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Perceptions of inequality and social mobility in Mexico ☆

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ABSTRACT

Using new survey and experimental data, we investigate how perceptions about inequality and social mobility affect preferences for redistribution in Mexico. In addition to the perceived level of inequality typically measured in previous studies, we explore perceptions about who is rich and poor and their share of the population. The shape of perceived inequality that we find provides new insights as to why people tolerate large differences between the rich and the poor. We find that Mexicans generally perceive poverty and inequality not too far from measured levels, but they overestimate the income of the rich and their proportion of the population. Their perceptions of social mobility correctly estimate persistence rates at the top and bottom of the distribution, but they overestimate upward and downward mobility. Providing people with more information about observed income inequality and social mobility could be one way to encourage a demand for redistribution. However, randomly providing selected participants with this information has almost zero effect on their desired levels of equality, social mobility, and tax rates. Finally, we find that Mexicans want a progressive tax system in which the poor pay an average tax rate of 14% and the wealthy pay 41%, and that preference for a more progressive tax structure is negatively related to socioeconomic status.

1. Introduction

The growing concern with inequality and social mobility has inspired a large number of studies measuring and analyzing their consequences.[1] However, less is known about how people perceive these phenomena. Perceptions are often different from reality[2] but understanding them helps to explain people's attitudes toward that reality. Moreover, the subjective experience of inequality and social mobility can affect political behavior and policy preferences, which in turn affect objective inequality and social mobility outcomes.

☆ The opinions expressed herein must in no way be considered to reflect the official position of the European Union, AFD, or El Colegio de México. All errors and omissions are the sole responsibility of the authors. Declaration of interests: none. The data and code used in our analysis can be found at https://github.com/aurororaramirez/Perceptions-of-Inequality-and-Social-Mobility.

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[1] See D'Hombres, Weber, and Elia (2012) and Wilkinson and Pickett (2019) for literature reviews of income inequality and its effects on social outcomes, and Goñi, Humberto López, and Servén (2011) for an analysis of inequality before and after taxes. There is an extensive literature on inequality and social mobility (among others, Piketty & Saez, 2003; Andrews & Leigh, 2009; Kopczuk, Saez, & Song, 2010; Chetty, Hendren, Jones, & Sonya, 2018; Chetty et al., 2017).

[2] Research has repeatedly shown that people have a poor understanding of inequality (Karadja et al., 2017; Norton & Ariely, 2011; Chambers et al., 2014; Dawtry et al., 2015). The extent of inequality is underestimated in most countries, with the notable exceptions of France and Germany, where it is overestimated, and Norway, where perceptions are accurate (Hauser & Norton, 2017). Similarly, social mobility is often overestimated, due to excessively optimistic beliefs in meritocracy (Kuhn, 2019; Mijs, 2021), although Chambers, Swan, and Heesacker (2015) find that respondents underestimate social mobility and believe that it has declined over the past four decades, contrary to evidence suggesting it has remained relatively stable (Chetty, Hendren, Kline, Saez, & Turner, 2014).

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There is currently a lack of consensus in the literature both about the relative importance of perceptions of inequality and social mobility on preferences for redistribution, and whether correcting people's perceptions with accurate data would alter those preferences. Disagreement also exists as to whether original perceptions and the effects of new information are necessarily homogeneous throughout a population, given the breadth of micro-level determinants and the importance of context. In this paper we therefore examine people's positive and normative attitudes towards inequality and social mobility, and how their link to individual policy preferences might vary by socioeconomic status (SES).

To analyze these issues, we design and conduct the first Mexican survey, representative at the urban level, about perceived and desired distributions and support for redistributive policies. Our survey consists of 2,493 households in seven Mexican cities. Based on responses to the survey, we first calculate perceptions about inequality and social mobility, focusing on differences in perceptions between high and low SES individuals. Second, we test the effect on redistribution preferences of accurate information on inequality and on social mobility, using an experimental design that provides such information to randomly selected respondents. Finally, we investigate the relationship between redistribution preferences and socioeconomic status. We measure individual redistribution preferences through individuals' preferred tax rates, unlike much of the literature, which focuses either on support for redistributive policies in general or on support for government transfers in particular.

Our results show that individuals have a relatively accurate perception of poverty rates, while they substantially overestimate the prevalence of the affluent. The average perception of the percentage of poor people is 59% of the population, which is higher than the 48.8% official poverty measure, based on a monthly income of less than MXN $2,548 (close to USD $280 in PPP) (Coneval, 2019a). The average perception of the number of rich people is 35%, based on a perception that the minimum income to be considered rich is MXN $38,248 per month (USD $4,250 in PPP). In actuality, however, the percentage of the population that is above that threshold is much lower: around 0.6%, according to official household surveys. We also find that perceptions vary by socioeconomic status. Low SES individuals estimate higher proportions at the extremes of wealth and poverty than high SES individuals. Additionally, in contrast with previous studies (Gimpelson & Treisman, 2018; Hauser & Norton, 2017; Norton & Ariely, 2011), we find that people perceive inequality roughly correctly, with an average perceived Gini of 0.56 versus an actual Gini of 0.5 (Coneval, 2019b). With regards to social mobility, they accurately estimate persistence rates at the bottom and top of the distribution but overestimate upward and downward mobility.

To test the effect of informational treatments on redistributive preferences, we conduct an experiment where we provide information about actual inequality levels to one-third of the participants, about social mobility rates to another third, and we leave one-third as a control group without additional information, before asking them all about their desired distributions. Informing participants of the actual levels of inequality and social mobility has almost zero effect on the levels of inequality, social mobility, and tax rates they describe as desirable (though it is not statistically significant). After providing this information, we also ask participants about the perceived and desired level for their own tax rate, as well as their desired tax rate for the poor, middle-income, and rich. This is a key innovation with respect to the existing literature that allows us to evaluate the type of social contract and redistribution supported by individuals of different socioeconomic status.[3] Our results show that people favor a progressive tax system in which the poor have a positive tax rate, with higher rates for individuals with higher income. Additionally, we find a negative relationship between socioeconomic status and the preference for a more progressive tax structure, independent of whether participants are provided with actual data about inequality. Moreover, we find that high and low SES individuals overestimate their taxes paid and wish to pay less.

