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Income inequality and social trust☆

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ABSTRACT

We study how economic inequality affects social trust. We test this relationship both using correlational evidence from a large social survey of British youth as well as novel causal evidence from a series of online experiments. We find causal evidence that higher inequality has a negative impact on social trust. By contrast, a high relative position leads to higher social trust in both samples. In times where inequality is on the rise these findings are cause for concern.

1. Introduction

Social trust — the belief that others will generally act fairly and reciprocate justly — is central to economic and social interactions (Galeotti et al., 2017; Uslaner, 2002, 2018). However, higher income inequality is consistently linked to lower trust across societies and within them (Putnam, 2000; Alesina and Ferrara, 2002; Uslaner, 2002; Delhey and Newton, 2005; Bjornskov, 2008; Piketty and Saez, 2003). At the same time, individuals with higher socioeconomic status (e.g., education, income) consistently report greater trust, suggesting that one's own economic position may matter (e.g., Boyadjieva and Ilieva-Trichkova, 2021; Stephany, 2017). Yet causal identification and the underlying mechanisms remain contested (Gustavsson and Jordahl, 2008; Nannestad, 2008). In particular, it is unclear whether trust responds primarily to inequality itself (income distribution in one's environment) or to relative position (one's rank within that distribution). In this paper, we provide new correlational and causal evidence on the impact of both inequality exposure and relative position on social trust by combining two complementary approaches—a large-scale social survey and a controlled experiment.

First, we analyze observational data from a 2019 survey of British youth (Next Steps Wave 8), where social trust is measured using a standard survey question. Consistent with past work, we find that personal relative economic position is a strong predictor of trust: youths who are economically better off relative to their peers tend to report higher generalized trust. In contrast, the contextual inequality of their local area (Gini coefficient) does not predict lower social trust once we account for individuals' own economic position. While informative, these observational findings still cannot conclusively pin down causality or separate the effect of inequality from selection effects. Our second approach uses a novel experiment to provide *causal* evidence on how inequality influences trust. We implement an online experiment with a large UK survey panel, in which participants are randomly assigned to different informational contexts. To manipulate the perceived exposure to inequality, we randomly show participants either one of two income distributions from two local communities, one a great deal more unequal than the other (both are boroughs in England). In a second treatment, we study the effect of relative position by further showing participants their own economic position within one of the two distributions, creating a comparison between their own income and that of residents in the randomly selected borough. Hence, in one condition, participants compare themselves with a wealthier community, induced to feel relatively worse-off about their own economic position ("upward" economic comparison); in the other, they instead compare with a poorer community, induced to feel relatively better-off ("downward" economic comparison). All participants then answer

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the same standard survey questions on generalized trust as in the Next Steps survey. As our experiment exogenously manipulates perceived relative position and inequality, it allows us to draw inferences on how these variables impact social trust.

The experimental findings show a causal relationship between both relative position and inequality on trust. Participants made to feel that they are higher in the income distribution report higher levels of trust than those made to feel they are lower in the distribution. In other words, an increased perceived relative economic position led to greater social trust, which aligns with correlational evidence from the Next Steps survey data. At the same time, we find evidence that, in itself, exposure to a high-inequality context has a detrimental impact on trust. Subjects who are exposed to the high-inequality community, absent cues of relative position, express lower trust on average than those exposed to the more equal community. Taken together, our results provide causal evidence that economic inequality undermines social trust through at least two channels: there is a direct effect of the income distribution in itself and an additional effect caused by shifting relative position.

Our research contributes to a large literature interested in the relationship between inequality and social trust (Alesina and Ferrara, 2002; Bjornskov, 2008; Delhey and Newton, 2005; Piketty and Saez, 2003; Putnam, 2000; McCoy and Major, 2007; Boyadjieva and Ilieva-Trichkova, 2021; Stephany, 2017). Other authors have related inequality and trust within a lab experiment (e.g., Greiner et al., 2011; D'Amato et al., 2022; Xiao and Bicchieri, 2010; Fehr et al., 2020). We contribute to this literature by (i) combining correlational and causal evidence using standard survey outcomes rather than the often-used trust game, which has the advantage of being incentivized but the disadvantage of being sensitive to risk preferences; (ii) by our focus on distinguishing the effects of overall inequality and personal relative position and (iii) by focusing on a sample of young respondents. Examining how inequality affects young adults is particularly relevant, as their levels of social trust play a crucial role in shaping important choices made during their education and at the beginning of their careers (e.g., Papagapitos and Riley, 2009).

