

Financial Market Exposure Increases Generalized Trust, Particularly Among the Politically Polarized

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Political polarization and lack of trust can greatly hamper the implementation of beneficial policies and broader economic development. Thus it is crucial to understand how to build trust, especially in polarized societies. We argue that carefully-designed exposure to trade in broad financial markets can increase generalized trust because it can expose investors to shared risks and returns that highlight the benefits of large-scale economic cooperation. Reporting results from a randomized controlled trial in which we encouraged Israelis to hold or trade stocks for up to seven weeks, we show that participation in financial markets increased generalized trust by 5.9pp, equivalent to 25% of the control group mean. Our main results are larger among political partisans, robust to negative price changes, and unrelated to changes in political preferences. We argue that trust-building through financial markets resembles a process of learning by doing, emphasizing the promise of financial innovations in facilitating trust in polarized societies.

Generalized trust, conceptualized as a belief in the goodwill of others and an expectation that others have an incentive and ability to promote one's interests (1,2), is an important facilitator of economic activity, and a central component of social capital (3). An immense literature across the social sciences suggests that trust is "the cause or precondition of much of what is good and valuable in society and in individual lives" (4), and that "virtually every commercial transaction has within itself an element of trust" (5). Indeed, theory and evidence suggest that higher levels of generalized trust enhance economic growth (6, 7), good governance (8), civic and political participation (9), and compliance with public health guidance (10, 11).

Despite the many merits of generalized trust, Figure 1 shows that trust is far from common around the world. In a majority of countries sampled by the World Values Survey, less than one in four survey respondents agrees that "most people can be trusted" (12). Moreover, low levels of trust are especially common in politically polarized societies (13), a concerning pattern given the rising levels of political polarization in many democracies worldwide (14).

The variation reported in Figure 1 and the low levels of trust experienced in many countries around the world have motivated scholars to examine the antecedents of generalized trust. Research suggests that societal levels of trust are a consequence of contemporary civil society strength and political institutions (3, 15), as well as historical legacies of extractive institutions (16), border changes (17), repression (18), and social structures (19). In line with these studies, it is commonly accepted that generalized trust is a personal disposition acquired through early socialization and that durably increasing generalized trust is extremely challenging (20, 21). This is especially the case in an era of enhanced political polarization (22), where social and political groups are perceived to be in opposition to one another.

Building on studies in evolutionary psychology, sociology, and economics examining the relationship between market integration and prosocial behavior (23–26), and based on the expectation that personal experiences with risk can inform people's level of trust (27–29), we

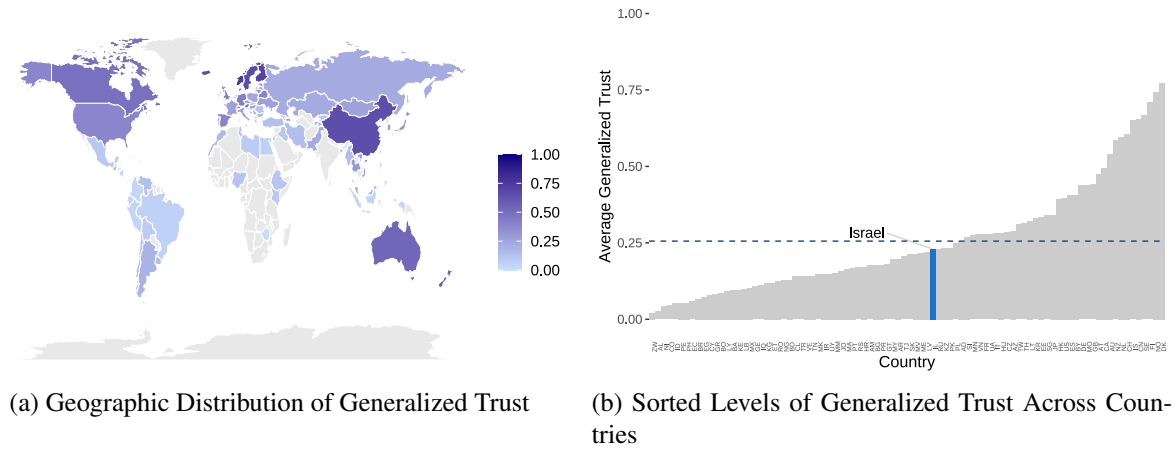


Figure 1: **Generalized trust around the world.** This figure reports cross-national patterns of generalized trust from the World Values Survey (Wave 7). For each country, we report the share of respondents who state that most people can be trusted. Since Israel is not included in the most recent wave of the World Value Survey, we report average generalized trust based on data from the 2004 World Value Survey. The Israeli average reported in these plots is remarkably close to the control group pre-treatment average of generalized trust in our RCT data.

argue that exposure to broad financial markets, and specifically opportunities to invest in and trade stocks, can increase generalized trust. Specifically, trust-building through financial markets resembles a process of learning by doing. The experience of exposure to financial markets, and in particular the opportunity to hold and trade stocks, allows people to share risks and realize the mutually beneficial gains of placing resources in the hands of other parties (28, 30) such that both tend to benefit as the economy as a whole improves. This experience, in turn, shapes people’s willingness to trust others.

To test our expectation, we turn to Israel, a highly polarized society (31, 32) with low levels of generalized trust (see Figure 1), and report results from a large randomized controlled trial in which we encouraged Israelis to invest in and trade a specific stock for up to seven weeks

using an accessible survey-based platform. Using separate surveys that included no additional political and social information, we elicit respondents' levels of generalized trust. We show that trading stocks durably increases generalized trust. This effect is robust to exogenous negative stock price performance. Further, though the effect is stronger among investors that made trading decisions that raised the value of their portfolio beyond the price performance of their exogenously- assigned stock, those who under-performed do not show a trust backlash. Importantly, the effect are more salient among polarized partisans, particularly males, and is distinct from changes in political preferences. Thus our study presents a scalable and non-paternalistic approach for building trust in polarized societies.

Trust and Financial Markets

To date, the finance literature has mainly focused on trust as a *cause* of participation in financial markets, rather than the reverse. Existing studies suggest that generalized trust increases individuals' tendency to own and trade stocks (33, 34), and that access to financial services is related to individual-level institutional trust (35). In line with this insight, scholars have shown that corporate scandals that reduce individuals' trust in the stock market also reduce their stock market participation (36). The consequences of trust, broadly defined, have been shown to aggregate at the national level. Indeed, lower bilateral trust leads to less trade and investment between countries (37, 38).

Inspired by early arguments made by political philosophers like Montesquieu regarding “doux commerce,” existing research examines the link between market integration, generalized trust, and other prosocial behavior (23–26). These studies argue that market transactions, which often entail interactions with strangers, require norms of fairness, trust, and pro-sociality towards “a generalized other.” Accordingly, evidence from a range of cross-cultural (23, 26) and local-contemporary (24, 25) studies point to a robust association between market integration

and generalized trust. Relatedly, although focusing on a different substantive mechanism and outcome, research in political economy identifies how financial markets and complementary economic institutions can promote tolerance and peace by emphasizing to citizens the tangible economic costs of conflict and societal benefits of peace (39–41).

Building on these studies, as well as on research regarding the effects of trust on financial market participation, we suggest that the relationship between trust and participation in financial markets might be bidirectional. Specifically, we argue that exposure to financial markets can increase generalized trust. Our theoretical expectation is motivated by recent market integration studies (23–26), as well as by previous studies highlighting the role of learning from personal experience in shaping generalized trust (28).

Trust is a central component of financial markets. The experience of investing in the stock market entails a degree of uncertainty and requires an individual investor to trust other parties in using their resources in a mutually beneficial manner. Exposure to financial markets, and specifically trading stocks, can help people realize the benefits of large-scale economic cooperation. By investing in financial markets, citizens expose themselves to a degree of risk. However, over time, investments can yield mutually beneficial returns and emphasize the economic benefits of investing with others, a type of behavior often described as the epitome of trust. These effects are likely to be accentuated among those political partisans for whom distrust of the other side is particularly salient.

