are in the White House, opinion responds conservatively, and the opposite occurs when Republicans are in charge. Based on these results, it is clear that our original results are not based on a spurious association of this sort.

Table 2: Perceptions of Inequality, 1987 and 2000 with CEO Salaries Excluded

| Population Group | Ratio of Perceived Highest to Lowest Paid Occupations | |
|------------------------|--|--------|
| | 1987 | 2000 |
| All Respondents | 10.42 | 66.39 |
| Bottom Income Quintile | 13.35 | 257.52 |
| Top Income Quintile | 9.30 | 21.03 |

A second concern that we addressed in some detail relates to whether our analysis of perceptions of inequality reported in Table 3 of the article could be driven entirely by increasing CEO salaries. To address this point, we recalculated the results of Table 3 excluding perceptions of CEO salaries. As Table 2 shows, we still observe that all income categories perceive rising inequality even if CEOs' salaries are excluded from the analysis. This provides further support for our conclusion that the public notices when inequality rises.