Our study builds upon a large body of previous contributions. The classic median voter hypothesis of Meltzer and Richard (1981) assumed that rising inequality would translate into increased demand for redistribution. However, recent models and findings suggest that demand for redistribution depends on people's expectations about their own social mobility, their belief in meritocracy, and individual circumstances (Alesina & Angeletos, 2005; Alesina & Giuliano, 2015; Alesina & La Ferrara, 2002; Benabou & Efe, 2001; Gaviria, Graham, & Braido, 2007; Gimpelson & Treisman, 2018; Kuhn, 2019; Mijs, 2021). For instance, Kahneman (2018) confirm in a laboratory experiment that in a known high-inequality scenario, support for redistribution is greater. In contrast, Ashok, Kuziemko, and Washington (2015) find that despite increasing inequality, such support has been decreasing in the U.S. among specific racial and age groups. Similarly, Roth and Wohlfart (2018) show that people in the U.S. and Germany who have experienced more inequality during their lives are less in favor of redistribution, and are less likely to consider the prevailing distribution of income to be unfair. Our study complements these previous findings by showing that perceptions of inequality, desired distribution, and redistribution preferences are heterogeneous throughout the socioeconomic status distribution.

The burgeoning literature on the impact of perceptions of inequality on redistributive preferences has so far placed insufficient scrutiny on the question of perceived social mobility and its relationship to those preferences, and how such perceptions might be adjusted upon receiving new information (with the notable exception of Alesina, Stantcheva, & Teso, 2018). Importantly, although this recent literature has established that both perceived levels of inequality and observed change in its structure are relevant to support for redistribution, little attention has been paid to how the impact of these perceptions might differ by people's relative incomes at the micro level (at the aggregate level, Kevins, Horn, Jensen, & van Kersbergen, 2018;Lupu & Pontusson, 2011 find differentiated impact). Herein lies the main contribution of our study: assessing the link between perceived inequality, social mobility, and individual policy preferences, we find that perceptions, and thus support for redistribution, vary by socioeconomic status. Previous studies have shown that redistribution preferences relate mostly to perceptions rather than the reality of inequality and social mobility (Alesina et al., 2018; Bartels, 2008; Bublitz, 2017; Gimpelson & Treisman, 2018; Kuziemko, Norton, Saez, & Stantcheva, 2015; Niehues, 2014). Kuhn (2019) finds that in general, those individuals perceiving higher inequality are more supportive of income redistribution policy. Mijs (2021) shows that it is perceptions about social mobility, rather than concern about

[3] Fernández-Albertos and Kuo (2018) conduct a somewhat similar survey in Spain. They find that in the control group, perceived and actual income are negatively correlated with the degree of progressivity, as measured by the ratio of the highest to lowest tax rates. Their results also show that providing information on respondents' relative place in the income distribution affects the preferences for progressivity only for those who learn that they are in the poorest quintile or who believe themselves to be poor and learn that they are poorer. In contrast, we find a negative relationship between socioeconomic status and the preference for a more progressive tax structure independent of the information treatment (both for information about overall inequality levels and mobility levels). We also measure the desired tax rate and find that its level is independent of respondents' socioeconomic status.

inequality, that shape support for redistributive policies.[4] One of the few studies analyzing the effects both of inequality and of social mobility on support for redistribution finds that perceptions of both phenomena are better predictors of support for social policy than measured levels of inequality and social mobility (Engelhardt & Wagener, 2014). We contribute to this body of research by testing these claims.

At the same time, providing information has an ambiguous effect on respondents' concern about inequality. Of particular relevance for our context is an indirect link connecting inequality to social mobility in its effect on redistribution preferences: Kuziemko et al. (2015) find that discovering that they are not as advantaged as they imagined increases people's concern about income inequality and support for policies that ameliorate it (see also Cruces, Perez-Truglia, & Tetaz, 2013; Karadja, Mollerstrom, & Seim, 2017). McCall, Burk, Laperrière, and Richeson (2017) suggest that perceptions of rising economic inequality create skepticism about the existence of economic opportunity that translates into support for policies promoting equality. However, Alesina et al. (2018) find that pessimistic information about mobility does not change support for redistribution among right-wing respondents in the U.S., despite changing their views on social mobility. Likewise, Hoy and Mager (2018) show that although attitudes toward inequality are elastic to information in eleven high- and middle-income countries, preferences for redistribution change in fewer countries. Our study confirms these results for the case of Mexico, where providing information does not change desired levels of equality or preferred tax rates.

A few studies have started describing within-population differences, reaching mixed results. In some cases, information treatments increase the acceptance of specific taxes on the rich, including estate, inheritance, and other wealth taxes, with increasing acceptance when people realize they will not be affected by the tax, and when wealth is perceived as unearned (Alesina et al., 2018; Bastani & Waldenström, 2019; Fisman, Gladstone, Kuziemko, & Naidu, 2017; Kuziemko et al., 2015; Sands & De Kadt, 2019). However, Cruces et al. (2013) show that only those participants who are informed that their economic rank is lower than they thought increase their demands for redistribution, while there is no statistically significant effect for those who underestimated their rank. Fernández-Albertos and Kuo (2018) detect little effect of new information on those with incomes greater than the median or on those who learn that they are richer than they believed, whereas Karadja et al. (2017) find that individuals who are richer than they initially thought demand less redistribution. Likewise, Bastani and Waldenström (2019) find a negative treatment effect for high-wealth respondents (although only for inheritance tax). Indeed, wealthier people in general seem to perceive society to be fairer and demand less redistribution (Dawtry, Sutton, & Sibley, 2015). Both status and perceived status affect redistribution preferences (Fernández-Albertos & Kuo, 2018; Karadja et al., 2017). In line with these findings, Guillaud (2013) identifies income as the primary driver of individual preferences for redistribution. We add to this literature by showing that the ranking in the socioeconomic status distribution generates differential preferences about the overall progressivity of the tax structure.