As investors gain experience and make successful trading decisions, they may increase their levels of trust. In that sense, trust building via financial markets can be thought of as learning by doing. Investors who invest in widely-held financial assets may gain positive feedback that highlights the mutually beneficial nature of productive investment across society. This realization, we argue, can increase generalized trust. In contrast to previous studies that emphasize how financial markets help citizens internalize the costs of conflict and increase their support

for peace-promoting parties (41), the mechanism linking financial markets and generalized trust is fundamentally different. Participation in financial markets, we argue, increases generalized trust because it provides people with an opportunity to learn about the gains of cooperation with a general other under uncertainty.

The Randomized Controlled Trial

Identifying the effects of exposure to financial markets on personal levels of generalized trust with observational data is challenging for multiple reasons. First, financial market participation is arguably endogenous to levels of generalized trust. Indeed, recent studies suggest that generalized trust is a salient determinant of investment in financial markets (34, 42). Second, generalized trust is often viewed as a personal disposition acquired through early age socialization (20, 21). Accordingly, various covariates that correlate with generalized trust (e.g., gender, education, and personality traits) also correlate with participation in financial markets (43, 44).

To overcome this identification challenge, we implemented a large-scale randomized controlled trial in Israel in the run-up to the 2015 national elections, in which we incentivized Jewish Israelis to hold or trade a specific stock from the Israeli or Palestinian stock exchanges for a period of up to seven weeks. To the best of our knowledge, this is the first randomized controlled trial to assign stock portfolios to potential investors and evaluate the social consequences of exposure to financial markets. Our randomized controlled trial was rolled out in three main stages.

Pre-Treatment Survey and Treatment Assignment

Using an online panel, we surveyed 1,418 Israelis screening 73 respondents who provided incomplete information, inconsistent information, or finished the survey in an unusually quick time. As part of our baseline surveys, we collect a rich range of demographic information as

well as pre-treatment measures of generalized trust, asking respondents the following question originating in the World Values Survey: “*Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?*” Possible responses included 1) “*Most people can be trusted*” 2) “*Need to be very careful with other people*” and 3) “*I don’t know.*”

After collecting baseline data, we block-randomized the remaining 1,345 survey respondents to treatment and control conditions (treatment = 1,036, control = 309).¹ Treated individuals were incentivized to participate in an instructions survey that detailed the rules of the study, informed respondents about their allocated assets, and quizzed respondents to ensure that they understood how the value of their assets would be determined. As indicated in Figure 2 possible assets included either domestic Israeli assets (Bezeq Telecoms (BEZQ): a large Israeli telecom company, Bank Leumi (LUMI): a large Israeli commercial bank, and the Tel Aviv 25 (TA25): an Israeli stock market index) or foreign Palestinian assets (Palestine Telecoms (PALTEL): a large Palestinian telecom company, Bank of Palestine (BOP): a large Palestinian commercial bank, and the Palestinian General Market Index (PLE): a Palestinian stock market index), amounting to a total of either 200NIS (~\$50) or 400NIS (~\$100). These endowments are substantial when compared to many behavioral economic experiments, or the average *daily* wage of 312NIS in Israel in 2014.² We consider the 840 treated individuals who completed the instructions survey as compliers (52%), and report both intent to treat (ITT) and treatment effect on the treated (TOT) estimates, using treatment status as an instrument for actual take-up of treatment.

¹We created 104 blocks stratifying sequentially by respondents’ 2013 vote choice, sex, experience trading stocks in the 6 months prior to the study, a dummy for whether they would recommend Arab stocks to a friend, their geographical region, discrepancies in the 2013 vote, and their willingness to take risks.

²Foreign assets were listed in foreign currency. We thus fixed the exchange rate for the duration of the experiment so that there was no exchange rate risk for participants trading foreign assets. Moreover, all assets in the experiment represented derivative claims on the authors’ research account. In other words, the treatment did not include direct ownership of the underlying asset.

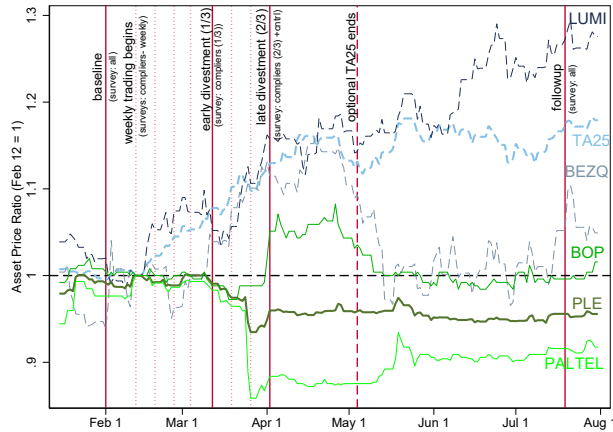


Figure 2: **Timeline of the RCT**. This figure reports the value of assets endowed as part of our treatment alongside the timeline of our RCT. Israeli stocks are shown by dashed lines (Bezeq Telecoms (BEZQ), Bank Leumi (LUMI), and theTel Aviv 25 (TA25)). Palestinian stocks are shown by solid lines (Palestine Telecoms (PALTEL), Bank of Palestine (BOP), and the Palestinian General Market Index (PLE)).

Treatment Rollout: Holding and Trading Stocks

Through an accessible and simplified survey-based platform, compliers received weekly updates about the price of their assigned assets, as well as a description and valuation of their current portfolio after markets closed on the last day of the week. Moreover, treated participants were given a weekly opportunity to decide to hold their existing portfolio or buy or sell up to 10% of that portfolio before markets opened the following week. To incentivize engagement, if they did not register a decision, including a decision to hold, however, they would lose the 10% that they could have traded. A third (two-thirds) of treated participants were randomly selected to trade on the platform for four (seven) weeks with three (six) trading periods. 69% of compliers engaged in trading during every opportunity, and 80% of compliers traded in all but one week.

Post-Treatment Surveys

As noted in the timeline in Figure 2, following the trading period compliers and control participants reported outcomes of interest as part of our endline survey. We collected non-compliers outcomes in a later follow-up survey. Endline surveys included a measure of generalized trust, as well as other outcomes of interest relating to vote choice and financial literacy explored in companion papers (40, 41).

Main Results

In Appendix A2, we report descriptive statistics of our sample as well as balance checks. In Table 1, we report our main results, focusing on ITT and TOT estimates.³ First, as one might expect in our experimental context, we show that treatment status does not affect *pre-treatment* levels of generalized trust. Indeed, when employing pre-treatment trust as an outcome in the first column of Table 1, the treatment point estimate is very small, amounting to 0.8 percentage points, and imprecisely estimated.

Turning to the second column of Table 1, we show that exposure to financial markets increases the probability of reporting that “most people can be trusted” by 5.9 percentage points. This effect is equivalent to 24.8% of baseline trust in the control group. Importantly, levels of trust in our control group (23.8%) are similar to levels of trust measured by the World Values Survey in Israel during the most recent wave fielded in 2004 (23.02%) (12). Not surprisingly, the IV-TOT results (which employ treatment status as an instrument for compliance), yield slightly larger point estimates of 6 percentage points. In substantive terms, the effect of trading stocks on generalized trust is 1.5 times larger than the correlation between gender and post-treatment trust and equivalent to a tenth of the correlation between pre- and post-treatment measures of

³For the purpose of other studies in our randomized controlled trial (41), we oversampled centrists in our surveys. However, since our main interest in this paper is on the general Jewish Israeli electorate, and specifically Jewish Israeli partisans, we weight our sample to resemble the party shares of the Jewish vote in 2013.

