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Policy Misperceptions, Information, and the Demand for Redistributive Tax Reform: Experimental Evidence from Latin American Countries*

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Abstract

Why do individuals' preferences for redistribution often diverge widely from their material self-interest? Using an original online survey experiment spanning eight countries and 12,000 respondents across Latin America, one of the most unequal regions in the world, we find significant evidence for an under-explored explanation: misconceptions regarding the distributional effects of current tax policy. Treated respondents who are informed that an increase in the value added tax (VAT) is regressive are significantly more likely to prefer policy reforms that make the tax more progressive. Treatment effects are driven by the large fraction of respondents who underestimate the regressivity of the VAT, even though their misperceptions are linked to fundamental views about the world. These respondents are disproportionately right-leaning and more likely to attribute success to individual effort than luck. Despite the deep-rooted nature of respondents' misperceptions, treatment effects are largest among individuals who hold these views of the world. These findings contribute both to understanding the political economy of redistribution and the potential for information interventions to shift support for fiscal adjustment policies protecting the most vulnerable.

JEL CLASSIFICATION: D72, D90, H20, H30

KEYWORDS: taxes, redistribution, survey experiment

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1 Introduction

A large literature seeks to understand why individuals' support for redistributive tax policies often diverges from their material self-interest. Previous research examines this puzzle in the United States and other advanced economies, but it is at least as profound in other regions, such as Latin America, where the challenge of inequality looms large. Two prominent lines of inquiry focus on voter ignorance regarding their place in the income distribution and the extent of inequality in society (see especially Stantcheva (2021) for the most recent advances). Slemrod (2006) though, observed that individuals also have significant misconceptions regarding the incidence of current tax policies and asks whether these misconceptions have a causal effect on preferences for progressive tax reform. Are individuals who incorrectly believe that a tax is progressive less supportive of reforms to make the tax more progressive? Is information about the distributional impact of tax policy effective at shifting citizen support for progressive reforms? We address these questions with experimental data from an original online survey spanning eight countries and 12,000 respondents across Latin America.

The analysis addresses two gaps in understanding of the cognitive processes that shape voter support for economic policy reforms. One concerns the informational obstacles that voters must surmount before they are willing to support a specific policy reform. The other relates to the sources of policy misperceptions and how they can be corrected. Voter support for a specific policy reform, such as one to make the tax code more progressive, depends on whether they have sufficient information to convince them that a problem exists, but also to convince them that a specific policy reform will solve the problem and make them better off. Their support for a specific solution should therefore depend on their beliefs about its effectiveness, even if they are fully convinced of the problem and the need for a policy response of some kind.¹

¹For example, if they believe that tax rates on the richest are already high, they are more likely to believe that the redistributive benefits of more progressive rates are outweighed by other negative effects that they might associate with higher tax rates. Moreover, individuals, experts and non-experts alike, may struggle to draw conclusions about the effects of large and unusual changes in public policy on the income distribution. They are likely to be more certain estimating the effects of more incremental and common policy shifts.

Previous research demonstrates that individuals often underestimate the magnitude of inequality and that this affects their support for redistributive reforms in general. For example, Stantcheva (2021) and Kuziemko et al. (2015) demonstrate with evidence from the United States that when individuals are made aware of the problem with information about inequality in society and of their own position on the income distribution, they are significantly more likely to support greater redistribution in general. However, this same information has smaller and more ambiguous effects on their support for specific progressive tax reforms.

We resolve this ambiguity by providing individuals with information that is relevant to their evaluation of the effectiveness of a specific reform to make the value added tax (VAT) more redistributive, by describing the incidence of the current VAT. Individuals who receive information about the regressivity of the current VAT are far more likely to support progressive tax reform that exempts poorer deciles from paying the VAT. The magnitude of the effect is similar to that uncovered by Kuziemko et al. (2015) when looking at the shift in support for greater redistribution in general among those who are informed that inequality is a significant problem. Treatment effects are driven by individuals who have misconceptions about the incidence of the VAT that lead them to believe that the VAT is already progressive, or that make them uncertain about the incidence of the VAT.

The other gap in understanding cognitive processes relates to the sources of policy misperceptions. Misconceptions can be rooted in factual knowledge gaps, but also in ideology-driven beliefs about the way the world operates. Prior research suggests that misconceptions that are rooted in ideology may be difficult to shift with simple information treatments (Luttmer and Singhal, 2011). However, not all ideological beliefs are equally deeply held and it may be that some, which turn out to be important for public policy preferences, are more susceptible to revision when new information is presented. In fact, our evidence on mechanisms indicates that policy misconceptions among respondents seem to be tied more strongly to ideologically rooted beliefs than to gaps in factual knowledge. Nevertheless, a relatively

simple information intervention has a significantly stronger effect on the policy preferences of these respondents.

In the experiment, respondents are asked to elicit preferences over three possible reforms to the VAT: one that exempts no poor households from the tax increase, one that exempts the poorest 30 percent of households and asks the remaining households to pay more, or one that exempts the poorest 50 percent of households, raising taxes even more on the remaining households. These options are carefully constructed to hold constant the amount of tax revenue that each option collects. Treated respondents receive accurate information about how much more poorer households in the region pay as a share of their income in VAT payments compared to richer households.

The data also permit us to analyze mechanisms in detail. We identify which respondents have misconceptions about the incidence of the VAT (that is, those who incorrectly believe it is progressive). We can also identify the characteristics of respondents who believe that the VAT is flat or progressive and of those who believe it is regressive. Their main distinguishing features are linked to their views about the world, reflected in their political ideology and other beliefs. For example, right-leaning respondents are more likely to hold the incorrect belief that richer households devote the same or a larger share of their income than the poor to VAT payments.

The experiment yields three main results. First, learning about the regressivity of current tax policy has a large impact on support for progressive tax reform. Second, treatment effects are much stronger among those who incorrectly perceive the progressivity of current tax policy. Third, policy misperceptions are greatest among those who categorize themselves as right-leaning; treatment effects are significantly stronger among this group.

These results add to the findings of a rich literature examining preferences for redistribution. Stantcheva (2021) find that informing individuals about the severity of inequality in society increases support for redistributive tax reforms in general.² Kuziemko et al. (2015)

²Fehr, Mollerstrom and Perez-Truglia (2022) report results from a two-year survey experiment in Germany that correcting respondents systematic under-estimation of their true place in the world's income

examine a multi-dimensional information treatment that, among other things, informs respondents about their income relative to others.³ Though the treatments have a statistically and economically large effect on preferences for redistribution in general, their impact on preferences for specific progressive tax reforms is substantively small, about one-tenth of the difference between the preferences of liberal and conservative respondents.⁴ Our treatment, information on the incidence of the current VAT, has as large an effect on respondent preferences for a specific progressive tax reform as the effects that Stantcheva (2021) and Kuziemko et al. (2015) estimate when examining the effects of information about inequality on preferences for redistribution in general.⁵

Both Bartels (2005) and Slemrod (2006) observed widespread misconceptions regarding the progressivity of specific tax policies in the United States. Slemrod (2006) analyzes data from a large survey of Americans and finds that many believed that a new sales or flat tax would be more progressive than the current income tax and those who held this belief were significantly more likely to support the sales/flat tax alternatives. Slemrod (2006) closes with a question for future research to which we respond: whether these misconceptions are

distribution does not affect support for policies related to global inequality.

³Their work builds on earlier contributions. For example, in Cruces, Perez Truglia and Tetaz (2013) and Fernandez-Albertos and Kuo (2018), individuals who are told that their relative income is lower than they believed demand more redistribution. Similarly, in Karadja, Mollerstrom and Seim (2017) individuals who learn they are richer relative to others demand less redistribution. In contrast to these findings, Hoy and Mager (2021) examine data from a survey experiment involving 10,000 participants in ten middle and upper-income countries and conclude that informing individuals that their position in the income distribution is lower than they thought does not increase support for redistribution.

⁴31.1 percent of treated respondents, versus 30.21 control respondents prefer higher tax rates on the richest 1 percent; 79 percent of treated respondents, versus 74 percent of control respondents, prefer higher tax rates on millionaires.

⁵In contrast to our findings, Douenne and Fabre (2022) find that respondents do not change their perceptions of the progressivity of a carbon tax policy when told “this reform would increase the purchasing power of the poorest households and decrease that of the richest”. We attribute the difference to greater familiarity with the VAT, the complexity surrounding the incidence of a carbon tax, and the fact that our information treatment, though substantially lighter than others in the literature, is more detailed and entails more comprehension checks than their treatment. Numerous studies find strong effects of similar information treatments on estate taxes, which evidently do not generalize to other taxes with broader incidence. Bastani and Waldenstrom (2021) find that information about the aggregate importance of inherited wealth and its implications for the inequality opportunity in Sweden leads to a significant increase in support for estate taxation among Swedish respondents. Kuziemko et al. (2015) and Sides (2016) also find a dramatic effect of their information treatment on preferences for a higher estate tax. In Kuziemko et al. (2015), more than 50 percent of treated respondents prefer it compared to 17 percent of control respondents. We focus on a different and fiscally more important tax with much broader incidence than the estate tax.

causally related to tax policy preferences.⁶

To capture redistributive policy preferences, Alesina, Miano and Stantcheva (2022) and Alesina, Stantcheva and Teso (2018) ask subjects to manipulate income tax rates paid by each quintile, holding total income tax revenues constant, allowing the subjects to observe how their manipulation would change each quintile’s actual after-tax income. We follow their practice of holding total tax revenues constant. Also holding constant total tax revenues, de Bresser and Knoef (2022) find that on average, respondents prefer a more redistributive tax system, giving rise to the same conjecture advanced by Slemrod (2006), that knowledge of the incidence of the current tax system increases support for redistributive tax reform. We experimentally evaluate this conjecture.⁷

Our analysis also contributes to research investigating the effects of information on bias in individual tax preferences. Sausgruber and Tyran (2011) examine the tax-shifting biases of individuals - their preference that sellers rather than buyers pay taxes. Tax-shifting bias is unrelated to the distributional issues of concern here, but their treatment is similar. They inform individuals about the effects of the two types of taxes on market prices and incomes and show that this information reduces tax-shifting bias. We find that information about the true incidence of the VAT also shifts preferences regarding redistributive tax reform.

Other research specifically explores bias against redistributive tax reform, focusing especially on ideologically induced bias. A repeated finding is that information predicted to increase support for redistribution has larger treatment effects among right-leaning respondents.⁸ We are able to investigate the mechanisms behind this relationship. Specifically, we

⁶He also notes that sales and flat taxes could, in principle, be designed in such a way as to make them more progressive. Respondents to our survey are given unambiguous information about the progressivity of different tax options.

⁷Hoy (2022) also exploits experimental evidence from Latin America to document widespread misperceptions of progressivity of fiscal policy and that information about the actual progressivity (regressivity) of fiscal policy in respondents’ countries increases (decreases) their willingness to pay taxes.

⁸Boudreau and MacKenzie (2018) inform Californian survey respondents about the true level of inequality in the state and then elicit their preferences for an increase in the (progressive) state income tax or the (regressive) state sales tax. Among Republicans, this information significantly raises support for the progressive reform, an increase in the income tax rates for high earners; it has no effect on Democrats. Among Democrats, the information reduces support for a regressive increase in the sales tax; it has no effect on Republican support for a sales tax increase. Results in Karadja, Mollerstrom and Seim (2017) are similarly

can show that treatment effects are strongest among those who misperceive the incidence of the VAT, and right-leaning respondents are among those who are most likely to have incorrect perceptions.

Finally, the experimental design incorporates common features of the policy environment. In particular, respondents are asked to assess the VAT reform options in the context of a government that confronts the need for a large fiscal adjustment and resorts to the VAT to extricate itself. The analysis therefore contributes to the literature on the political economy of fiscal adjustments. Alesina et al. (2021) account for the strategic choices that governments make to reduce the electoral costs of austerity (see Hübscher and Sattler (2017)). They conclude that tax-based austerity measures have large electoral costs that are significantly greater than spending-based measures. Consistent with this, Ardanaz, Hallerberg and Scartascini (2020) show fiscal adjustments in Latin America and the Caribbean are mostly tax-based and rely fundamentally on increasing the tax rates and the bases of indirect taxes such as the VAT.⁹ Our survey results indicate that efforts to make VAT adjustments more progressive might soften the negative electoral impact that previous studies document.

The remainder of the paper is organized as follows. Section 2 introduces the experiment's policy environment and stylized facts regarding the VAT in Latin America. Section 3 presents the survey experiment in more detail and associated data. Section 4 describes the empirical strategy and Section 5 reports the main results and robustness tests. Section 6 provides insights on the transmission mechanisms driving the results. Section 7 concludes.

driven by respondents who are more right-wing and believe more strongly that economic success is a product of effort rather than luck. Sides (2016) also demonstrates that treatment effects on support for a higher inheritance tax are strongest among right-leaning respondents.

⁹In a survey of five European countries, Hübscher, Sattler and Wagner (2021) also find that tax increases reduce government popularity, but less than spending cuts.

2 Value Added Taxes in Latin America

Two features of the VAT make it particularly relevant for this study. First, it is a key feature of tax policy in Latin America and a common tool that governments use to respond to fiscal crises. Hence, fiscal crisis frames the three reform options that the respondents consider: “How should governments raise tax revenues in response to a fiscal crisis?” In addition, significant technical advances allow for countries of the region to develop a “personalized VAT” one that allows poor households to be exempted from VAT payments or to have those payments be refunded to them. Hence, the three policy options that we describe, exempting different deciles of poor households, are not foreign to the survey respondents.

The VAT is the single most important source of revenue for Latin American governments and is highly salient for households.¹⁰ Because of its ease of implementation it is also a favored instrument for fiscal adjustment, despite widespread agreement among experts that it is regressive.¹¹ Indeed, the incremental upward adjustments of the VAT in response to repeated crises is one factor that contributes to the limited redistributive effect of fiscal policy and persistent inequality in the region (Lustig, Pessino and Scott, 2014).

Survey respondents could be confused by the vignettes, or not take them seriously, if they believed that exempting VAT households from the VAT was impossible or impractical. However, the region has made substantial progress towards a personalized or compensated VAT, aimed precisely at making the VAT more progressive. Though the details vary from country to country, Argentina, Ecuador and Bolivia all return VAT payments to certain poor households that have made purchases using debit cards issued to them by the government. Uruguay goes further and exempts poor households from paying the VAT if they use the

¹⁰VAT taxes account for about a third of total revenue collection in a typical Latin American country, and its contribution to the overall tax take is three times as large as that of the personal income tax.