[4] In the U.S., for example, misestimating inequality leads individuals to see less need for redistribution (Dawtry et al., 2015). Pedersen and Mutz (2019) find that preferred levels of inequality are heavily influenced by perceptual distortions of the anchoring effect and ratio bias. In general, political behavior, like most behavior, depends more on "how a person feels socially than on one's position according to objective characteristics such as education, occupation or income" (Lindemann, 2004; see also Dawtry et al., 2015).

The context of our study is important. Mexico is among the countries with the highest income inequality and lowest social mobility in the world. One of the defining features of the distribution in Mexico is the increasing distance between high-income individuals and the rest of the population: using current household income, the ratio of decile 10 to decile 1 is 18.3 (INEGI, 2019a). With a Gini coefficient of around 0.5 (Coneval, 2019b), only 3% of those born in the lowest quintile will move up to the top, and only 2% from the top quintile will end up at the bottom, with little change over time in recent years (Orozco-Corona, Espinosa-Montiel, Fonseca-Godínez, & Vélez-Grajales, 2019). This social rigidity leads to "opportunity hoarding": those starting from a disadvantaged position will have fewer opportunities to succeed, whereas those born into privilege continue to amass further advantages throughout their lifetime, which they are then able to pass on to their children. This fact is explained in part by the high level of inequality of opportunity, which in the case of Mexico represents at least half of the total observed inequality (Velez-Grajales, Monroy-Gomez-Franco, & Yalonetzky, 2021). While researchers have established, and agree upon, the existence of high inequality and low social mobility in Mexico, knowledge of these phenomena does not necessarily permeate the awareness of the general public. If this were the case, perceptions might not be in line with reality. Our study complements current studies that focus mostly on high-income countries.[5] Mexico, like many other developing countries, features a context of high poverty, high inequality, and low state capacity— particularly low tax revenue.

This paper is organized as follows. The next section explains the methodological challenges of studying perceptions of inequality and social mobility, and describes our survey design and information intervention, as well as the descriptive statistics of the survey. In Section 3, we discuss our results with respect to the perceptions and desired levels of inequality, social mobility, and redistribution, and we present the effects of the experiment. Section 4 offers some concluding remarks.

2. Methodology

2.1. Methodological challenges

Researchers have used a wide variety of methodologies to study perceptions of inequality and social mobility and their relation to desired distributions or redistribution preferences.[6] The now-classic question in the exploration of people's perceptions of inequality asks respondents to estimate quintile (or decile) shares of the wealth or income distribution of a country (Cruces et al., 2013; Karadja et al., 2017; Norton & Ariely, 2011). This can be a chal-

[5] One exception is Cruces et al. (2013), who conducted a survey in Argentina. Their sample is significantly smaller than ours (N = 1,100), and the main focus is on misperception of participants' position in the social hierarchy (as opposed to overall inequality levels in the country). The redistributive policies they use in their intervention are a set of measures to help the poor (which are difficult to oppose, as they do not require an immediate sacrifice from the respondent). Although recent qualitative studies have started to explore the perceptions of elites (Krozer, 2018) and the poor (Bayón, 2017), so far no quantitative study has explored these issues in Mexico.

[6] Dawtry et al. (2015) and Gimpelson and Treisman (2018) review theoretical arguments, and Kahneman (2011), and more specifically Payne (2017), lay out many of the (social) psychological patterns in specific, typical responses. Empirical methods for understanding people's attitudes about social mobility most commonly include experiments (especially in psychology, but increasingly also in economics research) testing people's responses to variations in social mobility under laboratory conditions (e.g., Day & Fiske, 2016; Payne, 2017). Evidence has also been collected in "real-life" experiments (Brunner et al., 2011), and with ethnographic methods (Khan, 2015), interviews (Reis & Moore, 2005), and many different types of surveys (Alesina et al., 2018; Norton & Ariely, 2011), with or without intervention. Clark and D'Ambrosio (2015) review the survey and experimental findings in the literature on attitudes to income inequality.

lenge, particularly for developing countries, as respondents might not have the mathematical preparation to answer this question. Graphical representations of distributions can assist people without statistical expertise in understanding the concepts involved. However, prompting biases can be significant. Moreover, Gimpelson and Treisman (2018) warn that the "ideal types" presented in their use of the ISSP (2009) "society type" figure, which usually range from perfectly equal to extremely unequal, do not necessarily correspond to actual income structures.

Following a different strategy, Alesina et al. (2018) ask participants to estimate the share of total income held by different income groups (top 1% and 10%, bottom 50%) for both labor and capital income as well as for wealth. In our context, this question faces similar concerns regarding participants' mathematical abilities. Eriksson and Simpson (2012) and Chambers, Swan, and Heesacker (2014) show that phrasing the question in terms of absolute numbers, such as thresholds, can produce different results than asking about percentages or shares. Our survey thus uses a hybrid: we include a bar graph showing different distributions participants can choose from, after asking them to provide thresholds for poor and rich people's incomes to avoid potential anchoring effects. This allows us to understand respondents' visions of both the extent and the shape of the distributions they perceive and would like to see. The figures used in the survey are shown in the supplementary materials.

Alesina et al. (2018) investigate perceptions of social mobility by asking participants to estimate the number of children from poor backgrounds that will end up in the richest or second richest quintile, both in general and also based on their talent or diligence. While this method allows the authors to study beliefs about meritocracy in more detail, their questions are unsuitable for our context, as they require familiarity with economists' practice of dividing income into quintiles and thinking about social mobility in terms of probabilities. Instead, we show respondents a figure representing population quintiles, and elicit their perceptions about mobility by asking them how many of the richest or poorest will end up in the same quintile or at the opposite extreme. This has the disadvantage that participants do not need to describe population quintiles that add up to 100 percent. Indeed, we find that participants do not think in terms of relative mobility (i.e., in terms of quintiles) but in terms of absolute mobility (they would like, for example, a large proportion of poor individuals to become rich).