Table 1: Trading Stock Increases Generalized Trust

Outcome: Generalized Trust (0/1)					
	Pre-Treat Trust	ITT	ITT Block FE	ITT Block FE + Cont.	IV-TOT
Treatment	0.008 (0.031)	0.059** (0.028)	0.057** (0.028)	0.057** (0.028)	0.060** (0.030)
Left Wing	0.129*** (0.040)	0.107*** (0.035)	0.109 (0.147)	0.109 (0.164)	0.111 (0.166)
Right Wing	0.009 (0.030)	0.031 (0.027)	-0.037 (0.148)	-0.112 (0.160)	-0.117 (0.161)
Pre-Treat Trust		0.515*** (0.031)	0.497*** (0.034)	0.472*** (0.034)	0.472*** (0.034)
Num.Obs.	1245	1245	1245	1245	1245
R2	0.013	0.268	0.330	0.357	0.358
Control Mean	0.257	0.238	0.238	0.238	0.238
Control SD	0.437	0.426	0.426	0.426	0.426

Block FE account for 104 blocks in which treatment was assigned. We created blocks by stratifying sequentially by respondents' 2013 vote choice, sex, experience trading stocks, an indicator for whether respondents would recommend Arab stocks to a friend, region, discrepancies in the 2013 vote, and willingness to take risks. Controls include measures left-wing support, right-wing support, pre-treatment generalized trust, gender, age, education, marital status, religiosity, geographical location, income, news consumption willingness to take risk, patience, a measure of survey timing, and a financial literacy score. All models include weights to match the party shares of the Jewish vote in 2013.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

generalized trust. In Appendices A3-A4, we address concerns about differential attrition and demonstrate the relative robustness of our results to alternative specifications.

Exploring the Mechanism

We argue that exposure to financial markets should increase generalized trust because it exposes people to the potential tangible benefits and shared risks of large-scale economic cooperation. Skeptics might worry, however, that financial markets can increase trust only as long as citizens benefit financially, but negative experiences with investing, including sudden negative price shocks and losses, might reduce generalized trust (27). To explore this possibility, we leverage data on the price change of assets on the day on which participants were divested from their stock and measure participants' gains and losses. Since participants were each randomly assigned to a single asset, with randomly assigned divestment dates, the price changes of the underlying stock from initial allocation to an individual's divestment day are exogenously determined.

In the top panel of Figure 3, we explore the consequences of negative exogenous price performance of the stock until divestment. To do so, we split our sample to include all control group respondents and the subset of treated respondents whose stock price increased (decreased) by divestment day. Our sample included 327 (709) respondents whose stock price decreased (increased) by their divestment day, with price changes ranging between -11.785% and 15.761%. In Figure 3, we estimate our specification from Table 1, which includes block fixed effects and respondent covariates on varying subsets of our data.

We find no evidence of a negative treatment effect across our different subsamples in which stock price decreased (increased) by divestment day. Indeed, point estimates are actually positive and precisely estimated for investors whose assets decreased. Similarly, point estimates are positive, albeit smaller, and approaching conventional levels of statistical significance for

investors whose assets exogenously increased on divestment day ($p = 0.148$). These additional results reduce concerns about the potential negative consequences of participation in financial markets, emphasizing that regardless of specific price shocks, exposure to financial markets can have large positive effects on generalized trust.

Furthermore, based on our main argument, one might expect that our identified effects will be larger among successful investors that made decisions that out-performed the exogenous price of their assigned stock. We interrogate this expectation in the bottom panel of Figure 3. Specifically, we split our sample to include all control respondents and the subset of out-performing (under-performing) treated respondents. Our sample included 265 (771) out-performing (under-performing) respondents. The financial consequences of respondents' performance ranged between -59.827 NIS and 11.784 NIS.

We find that our general effects are stronger among out-performing investors who made trading decisions that out-performed the performance of their original stock. As we report in the bottom panel of Figure 3, the point estimate for our subsample of out-performers is almost double the magnitude of the main effect we identify in Table 1 and visualize in Figure 3. Importantly, the point estimate for the subsample of under-performers is also positive and statistically indistinguishable from the point estimate of the out-performers subsample ($p = 0.17$), although imprecisely estimated ($p = 0.364$). We interpret these patterns to suggest that though better decision-making with more favorable realized outcomes in the process of exposure to financial markets is associated with larger effects on generalized trust, poorer decision-making within the experiment does not lead to backlash.

As a final step, we examine whether the effect of participation in financial markets is especially salient in increasing generalized trust amongst particular subsets of respondents. Our analyses are motivated by recent studies on the consequences of partisan polarization for generalized trust (13, 22), and studies documenting gender differences in trust (45). Specifically, in

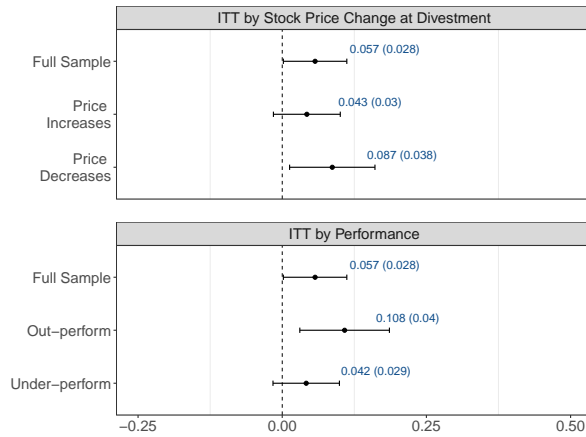


Figure 3: **Treatment effects are not dampened by exogenous price shocks and are stronger among investors who out-perform in their decisions.** This figure reports ITT point estimates, robust standard errors, and corresponding 95% confidence intervals of our main specification that includes covariates and block fixed effects. We focus on our full sample, as well as various subsamples, to explore the mechanism and scope of our effect.

Figure 4, we explore conditional average treatment effects on several subsamples of interest, focusing on partisanship, pre-treatment levels of trust, and gender. We estimate our specification from Table 1, which includes block fixed effects and respondent covariates on varying subsets of our data. Importantly, we subset our data based on pre-treatment measures.

The top panel of Figure 4 suggests that our main point estimate is larger among polarized respondents – supporters of left and right-wing parties rather than centrist respondents. Furthermore, the middle panel of Figure 4 provides evidence that our main treatment is positive for both trusting and non-trusting respondents (based on our pre-treatment measure of trust) but precisely estimated only among non-trusting individuals (likely in part due to the relative share of non-trusting individuals in our overall sample). Finally, the bottom panel of Figure 4 suggests that treatment effects are larger among men. Taken together, these additional patterns

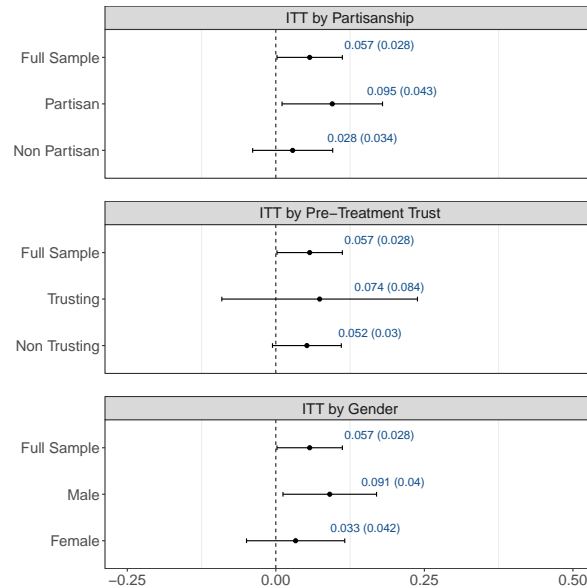


Figure 4: **Treatment effect magnitude varies as a consequence of partisanship, gender, and levels of pre-treatment trust.** This figure reports ITT point estimates, robust standard errors, and corresponding 95% confidence intervals of our main specification that includes covariates and block fixed effects. We focus on our full sample, as well as various subsamples to explore effect heterogeneity.

emphasize how exposure to financial markets can bolster trust, especially amongst polarized, low-trusting male respondents, a finding especially important in our current age of partisan polarization (46, 47).

Ruling Out Alternative Mechanisms

As noted above, we argue and provide additional evidence that exposure to financial markets increases generalized trust because it facilitates personal experiences in which investors are exposed to shared risks and potential benefits of large-scale economic cooperation. However, given the underlying correlation between pre-treatment left-wing support and levels of gener-

alized trust (Table 1 and Figure A7 in the appendix), and given recent evidence that exposure to financial markets increases Israelis' support for left-wing parties and the Israeli-Palestinian peace process (41), a possible alternative mechanism linking exposure to financial markets with shifts in generalized trust could relate to changes in partisan and political preferences.