The paper is organized as follows. Section 2 presents evidence from general social surveys. In Section 3 we present our experimental design. Sections Section 4 contains our main results on social trust. Section 5 concludes. A series of online appendices contains details and materials from the experiments as well as additional tables and figures.

2. Evidence from general social surveys

In this section, we analyze the relationship between inequality and social trust, relying on correlational evidence from the Next Steps survey Wave 8, a longitudinal general social survey administered to the youth in England (UCL, 2018). The data provide extensive information on a young sample of the English population representative in terms of income, education, and gender ($N \approx 6800$). *Social trust* is measured via agreement with the statement "Most people in life can be trusted" using an 11-point Likert Scale ("0 = not at all agree", ..., "10 = extremely strongly agree"). This represents a common measure of social trust also used in many other general surveys, for instance the European Value Survey. Respondents are classified in three *income* categories based on their annual household (HH) income – "low" (<£25K), "medium" (£25K–£45K), "high" (>£45K). We use the same cutoffs in our experiment, which are calibrated to induce comparable income categories across our samples (see Table C.1 in the Appendix). Finally, using data from the ONS (Office for National Statistics), we derive the Gini coefficient as our measure of *inequality* based on the respondent's residence at the level of the government office region.[1]

Table 1 presents estimates where social trust is expressed in standardized units (z-scores), computed using the mean and standard deviation of the estimation sample in each specification, allowing comparability with prior work.

The table shows a positive and statistically significant relationship between income and social trust. We also find substantial interaction effects with the Gini coefficient, which are, however, not statistically significant. These results can be replicated in the UK part of the European Value Survey, a much smaller sample, which contains the same question (see Table C.2 in the Online Appendix).

These results show a possible effect of relative position and inequality on social trust, but there are some important caveats. For instance, individuals with higher levels of social trust may be more inclined to pursue opportunities and exert greater effort, leading to higher incomes. This, in turn, could influence the overall income distribution and the measured Gini coefficient, complicating causal interpretation.[2] Another challenge in interpreting our estimates lies in the difficulty of isolating the effect of relative economic position from that of inequality itself, as changes in the Gini coefficient alter individuals' relative positions within the income distribution, even when their income remains constant.

In the next section, we introduce an experimental design developed to address these concerns, allowing for (i) a *causal* interpretation of the relationship between inequality and social trust, and (ii) a clear separation of the effect of inequality exposure per se from that of relative economic position.

3. Experimental design

Our experimental sample was drawn from a large panel of the general British population ($N \approx 600$). Fig. 1 shows the general structure of our experiment. In Stage 1, participants fill in an income questionnaire, which elicits information about (i) self-reported social class, (ii) own or (for students) parents' annual gross income, (iii) monthly rent paid by (parents') household, (iv) size of (parents') household, (v) which grocery store the household does their monthly shopping in, (vi) if and where they go for holidays abroad, (vii) how much (parents') household spends on eating out every week and (viii) the type of school (comprehensive, grammar, private, boarding) they attended.[3] Based on the answers to question (ii) we then sort participants into three income categories (low, medium, or high) corresponding to an annual household income of less than £25K, between £25K and £45K, or greater than £45K. These are the same cutoffs we use with the Next Steps 8 survey.

Information treatments

Our treatments manipulate the type of information participants are shown immediately after Stage 1. In treatment **INEQ**, we only show them one of two income distributions differing in their degree of inequality. Hence, participants can either be exposed to low inequality or high inequality (**INEQ-LOW** or **INEQ-HIGH**). In treatment **REL**, we show participants one of the two income distributions *and* their own relative position within that distribution.[4] Hence, conditional on their income category, we exogenously manipulate participants' relative position by using images like the ones shown in Fig. 2.

The bars in the figure represent income categories aligned with the average incomes of the "low", "medium", and "high" groups defined above. These correspond to the three leftmost bars in the distribution in

[1] We use the "Income and tax, by gender, region and county, 2015–2016" table provided by the ONS. We note that the Gini coefficient can be calculated only at a coarse level of aggregation in the UK, making it more difficult to understand the effect of exposure to "local" inequality here.

[2] Specification (6) in Table 1 tries to partially address this particular issue.

[3] Online Appendix B.1 shows the exact questions and answer categories for all of these questions.

[4] This exogenous manipulation can be thought of as an information provision experiment. For a review on this subject, refer to Haaland et al. (2023).