¹¹When individuals are ranked according to their current per capita income, VAT is regressive since the poor save less than the rich. However, when a lifecycle or intertemporal criterion is used to measure welfare, the VAT tends to be proportional (Metcalf, 1994; Gasparini, 1998). Informality generally makes the VAT less regressive: lower-income families are more likely to make part purchases in informal businesses at lower prices than those of larger and more formal businesses (for example, supermarkets) (Bachas, Gadenne and Jensen, 2021). However even the attenuating effect of informality on VAT regressivity depends on assumptions about the pass-through of taxes to informal sector prices.

government debit card that they have been issued. Colombia’s VAT compensation scheme currently reaches around two million poor households and benefits are delivered through the financial system, largely based on previously existing infrastructure for the payment of other social programs.¹²

3 Survey Experiment

To explore respondent attitudes towards a more progressive VAT, in March 2022 we conducted an online survey in eight countries in Latin America: Argentina, Brazil, Chile, Colombia, Costa Rica, Guatemala, Mexico, and Peru. In each country, we collected the answers of 1,500 respondents for a total of 12,000 responses. The survey was administered by the Latin American Public Opinion Project (LAPOP), which, in turn, uses a standing online panel from two different survey providers (Netquest and Offerwise).¹³

The survey is divided into three sections. Respondents first answer questions about their nationality, gender, age, region, confidence and trust, views on the tax administration, knowledge about who decides tax policy, political participation and alignment, time preferences, risk preferences, and perceptions of their location in the income distribution. In the third section, respondents answer questions about their education, occupation, income and the characteristics of their household.

The second, main part of the survey elicits information about their preferences regarding three possible tax reforms, which vary in their degree of progressivity. In addition, treated respondents receive information about the incidence of the VAT. Respondents are from different countries but all receive the same reform options and treated respondents receive the same information about incidence. This reinforces the experimental design. To ensure that the options and incidence information are plausible and realistic, we base them on aggregate data from household consumption surveys from across the different countries. Necessarily,

¹²See Barreix et al. (2022) and Rastelleti (2021) for further discussion.

¹³The survey was pre-registered at <https://osf.io/wd6tb>.

they more closely reflect the tax parameters of some countries than others. However, our estimates control for country fixed effects. We further report in the robustness section that treatment effects vary little across countries.

3.1 Tax policy reform preferences

Respondents are shown three policy options for raising tax revenues in response to a fiscal crisis. Governments can raise the VAT rate for all households; they can exempt the bottom 30 percent of households from the increase and impose a higher percentage point increase on the top 70 percent; or they can exempt the bottom 50 percent and impose an even higher increase on the upper 50 percent.

Two key parameters vary across the reform options: the amounts by which tax rates will increase, and the fraction of the population that is exempted from the increased tax rates. We set these parameters to ensure that all reform options increase total VAT collection by the same amount. We do this using estimates from household expenditure survey data of VAT payments across the income distribution.¹⁴

The baseline adjustment option raises the standard VAT rate by one percentage point for all households, enough to finance a 4 percent increase in total VAT revenues.¹⁵ This is the *All Pay* option. The *Top 70% Pay* option redistributes to the poorest 30 percent. The tax rate therefore rises by more than one percentage point on the 70% who pay, such that their VAT payments rise by 5 percent, ensuring that the VAT reform still yields an increase of 4% in VAT revenues for the government. The *Top 50% Pay* option exempts the poorest 50 percent of voters from paying the higher VAT. The tax rate rises by more than in the *Top 70% Pay* option and the 50% of households who pay it therefore see a 6 percent increase in their VAT payments, enough to yield a 4 percent net increase in VAT payments to the

¹⁴The potential impact of fiscal adjustment itself on income inequality is ambiguous and not mentioned to respondents. Potential heterogeneity in respondent beliefs about this should not introduce bias into the experiment since the adjustment is identical across all options.

¹⁵For example, if the VAT rate goes from 24 to 25 percent, household payments rise by an average of four percent.

government. These trade-offs are made clear to respondents.

The three policy options are therefore:

Option 1 - All pay: 4% increase in VAT payments, no exemptions.

Option 2 - Top 70% pay: 5% increase in VAT payments by top 70%, poorest 30% are exempted.

Option 3 - Top 50% pay: 6% increase in VAT payments by top 50%, poorest 50% are exempted.

We calculate the incidence of the current VAT and the key parameters of the three VAT reform options using micro-data taken from household consumption surveys in ten Latin American countries, based on IDB (2022).¹⁶ For households in each income decile, the survey data allow us to compute both the VAT that the households pay and household income, yielding VAT payments as a fraction of household income. For example, in Argentina households in the poorest decile pay 20.9 percent of their income in VAT payments while households in the richest decile pay only 8 percent.

As previously discussed, the two key parameters that vary across the three policy options are the fraction of households exempted from an increase in the VAT and the magnitude of the increase on the non-exempt that is needed to ensure that every policy option yields the same total revenues, regardless of how many poor households are exempted.¹⁷ To find out exactly how much higher the tax rate would be, we first calculate total household consumption in every decile from survey data. We then calculate how much each decile's total VAT payments would rise with a one percentage point increase in the standard VAT rate, which is a typical policy response in times of fiscal adjustment across the region (David and Leigh, 2018).¹⁸

¹⁶Argentina, Bolivia, Brazil, Chile, Colombia, the Dominican Republic, Honduras, Mexico, Peru, and Uruguay.

¹⁷The poorest decile consumes far less than 10 percent of total household consumption and therefore its VAT payments at any given rate are far less than 10 percent of total VAT payments. Hence, if the poorest decile is exempted from an increase in the VAT, the amount that the remaining households will have to pay is something less than 10 percent higher than they would have had to pay if no decile were exempted.

¹⁸VAT exemptions and rate reductions for particular goods proliferate in most Latin American countries. The survey data are detailed enough to allow us to assign shares of household consumption to the corresponding rates. However, to avoid complicating the options we present to the respondents, we do not

When no decile is exempted, the *All Pay* reform option raises total VAT tax revenues by approximately 4 percent.¹⁹ For each of the other two options, *Top 70% Pay* and *Top 50% Pay*, we then calculate the additional amount by which the VAT tax rate would have to rise to ensure that total VAT tax receipts to the government still rise by 4 percent after the bottom three (“70% Pay”) or bottom five deciles (“50% Pay”) are exempted.²⁰

To increase the salience of the policy options and reduce the cognitive burden on respondents, we tell them how much more households will pay in taxes under the new rates, not the new rates themselves. That is, respondents see the percentage increase in monthly VAT payments for an average household under each policy option. The increased VAT payments are simply the product of the tax rate established for each policy option and total household consumption in all non-exempt deciles. Our vignettes inform respondents of these increases: 5% in the case of the *Top 70% Pay* option, and 6% in the *Top 50% Pay* option.

All respondents see the three policy alternatives and are then asked to evaluate three pairwise comparisons: Option 1 against Option 2; Option 1 against Option 3; Option 2 against Option 3. The order in which respondents see these vignettes is randomized. In each comparison, respondents indicate on a 5-point scale if they are more likely to vote for the government if the government implemented Option x vs. Option y . A value of 1 indicates most support for Option x , 5 indicates most support for Option y , and 3 indicates that the respondent is indifferent between Option x and Option y .

After respondents completed these comparisons, they are guided to a new screen that asks them to choose their most preferred option among the following four alternatives: Option 1, Option 2, Option 3, or an additional Option 4, which suggests that the government does not adjust the VAT to address the fiscal crisis.

mention reduced rates. Our policy options incorporate only increases in the standard VAT rate, not the reduced rates.

¹⁹While in practice the exact number varies from country to country depending on their prior VAT tax rate and base, the cross-country variation is trivial, lending credence to the use of a common figure across the experiment.

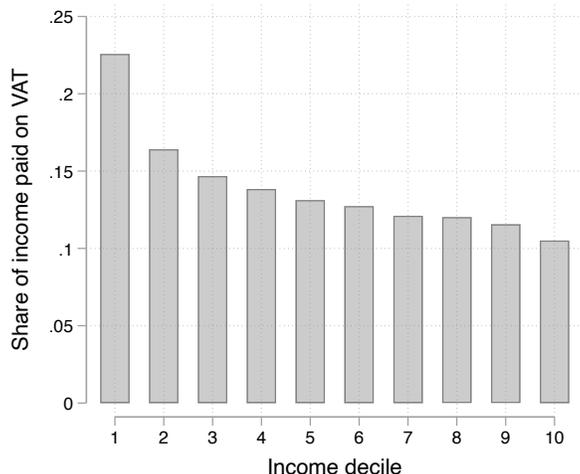
²⁰As is standard in this type of analysis, we assume that household consumption is inelastic with respect to the changes in the VAT tax rate and that households bear the full burden of the tax (see Lustig (2018) and IDB (2022)).

3.2 Information treatment

The hypothesis motivating the study is that individuals' reluctance to embrace progressive tax reforms can be traced to their uncertainty about the progressivity of the existing tax system. Therefore, before choosing between the policy options, the survey includes an information treatment that tells respondents randomly assigned to the treatment group the distributive impact of the VAT in a typical Latin American country.

To build the treatment, we again use the tax incidence analysis described above providing information on the fraction of monthly income devoted to VAT payments by different income groups. Thus, our treatment involves telling respondents about the incidence of the VAT across the income distribution and, specifically, that lower income households devote a higher share of their income to VAT payments than higher income households, as shown by Figure 1. We highlight the fact that the poorest households pay up to 23% of their income on the VAT and the richest households pay only 11% of their income on VAT payments. To increase salience and comprehension, the information is presented both verbally and graphically.²¹

Figure 1: Impact of VAT on income deciles; averages across selected countries in Latin America



²¹Appendix Figure A1 shows a screenshot from the survey with the actual graph shown to the treatment group. In order to generate a common treatment across countries, the figure presents average values across the countries in our sample, thus representing the distributive impact of VAT in a typical or representative country in Latin America.

Treatment length or content could affect attrition in the treatment group relative to the control group, potentially biasing responses. However, attrition was nearly the same in treatment and control groups, on average 6.2% of respondents in the control group and 6.6% in the treatment group. The difference is entirely insignificant, whether or not we control for country fixed effects and respondent characteristics (see Table 1).²²

Table 1: Survey attrition rate by treatment status

	Outcome: D(Dropped out from the survey)		
	(1)	(2)	(3)
Treated	0.004 (0.006)	0.004 (0.006)	0.001 (0.003)
Observations	12,985	12,985	12,371
Country Fixed Effects	No	Yes	Yes
Individual controls	No	No	Yes
Mean Dep Var (Control)	.0622	.0622	.0171

Notes: This table presents the estimates of the effect of being treated on survey attrition. The outcome is a dummy taking the value of 1 if the individual dropped out from the survey. Individual controls include sex, age, household size, the education level, the income level, employment and formality status, whether the participant is retired, and a subsidies reception dummy. Standard errors are clustered at the country level.

3.3 Control variables

The survey collected a wide range of household and respondent characteristics that might influence their support for more progressive tax reform. These included basic data about education, age, gender, household size, and employment status. In addition, respondents provided information that allow us to place their actual and perceived location in the income distribution, as well as their attitudes on key issues. These are all balanced across treatment and control groups. We include them to identify empirical regularities in the data that link

²²In their work, using more intensive treatments, Kuziemko et al. (2015) and Stantcheva (2021) experienced overall attrition rates of 15% and 19%-20%, respectively. In Kuziemko et al. (2015), treated individuals were 11.3 percentage points less likely to finish the survey and in Stantcheva (2021) the treated were between two and six percentage points less likely. In our experiment, the treated are 0.4 percentage points less likely.

this research to prior work, yield surprising new regularities, or, most importantly, help to estimate heterogeneous treatment effects that are useful to explore mechanisms.

Actual and perceived position in the income distribution. Substantial theoretical and empirical attention has been given to household income as a determinant of redistributive preferences. If respondents are only motivated by their material self-interest, respondents in the top half of the income distribution should prefer the *All Pay* option over the other two; those in the fourth or fifth deciles should prefer the *Top 50% Pay* option over the other two; and those in the first, second or third deciles should prefer either of the redistributive options over the first.

Two questions capture households' actual and perceived location in the income distribution. First, prior to entering the VAT portion of the survey, respondents were asked to imagine a staircase with ten steps, with the poorest located on the first step and the richest on the tenth step. Their self-location on the staircase constitutes their perceived location in the income distribution. Second, we derived their actual location by asking them, at the end of the survey, for their household income. Specifically, we computed the thresholds for each income decile in the survey countries using Latin American household survey data from Sociómetro-IDB and SEDLAC. Respondents were asked to place themselves in one of the 10 income categories.²³

The 10-step scales allowed us to group respondents into the three income groups that are relevant for the fiscal policy questions: the lower 30% group including respondents who classify themselves into the first three income percentiles; the middle 40-50% group including respondents who classify themselves into the fourth and fifth income percentiles; and the top 60% group including respondents who classify themselves into sixth through the tenth percentiles.

Tax incidence misperceptions. We expect treatment effects to be strongest among those who have incorrect perceptions of the incidence of tax policy. Therefore, before introducing

²³The distribution of respondents for these two variables is in Appendix B, Figure B1.

our experiment, we asked respondents whether they believe rich households spend a higher, the same, or lower fraction of their income on VAT compared to poor households.²⁴ Only 35 percent of our sample is aware that poor households tend to pay a higher fraction of their income in VAT than the rich.²⁵

Attitudinal controls. The survey collected additional information that is particularly useful for understanding mechanisms. We asked respondents where they located themselves ideologically, on a 10 point scale from left to right; right-leaning respondents were significantly more likely to underestimate the regressivity of the VAT.

Individuals' support for redistribution can also depend on whether they believe that success in life depends on one's own efforts. Those who believe this is the case turn out to have the misconception that the VAT is progressive.²⁶

Beliefs about the potential for upward mobility in society might also affect support for progressive tax reform, and perceptions about the progressivity of the VAT. Respondents therefore indicated which of four statements they most agreed with, from "almost all children from poor households have the same opportunities as children from rich households" to "almost no child from a poor household has the same opportunities as children from rich households." Again, these beliefs are strongly associated with misconceptions about the incidence of the VAT.

²⁴The exact question wording is as follows: "Over the course of a year, all households will have dedicated a certain percentage of their income to paying VAT for the goods and services they purchased. What do you think is the percentage of income paid by poor households and rich households on VAT? Do you think that rich households spend a higher percentage of their income paying VAT, or a lower percentage, compared to poor households?" Respondents choose one of five possible answers: 1) Rich households spend a *much higher* percentage of their income in VAT payments; 2) Rich households spend a *higher* percentage; 3) Rich and poor households spend *about the same* percentage; 4) Poor households spend a *higher* percentage; and 5) Poor households spend a *much higher* percentage of their income in VAT payments.