To distinguish our learning-by-doing mechanism from a political preference mechanism, we report a series of mediation analyses (48), estimating the indirect effect of our treatment on generalized trust as a consequence of shifts in partisan preferences (panels a-b) and support for peace (panel c). Results from Figure 5 suggest that shifts in partisan and political preferences are unlikely mediators of our main effect. Specifically, across all panels in Figure 5, the indirect effect of our treatment on generalized trust via partisan and political preferences is very small and imprecisely estimated, in contrast to our treatment's direct effect, which is large (for the most part precisely estimated), and similar in magnitude to the total effect. This pattern further increases our confidence that exposure to financial markets increases generalized trust because of the learning experience it facilitates and not because it changes peoples' partisan and political preferences.

Discussion

In this paper, we present results from a novel randomized controlled trial, demonstrating that exposure to financial markets increases generalized trust. Our evidence suggests that the effect of exposure to financial markets is more salient among respondents with polarized political preferences. Our main identified effect is not reduced by exogenous negative stock price performance or poor decisions in financial markets, though it is stronger among investors that made decisions that outperformed the performance of their assigned stock. Trust building through financial markets is not driven by changes in political preferences but is rather a process of learning by doing. Investors are able to share risks and realize the mutually beneficial gains

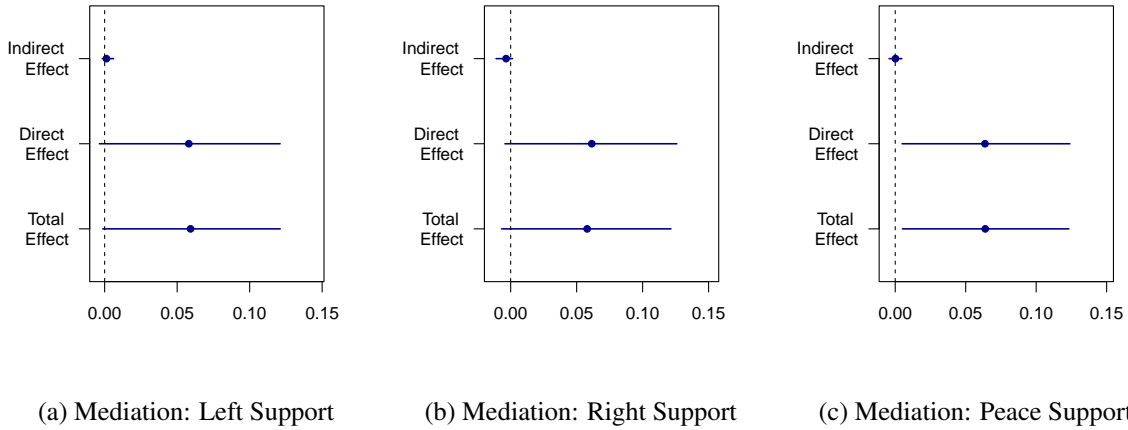


Figure 5: **Partisan and political preferences do not mediate the relationship between financial market exposure and generalized trust.** This figure reports results from mediation analyses (48), in which we consider the indirect effect of our treatment on generalized trust via partisan and political preferences (support for left and right-wing parties and support for peace). In panel a, we show that the indirect effect of our treatment on generalized trust mediated by increased support for left-wing parties is very close to 0, substantially smaller than the direct effect of our treatment on generalized trust and imprecisely estimated. The same pattern of result holds in panel b when considering support for right-wing parties as a mediator and in panel c when considering support for peace as a mediator, emphasizing that shifts in partisan and political preferences are an unlikely mechanism accounting for our main result.

of placing resources in the hands of other parties, and this informative experience shapes their willingness to trust others.

We make three main contributions to the existing literature. First, we contribute to the existing scholarship on generalized trust and social capital (1–3) by identifying a promising approach for increasing trust in a highly polarized society (31, 32) with low levels of generalized trust. We

show that empowering people and providing them with opportunities to invest in financial markets can increase generalized trust. This result is especially important, given the prevalence of low levels of trust around the world (see Figure 1), and particularly in our current age of polarization (47). Our approach to trust-building is notable for being non-paternalistic and scalable. Rather than informing participants how they should regard others, we allow them to develop their preferences in light of their own experiences. This non-paternalistic intervention could be scaled by integrating financial market exposure into at-scale cash transfer programs (49) and encouraging non-investors towards informed participation in financial markets.

Second, we contribute to the literature on market exposure and pro-sociality. A range of existing studies leverage rich data to document the links between market exposure and pro-social behavior (broadly defined) (23–26). Similarly, other work demonstrates how financial markets and trade can emphasize the cost of conflict and promote support for peace (39, 41). Through our randomized controlled trial, we complement existing studies and provide causal evidence that exposure to financial markets increases generalized trust, arguably doing so because it gives investors hands-on learning experiences that emphasize the benefits of cooperation under uncertainty.

Finally, we contribute to the literature on generalized trust and economic behavior. Existing evidence emphasizes the central role of generalized trust in predicting participation in financial markets (33, 34, 36). Reporting results from the first randomized controlled trial to encourage financial market participation, we show that trust may be not only a cause but also an effect of participation in financial markets.

References

1. T. Yamagishi, M. Yamagishi, *Motivation and emotion* **18**, 129 (1994).

2. M. Levi, L. Stoker, *Annual review of political science* **3**, 475 (2000).
3. R. D. Putnam, *Making democracy work: Civic traditions in modern Italy* (Princeton university press, 1992).
4. P. Nannestad, *Annu. Rev. Polit. Sci.* **11**, 413 (2008).
5. K. J. Arrow, *Philosophy & Public Affairs* pp. 343–362 (1972).
6. P. J. Zak, S. Knack, *The economic journal* **111**, 295 (2001).
7. Y. Algan, P. Cahuc, *Annu. Rev. Econ.* **5**, 521 (2013).
8. S. F. Knack, *Social capital and the quality of government: Evidence from the United States*, vol. 2504 (World Bank Publications, 2000).
9. E. M. Uslaner, M. Brown, *American politics research* **33**, 868 (2005).
10. M. Siegrist, A. Bearth, *Proceedings of the National Academy of Sciences* **118**, e2100411118 (2021).
11. P. S. Eisnecker, M. Kroh, S. Kühne, *Plos one* **17**, e0278854 (2022).
12. R. Inglehart, M. Basanez, J. Diez-Medrano, L. Halman, R. Luijkx, *Ann Arbor-Michigan, Institute for Social Research, ICPSR version* (2020).
13. C. Rapp, *Social science research* **58**, 34 (2016).
14. L. Boxell, M. Gentzkow, J. M. Shapiro, *Review of Economics and Statistics* pp. 1–60 (2022).
15. B. R. Weingast, *Institutions and social order* pp. 163–200 (1998).
16. N. Nunn, L. Wantchekon, *American Economic Review* **101**, 3221 (2011).

17. S. F. Abramson, D. B. Carter, L. Ying, *American Political Science Review* **116**, 875 (2022).
18. M. Drelichman, J. Vidal-Robert, H.-J. Voth, *Proceedings of the National Academy of Sciences* **118**, e2022881118 (2021).
19. J. Moscona, N. Nunn, J. A. Robinson, *American Economic Review* **107**, 565 (2017).
20. E. M. Uslander, *Available at SSRN 824504* (2002).
21. P. T. Dinesen, *Comparative Politics* **44**, 273 (2012).
22. A. H.-Y. Lee, *Political behavior* **44**, 1533 (2022).
23. J. P. Henrich, *et al.*, *Foundations of human sociality: Economic experiments and ethnographic evidence from fifteen small-scale societies* (Oxford University Press on Demand, 2004).
24. D. Baldassarri, *Proceedings of the National Academy of Sciences* **117**, 2858 (2020).
25. G. Agneman, E. Chevrot-Bianco, *The Economic Journal* **133**, 537 (2023).
26. B. Enke, *Nature Human Behaviour* **7**, 134 (2023).
27. U. Malmendier, S. Nagel, *The quarterly journal of economics* **126**, 373 (2011).
28. V. Nee, H. J. Holm, S. Opper, *Organization Science* **29**, 969 (2018).
29. Y. M. Herrera, A. H. Kydd, *Journal of Peace Research* **59**, 727 (2022).
30. J. S. Coleman, *Foundations of social theory* (Harvard university press, 1994).
31. L. Bassan-Nygate, C. M. Weiss, *APSA MENA Politics Newsletter* (2020).
32. L. Bassan-Nygate, C. M. Weiss, *Comparative Political Studies* **55**, 287 (2022).