Another challenge concerns the choice of indicator to gauge redistribution preferences. Any redistribution policy used as a representative policy necessarily oversimplifies a process that is the result of a complex set of policies from a variety of areas. To avoid selecting one particular policy, previous studies have used ideological inclinations as proxies for redistribution preferences. For instance, in their original study, Alesina and Angeletos (2005) use "leftist political orientation" as a proxy for favoring redistribution. In a similar vein, Gimpelson and Treisman (2018), as well as most studies relying on ISSP data, make use of the survey's question about "the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes." An alternative strategy is pursued by Fernández-Albertos and Kuo (2018), who ask respondents what percentage of household income should be paid in taxes at different thresholds of household monthly income (1,200, 2,100, 3,200, and 10,000 euros/month). The numbers obtained allow for the calculation of progressivity preference ratios. Such measures include all taxpaying citizens (including, presumably, the respondent) more directly, thus allowing for inferences about inequality tolerance. As these results are also less ambiguous in their description of redistribution preferences, our study makes use of a similar technique. We choose to focus on taxation rather than social spending to gauge the "sacrifice" respondents are willing to make to decrease inequality (i.e., how important a problem they consider it to be) and to test whether people associate taxation with inequality relief.[7]

2.2. Data collection

In April and May 2019, we surveyed 2,493 households, 643 located in the Mexico City metropolitan area and between 280 and 330 in each of the following other metropolitan regions: Ciudad Juárez (Chihuahua) and Monterrey (Nuevo Leon) in the north; Acapulco (Guerrero) and Villahermosa (Tabasco) in the south; and León (Guanajuato) and San Luis Potosí (San Luis Potosí) in central Mexico. Our survey of perceptions of inequality and social mobility is representative at the urban level (metropolitan areas larger than 100,000 inhabitants) and was conducted face-to-face by appropriately trained interviewers at the informants' homes with a randomly selected household member aged 25–54.[8] Long surveys and complicated questions deteriorate response rates and the quality of answers (Bastani & Waldenström, 2019; Lenzner, Kaczmirek, & Lenzner, 2010). We thus had the interviewers read the questions aloud and record the answers on a tablet device. Where appropriate, they showed participants figures on cards. Completing the entire survey, including the informational intervention, took 20–25 min.

2.3. Survey design

The survey has several sections, including established questions from prior studies and some new ones specific to the context (the questionnaire is included in the Supplementary Materials). The first section consists of a short sociodemographic block. Due to the recent upsurge in violent crime in Mexico, people are increasingly reluctant to answer direct questions in surveys about their economic condition. Our questionnaire thus requests information about the conditions of the respondent's household as a measure of their economic situation. This section is followed by the main section on perceptions of inequality and social mobility, which also includes the informational intervention (one-third of the respondents are given information describing real inequality levels, another third are given information describing levels of social mobility, and the final third are not given any additional data). Immediately after the intervention participants are asked about their policy preferences and the distribution and mobility levels they would like to see. The third section of the survey features questions about participants' households when they were children, in order to approximate their social mobility.

The main section includes 19 questions. The first three ask participants to locate their current, past, and future households—at present, when they were 14 years old, and in 20 years—on a decile continuum. The next four questions ask respondents to identify the income thresholds they consider to define the rich and the poor, and the number of individuals out of 10 from each of these groups. The following question asks about the perceived overall tax burden: "Of every 10 pesos of your household income, what do you

[7] Future research needs to address how well individuals understand the difference between market income and disposable income, and their perceptions as to which expenditures are more effective in reducing inequality. For the case of Mexico, Scott (2014) finds that redistribution is more effective on the spending side than on the taxation side, while the overall redistributive impact of the tax-benefit system is low.

[8] In Tables B1 and B2 of the Supplementary Materials we include summary statistics and a comparison of the fraction of women, age, and schooling of individuals in our Perception Survey and in the Labor Survey 2019. As shown, our survey closely matches the characteristics of highly urbanized areas. In contrast, estimates at the national level suggest that the population in our study is slightly more educated than the population of the country as a whole. Because of data restrictions, we compare our survey estimates throughout the analysis with actual measures of inequality and other outcomes using national-level estimates.

think is the total you pay in taxes (including consumption taxes or VAT, income taxes, state taxes like property taxes, gasoline taxes, and other taxes)?" This question is important to calculate both the internal consistency, described by Brunner, Ross, and Washington (2011) as "cognitive consistency," in respondents' proposals for redistribution, and also how realistic they are. Given the size of the informal sector (58% of the employed population; INEGI, 2019b), whose workers do not pay income taxes, the question includes all types of taxes.

Participants are then shown six different hypothetical income distributions, from extremely unequal to completely equal, in the form of bar graphs (see Supplementary Materials), and they are asked to choose the distribution they believe most closely represents the current Mexican income distribution. According to Coneval (2019b), the Gini coefficient calculated from household surveys was approximately 0.5 in the years 2010–2016. Thus, the Mexican income distribution resembles the two middle options (3 and 4). Because the rich and their income are not well represented in household surveys, Campos-Vazquez, Chavez, and Esquivel (2018) and Del Castillo (2017) adjust survey data using disposable income from national accounts. Their results indicate an estimated Gini coefficient of 0.70, with the top 20% receiving approximately 75% of the total income. Therefore, the real Mexican distribution would be closer to Option 2. We include both completely egalitarian and extremely unequal options to allow participants to choose their ideal distribution from a full range of possibilities. This question is followed by a set of questions, similar to those in the ISSP (2009), about why people are rich or poor, and another set, adapted from Hofstede (2011), about the role of government.

The final section includes six questions about social mobility. Unlike most surveys, which look only at upward mobility, we ask about both perceived upward and downward mobility for individuals in low-, medium-, and high-income households. This allows us to better understand how people interpret the abstract concept of social mobility and test the claim of Hauser and Norton (2017) that people fail to connect the two dynamics. The questions are the following: "Now think about 10 children with the lowest (highest, middle) income today. How many of them do you think will be in the poorest (richest) households? Please indicate a number from 0 to 10, with 0 being 'none' and 10 being 'all.'"[9]

The informational treatment (see below) follows the section on social mobility. After participants are given the information, we ask about desired levels of inequality, social mobility, and redistribution. First, we ask them to select the income distribution they would like to see from the same six-option figure used before in asking about their perception of the distribution. Then we ask them again about social mobility, this time about the mobility they would like to see. Finally, we assess their views on tax progressivity and their aversion to inequality. We ask about the tax rate they would like to pay, as well as their desired tax rate for individuals they believe are poor, middle-income, and rich.[10] Assessing support for tax progressivity as a measure of redistributional preferences is a key innovation in the present study. Previous research has mostly used general Likert-scale questions about the degree to which government should be responsible for lessening the distance between rich and poor, but such questions do not refer to specific policy instruments, like tax rates.