²⁵Krupnikov et al. (2006) argue that survey data on respondents' factual knowledge, in their case knowledge of the incidence of the estate tax, likely underestimate knowledge. When they offer one dollar to respondents who correctly answer the question about estate tax incidence, the number of correct responses increase by more than 30 percent. Although we do not reward respondents for correct answers on the incidence of the VAT, the possible inaccuracy of responses does not bias our experimental results. Random assignment of respondents into treatment and control groups ensures balance in the number of respondents who accurately and inaccurately respond to the question regarding VAT tax incidence.

²⁶The exact question wording is as follows: "With which of statements A or B are you more in agreement? A. People's incomes are the product of their individual efforts; or B. People's incomes are the product of factors outside of their control?"

Respondents had an opportunity to indicate which two potential problems in their country, out of a list of 14, most concerned them. The list was randomly reordered for each respondent. From these choices, we constructed a dummy variable to indicate those respondents who were most concerned about inequality and poverty. They were more in favor of progressive tax reform, and more likely to say that the VAT was regressive.

Finally, the survey also asked various questions related to trust in others and in government. These did not have systematic effects on either preferences for tax reform nor misconceptions regarding the incidence of the VAT.

4 Empirical Strategy

We examine whether the information treatment has a significant effect on VAT reform preferences by estimating an empirical specification with the following form:

$$y_{ic} = \alpha_c + \theta_1 Treated_i + \theta_2 X_i + \varepsilon_{ic} \quad (1)$$

The variable y_{ic} captures the VAT reform options preferred by respondent i in country c . There are different versions of the variable, capturing respondent preferences across binary comparisons of the three options *All Pay*, *70% Pay*, or *50% Pay*. $Treated_i$ is an indicator variable that equals 1 if the respondent i received the information treatment, and 0 otherwise. The coefficient of interest, θ_1 , captures the average differential change between those who received the information treatment and those who did not.

We include a complete set of country fixed effects α_c to control for any source of cross-country heterogeneity. The term X_i in equation (1) represents control variables. The group of basic socioeconomic controls consists of the respondent's actual position in the income distribution, education, age, gender, employment status, whether the worker is informal or retired, whether the respondent receives any government subsidy, and household size. Some specifications also control for respondents' attitudes: their perceived location in the income

distribution, whether they consider inequality and poverty as main problems in their country, trust in the current government, beliefs about the determinants of economic success (luck vs. effort), beliefs about the life opportunities of poor children, previous knowledge about who decides tax policy, and political alignment (left vs. right ideological dimensions). Finally, ε_{ic} is the clustered error term that allows correlation within countries.

To investigate the heterogeneity of the information treatment based on respondent's characteristics, we use an augmented version of the main specification, equation (1). We estimate the following equation:

$$y_{ic} = \alpha_c + \theta_1 Treated_i + \theta_2 (Treated_i \times Z_i) + \theta_3 Z_i + \mu_{ic}, \quad (2)$$

The coefficient of interest in this equation is θ_2 , which captures the differential effect on tax policy preferences of those who received the information treatment that also share characteristic Z_i .

5 Results

5.1 Graphical evidence

Before examining respondent support for redistribution we confirm in Figure C1 in Appendix C that the treatment and control groups are balanced with respect to all observable variables. This is unsurprising given the random assignment of respondents to treatment and control groups. The analysis provides reassurance that the two groups are likely to be balanced as well with respect to unobservable characteristics.

Simple comparisons of respondent support for the various reform options reveals a significant preference for the redistributive over the non-redistributive reform options. This preference is stronger among treated respondents. Figure 2 describes these differences. Subfigure 2(a) shows that more respondents favor the options that include a compensation

component, Options 2 (*70% Pay*) and 3 (*50% Pay*), than Option 1 (*All Pay*).

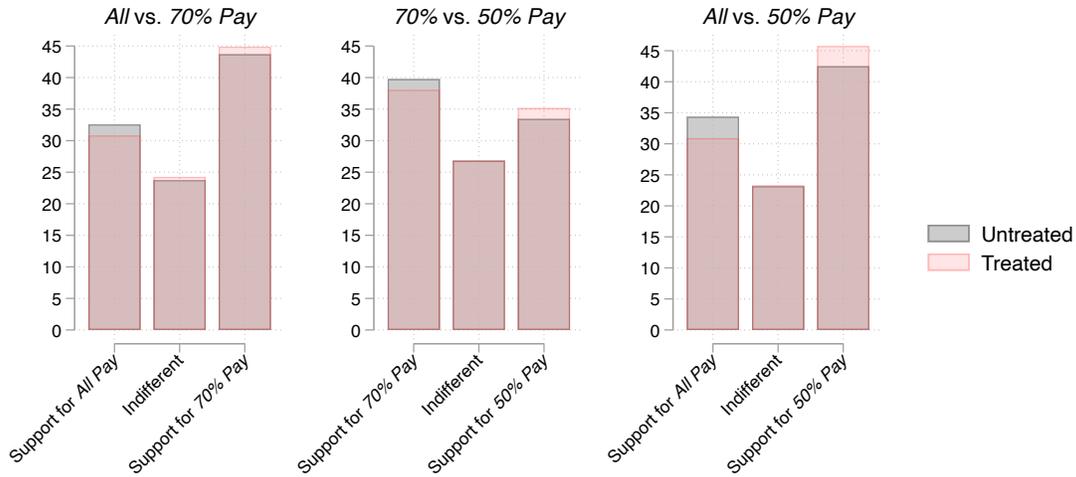
More specifically, respondents first made a pairwise comparison between Option 1, *All Pay* and Option 2, *70% Pay*, on the 5-point scale described in the previous section, where 1 or 2 expressed support for the first option, 4 or 5 for the second, and 3 reflects indifference. The columns *Support for O₁/O₂* are the shares of respondents who prefer *All Pay* or *70% Pay*, respectively. The shares for the other two pairwise comparisons are computed similarly. The fraction of respondents who prefer the more redistributive options over the non-redistributive option is between 10 and 15 percentage points. When respondents choose between the two redistributive options, they slightly favor Option 2, which exempts the bottom 30%, over Option 3, which exempts the bottom 50% of the income distribution. Between 20% and 25% of the respondent are indifferent between the various options.

Respondents then indicated their preferred policy from among any of the three options plus the added option of no VAT reform at all, despite the fiscal stringencies that the government confronts. Subfigure 2(b) reports the responses to this question. Option 1, *All Pay*, receives less support than the other two options. The most redistributive option, Option 3, *50% Pay*, receives more overall support than all other options, including *70% Pay*, which differs from the pairwise comparisons in subfigure 2(a). We also find that only a small share of respondents, about 7%, favors no fiscal adjustment.²⁷

²⁷We do not attach a strong interpretation to the fact that more respondents prefer an uncompensated tax hike to doing nothing. It is possible that the framing of the vignette, emphasizing that serious fiscal problems threaten economic stability, employment, and family incomes, could account for weak support for no action. Experimenter demand, though, is another plausible explanation, since all of the focus of the section is on VAT policy changes.

Figure 2: Support for fiscal adjustment options, in %

(a) Pairwise comparisons



(b) Direct comparison of all options

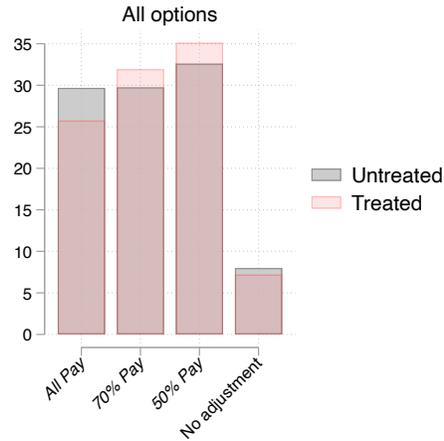


Figure 2 also summarizes how the information treatment, which manipulates respondents' knowledge about the regressive impact of the VAT, affects their policy preferences. It compares the average policy preference for the treated (red bar) with those for the non-treated (gray bar). For all three pairwise comparisons, information about the regressive impact of the VAT increases support for a policy that compensates citizens in lower income brackets. The increase in support is most pronounced for Option 3, *50% Pay* which proposes

an increase in VAT of 6% for citizens who belong to the upper half (top 50%) of the income distribution while exempting the bottom half. This result is consistent across both outcome variables in panels (a) and (b) of Figure 2. The share of respondents that are indifferent remains almost identical between treated and untreated respondents.

5.2 Regression results: average treatment effects

Table 2 further examines the treatment effect using a series of OLS regression models with country fixed effects.²⁸ We use different outcome variables for the analysis of the pairwise comparisons in columns (1) to (6): the original, 5-scale categorical variable where higher values indicate greater support for the option mentioned first in the top row²⁹ and a dummy version that takes the value 1 if the respondent supports the option mentioned first in the top row. In columns (7) to (10), the outcome variables are dummy variables that take the value 1 if the respondent chose the option listed on top of the column and 0 otherwise. Finally, Panel A simply regresses the respective outcome variable on the treatment dummy; Panel B does the same but includes a series of socioeconomic control variables; and Panel C includes variables capturing a respondent’s subjective perceptions, beliefs and knowledge in addition to the socioeconomic controls.³⁰

This is a version of the table just above, but with stars indicating statistical significance

The results confirm the graphical analysis of Figure 2. The information treatment has a consistent and statistically significant impact on support for the different adjustment options. The negative signs on the coefficients in the Treated row of 2 indicate that respondents who were informed about the regressive impact of the VAT are less likely to choose Option 1, *All Pay*, over Option 2, *70% Pay* or over Option 3, *50% Pay* (columns (1)-(2) and (5)-(6)). In column 6, information reduces support for the least redistributive option by 3.4

²⁸The summary statistics of all relevant variables are in Appendix Table B1.

²⁹For example, for the comparison of ‘Option1to2’, higher values indicate greater support for Option 1.

³⁰The results for the control variables are in the Appendix, Table C1.

Table 2: Main effects VAT experiment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	<i>All vs. 70% Pay</i>		<i>70% vs. 50% Pay</i>		<i>All vs. 50% Pay</i>		Preferred Choice			
	Cat	D	Cat	D	Cat	D	<i>All Pay</i>	<i>70% Pay</i>	<i>50% Pay</i>	<i>No Adj</i>
Panel A: Baseline										
Treated	-0.049*** (0.014)	-0.017*** (0.005)	-0.050** (0.020)	-0.017 (0.012)	-0.112*** (0.021)	-0.034*** (0.007)	-0.039** (0.015)	0.022 (0.014)	0.025** (0.010)	-0.008 (0.004)
Panel B: Baseline + socioeconomic controls										
Treated	-0.050*** (0.013)	-0.017*** (0.005)	-0.050** (0.021)	-0.016 (0.012)	-0.114*** (0.022)	-0.035*** (0.008)	-0.040** (0.015)	0.022 (0.014)	0.027** (0.010)	-0.008 (0.005)
Panel C: panel B + knowledge/beliefs/perceptions										
Treated	-0.051*** (0.013)	-0.017*** (0.005)	-0.051** (0.020)	-0.016 (0.012)	-0.114*** (0.021)	-0.035*** (0.008)	-0.040** (0.014)	0.022 (0.014)	0.027** (0.009)	-0.008 (0.005)
Observations	12,152	12,152	12,152	12,152	12,152	12,152	12,152	12,152	12,152	12,152
Mean Dep. Var.	3.094	0.317	2.934	0.389	3.107	0.326	0.277	0.308	0.338	0.076
Mean Dep. Var. (control)	2.931	0.326	3.091	0.398	2.949	0.344	0.297	0.297	0.326	0.080
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table presents the results of the main treatment effects. “*All vs. 70% Pay*” measures respondents’ preferences for option 1 over option 2. *Cat* means that it is the categorical measure, which takes values from 1-5, where 5 is a greater preference for option 1. *D* is an indicator variable that takes values of 1 if option 1 was preferred, and 0 otherwise. *All Pay* in column 7 is an indicator variable that takes values of 1 if option 1 was chosen, and 0 otherwise. The same logic for columns 8, 9 and 10. *All Pay* being the least redistributive option and *50% Pay* the most redistributive. *No Adj* means no action. *Treated* is an indicator variable that takes values of 1 if it received the treatment of experiment 1, and 0 otherwise. Clustered standard errors at the country level are reported in parentheses. * is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.

percentage points from a base of 34% in the control group, a 10% decrease. There is some indication that the treated respondents are also less likely to choose Option 2, *70% Pay*, over Option 3, *50% Pay* (column (3)), although this result is not robust across definitions of the dependent variable (column 4). In line with these results from the pairwise comparisons, support for Option 1, *All Pay*, is lower and support for Option 3, *50% Pay*, is higher among treated respondents for the simultaneous comparison of all options (columns (7)-(10)). The treatment does not affect support for Option 2, *70% Pay*, or Option 4 (no fiscal adjustment).

A standard concern regarding information interventions is whether their effects are substantively important. One way to see that they are is by comparing them with other respondent characteristics that are known to be electorally important. Three such characteristics are political alignment, concern for inequality, and beliefs about the relative opportunities of children from poor and rich households.

Treated respondents are more likely to prefer option 3, *70% Pay* over option 1, *All Pay*.

The effect size is larger than a one standard deviation leftward shift in political alignment, which increases the probability of supporting *70% Pay* by 2 percent. Treatment effects are similar to the impact of concerns about inequality and poverty and are half as large as the effect of believing that poor children have fewer opportunities than rich children: these respondents are 8 percent more likely to prefer *70% Pay* over option 1, *All Pay*.

Among the control variables, ideology and beliefs have the strongest consistent impact on a respondent's fiscal attitudes (see Appendix C, Table C1). Three variables—political alignment, concern for inequality and perceptions of poor child opportunity—stand out. Compared to left-leaning respondents, those on the right are more likely to support the less redistributive options, i.e. Option 1, *All Pay*, over Option 2, *70% Pay*, and Option 2, *70% Pay*, over Option 3, *50% Pay*. Their preferences are transitive, as they also prefer Option 1, *All Pay*, over Option 3, *70% Pay*. Respondents who do not indicate that inequality and poverty are among their two greatest concerns are similar to right-leaning respondents. Respondents who agree more with the statement that children from poor households have the same opportunities as children from rich households also express significantly less support for the more redistributive reform options.

Respondents' actual location in the income distribution, based on respondent reports of the income decile to which their household belongs, exhibits a counter-intuitive relationship with preferences for redistribution. Contrary to their material interests, respondents in the bottom 30% of the income distribution are more likely to support *less* redistributive options than those in the top 50% group (the reference category in our analysis). The same is true for the respondents in the fourth and fifth decile of the income distribution.