33. L. Guiso, P. Sapienza, L. Zingales, *the Journal of Finance* **63**, 2557 (2008).
34. D. Georgarakos, G. Pasini, *Review of Finance* **15**, 693 (2011).
35. D. Leblang, M. D. Smith, D. Wesselbaum, *Economics Letters* **220**, 110884 (2022).
36. M. Giannetti, T. Y. Wang, *The Journal of Finance* **71**, 2591 (2016).
37. L. Bottazzi, M. Da Rin, T. Hellmann, *The Review of Financial Studies* **29**, 2283 (2016).
38. L. Guiso, P. Sapienza, L. Zingales, *The quarterly journal of economics* **124**, 1095 (2009).
39. S. JHA, *American Political Science Review* **107**, 806 (2013).
40. S. Jha, M. Shayo, *The Economic Journal* (Accepted, subject to data replication).
41. S. Jha, M. Shayo, *Econometrica* **87**, 1561 (2019).
42. L. Guiso, P. Sapienza, L. Zingales, *American economic review* **94**, 526 (2004).
43. J. Almenberg, A. Dreber, *Economics Letters* **137**, 140 (2015).
44. A. Conlin, *et al.*, *Journal of Empirical Finance* **33**, 34 (2015).
45. M. P. Haselhuhn, J. A. Kennedy, L. J. Kray, A. B. Van Zant, M. E. Schweitzer, *Journal of Experimental Social Psychology* **56**, 104 (2015).
46. M. H. Graham, M. W. Svobik, *American Political Science Review* **114**, 392 (2020).
47. N. Gidron, J. Adams, W. Horne, *American affective polarization in comparative perspective* (Cambridge University Press, 2020).
48. K. Imai, L. Keele, D. Tingley, T. Yamamoto, *American Political Science Review* **105**, 765 (2011).

49. D. Egger, J. Haushofer, E. Miguel, P. Niehaus, M. Walker, *Econometrica* **90**, 2603 (2022).

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Supporting Information for Online Appendix

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A The RCT: Additional Information

We provide a description of our experimental protocol in the main text. All survey instruments can be accessed on the authors' websites:

http://web.stanford.edu/saumitra/papers/JhaShayo_Finance_SurveyInstruments.pdf

Here we further provide illustrative examples of the survey platform through which treated respondents received exposure to financial markets. In Figure A1, we present a screenshot of the portion of our financial survey in which respondents receive information about their initial endowment. In Figure A2, we further present a screenshot of the portion of the weekly financial survey in which treated respondents received information about their current portfolio performance. As depicted in Figure A2, at that moment, respondents were able to sell 10% of their portfolio and buy other assets (if they had available funds in their account).

B Sample Characteristics

In Table A1, we report key descriptive statistics of our sample and benchmark descriptive statistics against the Jewish Israeli population. Note that in our main specification, we employ survey weights to ensure our sample resembles the distribution of partisan voters in Israel. We further report a balance test in Figure A3. Given our randomization procedure, our sample is well-balanced along a range of covariates.

C Attrition

In table A2, we show that treatment is positively correlated with non-response to our generalized trust outcome measure. This raises concerns regarding differential attrition, which might bias our main estimates. We address this concern in two separate ways. First, in Figure A4, we

show that non-attriting respondents are well-balanced on a range of demographics between treatment and control conditions. Second, we report Horowitz-Manski bounds for our main point estimates in Figure A5. Doing so, we show that our estimate remains positive even in a very extreme instance where all treated respondents with missing outcomes report 0 in our post-treatment trust item and all non-treated respondents with missing outcomes report 1 in our post-treatment trust item.

D Additional Analyses

In our original study, we oversampled centrist voters (doubling their 2013 vote share) in order to identify treatment effects on the political preferences of Israeli centrist voters. However, in this study, our main interest is examining treatment effects on generalized trust among the general population of Jewish-Israeli voters. For that reason, in our main specification, we employ weights that match our sample to the party shares of the Jewish vote in 2013. In Table 3, we report additional analyses, identifying the effects of our treatment on generalized trust with the centrist voter over-sample and without employing survey weights. These results are largely similar to our preferred estimates in the main text. However, in our unweighted analyses, the magnitude of our point estimates is smaller, and our findings only approach conventional levels of statistical significance (e.g., in our ITT estimate in Table 3, we obtain a $p.value = 0.1$ (two-tailed test)). Regardless, it is worth pointing to the substantial difference between our ITT on pre- and post-treatment levels of trust in this context. Indeed, as one might expect, the effects of our treatment on pre-treatment levels of generalized trust are very close to 0 ($\beta = 0.006$). In contrast, point estimates on post-treatment levels of trust are over 6.5 times that magnitude amounting to a point estimate of $\beta = 0.04$. This emphasizes that our treatment had a substantively meaningful effect on post-treatment levels of generalized trust, even when focusing on

our unweighted specification.

In Figure [A6](#), we examine potential heterogeneity in our main results as a factor of asset type. Specifically, we consider two important dimensions. First, we consider the value of an initial portfolio, which was exogenously assigned at either 200NIS or 400NIS. Second, we consider whether the assigned assets were Israeli or Palestinian companies or indices. We find that effects are largely consistent across different types of assets. Finally, in Figure [A7](#) we consider the correlation of partisanship with generalized trust, and report our ITT estimates for partisan subsamples.

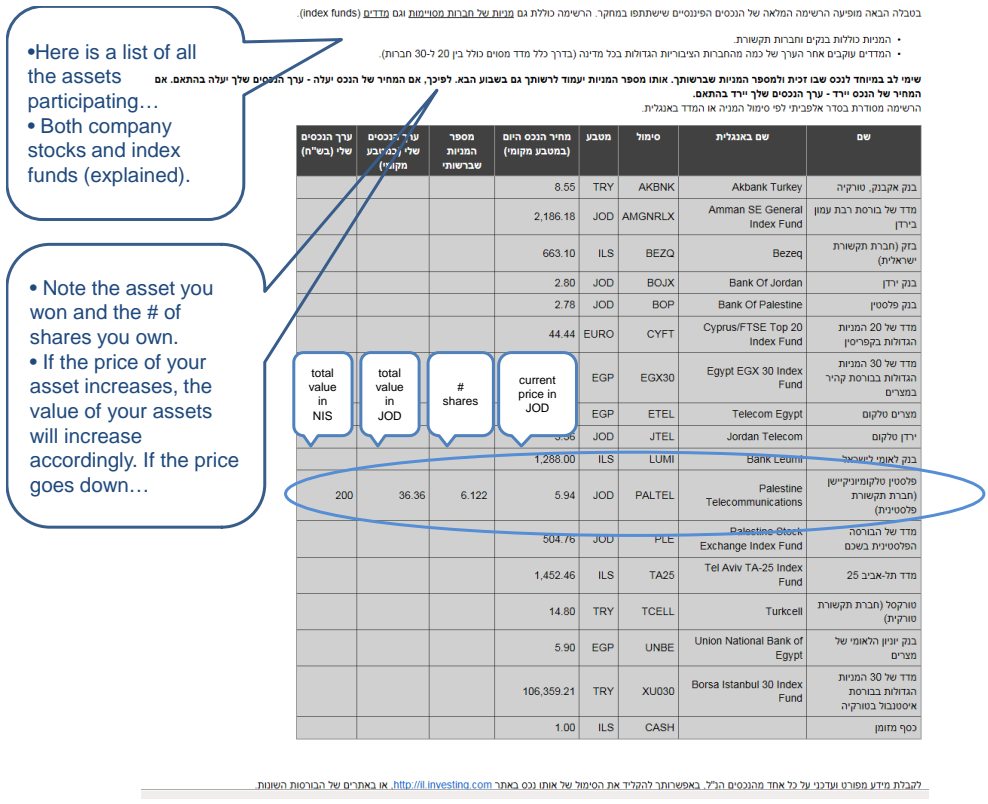


Figure A1: Screenshot of the initial survey providing respondents with information regarding their initial portfolio.