2.4. Informational intervention

Researchers in social psychology estimate redistribution preferences by conducting laboratory experiments that ask participants to divide incomes according to fairness or other considerations, or by using tax games designed by economists.[11] A different set of studies has relied on information interventions. Cruces et al. (2013), exploring how people place themselves in the income distribution, inform participants that "the latest studies conducted by the university indicate that there are X million households with an income lower than yours, while you stated that there were Y." In a study in the Netherlands testing the effects of inequality on trust, Gallego (2016) presents participants with a real quintile distribution (the control group) or a manipulated low-inequality or high-inequality condition.

In our study, we randomly divide the sample into three groups. One is shown a political cartoon (included in the Supplementary Materials) and the interviewer reads aloud the following sentence about inequality: "Academic studies and media reports have shown that the level of inequality in Mexico is high. These are the numbers: Out of every $100 pesos the economy generates, approximately $60 pesos go to the richest people in the country (those that are in the top 10% of income). By contrast, the poorest people in the country (those in the bottom 10% of income) receive only $2 pesos."[12] The second group is shown a different political cartoon and the interviewer reads the following sentence about social mobility: "Academic studies and media reports have shown that the level of social mobility in Mexico is bad. These are the numbers: If you are born poor, it is very difficult to move up to the middle or upper class. For every 10 people born into poverty, seven will remain poor and not even one will become rich. That is, if you are born poor, you will die poor, and if you are born rich, you will very likely die rich." The control group is given no information. Unlike other studies, after the intervention, we ask respondents to describe their ideal distribution and redistribution. Norton and Ariely (2011) ask about ideal distributions but without an intervention; Cruces et al. (2013), Brunner et al. (2011), and Fernández-Albertos and Kuo (2018) test redistributive preferences but not ideal distributions.

2.5. Descriptive statistics

The descriptive statistics of the survey are in the first column of Table 1. The proportion of women is 53%, and the group averages 39 years of age, with close to 11 years of education. Most of the sample is gainfully employed. We aggregate different characteristics in the survey into indexes. We construct a household neighborhood quality index from a principal component analysis that

[9] In addition to this more traditional way of asking about social mobility, we also include questions about social mobility in the past: "Now think about 10 adults with the lowest (highest, middle) incomes today. How many of them do you think grew up in the poorest (richest) households? Please indicate a number from 0 to 10, with 0 being 'none' and 10 being 'all'". The results are similar for both measures. Interpreting people's perceptions about the past is not always straightforward; however, these perceptions do coincide with the actual lack of social mobility observed (Orozco-Corona et al., 2019). Although we cannot be certain that the participants' view of the dynamics of inequality is the same, this observation raises the question of people's belief in the power of the state to affect inequality. howpoverty and wealth of the state to affect inequaltiy.uationocial mobility

[10] In the Supplementary Material we also calculate the inequality aversion parameter (Amiel, Creedy, & Hurn, 1999; Pirttilä & Uusitalo, 2010) using a question about what percentage of a reference income (MXN $10,000 or USD $1,111 in PPP) they would be willing to sacrifice to obtain income equality.

[11] For instance, Krawczyk (2010) finds that faced with different probabilities of winning a prize, participants' average redistributive transfers were about 20% lower where winning was determined by performance on a task rather than by luck. Likewise, Jiménez-Jiménez, Molis, and Solano-García (2018) determine participants' pre-tax income according to their performance on a task, and then let them vote on the tax rates to be imposed. Their results are in agreement with those of Alesina and Angeletos (2005). However, Charité, Fisman, and Kuziemko (2015), also using experimental games, find that voters demand less redistribution than standard models predict.

[12] We include the images alongside the somewhat abstract idea of social mobility and inequality to overcome possible comprehension issues arising from participants' limited education, as well as to make the issues clearer.

Table 1
Descriptive Statistics and Balance across Treatment and Control Groups.

Variable	All	Control	Treatment: Inequality	Treatment: Social mobility	*p*-value
Number of Observations	2,493	856	845	792	
Female	0.53 [0.01]	0.51 [0.02]	0.54 [0.02]	0.53 [0.02]	[0.679]
Age	38.88 [0.18]	38.65 [0.30]	38.93 [0.31]	39.06 [0.33]	[0.650]
Years of Schooling	10.93 [0.08]	10.72 [0.13]	10.85 [0.13]	11.25 [0.13]	[0.027]
% University	0.22 [0.01]	0.21 [0.01]	0.21 [0.01]	0.25 [0.02]	[0.112]
% Married / Cohabiting	0.66 [0.01]	0.65 [0.02]	0.68 [0.02]	0.65 [0.02]	[0.335]
% Employed	0.70 [0.01]	0.70 [0.02]	0.70 [0.02]	0.71 [0.02]	[0.912]
% Health Insurance	0.58 [0.01]	0.55 [0.02]	0.60 [0.02]	0.60 [0.02]	[0.163]
HH neighborhood quality index	−0.00 [0.02]	−0.04 [0.03]	0.03 [0.03]	0.01 [0.04]	[0.348]
Beliefs poverty	−0.00 [0.02]	−0.00 [0.03]	−0.01 [0.03]	0.01 [0.04]	[0.927]
Beliefs collectivism	−0.00 [0.02]	−0.02 [0.03]	−0.04 [0.03]	0.06 [0.03]	[0.106]
% Indigenous language	0.10 [0.01]	0.10 [0.01]	0.12 [0.01]	0.08 [0.01]	[0.026]
% Parents low education	0.71 [0.01]	0.72 [0.02]	0.72 [0.02]	0.68 [0.02]	[0.167]
Mexico City	0.33 [0.01]	0.33 [0.02]	0.34 [0.02]	0.31 [0.02]	[0.653]
North	0.27 [0.01]	0.27 [0.02]	0.26 [0.02]	0.27 [0.02]	[0.838]
South	0.17 [0.01]	0.17 [0.01]	0.15 [0.01]	0.18 [0.01]	[0.409]
Center	0.24 [0.01]	0.24 [0.01]	0.25 [0.01]	0.24 [0.02]	[0.795]