When we compare respondents' actual location in the income distribution, based on household income information that they provide at the end of the survey, with their perceived location, based on information they provide at the beginning, significant inconsistencies emerge. In line with previous research (Cruces, Perez Truglia and Tetaz, 2013; Karadja, Mollerstrom and Seim, 2017), respondents have difficulty placing themselves in the income

distribution.³¹ Hence, we also ask how perceived location in the income distribution is related to preferences for redistributive tax reform.

These coefficient estimates yield more intuitive results. Respondents who perceive themselves to be the bottom three deciles or in the fourth and fifth deciles of the income distribution are more likely to choose the most redistributive Option 3, *50% Pay*, over Option 1, *All Pay*. These results are robust to whether or not the specification controls for actual location in the income distribution. However, even perceived income is not correlated with preferences across other policy comparisons (e.g., *70% Pay* vs. *All Pay*).³²

5.3 Robustness checks

There are three possible concerns with the foregoing results. One is that treatment effects could be the product of experimenter demand; another is that they are the spurious product of respondents' lack of attention; a third is that results are driven country-specific circumstances, such as levels of informality or VAT tax rates, that cloud interpretation or limit external validity.

Two features of the the experiment attenuate concerns about experimenter demand bias. First, we would expect stronger experimenter demand effects from treatments in prior research; these treatments nevertheless have small effects on preferences for specific reforms to reduce inequality. This is the case for the three-part intervention in Kuziemko et al. (2015), for example. The first part told respondents their exact position in the income distribution; the second, how much larger their income would be if growth had been more evenly shared; and the third told respondents that pre-tax family incomes grew faster when top tax rates

³¹As Appendix B, Figure B1 shows, respondents tend to place themselves closer to the middle of the income distribution than their actual income would suggest. That is, poor respondents perceive themselves as less poor and rich respondents perceive themselves as less rich than they really are.

³²Misperceptions regarding one's location in the income distribution are in any case likely to be related to unobserved characteristics and beliefs that influence demand for redistributive policies. Weisstanner and Armingeon (2022) note that perceptions of location in the income distribution are endogenous; they also find, in their study of Swiss respondents, that perceived income is only associated with redistribution preferences among center-right, not left-leaning respondents.

were higher. Nevertheless, the treatment had an economically small effect on preferences for tax rates on the rich. Our treatment, which only informed respondents that VAT payments by poor households constitute a larger share of their incomes, has an economically large effect on preferences for a more progressive VAT.

Second, any experimenter demand bias elicited by the treatment is likely to be small compared to the potential bias elicited by text seen by both control and treated respondents. All respondents, both treated and control, are told the following: *“We wanted to know your opinion about three options that governments have to collect more revenues through the value-added tax. **Two of these seek to protect the poorest households from the impact of the increase, by collecting more revenues from the other households.**”* Hence, all respondents are encouraged to pay attention to the welfare of poor households. Treated households are only told, in addition, that the VAT affects poor households more than rich, with technical information about the incidence of the tax across income deciles. If experimenter demand effects were strong, they would be more likely to be elicited by the bold-faced statement, read by all respondents, attenuating rather than enhancing treatment effects.

Respondents possible lack of attention is especially relevant because our interpretation of the results depends on whether respondents actually understood the key features of each of the policy alternatives. We introduced two attention check questions that capture respondent comprehension of the distributive effects of the reform options. One asked respondents to identify the policy option that makes the poorest pay more; the other asked the option that makes the richest deciles pay more. Close to 70% of the sample understood at least one of the attention check questions (see Table C2 in Appendix C). When we restrict the analysis to this particular sample, we obtain larger treatment effects, as Table C3 in Appendix C shows. The treatment effect remains unchanged for the comparison of Options 2 and 3, but it increases by 19% for the comparison of Options 1 and 3 and by 76% for the comparison of Options 1 and 2.

Finally, the countries in our sample may vary in ways that influence how respondents interpret or react to the treatment. For example, the countries exhibit significant variations in their VAT tax rates, potentially affecting the salience of the treatment, and in their levels of informality, which could affect perceptions of incidence (e.g., if respondents believe that the poor buy from vendors who evade the VAT). Such variations do not affect the internal validity of our estimated treatment effects, but could raise questions about their external validity and interpretation. In fact, the point estimates of the treatment effects are roughly constant across the sample countries.

Figure C7 in Appendix C summarizes the treatment effects for every country across the three outcome variables in Table 2. We do not expect significant treatment effects at the country level, since the experiment was not powered to reveal them. However, in nearly every case the point estimates are close in magnitude to and statistically indistinguishable from the point estimates of the total treatment effects. In addition, to check that no particular country is driving the results, we drop one country at a time from the estimation sample. Figure C8 in Appendix C shows the treatment effects when the observations from the different countries are excluded one-by-one. The results are stable and similar across the different subsamples.

6 Mechanisms: The Role of Tax Incidence Misperceptions

The rich data from the survey allow us to explore the mechanisms linking misperceptions of VAT incidence to opposition to progressive tax reform. Two key conclusions emerge from this exploration. First, the effects of the information treatment are strongest among respondents with misperceptions regarding incidence. Second, misperceptions appear not to be a cognitive phenomenon: education is not correlated with beliefs about the progressivity of the VAT. Instead, policy misperceptions are correlated with individuals' world views: they are consistently higher among right-leaning respondents, respondents who believe that

poor children have similar opportunities as children in rich households, and respondents who believe that effort is more important than luck in determining household incomes. It is intuitive that misperceptions about the progressivity of the VAT might be strongest among individuals with these beliefs. Less intuitive and more remarkable is the finding that information that corrects these misperceptions is sufficient to overcome these beliefs and change respondents' preferences regarding progressive tax reform.

6.1 Misperceptions about the incidence of VAT

We first examine how respondents' prior beliefs about the distributive impact of the VAT influences policy choices. Table 3 regresses the outcome variables on *PerceptVAT*, a variable that takes higher values for those respondents who incorrectly perceive that the VAT is progressive, and on the interaction of *PerceptVAT* with the treatment variable.³³ The coefficient estimates of *PerceptVAT* are positive, indicating that untreated respondents who incorrectly believe that rich people pay a greater share of their income on the VAT than poor people are significantly more likely to support Option 1, *All Pay*, which does not compensate poor people. The effect is most pronounced when this option is compared to the most redistributive Option 3, *50% Pay*.

The negative coefficient on the interaction term reveals that the information treatment significantly moderates the impact of misperceptions, especially when the respondents compare the least and most progressive options. Figure 3 shows the marginal effect of the information treatment on support for the least and most progressive options among respondents with different perceptions regarding the impact of the VAT. The strongest treatment effects are observed among those who misperceive the impact of the VAT. For those who (correctly) believe that poor people pay a greater share of their income on VAT than rich people, the point estimate for the treatment variable is negative, but it is not statistically

³³The misperceptions variable takes a value of 1 if the respondent believes that richer households spend a higher or similar percentage of their income on VAT payments relative to poorer households and 0 otherwise.

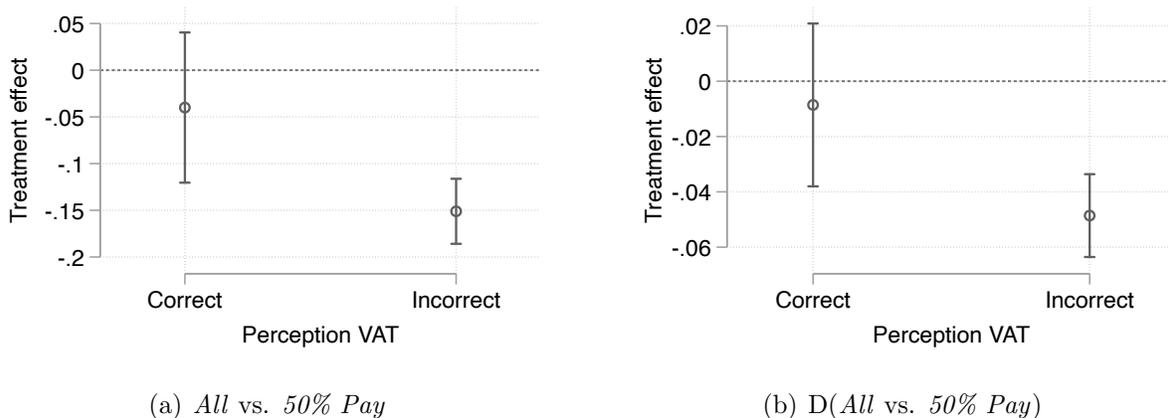
Table 3: Heterogenous effect - Misperception of VAT incidence

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	<i>All vs. 70% Pay</i>		<i>70% vs. 50% Pay</i>		<i>All vs. 50% Pay</i>		Preferred Choice			
	Cat	D	Cat	D	Cat	D	<i>All Pay</i>	<i>70% Pay</i>	<i>50% Pay</i>	<i>No Adj</i>
Treated * PerceptVAT	-0.098 (0.061)	-0.028 (0.020)	-0.097** (0.038)	-0.043 (0.023)	-0.111** (0.042)	-0.040** (0.017)	-0.028 (0.017)	0.008 (0.019)	0.022 (0.021)	-0.002 (0.012)
Treated	0.014 (0.048)	0.001 (0.015)	0.013 (0.023)	0.010 (0.013)	-0.040 (0.041)	-0.009 (0.015)	-0.021 (0.019)	0.016 (0.016)	0.011 (0.015)	-0.007 (0.009)
PerceptVAT	0.185** (0.066)	0.053** (0.018)	0.194*** (0.047)	0.055** (0.022)	0.220*** (0.044)	0.066*** (0.009)	0.065*** (0.013)	0.008 (0.014)	-0.068** (0.021)	-0.005 (0.010)
Constant	2.811*** (0.044)	0.291*** (0.012)	2.966*** (0.030)	0.362*** (0.012)	2.807*** (0.031)	0.301*** (0.007)	0.255*** (0.008)	0.292*** (0.008)	0.370*** (0.015)	0.083*** (0.006)
Observations	12,152	12,152	12,152	12,152	12,152	12,152	12,152	12,152	12,152	12,152
R-squared	0.014	0.013	0.008	0.009	0.019	0.016	0.018	0.005	0.011	0.005
Mean Dep. Var.	3.094	0.317	2.934	0.389	3.107	0.326	0.277	0.308	0.338	0.076
Mean Dep. Var. (control)	2.931	0.326	3.091	0.398	2.949	0.344	0.297	0.297	0.326	0.080
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table presents the results of heterogeneous treatment effects. “*All vs. 70% Pay*” measures respondents’ preferences for option 1 over option 2. *Cat* means that it is the categorical measure, which takes values from 1 to 5, where 5 is a greater preference for option 1. *D* is an indicator variable that takes values of 1 if option 1 was preferred, and 0 otherwise. Same logic for the dependent variables in columns 3 to 6. *All Pay* in column 7 is an indicator variable that takes values of 1 if option 1 was chosen, and 0 otherwise. The same logic for columns 8, 9 and 10. *All Pay* being the least redistributive option and *50% Pay* the most redistributive. *No Adj* means no action. *Treated* is an indicator variable that takes values of 1 if it received the information treatment, and 0 otherwise. *PerceptVAT* is an indicator variable equal to 1 if respondent believes that rich households spend a higher or similar percentage of their income on VAT payments relative to poor households, and 0 otherwise. Clustered standard errors at the country level are reported in parentheses. * is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.

significant. For those who (incorrectly) believe that rich people pay a greater share of their income on VAT, the point estimate is considerably larger and the 95% confidence interval does not span the zero line. In short, the treatment effect is driven by misinformed people who change their attitude towards compensated fiscal adjustment when they learn that their beliefs about the incidence of the VAT across income groups are wrong.

Figure 3: Treatment Effects by Perception about VAT Incidence



Notes: This figure presents the impact of the information treatment on support for the more redistributive option 3, *50% Pay*, conditional on the respondent’s perception of the impact of the VAT. The results are based on models (5) and (6) in Table 3. “*All vs. 50% Pay*” is a categorical variable that measures preferences for option 1 over option 3. $D(\textit{All vs. 50\% Pay})$ is an indicator variable that takes values of 1 if the respondent prefers option 1 more, and 0 if he/she prefers option 3 more. Perception VAT is an indicator variable that takes the value 1 if the respondent (incorrectly) believes that richer households spend the same or a higher percentage of their income on VAT relative to poorer households, and 0 otherwise.

6.2 Drivers of misperceptions

In the next step, we examine the determinants of tax incidence misperceptions. Table 4 examines to what extent these misperceptions correlate with cognitive and ideological factors, including education, political alignment (left vs. right), concerns about inequality, and beliefs about the sources of poverty and individual success. Beliefs and ideology, rather than cognitive factors (education), appear to drive misperceptions. The positive coefficient on political alignment in Table 4 shows that people on the center/right tend to be more likely to believe the rich pay more than the poor. In contrast, people who think inequality and poverty are a significant concern are more likely to believe that the poor pay more than the rich in VAT, as the negative coefficient on concern for inequality in Table 4 shows. We would therefore expect that the information treatment should mostly affect people on the center and right of the ideological spectrum since the perceptions of VAT incidence of those on the left are more consistent with its actual distributive impact. Similarly, the treatment should affect respondents who believe that inequality is the main problem less than those

who believe other issues to be more salient. This is because the perceptions of the latter about the VAT impact is less accurate than the perceptions of the former.