The screenshot shows a Hebrew interface for an investment platform. It contains several sections:

- להלן העדכון על ביצועי תיק ההשקעות שלך.** (Below is the update on the performance of your investment portfolio.)
- כידוע לך, הנכס שלך עוקב אחר המחיר של מניית בזק.** (As you know, your asset follows the price of Bezeq stock.)
- ניתן לעקוב אחרי מנייה זו באתרי אינטרנט רבים לדוגמא, באתר הבאי:** <http://il.investing.com/equities/bezeq-ord>
- מצב תיק הנכסים שלך** (Status of your assets portfolio) section includes:
 - בשבוע שעבר שווי תיק הנכסים שלך היה 200 ש"ח. לרשותך עמדו 0.302 מניות בקירוב ו-0 ש"ח במזומן.
 - מחיר הנכס בשבוע שעבר היה: 663.1 ש"ח.
 - מחיר הנכס המעודכן לפי נתוני הסגירה של יום חמישי הוא: 668.1 ש"ח.
 - לפיכך, השווי המעודכן של נכסך הוא 201.5 ש"ח.
- החלטות ההשקעה שלך** (Your investment decisions) section includes:
 - אנא חזן להלן את החלטות הקניה והמכירה שלך. קניה ומכירה של נכסים אינן כרוכות בעמלה.
 - קניה** (Buy): כיום אין ברשותך כסף מזומן ולכן אינך יכול לקנות מניות.
 - מכירה** (Sell): באפשרותך למכור עד 10% מהמניות שברשותך. המכירה תהיה לפי המחיר המעודכן שצוין למעלה, 668.1 ש"ח. הכסף מהמכירה ייגבר לזכותך במזומן ולא יהיה צמוד לשום נכס פיננסי. אנא הקלד את אחוז המניות שברצונך למכור. באפשרותך לבחור כל מספר בין 0 ל-10 (אם להזין מספרים שלמים בלבד) אם אינך מעוניין למכור את המניות או חלקן, הקלד אפס.

 Callouts on the right side of the screenshot explain:

- The top callout: "Link to website with info on assigned stock" points to the Bezeq stock link.
- The middle callout: "Composition, price and updated value of portfolio" points to the status section.
- The bottom callout: "Selling decision (if current portfolio includes stocks)" points to the sell decision section.

 A callout on the left side says: "Buying decision (if current portfolio includes cash)" pointing to the buy section, which is currently inactive.

Figure A2: Screenshot of the platform in which treated respondents received their weekly update regarding their portfolio. In this stage, respondents were able sell/buy 10% of their portfolio.

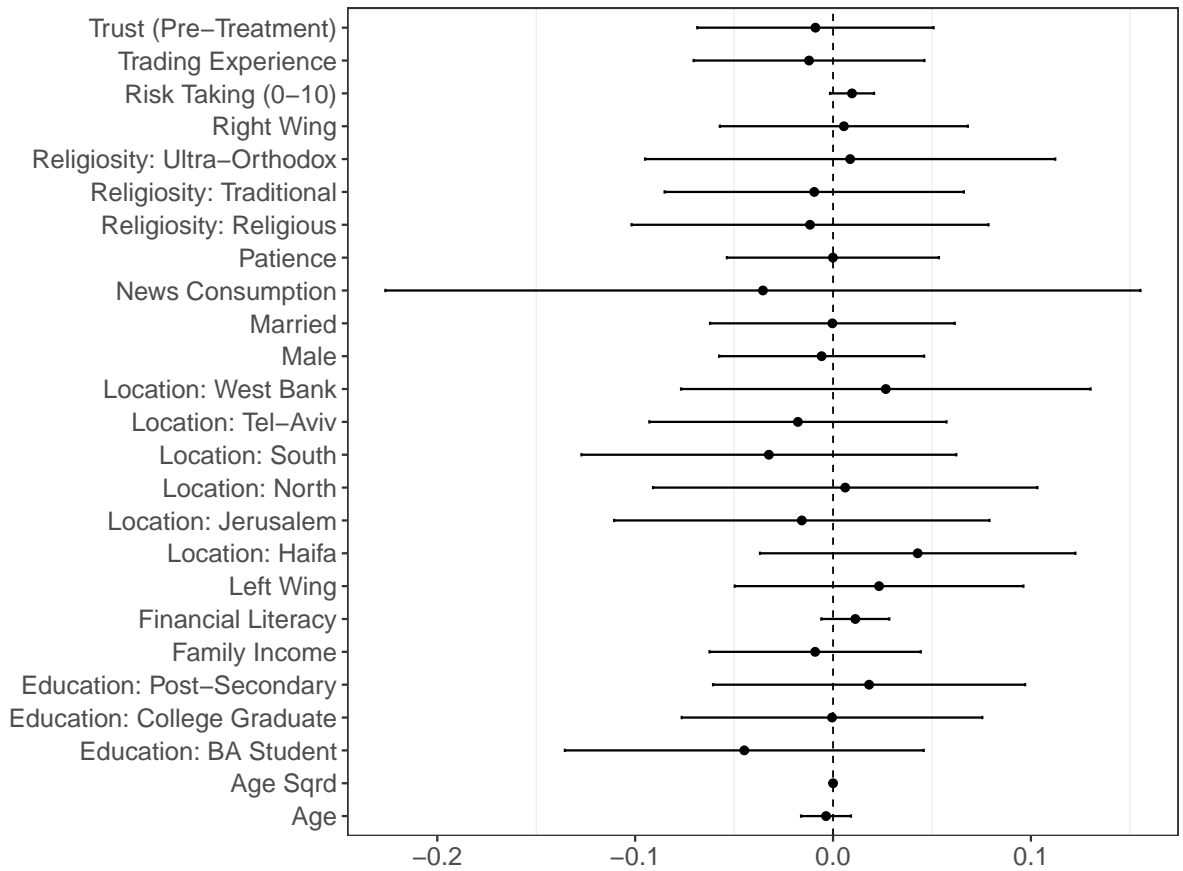


Figure A3: **This Figure reports balance on pre-treatment covariates amongst our full sample.** Point estimates are extracted from a regression in which treatment status is regressed over pre-treatment covariates ($n = 1345$).