includes variables for participants' perception of the quality of public services (paved roads, sidewalks, sewer system, garbage collection, and street lighting) on their street (a Likert scale from 0 to 6, with 0 meaning none). Another index is constructed to measure beliefs about why individuals are rich or poor; it includes six questions about participants' perceptions of equality of opportunity and whether they perceive inequality as a problem (ISSP, 2009). A larger number means a greater belief in poverty driven by personal rather than environmental factors (we add the responses and standardize the sum). A third index is based on perceptions about individualism versus collectivism (Hofstede, 2011). The questions ask whether government or society (on a scale from 1 to 5) is responsible for problems like poverty, inequality, corruption, and bad education (we add the responses and standardize the sum). Approximately 10% of participants have at least one parent who speaks an indigenous language, and close to 70% have one parent with no more than a junior high school education. Seven cities are sampled, divided by region: Mexico City, Ciudad Juárez and Monterrey (north), León and San Luis Potosí (center), and Acapulco and Villahermosa (south).

Notes: Authors' calculations. N = 2,493. Standard errors in brackets. Last column shows the p-value of the null hypothesis of equal means across control and treatment groups.

3. Results

3.1. Perceptions of current levels of inequality and social mobility

In order to measure inequality levels, we include questions in the survey about the income level participants perceive to mean a person is rich or poor. We ask participants to identify the minimum income needed to be rich, and the maximum a person can have and be poor. Then, a follow-up question asks them how many people in ten they think are rich and poor. The results are shown in Fig. 1. Respondents identified an average maximum income to be poor of MXN $2,548 per person per month (approximately USD $280 in PPP). The official urban poverty lines (*líneas de bienestar*) for the urban sector are MXN $3,080 (USD $340 in PPP) per person per month, and MXN $1,562 (USD $170 in PPP) for extreme poverty (Coneval, 2019a). Perceptions about the income of the poor are thus fairly accurate. The average proportion of the population they perceived to be poor was 59%. Official poverty estimates show that 48.8% of the population had incomes below the poverty threshold, less than the perception.

The average minimum income participants identified as meaning a person is rich was MXN $38,248 per person per month (USD

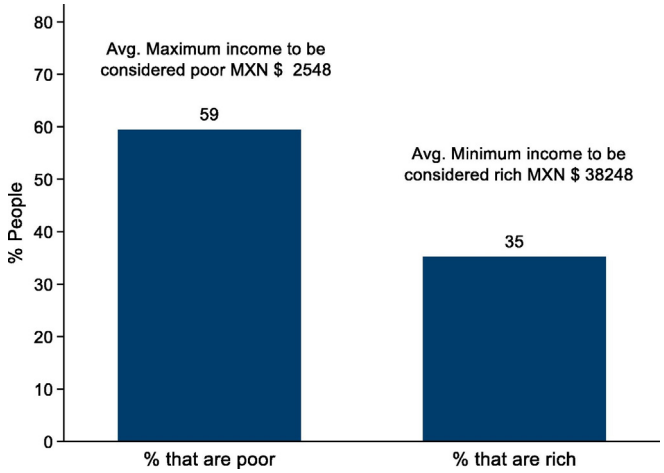

Fig. 1. Perceptions. Notes: Authors' calculations. N = 2,493. "% that are poor (rich)" refers to the question about how many individuals in 10 the respondent considers poor (rich), following a question that asked about the maximum (minimum) income the respondent considered to mean a person was poor (rich).

$4,250 in PPP). This amount is 15 times the perceived poverty line and close to 25 times the actual extreme poverty line. The divergence in perceptions of the income of the rich is greater than that of the poor. Participants perceived 35% of the population to be rich, a vast overestimation. Official income figures for the top 35% are closer to average income (MXN $4,784 or USD $532 in PPP). The official percentage of the population with income above the threshold participants perceived to define the rich is much lower: approximately 0.6% (based on either the Income-Expenditure Survey or the Labor Force Survey).[13]

[13] It could be that there is a problem in official surveys with under-reporting of income or under-sampling of rich individuals. Household income reported by surveys is lower than that reported in national accounts (Campos-Vazquez et al., 2018). However, it does not seem plausible that compensating for this gap would substantially increase the percentage of rich individuals. For the Income-Expenditure survey, the calculation is based on per capita income at the household level. For the Labor Force Survey, the calculation includes only workers with positive income. With total income calculated at the household level, 5% have income that participants believe makes them rich. However, the question refers to individual income. Using administrative data for formal sector workers only, we find that only 4.8% of workers have at least MXN $38,000 monthly income. However, of the total of 55 million workers (including the self-employed and business owners), only around 20 million are formally employed. Hence, only around 3% of all workers have that level of income. At the same time, monthly household income (per capita) is MXN $22,200 (MXN $7,340) for the top 20% and MXN $17,500 (MXN $5,550) for the top 30% using the Income-Expenditure survey.

We test whether perceptions of poverty and wealth vary by socioeconomic status and how these differences influence the shape of perceived inequality. To do so, we build a socioeconomic status index using a principal component analysis of the household neighborhood quality index, neighborhood average years of schooling, whether the respondent has health insurance (either private or as part of social security), parental indigenous language, a dummy variable for parents with a low educational level (no more than junior high school), and average years of schooling. The first principal component explains the largest proportion of the total variance (31%), and it is used as the socioeconomic status index to represent respondents' actual income or wealth (SES). The results are shown in Fig. 2, with a regression line and the *p*-value of the slope coefficient.