Table 1
OLS regression of standardized Social Trust in Next Steps 8 survey. Individual controls are gender, religion, and ethnicity. The larger set of individual controls (YES$^+$) also includes an indicator for unemployment, level of interest in politics, and an indicator for having a higher education degree. The region controls are population size, ethnic diversity (share of white population), and the share of the population living in an urban area. Column (6) is a restricted sample of people who have not moved in the last 2 years. Standard errors in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1.

	Social Trust - **Next Steps 8**					
	(1)	(2)	(3)	(4)	(5)	(6)
Medium income	0.186***	0.294	0.226***	0.186***	0.287	0.162
	(0.0263)	(0.235)	(0.0257)	(0.0263)	(0.235)	(0.308)
High income	0.296***	−0.0508	0.351***	0.295***	−0.0461	0.0360
	(0.0471)	(0.423)	(0.0463)	(0.0471)	(0.424)	(0.655)
Gini	0.184	0.217	−0.847	−0.556	−0.512	−0.107
	(0.410)	(0.529)	(0.734)	(0.735)	(0.812)	(1.040)
Gini × Med income		−0.385			−0.359	0.0110
		(0.832)			(0.832)	(1.082)
Gini × High income		1.217			1.199	1.080
		(1.481)			(1.483)	(2.296)
Constant	−0.0434	−0.0539	0.0823	0.211	0.196	−0.603
	(0.123)	(0.154)	(0.506)	(0.510)	(0.522)	(0.693)
Individual controls	YES	YES$^+$	NO	YES$^+$	YES$^+$	YES$^+$
Region controls	NO	NO	YES	YES	YES	YES
Observations	6899	6899	6927	6899	6899	4143
R-squared	0.028	0.029	0.016	0.029	0.029	0.034

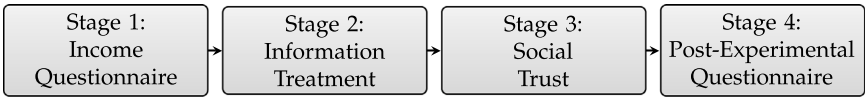
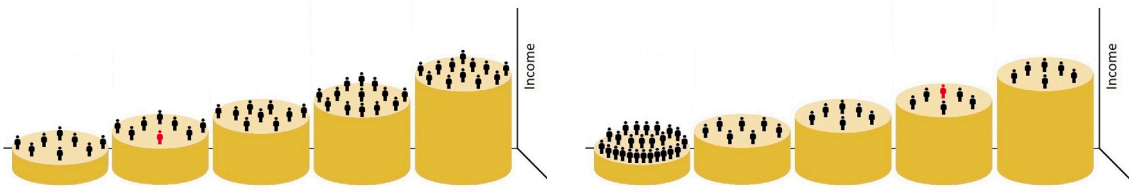
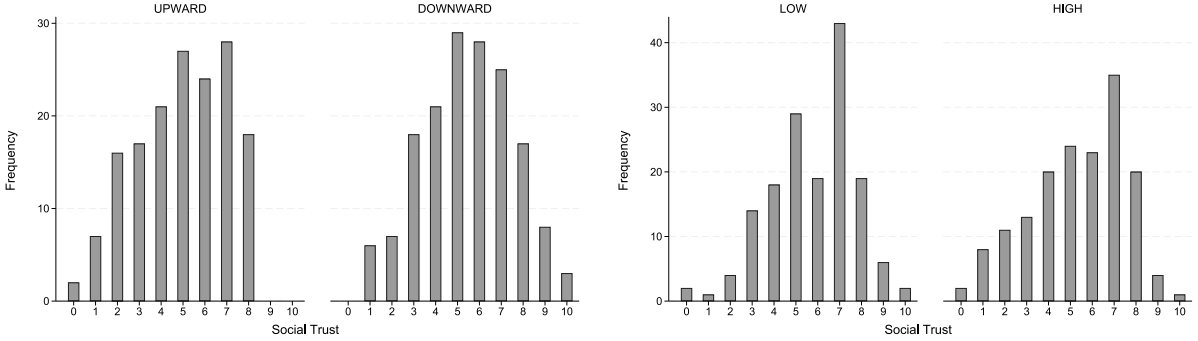


Fig. 1. Stages of the experiment.



(a) Upward comparison (Low inequality) (b) Downward comparison (High inequality)

Fig. 2. The pictures show the image used to induce upward and downward comparisons in the **REL** treatment for those in the medium income category. For those in the low (high) income category, the red person was one bar lower (higher). In the treatment without relative position (**INEQ**), the figures were shown without the red person. Appendix Figure D.1 shows all eight different pictures used. (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.)