Table 4: Determinants of VAT misperceptions

	(1)	(2)	(3)	(4)	(5)
	Perception of VAT impact				
Educated	0.005 (0.016)	-0.009 (0.016)	-0.007 (0.015)	-0.015 (0.015)	-0.015 (0.015)
PoliticalAlign	0.027*** (0.004)	0.027*** (0.004)	0.026*** (0.004)	0.026*** (0.004)	0.022*** (0.003)
Bottom30Actual		-0.053*** (0.014)		-0.036** (0.014)	-0.043** (0.013)
B40and50Actual		-0.005 (0.016)		0.002 (0.015)	-0.001 (0.015)
Bottom30Perceived			-0.095*** (0.009)	-0.083*** (0.007)	-0.070*** (0.008)
B40and50Perceived			-0.022 (0.012)	-0.017 (0.011)	-0.012 (0.010)
KnowledgeTaxes					-0.001 (0.010)
ConcernIneqPov					-0.044*** (0.010)
TrustGov					0.021 (0.018)
BeliefsLuck					-0.028*** (0.007)
PoorChildOpportunity					-0.092*** (0.017)
Constant	0.499*** (0.019)	0.526*** (0.021)	0.542*** (0.023)	0.553*** (0.025)	0.654*** (0.028)
Observations	12,152	12,152	12,152	12,152	12,152
R-squared	0.039	0.041	0.043	0.044	0.054
Mean Dep. Var.	0.580	0.580	0.580	0.580	0.580
Country FE	Yes	Yes	Yes	Yes	Yes

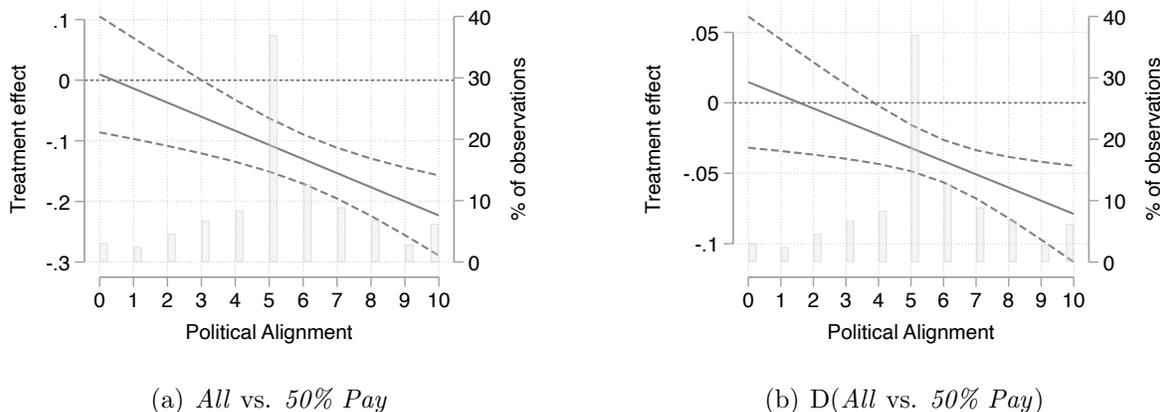
Notes: This table presents the determinants of respondents' misperceptions about VAT. BottomXXActual and BottomXXPerceived identify respondents whose reported income puts them in the bottom XXth percentile and whose perceived income puts them in the bottom XXth percentile, respectively. Clustered standard errors at the country level are reported in parentheses. * is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.

This is what Figures 4 and 5 show.³⁴ Figure 4 illustrates the impact of the information treatment for respondents who place themselves on different locations on the left-right political dimension. The treatment does not affect respondents on the left: the marginal effect for these respondents is zero, which means that treated and untreated respondents from the

³⁴The figures are based on the results in Appendix C, Tables C4 and C5.

left, on average, do not differ when they compare Options 1 and 3. In contrast, the information treatment has a strong effect on respondents on the right; they are correspondingly less likely to select the least redistributive Option 1, *All Pay*, over the most redistributive Option 3, *50% Pay*, when they learn about the regressive impact of the VAT.

Figure 4: Treatment effects by political alignment



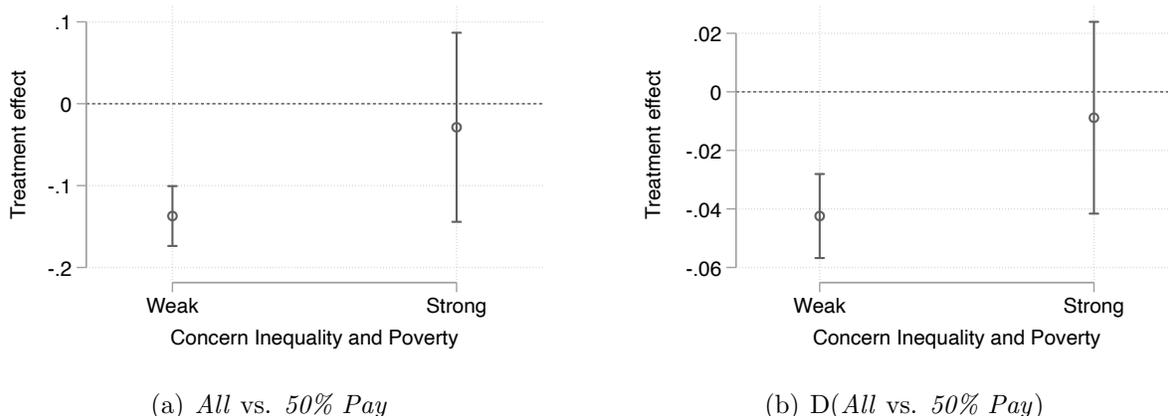
Notes: This figure presents the impact of the information treatment on support for the more redistributive option 3, *50% Pay*, conditional on the respondent's political alignment. The results are based on models (5) and (6) in Table C4. "*All vs. 50% Pay*" is a categorical variable that measures preferences for option 1 over option 3. $D(\text{All vs. } 50\% \text{ Pay})$ is an indicator variable that takes values of 1 if the respondent prefers option 1 more, and 0 if he/she prefers option 3 more. Political alignment is the respondent's position on the left-right political dimension.

Figure 5 compares treatment effects for respondents with strong and weak concern for inequality and poverty. The figure shows that the treatment effect is not statistically significant for respondents who have a strong concern for inequality. In contrast, it is large for those with a small concern, indicating that respondents who are not much concerned with inequality are less likely to choose Option 1 over Option 3 when they are informed about the regressive impact of VAT.

7 Conclusions and Policy Implications

Prior research has found a strong relationship between respondents' knowledge of their location in the income distribution and support for more redistributive policies in general, but much weaker effects on support for specific measures to redistribute. Our results suggest that

Figure 5: Treatment effects by concern about inequality and poverty as problems



Notes: This figure presents the impact of the information treatment on support for the more redistributive option 3, *50% Pay*, conditional on the respondent’s concern for inequality and poverty. The results are based on models (5) and (6) in table 5. “*All vs. 50% Pay*” is a categorical variable that measures preferences for option 1 over option 3. $D(\textit{All vs. 50\% Pay})$ is an indicator variable that takes values of 1 if the respondent prefers option 1 more, and 0 if he/she prefers option 3 more. Concern for inequality is an indicator variable that takes the value 1 if the respondent answers that s/he is strongly concerned about inequality and poverty, and 0 otherwise.

misperceptions about the distributional incidence of different policy measures could account for this. In theory, individuals might reasonably have a difficult time inferring significant changes in the distribution of income and their position within it from any specific change in the tax code. However, when they are informed about the general incidence of a salient tax across all households in the income distribution, their support for more redistributive tax policies increases.

The effects are large. In addition, they are driven in part by a group of respondents who might reasonably be considered as hard-to-reach: respondents whose ideologies and view of the world lead them to assume that the VAT is not regressive and that redistribution is an inappropriate goal for public policy. In fact, treatment effects are stronger among this group.

These results have policy implications both regarding how to inform citizens about complex fiscal policy reforms with easy-to-interpret facts, but also about how to design fiscal adjustment packages. More progressive policy responses are more popular, but only when individuals are informed about how progressive they are.

References

- Alesina, Alberto, Armando Miano and Stefanie Stantcheva. 2022. “Immigration and Redistribution.” *The Review of Economic Studies* pp. 1–39.
- Alesina, Alberto, Gabriele Ciminelli, Davide Furceri and Giorgio Saponaro. 2021. “Austerity and Elections.” IMF Working Paper No. 2021/121.
- Alesina, Alberto, Stefanie Stantcheva and Edoardo Teso. 2018. “Intergenerational mobility and preferences for redistribution.” *American Economic Review* 2(2):521–554.
- Ardanaz, Martin, Mark Hallerberg and Carlos Scartascini. 2020. “Fiscal consolidations and Electoral Outcomes in Emerging Economies: Does the Policy Mix Matter? Macro and Micro Level Evidence from Latin America.” *European Journal of Political Economy* 64(September):1–28.
- Bachas, Pierre, Lucie Gadenne and Anders Jensen. 2021. Informality, Consumption Taxes and Redistribution. NBER Working Papers 27429 National Bureau of Economic Research.
- Barreix, Alberto, Martin Bes, Oscar Fonseca, Maria Belen Fontenez, Dalmiro Moran, Emilio Pineda and Jeronimo Roca. 2022. “Revisiting Personalized VAT: A Tool for Fiscal Consolidation with Equity.” IDB Discussion Paper 939.
- Bartels, Larry. 2005. “Homer Gets a Tax Cut: Inequality and Public Policy in the American Mind.” *Perspectives on Politics* 3(1):15–31.
- Bastani, Spencer and Daniel Waldenstrom. 2021. “Perceptions of Inherited Wealth and the Support for Inheritance Taxation.” *Economica* 88:532–556.
- Boudreau, Cheryl and Scott MacKenzie. 2018. “Wanting What is Fair: How Party Cues and Information about Income Inequality Affect Public Support for Taxes.” *Journal of Politics* 80(2):367–381.

- Cruces, Guillermo, Ricardo Perez Truglia and Martin Tetaz. 2013. “Biased perceptions of income distribution and preferences for redistribution: evidence from a survey experiment.” *Journal of Public Economics* 98(February):100–112.
- David, Antonio and Daniel Leigh. 2018. “A New Action-Based Dataset of Fiscal Consolidation in Latin America and the Caribbean.” IMF Working Paper 2018/094.
- de Bresser, Jochem and Marike Knoef. 2022. “Eliciting preferences for income redistribution: A new survey item.” *Journal of Public Economics* 214.
- Douenne, Thomas and Adrien Fabre. 2022. “Yellow Vests, Pessimistic Beliefs, and Carbon Tax Aversion.” *American Economic Journal: Economic Policy* 14(1):81 – 110.
- Fehr, Dietmar, Johanna Mollerstrom and Ricardo Perez-Truglia. 2022. “Your Place in the World: Relative Income and Global Inequality.” *American Economic Journal: Economic Policy* 14(4):232 – 268.
- Fernandez-Albertos, José and Alexander Kuo. 2018. “Income Perception, Information, and Progressive Taxation: Evidence from a Survey Experiment.” *Political Science Research and Methods* 6(1):83–110.
- Gasparini, Leonardo. 1998. “Incidencia distributiva del sistema impositivo argentino.” In *La Reforma Tributaria en Argentina*. FIEL.
- Hoy, Christopher. 2022. “How Does the Progressivity of Taxes and Government Transfers Impact People’s Willingness to Pay Tax?: Experimental Evidence across Developing Countries.” *World Bank Policy Research Working Papers* (10167).
- Hoy, Christopher and Franziska Mager. 2021. “Why Are Relatively Poor People Not More Supportive of Redistribution? Evidence from a Randomized Survey Experiment across Ten Countries.” *American Economic Journal: Economic Policy* 13(4):299 – 328.

- Hübscher, Evelyne and Thomas Sattler. 2017. “Fiscal consolidation under electoral risk.” *European Journal of Political Research* 56(1):151–168.
- Hübscher, Evelyne, Thomas Sattler and Markus Wagner. 2021. “Voter Responses to Fiscal Austerity.” *British Journal of Political Science* 51(4):1751–1760.
- IDB. 2022. “Analysis of the Incidence of Consumption Taxes in Selected Countries of Latin America and the Caribbean.” Inter-American Development Bank, Unpublished Report.
- Karadja, Mounir, Johana Mollerstrom and David Seim. 2017. “Richer (and holier) than thou? The effect of relative income improvements on demand for redistribution.” *Review of Economics and Statistics* 99(2):201–212.
- Krupnikov, Yanna, Adam Levine, Arthur Lupia and Markus Prior. 2006. “Public Ignorance and Estate Tax Repeal: The Effect of Partisan Differences and Survey Incentives.” *National Tax Journal* 59(3):425–437.
- Kuziemko, Ilyana, Michael Norton, Emmanuel Saez and Stefanie Stantcheva. 2015. “How elastic are preferences for redistribution? Evidence from randomized survey experiments.” *American Economic Review* 105(4):1478–1508.
- Lustig, Nora. 2018. *Commitment to Equity (CEQ) Handbook: Estimating the impact of fiscal policy on inequality and poverty*. Brookings Institution Press.
- Lustig, Nora, Carola Pessino and John Scott. 2014. “The Impact of Taxes and Social Spending on Inequality and Poverty in Argentina, Bolivia, Brazil, Mexico, Peru, and Uruguay: Introduction to the Special Issue.” *Public Finance Review* 42(2):287–303.
- Luttmer, Erzo and Monica Singhal. 2011. “Culture, Context, and the Taste for Redistribution.” *American Economic Journal: Economic Policy* 3(1):157–179.
- Metcalf, Gilbert. 1994. Lifecycle vs. Annual Perspectives on the Incidence of a Value Added Tax. NBER Working Papers 4619 National Bureau of Economic Research.

- Rastelleti, Alejandro. 2021. "IVA personalizado: Experiencia de 5 países y su importancia estratégica para la política y la administración tributaria." *Recaudando Bienestar Blog*, IDB.
- Sausgruber, Rupert and Jean-Robert Tyran. 2011. "Are We Taxing Ourselves: How Deliberation and Experience Shape Voting on Taxes." *Journal of Public Economics* 95(1-2):164–176.
- Sides, John. 2016. "Stories or Science? Facts, Frames, and Policy Attitudes." *American Politics Research* 44(3):387–414.
- Slemrod, Joel. 2006. "The Role of Misconceptions in Support for Regressive Tax Reform." *National Tax Journal* 1(LIX):57–75.
- Stantcheva, Stefanie. 2021. "Understanding tax policy: How do people reason?" *The Quarterly Journal of Economics* 136(4):2309–2369.
- Weisstanner, David and Klaus Armingeon. 2022. "Redistributive preferences: Why actual income is ultimately more important than perceived income." *Journal of European Social Policy* 32(2):151–168.

A Survey Screenshots

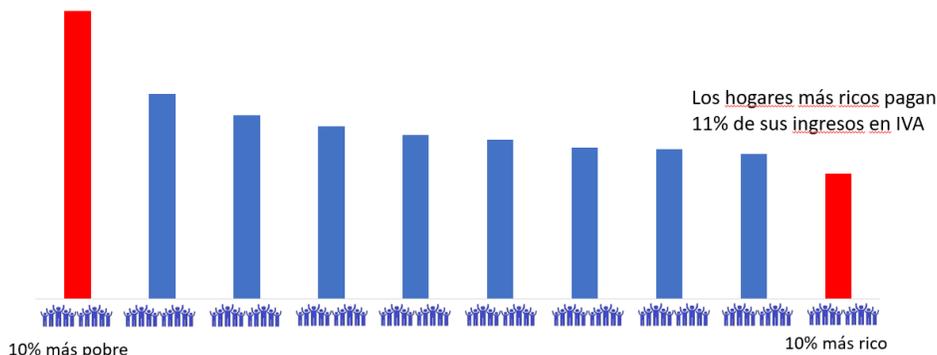
Screen 1 Figure A1: Information treatment and VAT adjustment options

A menudo, los países de América Latina se encuentran con problemas fiscales serios, amenazando la estabilidad económica, el empleo, y los ingresos familiares. Una opción a la cual los gobiernos recurren para salir del callejón fiscal es subir los impuestos al consumo - el Impuesto al Valor Agregado (IVA).