Participants' identification of the maximum income they consider poor is positively related to their SES rank; that is, poorer people identify a lower maximum income than richer ones. However, the variation in the estimate of approximately MXN $500 (USD $56 in PPP) from the bottom to the top SES rank is not large. There seems to be a consensus among richer and poorer individuals as to the maximum income a person can have and still be considered poor. If poorer individuals estimate a lower poverty line and the perceived income distribution is the same for all individuals, we should expect a positive relationship between the percentage of individuals perceived to be poor and SES rank. However, as panel C shows, the relationship is negative and statistically significant at the 1% level (*p*-value in brackets). The poorest individuals estimate that 63% of the population are poor, while the richest estimate their share to be close to 55%. This suggests that the perceived income distribution varies by SES rank.

In contrast, there is wide variation in participants' perception of the minimum income necessary for a person to be considered rich. Fig. 2 panel B shows a positive relationship between participants' identification of the minimum income they consider rich and their SES rank, but it is not statistically significant. The average minimum income identified by individuals in the first quintile is below MXN $35,000, while those in the 65th-80th percentile believe it to be around MXN $47,000. As in the perception of poverty, if participants' perceived income distributions are the same, independent of their SES, we would expect a flat or negative plot of the perception of the percentage of rich individuals as a function of participants' SES. Panel D shows a negative relationship (p = 0.016). The poorest 20% of individuals in the sample estimate that close to 40% of the population is rich, while the richest 20% estimate the figure as close to 35%.

In general, individuals' perceptions approximate official poverty measures but substantially overestimate the proportion of rich individuals in the population, and individuals at different places in the SES distribution have different perceptions of that distribution. Poorer individuals estimate higher proportions both of the poor and the rich than richer individuals. We would thus expect that perception of inequality is approximately correct and that this perception is negatively related to SES rank. This expectation differs from the finding of Gimpelson and Treisman (2018) that people in 40 countries performed only slightly better than chance levels in identifying the actual distribution in their countries. If SES rank does influence the perception of inequality, that would be consistent with the observation of Cruces et al. (2013) that individuals' relative incomes within their localities have a strong correlation with their perceptions of the distribution, as locality might be a proxy for SES.

To measure inequality, we include a question that asks respondents to identify which of six bar graphs representing hypothetical income distributions and Gini coefficients in Mexico best reflects the reality.[14] Each has five bars representing 20% of the population, sorted from highest to lowest income. The figures also include the percentages represented by each bar. Fig. 3 summarizes the responses to this question. The mean perceived distribution corresponds to a Gini coefficient of 0.56; the median is 0.65, with the top 20% obtaining 80% of the income and the bottom 20% receiving 1.5%. Three-fourths of respondents identify distributions with a Gini coefficient of at least 0.53; only 11% perceive a degree of equality corresponding to a Gini coefficient of 0.20 or 0. On this basis, it seems that respondents' perceptions of inequality are approximately correct. This result differs from those of previous studies, which find discrepancies between perceived and real inequality in most countries (see, for example, Gimpelson & Treisman, 2018; Hauser & Norton, 2017; Norton & Ariely, 2011).

The survey also included questions about perceptions of social mobility. Participants are asked their opinion as to how many children out of 10 in poor, middle-income, and rich households will live in poor or rich households as adults. The six possible results are shown in Fig. 4. The perceived persistence rates are high. Respondents believe that 52% of children born at the bottom and 56% of those born at the top will remain in their respective quintiles through adulthood. This result is similar to those of previous studies (Delajara, Campos-Vazquez, & Velez-Grajales, 2021; Velez-Grajales, Campos-Vazquez, & Huerta-Wong, 2013), which find an approximate persistence rate of 50%, with higher persistence at the top than at the bottom.[15]

Respondents substantially overestimate upward and downward mobility. They estimate upward mobility from the bottom (Q1) and the middle (Q3) to the top quintile (Q5) at 36% and 40%, respectively, and downward mobility from the top and the middle to the bottom quintile at 31% and 37%, respectively. However, studies calculate actual upward mobility from the bottom to the top at 2.6% (Delajara et al., 2021) and downward mobility from the top to the bottom at 2% (Orozco-Corona et al., 2019). Individuals also overestimate the degree of mobility from the middle quintile. Although respondents perceive a downward mobility of 37% and an upward mobility of 40%, previous studies (Orozco-Corona et al., 2019; Velez-Grajales, Campos-Vazquez, & Huerta-Wong, 2013) indicate that downward mobility to the bottom quintile averages 13% and upward mobility to the top quintile 17%. While respondents are approximately correct about persistence at the bottom and the top, they overestimate both upward and downward mobility in Mexico.[16]

3.2. Desired levels of equality and social mobility

To test the effects of the information treatment, we inquire about preferred distribution and mobility after the intervention. We ask the same questions used for perceived inequality and social

[14] The question is posed as follows: "For example, as you can observe in the image, of each $100 pesos that are generated, $92 pesos are taken by the richest persons (the group with the highest income); the next group takes $4.50, and so on, until the poorest group takes $0.50." Each bar graph is explained in the same way, and respondents are then asked: "In your view, which of the images represents Mexican society?"

[15] Persistence rates from Q1 to Q1 and Q5 to Q5 vary by region, as shown in Delajara et al., 2021. However, the same paper indicates that the national Q1 to Q1 transition is 50% and Q5 to Q5 is 54% (Table 1, row 1, columns 4 and 5). We find that individuals perceive transitions of 52% and 56%, respectively. We believe this is highly accurate.

[16] The sum of the movements for each quintile does not equal 100%. For example, 13% of individuals initially in Q5 are no longer in Q5 (persistence phenomenon) nor do they shift to Q1 (extreme downgrading). The questions in our survey do not allow us to specifically calculate the perceived mobility rates from Q5 to Q2, Q3, or Q4. This is simply because the survey did not ask people to quantify all possible transitions. Because individuals seem to think in terms of absolute rather than relative mobility, as our results below show, one should not conclude that these missing 13% are supposed to have moved into the second, third, or fourth quintile.