(a) **REL** (b) **INEQ**

Fig. 3. Histogram of responses to the social trust question. Panel (a): participants shown either low inequality and low relative position (UPWARD) or high inequality and high relative position (DOWNWARD). Panel (b): participants shown only low inequality (LOW) or high inequality (HIGH).

panel (a) and the three rightmost bars in the distribution in panel (b). Participants are told that the picture represents the income distribution of a borough in England and that "*based on your answers in the initial questionnaire, we have computed a rough estimate of your position in the income distribution of the borough*". The two boroughs are Chelsea and Kensington (mean annual income 178K GBP) and Norwich South (mean annual income 26K GBP) for panel (a) and (b) respectively.[5] Those are the richest and poorest boroughs on average and hence will respectively present an upward or downward shock to beliefs about their own relative position for most residents of the UK, **REL-UPWARD** and **REL-DOWNWARD**.[6] In the **REL** treatment, one's position was highlighted by showing a person in red, while in **INEQ** it was not shown; otherwise, the figures were identical.

We pretested the clarity of these visualizations in two separate online surveys. In the first, we evaluated participants' understanding of various representations of income distributions (see Online Appendix A for details). The version displayed in Fig. 2 (income bars with people on top) was selected because it was consistently better understood than alternative formats (n = 176). In the second online survey (n = 108), a different group of respondents was asked which of the two income distributions appeared more unequal. The vast majority of subjects perceived the income distribution in panel (b) as more unequal.[7] Therefore, we refer to people assigned to this distribution as being exposed to higher inequality compared to lower inequality. This is important for interpreting potential behavioral differences between information conditions.

Social trust

In Stage 3, following the information assignment, we measured participants' level of social trust. Again, this outcome was assessed using agreement with the statement "Most people in life can be trusted", rated on an 11-point Likert scale ("0 = not at all agree", ..., "10 = extremely strongly agree"). We chose this non-incentivized measure over others more commonly used in experimental work (e.g., trust games) for two main reasons. First, we wanted to align this measure with that used in the Next Steps 8 survey to ensure consistency across the two samples. Non-incentivized questions on social trust are widely used in social surveys (e.g., World Values Survey, European Social Survey), and they have been shown to yield valid and informative data (e.g., Zak and Knack, 2001; OECD, 2017). Second, our goal was to elicit a broad form of trust—general belief in the honesty, integrity, and reliability of people beyond one's immediate social circle. Survey-based trust questions and incentivized trust games capture distinct but complementary components of trust (Sapienza et al., 2013). The survey measures primarily reflect expectations about others' trustworthiness (belief-based trust), while trust games also incorporate preferences like risk attitudes. Our primary interest lies in the former type of trust, rather than the latter.

Research questions

A large literature across the social sciences suggests that inequality is detrimental to social trust. To test this question we randomly assign different income distributions to participants. As changes in the income distribution impact not only the level of inequality but also the relative position of any given person in that distribution, treatment **REL** causally identifies the joint effect of inequality and relative position on social trust. Our first conjecture hence is that *social trust is higher in **REL-DOWNWARD** compared to **REL-UPWARD***. We then hide information about relative position in treatments **INEQ** and conjecture: to the extent that the negative impact of inequality on social trust is not purely driven by relative position we should see *higher social trust in **INEQ-LOW** compared to **INEQ-HIGH***.

Other details

In the post-experimental questionnaire, we elicited risk attitude and competitiveness on a scale from 0–10. We fielded the survey online using a large UK survey provider (Prolific) and restricted the sample to UK nationals. Table C.1 in the Online Appendix contains sample characteristics including a comparison of the Next Steps 8 and the experimental sample. None of the 640 participants dropped out of the experiment, and all were paid a flat fee of 1.50 GBP. Ethical approval was obtained by the University of Essex (Faculty of Social Sciences subcommittee) in October 2018. This study was part of a larger research project aimed at studying the effect of income inequality on different attributions and beliefs.[8]

4. Experimental results

Fig. 3 shows the distribution of self-reported social trust. Panel (a) displays participants shown both their relative position (high or low) and the level of inequality; Panel (b) displays those shown only an income distribution with high or low inequality. The figure highlights two results. In the **REL** treatment, participants exogenously placed in a high relative position (downward comparison) express higher social trust. In contrast, those exposed to a higher level of inequality in the **INEQ** treatment (**INEQ-HIGH**) indicate lower social trust.