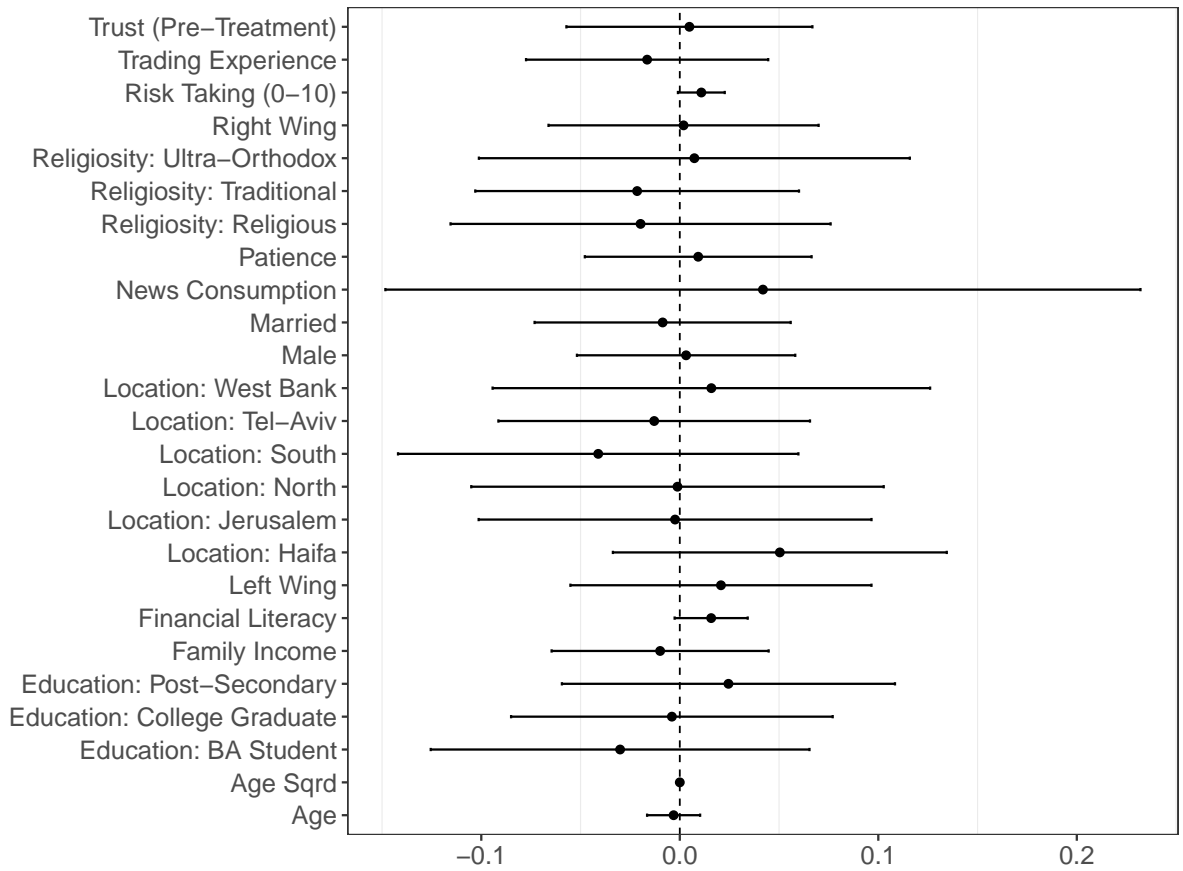


Figure A4: **This figure reports balance on pre-treatment covariates amongst non-attriting respondents.** Point estimates are extracted from a regression in which treatment status is regressed over pre-treatment covariates for respondents for whom we obtain a post-treatment measure of generalized trust ($n = 1,245$).

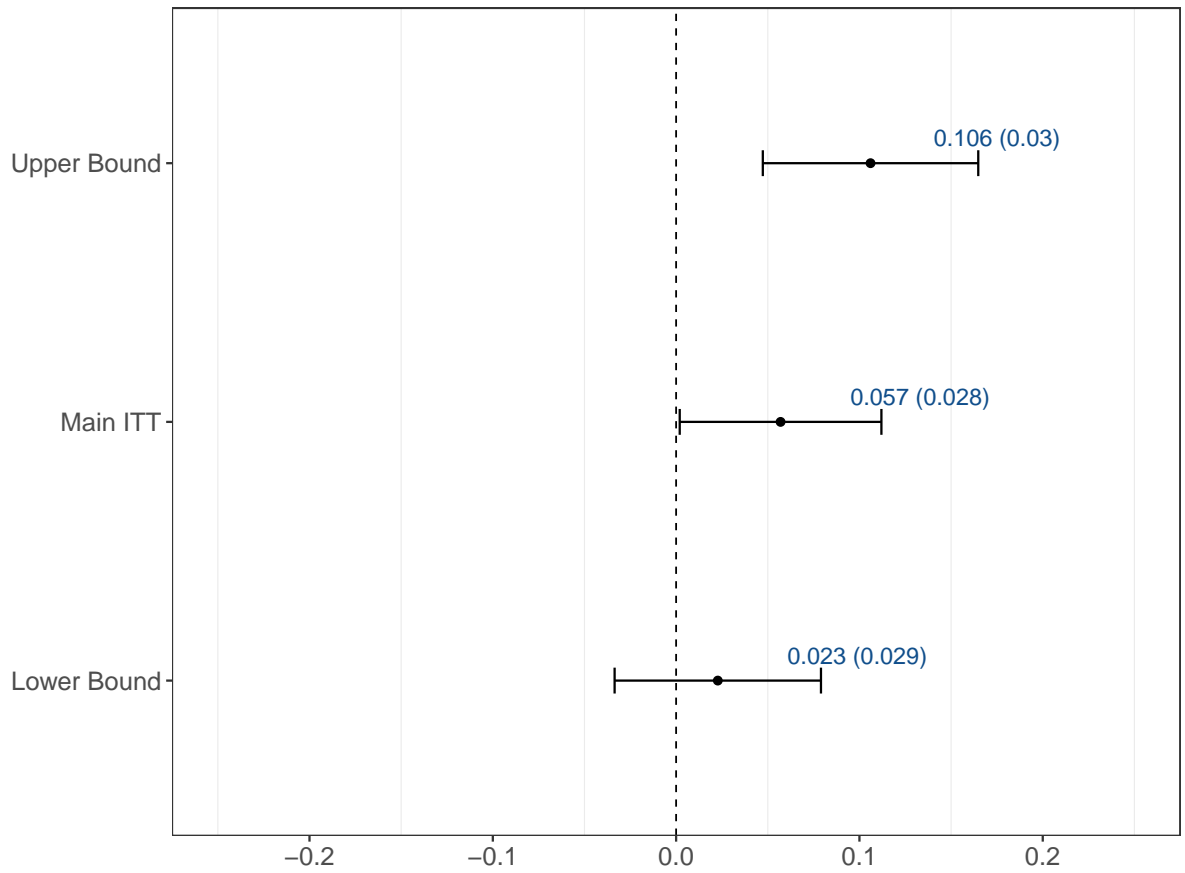


Figure A5: **This Figure reports Horowitz-Manski bounds for our main ITT point estimate.** These results suggest that our estimate remains positive even under the most conservative bounds.

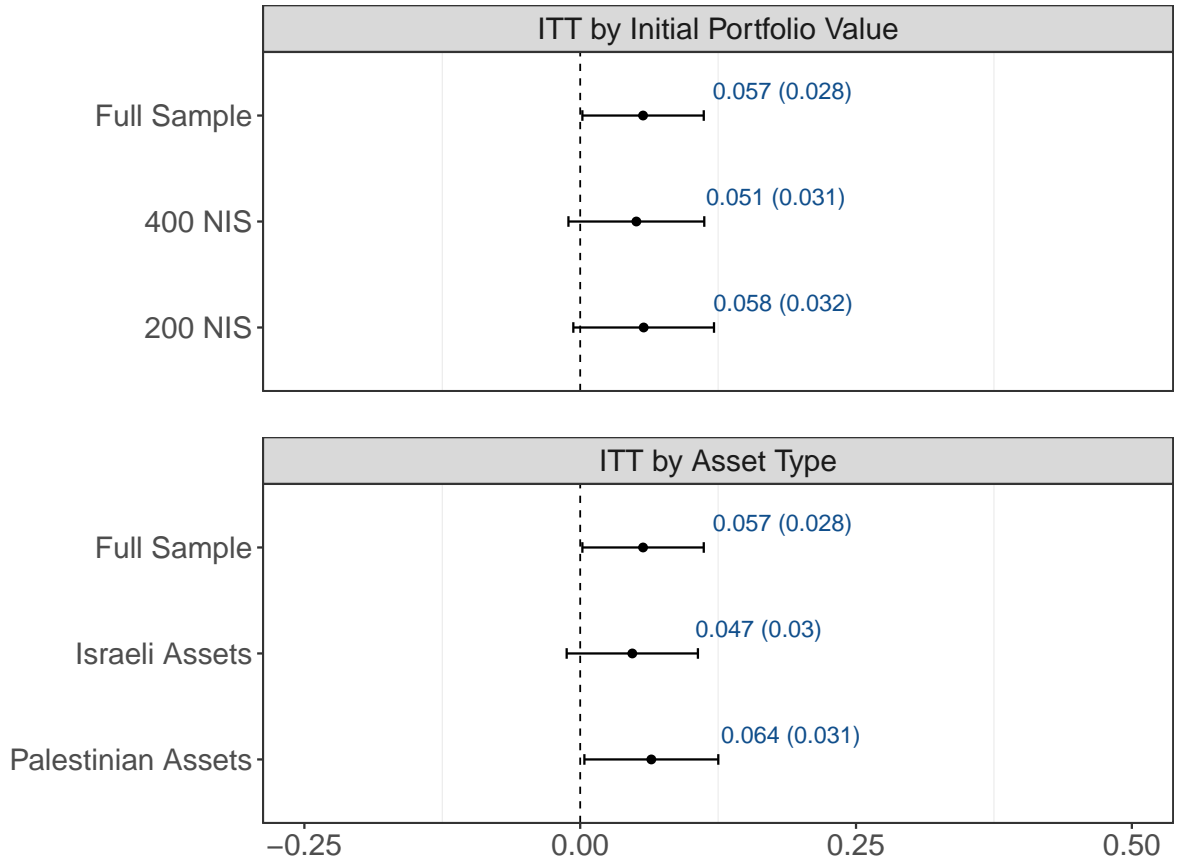


Figure A6: **Treatment effects are similar for respondents assigned to 200NIS and 400 NIS portfolios and to respondents assigned Israeli and Palestinian assets.** This figure reports ITT point estimates, robust standard errors, and corresponding 95% confidence intervals of our main specification. We focus on our full sample, as well as various subsamples, to explore the stability of our main result.