El IVA afecta más a los pobres que a los ricos. Como muestra el gráfico abajo, un individuo perteneciente al 10% de hogares más pobres destina alrededor de **23%** de sus ingresos mensuales en concepto de pagos de IVA. En cambio, un individuo perteneciente al 10% de los hogares más ricos paga sólo **11%** de sus ingresos en concepto de IVA.

Pagos de IVA como porcentaje del ingreso en América Latina

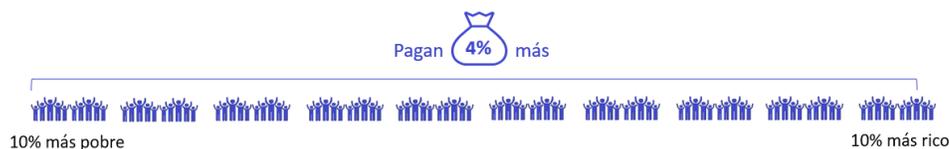
Los hogares más pobres pagan
23% de sus ingresos en IVA



Screen 2

Queremos saber su opinión de tres opciones que tienen los gobiernos para recaudar más a través de del IVA. **Dos de ellas buscan proteger a los hogares más pobres del impacto del aumento, al recaudar más de los demás hogares.**

Opción 1: Aumentar el IVA de manera que el gobierno recaude lo suficiente para evitar la crisis fiscal. **Cada persona pagaría 4% más que ahora en concepto de IVA.** Por ejemplo, si una persona actualmente paga mensualmente 3.000 pesos, después del aumento del IVA pagaría 3.120 pesos.



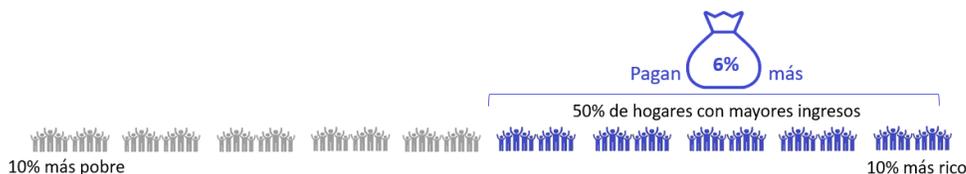
Screen 3

Opción 2: Aumentar el IVA de manera que el gobierno recaude lo suficiente para evitar la crisis fiscal. Sin embargo, *el 30% de hogares más pobres no pagaría el aumento de IVA. Cada persona en los demás hogares pagaría 5% más que ahora.* Por ejemplo, si una persona en estos hogares actualmente paga mensualmente 3.000 pesos, después del aumento del IVA pagaría 3.150 pesos.



Screen 4

Opción 3: Aumentar el IVA de manera que el gobierno recaude lo suficiente para evitar la crisis fiscal. Sin embargo, en este caso *el 50% de hogares más pobres no pagaría el aumento de IVA. Cada persona en los demás hogares pagaría 6% más que ahora.* Por ejemplo, si una persona en estos hogares paga mensualmente 3.000 pesos, después del aumento del IVA pagaría 3.180 pesos.



Screen 5

Esta tabla resume las opciones.

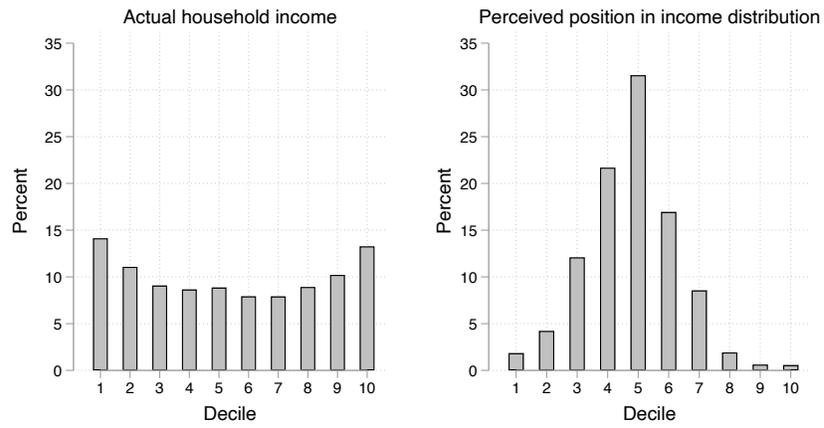
	¿Cuáles hogares pagan?	¿Cuánto paga cada hogar?
Opción 1	Todos los hogares	4% más que ahora
Opción 2	El 70% de hogares con mayores ingresos	5% más que ahora
Opción 3	El 50% de hogares con mayores ingresos	6% más que ahora

B Descriptives

Table B1: Summary statistics

	(1)	(2)	(3)	(4)	(5)
	Average	Standard deviation	Min	Max	Obs.
Panel A: Outcomes					
<i>All vs. 70% Pay</i>	2.906	1.351	1	5	12,152
<i>D(All vs. 70% Pay)</i>	0.317	0.465	0	1	12,152
<i>70% vs. 50% Pay</i>	3.066	1.301	1	5	12,152
<i>D(70% vs. 50% Pay)</i>	0.389	0.488	0	1	12,152
<i>All vs. 50% Pay</i>	2.893	1.386	1	5	12,152
<i>D(All vs. 50% Pay)</i>	0.326	0.469	0	1	12,152
<i>Redist - All Pay</i>	0.277	0.448	0	1	12,152
<i>Redist - 70% Pay</i>	0.308	0.462	0	1	12,152
<i>Redist - 50% Pay</i>	0.338	0.473	0	1	12,152
<i>Redist - No Adj.</i>	0.076	0.265	0	1	12,152
Panel B: Controls					
<i>Actual - Bottom 30%</i>	0.343	0.475	0	1	12,152
<i>Actual - Between 40% and 50%</i>	0.175	0.380	0	1	12,152
<i>Actual - Top 60%</i>	0.482	0.500	0	1	12,152
<i>Educated</i>	0.516	0.500	0	1	12,152
<i>Age</i>	38.755	13.780	16	99	12,152
<i>Female</i>	0.501	0.500	0	1	12,152
<i>Unemployed</i>	0.324	0.468	0	1	12,152
<i>Informal worker</i>	0.191	0.393	0	1	12,152
<i>Retired</i>	0.050	0.218	0	1	12,152
<i>Government subsidies</i>	0.158	0.365	0	1	12,152
<i>Household size</i>	4.020	2.322	1	12	12,152
Panel C: Knowledge/Beliefs/Perceptions					
<i>Perceived - Bottom 30%</i>	0.181	0.385	0	1	12,152
<i>Perceived - Between 40% and 50%</i>	0.533	0.499	0	1	12,152
<i>Perceived - Top 60%</i>	0.286	0.452	0	1	12,152
<i>Knowledge of tax policy</i>	0.457	0.498	0	1	12,152
<i>Concern about inequality and poverty</i>	0.248	0.432	0	1	12,152
<i>Trust in government</i>	0.250	0.433	0	1	12,152
<i>Beliefs in luck</i>	0.244	0.429	0	1	12,152
<i>Poor child opportunities</i>	0.743	0.437	0	1	12,152
<i>Political alignment</i>	5.323	2.225	0	10	12,152

Figure B1: Actual and perceived position of respondents in income distribution



C Additional Results

Figure C1: Balance between treatment and control

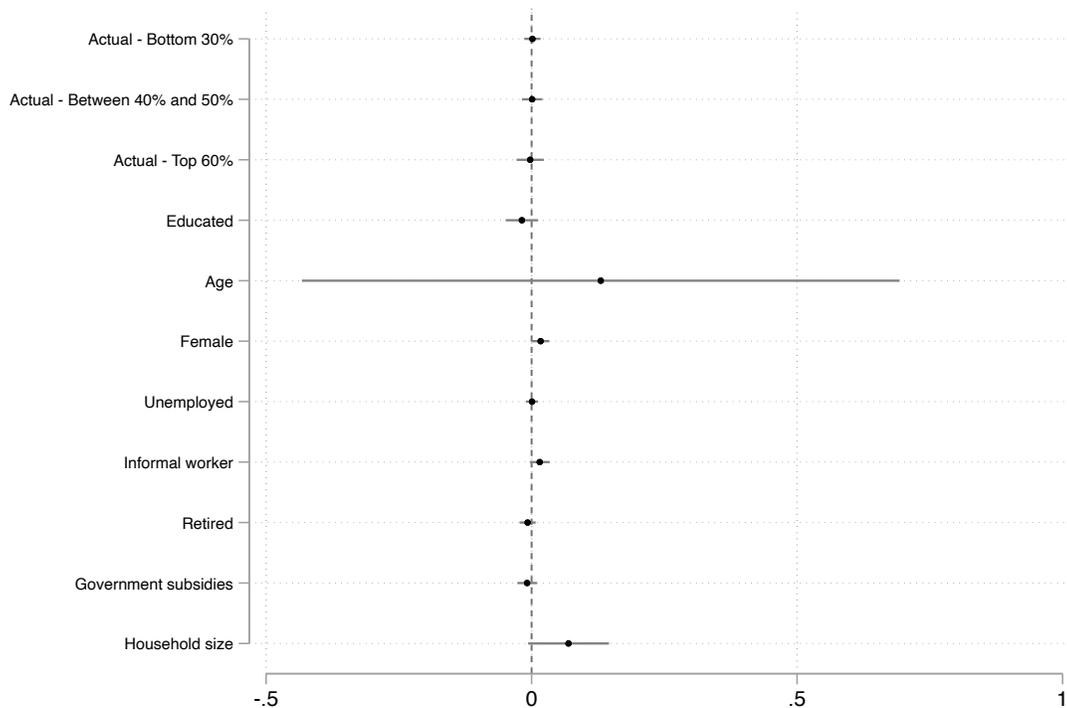
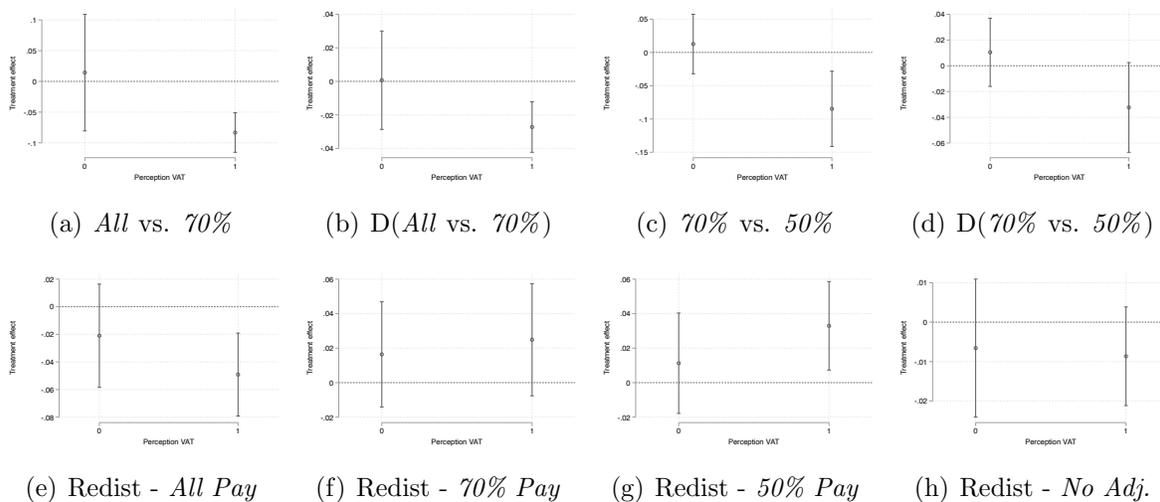
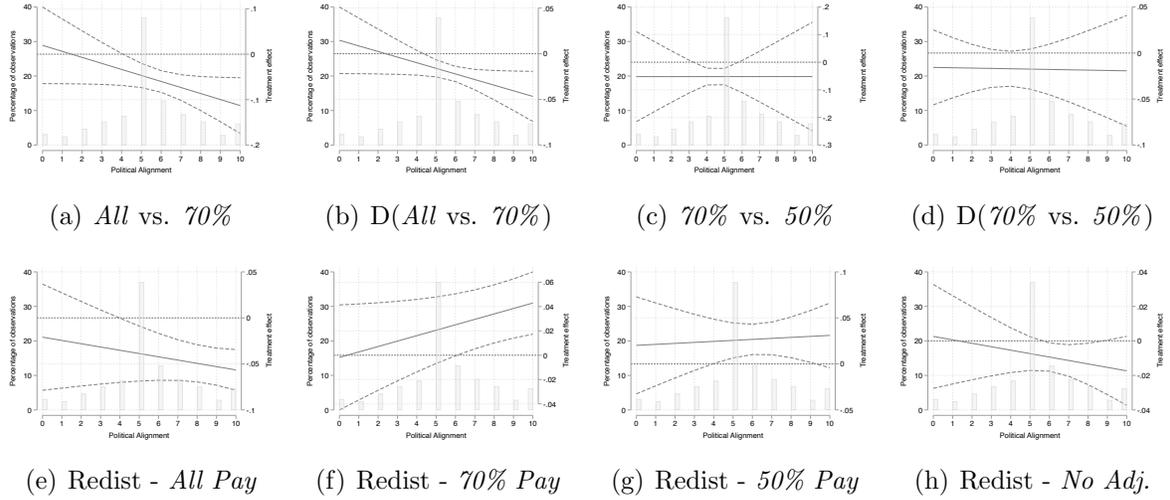


Figure C2: Margin plots - perception VAT (other outcomes)



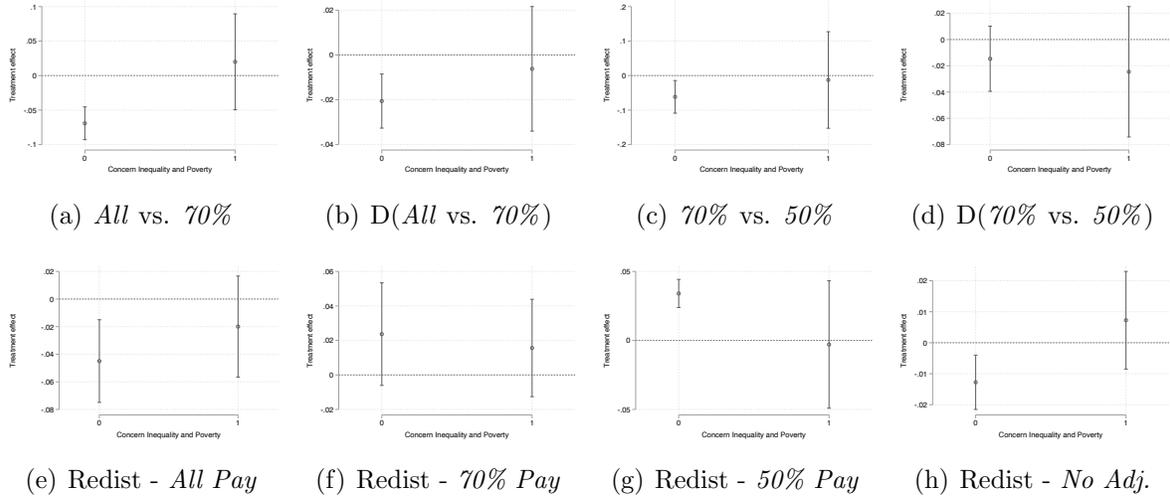
Notes: This figure presents the marginal effects of the heterogeneous effects. ‘All vs. 70% Pay’ is a categorical variable that measures preferences for option 1 over option 2. $D(\text{All vs. 70\% Pay})$ is an indicator variable that takes values of 1 if the respondent prefers option 1 more, and 0 if he/she prefers option 2 more. Same logic for variables ‘70% vs. 50% Pay’ and $D(70\% \text{ vs. } 50\% \text{ Pay})$. ‘Redist - All Pay’ is an indicator variable that takes values of 1 if option 1 was chosen, and 0 otherwise. The same logic for panels f, g and h. ‘Redist - All Pay’ being the least redistributive option and ‘Redist - 50% Pay’ the most redistributive. ‘Redist - No Adj.’ means no action.