Tables 2 and 3 present regression estimates where outcomes are standardized to the control-group mean and standard deviation for each specification, allowing direct comparison with prior studies. Table 2 shows results for the **REL** information treatment. Those assigned to a higher relative position (DOWNWARD) express higher levels of social trust, with an effect size of about one quarter of a standard deviation compared to those assigned to a lower relative position. The table also shows a substantial correlational effect of income, with those with higher income displaying higher levels of social trust. Table 3 reports the results for the **INEQ** treatment. Respondents assigned to a higher degree of inequality (HIGH) subsequently show lower levels of trust, with an effect size corresponding to at least 0.238 standard deviations.

5. Conclusions

Using both correlational evidence from a large social survey of British youth as well as causal evidence from online experiments, we provide robust evidence of non-negligible effects of both inequality exposure and personal relative position on social trust. We find that a higher personal relative position increases social trust, while mere exposure to inequality erodes it.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Friederike Mengel reports financial support was provided by European Research Council. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

[5] Images are based on 2015–2016 data from the ONS (Office for National Statistics).

[6] Of course, there is some variation within our income categories as two persons at the extremes of the same category will perceive an identical income shock with different strength.

[7] A clear majority (84.26%) identified the distribution in panel (b) as more unequal, while 7.41% judged the two distributions to be "about the same".

[8] The original research project was pre-registered on EGAP as part of a bigger research project. After this site shut down, it was transferred to OSF and made available at https://osf.io/9mhvg and https://osf.io/muh8s/.

Table 2
Standardized social trust in **REL** treatment. Extra Income Controls are fixed effects from the initial income questionnaire (the smaller set is questions 1–4, the larger set is all eight questions). Other Controls are age, gender, and student status. The larger set also includes risk aversion and a self-reported competitiveness measure. Standard errors in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1.

	Social Trust - **REL**					
	(1)	(2)	(3)	(4)	(5)	(6)
DOWNWARD	0.240**	0.242**	0.254**	0.258**	0.247**	0.251**
	(0.111)	(0.110)	(0.109)	(0.109)	(0.110)	(0.111)
Medium income		0.337***	0.307**	0.323***	0.312**	0.236*
		(0.121)	(0.124)	(0.124)	(0.127)	(0.135)
High income		0.425***	0.417**	0.413**	0.344*	0.259
		(0.161)	(0.165)	(0.165)	(0.179)	(0.189)
Constant	0.000	−0.185*	−0.908	−1.184	−1.344*	−1.056
	(0.0791)	(0.0958)	(0.684)	(0.757)	(0.796)	(0.848)
Extra Income Controls	NO	NO	NO	NO	YES	YES+
Other Controls	NO	NO	YES	YES+	YES+	YES+
Observations	322	322	321	321	321	320
R-squared	0.014	0.048	0.079	0.091	0.104	0.188

Table 3
Standardized social trust in **INEQ** treatment. Extra Income Controls are fixed effects from the initial income questionnaire (the smaller set is questions 1–4, the larger set is all eight questions). Other Controls are age, gender, and student status. The larger set also includes risk aversion and a self-reported competitiveness measure. Standard errors in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1.

	Social Trust - **INEQ**					
	(1)	(2)	(3)	(4)	(5)	(6)
HIGH	−0.238**	−0.280**	−0.308***	−0.284**	−0.347***	−0.412***
	(0.120)	(0.119)	(0.115)	(0.113)	(0.116)	(0.120)
Medium income		0.290**	0.142	0.105	0.0446	0.00814
		(0.132)	(0.132)	(0.130)	(0.133)	(0.138)
High income		0.530***	0.504***	0.478***	0.410**	0.475**
		(0.178)	(0.174)	(0.171)	(0.191)	(0.202)
Constant	0.000	−0.144	−1.470**	−2.637***	−2.550***	−3.191***
	(0.0851)	(0.0970)	(0.700)	(0.761)	(0.815)	(0.871)
Extra Income Controls	NO	NO	NO	NO	YES	YES+
Other Controls	NO	NO	YES	YES+	YES+	YES+
Observations	318	318	317	317	317	312
R-squared	0.012	0.045	0.119	0.157	0.191	0.274

Appendix A. Supplementary data

Supplementary material related to this article can be found online at https://doi.org/10.1016/j.econlet.2025.112675.

Data availability

Data will be made available on request.

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