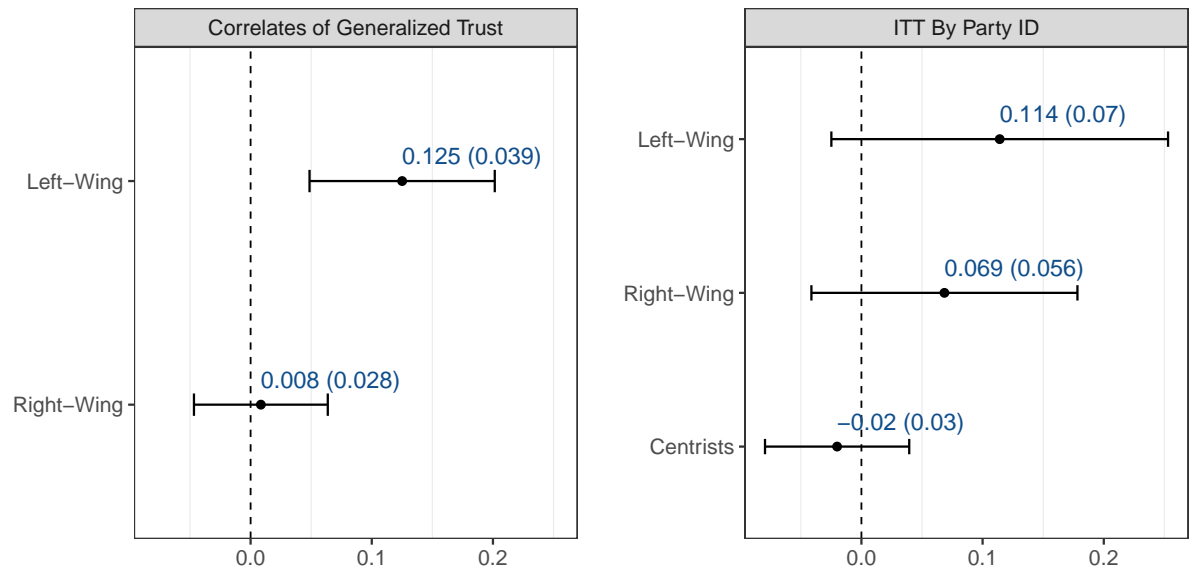


Figure A7: **Partisan identification and generalized trust.** This figure considers the correlation of pre-treatment party identification with generalized trust and the effects of our main treatment on center, right-wing, and left-wing participants. In the left panel, we report point estimates from an OLS model regressing pre-treatment generalized trust over indicators for left and right-wing supporters, showing that left-wing partisans are more likely to report higher levels of generalized trust. In the right panel, we report our ITT estimates for left-wing, right-wing, and centrist subsamples, demonstrating that point estimates are largest for left-wing voters and smallest for centrists.

	Baseline Sample (N = 1345)	Israeli Jewish
1. Region: Jewish Population in District (%)		
Jerusalem District	9.4	11.1
Northern District	9.5	9.5
Haifa District	13.7	10.7
Central District	29.2	28.5
Tel Aviv District	19.8	20.2
Southern District	10.6	14.2
West Bank	7.8	5.8
2. % Female in Jewish Pop., 18+	48.3	51.4
3. Age (Jewish Population above age 18 (%))		
Male		
18-24	10.1	14.6
25-34	29.6	20.4
35-44	28.1	18.7
45-54	15	14.7
55-64	9.6	15.1
65+	7.6	16.5
Female		
18-24	14.2	13.3
25-34	29.7	19.2
35-44	26.3	17.9
45-54	14	14.6
55-64	10.5	15.5
65+	5.4	19.5
4. Religiosity (Jewish Population, %)		
Not religious/Secular	63.1	43.4
Traditional	16.8	36.6
Religious	11.9	10.6
Ultra-orthodox	8.2	9.1
5. Education (Jewish Population level of schooling (%))		
Less than high school grad (0 to 10 yrs.)	5.8	13.7
High school graduate (11 to 12 yrs.)	13.7	33.3
Post-secondary/BA Student (13 to 15 yrs.)	38.2	24.1
College grad and above (16+ yrs.)	42.3	28.9
6. Net Monthly Income per Household (NIS)		
Mean	10766	14,622
Median	12000	13,122

The prime-age sample includes only participants who completed at least one of the post-treatment financial surveys.

1. Statistical Abstract of Israel 2015, Table 2.15, 2014 Totals

2. Statistical Abstract of Israel 2015, Table 8.72, 2014 Totals

3. Statistical Abstract of Israel 2015, Table 8.72, 2014 Totals

4. Statistical Abstract of Israel 2015, Table 7.6, 2013 Totals. The data for the Israeli population is for age 20 and over.

5. Statistical Abstract of Israel 2015, Table 8.72, 2014 Totals

6. Statistical Abstract of Israel 2015, Table 5.27, 2013

Total (mean). Median is midpoint between 5th and 6th

Table A1: **Descriptive Statistics.** This figure reports descriptive statistics of our sample, and benchmarks our sample against the Jewish Israeli population.

Table A2: Treatment Effects on Attrition

Outcome: Non-Response to Trust Outcome (0/1)			
	Base	Block FE	Block FE + Cont.
Treatment	0.058*** (0.015)	0.057*** (0.016)	0.071*** (0.017)
Left Wing	-0.019 (0.019)	0.222 (0.205)	0.224 (0.187)
Right Wing	0.032 (0.019)	-0.031 (0.083)	-0.027 (0.078)
Pre-Treat Trust	-0.017 (0.018)	-0.013 (0.020)	-0.008 (0.020)
Num.Obs.	1345	1345	1345
R2	0.014	0.088	0.141
Control Mean	0.033	0.033	0.033
Control SD	0.179	0.179	0.179

This table reports the correlation of treatment with non-response to our post-treatment outcome of trust. We find evidence for differential attrition.

In Section C we reduce concerns regarding selective attrition by reporting balance tests, and Manski-Horowitz Bounds. Block FE and controls in this table are identical to our main specification in Table 1, and all regressions include weights to match the party shares of the Jewish vote in 2013.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table A3: Trading Stocks and Trust (With Centrist Voter Over-Sample)

Outcome: Generalized Trust (0/1)					
	Pre-Treat Trust	ITT	ITT Block FE	ITT Block FE + Cont.	IV-TOT
Treatment	0.006 (0.029)	0.040 (0.024)	0.038 (0.025)	0.040 (0.025)	0.042 (0.027)
Left Wing	0.109*** (0.040)	0.104*** (0.035)	0.116 (0.148)	0.133 (0.163)	0.134 (0.165)
Right Wing	-0.005 (0.029)	0.032 (0.027)	-0.048 (0.143)	-0.124 (0.151)	-0.128 (0.151)
Pre-Treat Trust		0.519*** (0.029)	0.506*** (0.030)	0.483*** (0.031)	0.483*** (0.031)
Num.Obs.	1245	1245	1245	1245	1245
R2	0.008	0.270	0.330	0.352	0.352
Control Mean	0.265	0.253	0.253	0.253	0.253
Control SD	0.442	0.435	0.435	0.435	0.435

This table reports the same specification reported in Table 1 of the main text, with centrist voter oversample and without the survey weights we used to match our sample to the party shares of the Jewish vote in 2013. Our estimates in this specification are slightly noisier but substantively similar to our main estimates in Table 1 of the main text.

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$