Figure C3: Margin plots - political alignment (other outcomes)



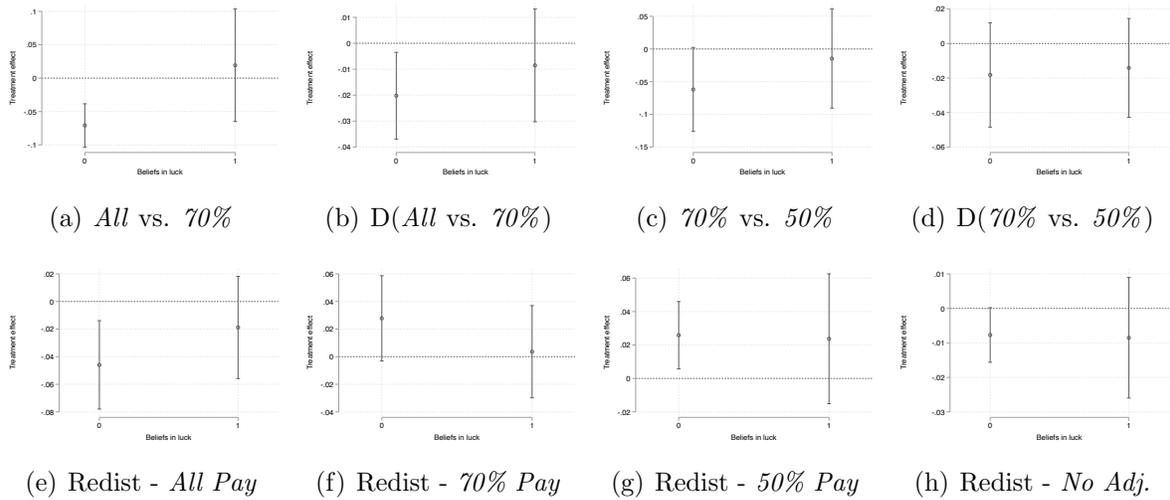
Notes: This figure presents the marginal effects of the heterogeneous effects. ‘*All vs. 70% Pay*’ is a categorical variable that measures preferences for option 1 over option 2. *D(All vs. 70% Pay)* is an indicator variable that takes values of 1 if the respondent prefers option 1 more, and 0 if he/she prefers option 2 more. Same logic for variables ‘*70% vs. 50% Pay*’ and *D(70% vs. 50% Pay)*. ‘*Redist - All Pay*’ is an indicator variable that takes values of 1 if option 1 was chosen, and 0 otherwise. The same logic for panels f, g and h. ‘*Redist - All Pay*’ being the least redistributive option and ‘*Redist - 50% Pay*’ the most redistributive. ‘*Redist - No Adj.*’ means no action.

Figure C4: Margin plots - concern inequality and poverty (other outcomes)



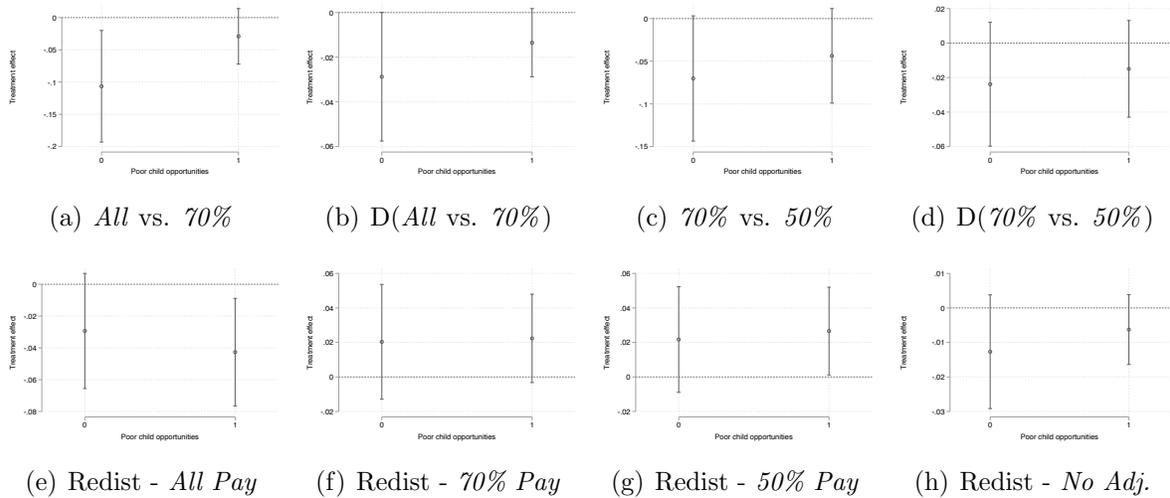
Notes: This figure presents the marginal effects of the heterogeneous effects. ‘*All vs. 70% Pay*’ is a categorical variable that measures preferences for option 1 over option 2. *D(All vs. 70% Pay)* is an indicator variable that takes values of 1 if the respondent prefers option 1 more, and 0 if he/she prefers option 2 more. Same logic for variables ‘*70% vs. 50% Pay*’ and *D(70% vs. 50% Pay)*. ‘*Redist - All Pay*’ is an indicator variable that takes values of 1 if option 1 was chosen, and 0 otherwise. The same logic for panels f, g and h. ‘*Redist - All Pay*’ being the least redistributive option and ‘*Redist - 50% Pay*’ the most redistributive. ‘*Redist - No Adj.*’ means no action.

Figure C5: Margin plots - beliefs in luck (other outcomes)



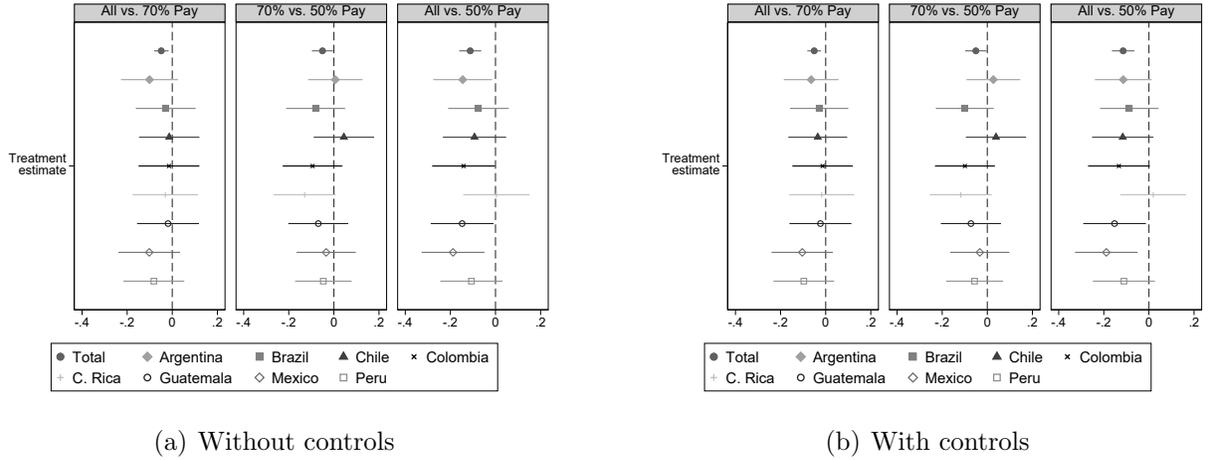
Notes: This figure presents the marginal effects of the heterogeneous effects. ‘*All vs. 70% Pay*’ is a categorical variable that measures preferences for option 1 over option 2. *D(All vs. 70% Pay)* is an indicator variable that takes values of 1 if the respondent prefers option 1 more, and 0 if he/she prefers option 2 more. Same logic for variables ‘*70% vs. 50% Pay*’ and *D(70% vs. 50% Pay)*. ‘*Redist - All Pay*’ is an indicator variable that takes values of 1 if option 1 was chosen, and 0 otherwise. The same logic for panels f, g and h. ‘*Redist - All Pay*’ being the least redistributive option and ‘*Redist - 50% Pay*’ the most redistributive. ‘*Redist - No Adj.*’ means no action.

Figure C6: Margin plots - poor child opportunity (other outcomes)



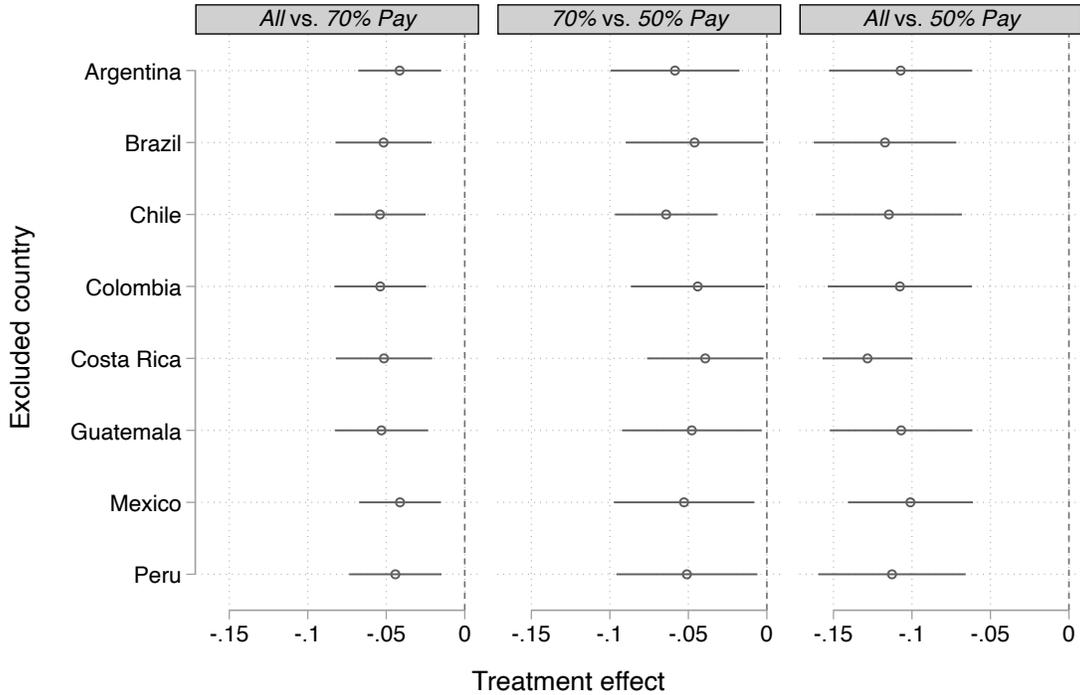
Notes: This figure presents the marginal effects of the heterogeneous effects. ‘*All vs. 70% Pay*’ is a categorical variable that measures preferences for option 1 over option 2. *D(All vs. 70% Pay)* is an indicator variable that takes values of 1 if the respondent prefers option 1 more, and 0 if he/she prefers option 2 more. Same logic for variables ‘*70% vs. 50% Pay*’ and *D(70% vs. 50% Pay)*. ‘*Redist - All Pay*’ is an indicator variable that takes values of 1 if option 1 was chosen, and 0 otherwise. The same logic for panels f, g and h. ‘*Redist - All Pay*’ being the least redistributive option and ‘*Redist - 50% Pay*’ the most redistributive. ‘*Redist - No Adj.*’ means no action.

Figure C7: Treatment effects by country (with and without controls)



Notes: Treatment effects, equivalent to the results in Table 2, Panels A (without controls) and C (including socioeconomic controls and knowledge, beliefs, and perceptions), when all countries are pooled, and by country. *Total* treatment refers to the pooled estimation. Outcome variables are the categorical measures described in Table 2. The standard errors are clustered at the country level for the pooled sample, and are robust for the country specifications. Point estimates with 95% confidence intervals.

Figure C8: Country Exclusion



Notes: Treatment effects, equivalent to the results in Table 2, Panel A, when countries are excluded one-by-one. Outcome variables are the categorical measures described in Table 2. Point estimates with 95% confidence intervals

Table C1: Main effect - showing controls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	<i>All vs. 70% Pay</i>		<i>70% vs. 50% Pay</i>		<i>All vs. 50% Pay</i>		Preferred Choice			
	Cat	D	Cat	D	Cat	D	<i>All Pay</i>	<i>70% Pay</i>	<i>50% Pay</i>	<i>No Adj</i>
Treated	-0.051*** (0.013)	-0.017*** (0.005)	-0.051** (0.020)	-0.016 (0.012)	-0.114*** (0.021)	-0.035*** (0.008)	-0.040** (0.014)	0.022 (0.014)	0.027** (0.009)	-0.008 (0.005)
Bottom30Actual	0.238*** (0.046)	0.049*** (0.012)	0.128** (0.040)	-0.001 (0.016)	0.228** (0.067)	0.035 (0.023)	0.036** (0.014)	-0.023** (0.009)	-0.043** (0.015)	0.030*** (0.008)
B40and50Actual	0.199*** (0.039)	0.034** (0.010)	0.094** (0.030)	-0.001 (0.010)	0.183*** (0.037)	0.025 (0.014)	0.020* (0.009)	-0.011 (0.011)	-0.023* (0.011)	0.014 (0.008)
Educated	-0.088*** (0.022)	-0.020* (0.010)	-0.063 (0.036)	-0.014 (0.010)	-0.082* (0.043)	-0.018 (0.012)	-0.031*** (0.008)	-0.002 (0.015)	0.032* (0.016)	0.000 (0.005)
Age	0.000 (0.001)	-0.000 (0.000)	-0.001 (0.001)	-0.001** (0.000)	-0.001 (0.001)	-0.001 (0.001)	0.000 (0.001)	-0.000 (0.000)	-0.001 (0.001)	0.000 (0.000)
Female	-0.024 (0.039)	-0.017 (0.014)	-0.024 (0.015)	-0.015 (0.008)	-0.013 (0.031)	-0.018 (0.010)	-0.004 (0.007)	0.027*** (0.005)	-0.022*** (0.006)	-0.002 (0.006)
Unemployed	-0.050 (0.033)	-0.014 (0.009)	0.003 (0.019)	0.005 (0.006)	-0.017 (0.052)	-0.002 (0.013)	-0.009 (0.009)	0.004 (0.005)	-0.005 (0.006)	0.010** (0.003)
InformalWorker	-0.084** (0.033)	-0.021** (0.007)	-0.048 (0.027)	-0.014 (0.010)	-0.038 (0.035)	-0.009 (0.013)	-0.014 (0.011)	0.022** (0.008)	-0.005 (0.013)	-0.003 (0.008)
Retired	-0.035 (0.090)	0.005 (0.023)	-0.058 (0.043)	-0.014 (0.010)	-0.008 (0.098)	-0.013 (0.026)	-0.013 (0.034)	0.008 (0.031)	0.030 (0.021)	-0.025 (0.015)
GovernmentSub	0.001 (0.043)	0.015 (0.012)	0.053 (0.038)	0.031** (0.010)	-0.029 (0.041)	-0.001 (0.012)	-0.007 (0.009)	0.028 (0.019)	0.001 (0.014)	-0.022* (0.012)
HouseholdSize	0.011* (0.005)	0.001 (0.002)	0.002 (0.004)	-0.002 (0.002)	0.016* (0.008)	0.005 (0.003)	0.002 (0.002)	-0.001 (0.002)	-0.002 (0.002)	0.001 (0.002)
Bottom30Perceived	-0.033 (0.037)	-0.016 (0.012)	-0.074 (0.044)	-0.021 (0.014)	-0.096** (0.032)	-0.025* (0.012)	0.005 (0.013)	-0.028* (0.014)	0.018* (0.009)	0.005 (0.007)
B40and50Perceived	0.004 (0.017)	0.000 (0.009)	-0.040 (0.032)	-0.017 (0.010)	-0.067** (0.025)	-0.015 (0.008)	0.003 (0.007)	-0.008 (0.011)	0.005 (0.012)	0.000 (0.003)
KnowledgeTaxes	-0.019 (0.022)	-0.003 (0.008)	-0.039 (0.023)	-0.008 (0.009)	-0.042* (0.019)	-0.003 (0.006)	0.007 (0.008)	-0.007 (0.010)	0.008 (0.009)	-0.008 (0.006)
ConcernIneqPov	-0.175*** (0.040)	-0.033** (0.012)	-0.066* (0.031)	-0.004 (0.008)	-0.145*** (0.036)	-0.030*** (0.008)	-0.050*** (0.011)	0.021** (0.009)	0.044* (0.019)	-0.014** (0.004)
TrustGov	0.019 (0.052)	0.017 (0.014)	0.071 (0.048)	0.043** (0.013)	0.053 (0.064)	0.027 (0.017)	0.022 (0.013)	0.013 (0.009)	-0.026 (0.017)	-0.009 (0.008)
BeliefsLuck	0.005 (0.031)	0.011 (0.006)	-0.028 (0.038)	0.003 (0.012)	-0.024 (0.035)	0.001 (0.008)	-0.038** (0.015)	0.017* (0.007)	0.009 (0.016)	0.012* (0.005)
PoorChildOpportunity	-0.207*** (0.027)	-0.062*** (0.012)	-0.161*** (0.018)	-0.037*** (0.006)	-0.277*** (0.020)	-0.080*** (0.009)	-0.038*** (0.011)	-0.006 (0.009)	0.054*** (0.011)	-0.009 (0.009)
PoliticalAlignment	0.063*** (0.013)	0.018*** (0.003)	0.045*** (0.008)	0.011*** (0.001)	0.064*** (0.014)	0.017*** (0.003)	0.018*** (0.003)	-0.005** (0.002)	-0.016*** (0.003)	0.003 (0.002)
Observations	12,152	12,152	12,152	12,152	12,152	12,152	12,152	12,152	12,152	12,152
R-squared	0.045	0.030	0.023	0.015	0.051	0.034	0.034	0.008	0.026	0.012
Mean Dep. Var.	3.094	0.317	2.934	0.389	3.107	0.326	0.277	0.308	0.338	0.076
Mean Dep. Var. (control)	2.931	0.326	3.091	0.398	2.949	0.344	0.297	0.297	0.326	0.080
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table presents the results of the main treatment effects. “*All vs. 70% Pay*” measures respondents’ preferences for option 1 over option 2. *Cat* means that it is the categorical measure, which takes values from 1 to 5, where 5 is a greater preference for option 1. *D* is an indicator variable that takes values of 1 if option 1 was preferred, and 0 otherwise. Same logic for the dependent variables in columns 3 to 6. *All Pay* in column 7 is an indicator variable that takes values of 1 if option 1 was chosen, and 0 otherwise. The same logic for columns 8, 9 and 10. *All Pay* being the least redistributive option and *50% Pay* the most redistributive. *No Adj* means no action. *Treated* is an indicator variable that takes values of 1 if it received the treatment of experiment 1, and 0 otherwise. Clustered standard errors at the country level are reported in parentheses. * is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.

Table C2: Attention checks by country

Country	(1)		(2)		(3)		(4)		(5)		(6)	
	ATT. Check I		ATT. Check II		At least one correct		Both correct					
	Wrong	Correct	Wrong	Correct	Wrong	Correct	Wrong	Correct	Wrong	Correct	Wrong	Correct
Argentina	44.68	55.32	48.12	51.88	29.54	70.46	63.25	36.75				
Brazil	45.77	54.23	49.11	50.89	29.84	70.16	65.05	34.95				
Chile	47.91	52.09	45.18	54.82	29.34	70.66	63.75	36.25				
Colombia	46.15	53.85	50.72	49.28	30.64	69.36	66.23	33.77				
Costa Rica	48.80	51.20	57.31	42.69	34.44	65.56	71.68	28.32				
Guatemala	45.44	54.56	57.03	42.97	33.38	66.62	69.09	30.91				
Mexico	48.92	51.08	53.57	46.43	33.99	66.01	68.50	31.50				
Peru	46.04	53.96	49.74	50.26	31.64	68.36	64.13	35.87				
All	46.72	53.28	51.32	48.68	31.59	68.41	66.45	33.55				

Notes: This table presents the percentages of respondents by country who chose each of the options in the attention control question. *ATT. Check I* corresponds to the question: *Under which reform option do the poorest households pay more?*. Respondents were expected to choose the 4% increase in VAT payments applied to all households. *ATT. Check II* corresponds to the question *Under which reform option do the richest households pay more?*. Respondents were expected to choose the 6% increase in VAT payments that exclude the bottom 50%. *Option 1* is “4% increase”, *Option 2* is “5% increase”, and *Option 3* is “6% increase”.

Table C3: Main effect - subsample attention checks

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	<i>All vs. 70% Pay</i>		<i>70% vs. 50% Pay</i>		<i>All vs. 50% Pay</i>		Preferred Choice			
	Cat	D	Cat	D	Cat	D	<i>All Pay</i>	<i>70% Pay</i>	<i>50% Pay</i>	<i>No Adj</i>
Treated	-0.090*** (0.013)	-0.032*** (0.006)	-0.058* (0.029)	-0.019 (0.014)	-0.136*** (0.025)	-0.041*** (0.011)	-0.045*** (0.012)	0.021 (0.015)	0.028** (0.010)	-0.004 (0.005)
Observations	8,313	8,313	8,313	8,313	8,313	8,313	8,313	8,313	8,313	8,313
R-squared	0.029	0.022	0.011	0.010	0.029	0.020	0.025	0.009	0.015	0.011
Mean Dep. Var.	3.094	0.317	2.934	0.389	3.107	0.326	0.277	0.308	0.338	0.076
Mean Dep. Var. (control)	2.931	0.326	3.091	0.398	2.949	0.344	0.297	0.297	0.326	0.080
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table presents the results of the main treatment effects in a subsample of those who responded well to care checks. “*All vs. 70% Pay*” measures respondents’ preferences for option 1 over option 2. *Cat* means that it is the categorical measure, which takes values from 1 to 5, where 5 is a greater preference for option 1. *D* is an indicator variable that takes values of 1 if option 1 was preferred, and 0 otherwise. Same logic for the dependent variables in columns 3 to 6. *All Pay* in column 7 is an indicator variable that takes values of 1 if option 1 was chosen, and 0 otherwise. The same logic for columns 8, 9, and 10. *All Pay* being the least redistributive option and *50% Pay* the most redistributive. *No Adj* means no action. *Treated* is an indicator variable that takes values of 1 if it received the treatment of experiment 1, and 0 otherwise. Clustered standard errors at the country level are reported in parentheses. * is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.

Table C4: Heterogeneous effect - political alignment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	<i>All vs. 70% Pay</i>		<i>70% vs. 50% Pay</i>		<i>All vs. 50% Pay</i>		Preferred Choice			
	Cat	D	Cat	D	Cat	D	<i>All Pay</i>	<i>70% Pay</i>	<i>50% Pay</i>	<i>No Adj</i>
TreatedXPoliticalAlignment	-0.011 (0.006)	-0.006* (0.003)	0.001 (0.018)	-0.000 (0.005)	-0.021*** (0.006)	-0.009** (0.003)	-0.003 (0.003)	0.004 (0.002)	0.001 (0.004)	-0.002 (0.002)
Treated	0.007 (0.037)	0.013 (0.017)	-0.058 (0.080)	-0.015 (0.020)	-0.002 (0.040)	0.013 (0.022)	-0.023 (0.029)	-0.000 (0.022)	0.022 (0.026)	0.001 (0.015)
PoliticalAlignment	0.081*** (0.016)	0.024*** (0.003)	0.054*** (0.013)	0.013*** (0.003)	0.090*** (0.017)	0.025*** (0.004)	0.022*** (0.004)	-0.007** (0.002)	-0.020*** (0.005)	0.004 (0.003)
Observations	12,152	12,152	12,152	12,152	12,152	12,152	12,152	12,152	12,152	12,152
R-squared	0.037	0.026	0.017	0.012	0.040	0.027	0.029	0.007	0.020	0.011
Mean Dep. Var.	3.094	0.317	2.934	0.389	3.107	0.326	0.277	0.308	0.338	0.076
Mean Dep. Var. (control)	2.931	0.326	3.091	0.398	2.949	0.344	0.297	0.297	0.326	0.080
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table presents the results of heterogeneous treatment effects. “*All vs. 70% Pay*” measures respondents’ preferences for option 1 over option 2. *Cat* means that it is the categorical measure, which takes values from 1 to 5, where 5 is a greater preference for option 1. *D* is an indicator variable that takes values of 1 if option 1 was preferred, and 0 otherwise. Same logic for the dependent variables in columns 3 to 6. *All Pay* in column 7 is an indicator variable that takes values of 1 if option 1 was chosen, and 0 otherwise. The same logic for columns 8, 9 and 10. *All Pay* being the least redistributive option and *50% Pay* the most redistributive. *No Adj* means no action. *Treated* is an indicator variable that takes values of 1 if it received the treatment of experiment 1, and 0 otherwise. Clustered standard errors at the country level are reported in parentheses. * is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.

Table C5: Heterogeneous effect - concern about inequality and poverty

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	<i>All vs. 70% Pay</i>		<i>70% vs. 50% Pay</i>		<i>All vs. 50% Pay</i>		Preferred Choice			
	Cat	D	Cat	D	Cat	D	<i>All Pay</i>	<i>70% Pay</i>	<i>50% Pay</i>	<i>No Adj</i>
TreatedXConcernIneqPov	0.099** (0.040)	0.016 (0.017)	0.054 (0.082)	-0.010 (0.027)	0.119* (0.063)	0.036* (0.018)	0.027 (0.015)	-0.009 (0.015)	-0.039* (0.020)	0.021** (0.008)
Treated	-0.073*** (0.010)	-0.021** (0.006)	-0.063** (0.025)	-0.014 (0.013)	-0.142*** (0.018)	-0.043*** (0.007)	-0.046** (0.015)	0.024 (0.015)	0.036*** (0.005)	-0.014** (0.005)
ConcernIneqPov	-0.301*** (0.056)	-0.062*** (0.012)	-0.151* (0.078)	-0.012 (0.021)	-0.290*** (0.067)	-0.070*** (0.013)	-0.084*** (0.020)	0.029* (0.012)	0.083** (0.029)	-0.028*** (0.006)
Observations	12,152	12,152	12,152	12,152	12,152	12,152	12,152	12,152	12,152	12,152
R-squared	0.028	0.018	0.011	0.009	0.029	0.020	0.023	0.007	0.016	0.010
Mean Dep. Var.	3.094	0.317	2.934	0.389	3.107	0.326	0.277	0.308	0.338	0.076
Mean Dep. Var. (control)	2.931	0.326	3.091	0.398	2.949	0.344	0.297	0.297	0.326	0.080
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: This table presents the results of heterogeneous treatment effects. “*All vs. 70% Pay*” measures respondents’ preferences for option 1 over option 2. *Cat* means that it is the categorical measure, which takes values from 1 to 5, where 5 is a greater preference for option 1. *D* is an indicator variable that takes values of 1 if option 1 was preferred, and 0 otherwise. Same logic for the dependent variables in columns 3 to 6. *All Pay* in column 7 is an indicator variable that takes values of 1 if option 1 was chosen, and 0 otherwise. The same logic for columns 8, 9, and 10. *All Pay* being the least redistributive option and *50% Pay* the most redistributive. *No Adj* means no action. *Treated* is an indicator variable that takes values of 1 if it received the treatment of experiment 1, and 0 otherwise. Clustered standard errors at the country level are reported in parentheses. * is significant at the 10% level, ** is significant at the 5% level, *** is significant at the 1% level.