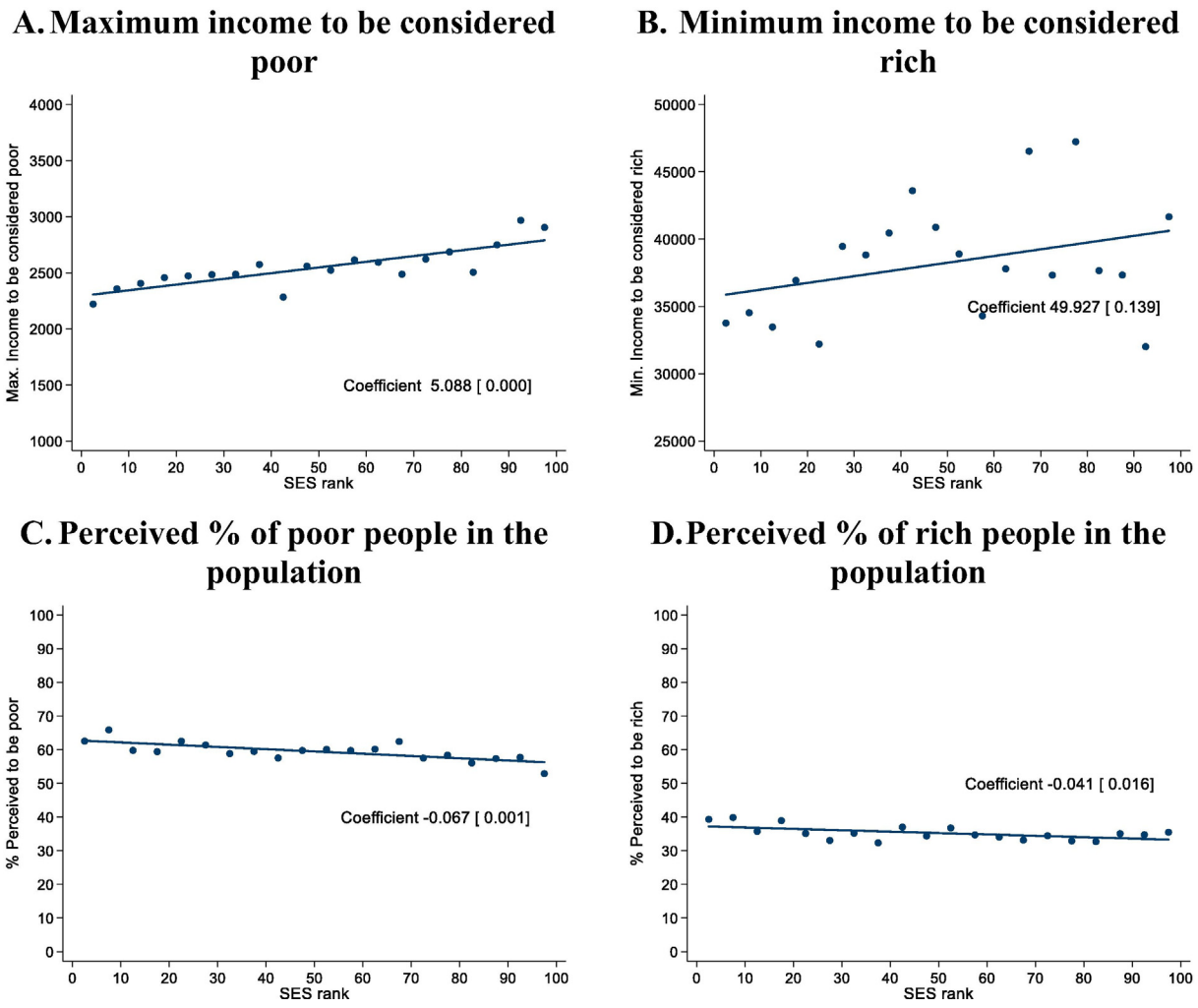

Fig. 2. Participants' perception of income defining the poor and rich, as a function of participants' socioeconomic status. Notes: Authors' calculations. N = 2,493. Panels A and B refer to questions about the income levels defining poor and rich. Panels C and D refer to questions about how many individuals in 10 the respondent considers poor and rich. A regression line is estimated; p-values are shown in brackets.

mobility, except that the questions now ask "what should be" instead of "what will be." These questions allow us to calculate the levels of equality and social mobility that respondents would like to see. Figs. 3 and 4 show the results. The average level of inequality respondents would like to see corresponds to a Gini coefficient of 0.31. This is similar to inequality in Canada, France, and Germany (OECD, 2019), higher than in Nordic countries like Finland, Norway (both 0.26), and Sweden (0.28), but lower than in the United Kingdom (0.35) or the United States (0.39). It is important to note that a quarter of the respondents would like to see zero inequality, while the median and mode prefer a level corresponding to a Gini coefficient of 0.20. This result coincides with those of other studies, which have found that people have an aversion to inequality (Fehr & Schmidt, 1999) and in general prefer distributions more equal than those where they live (Sands & De Kadt, 2019). However, Mexicans today seem to prefer not "Swedish levels" of inequality, a preference that Norton and Ariely (2011) found in the U.S., but an inequality that is somewhat greater. The preference probably depends on how many choices they are given for desired levels of inequality.

Participants' responses concerning social mobility (Fig. 4) show that the rate of persistence they would like to see at the bottom is slightly higher (23%) than what random assignment would predict (20%). However, it seems that they have difficulty in understanding mobility in relative terms: desired upward mobility and persistence at the top both show rates approximately equal to 70%. Even though the five strata were explained to them, they say that most people should be at the top and stay there. Other studies have found similar logical inconsistencies, where perceived upward mobility exceeds downward mobility (Hauser & Norton, 2017). This apparent paradox could be explained by people thinking in terms of absolute rather than relative mobility when they are asked how many people should be in the top quintile as adults. Ideally, everyone should experience absolute upward mobility in terms of being better off over time. Ravallion (2004) has called attention to a similar contradiction in perceptions of global inequality, noting that although economists have focused more on relative inequality, it is absolute inequality that people see in their daily lives and that motivates their concerns about distributive justice. Thus, perceptions that inequality is rising may well be based on absolute disparities in living standards. Recent evidence in fact shows that relative global income inequality has decreased substantially in the last four decades, but absolute inequality has shown a marked increase (Niño-Zarazúa, Roope, & Tarp, 2017).

3.3. Results of the intervention

Two interventions were conducted just after eliciting participants' perceived social mobility. One consisted of showing one-

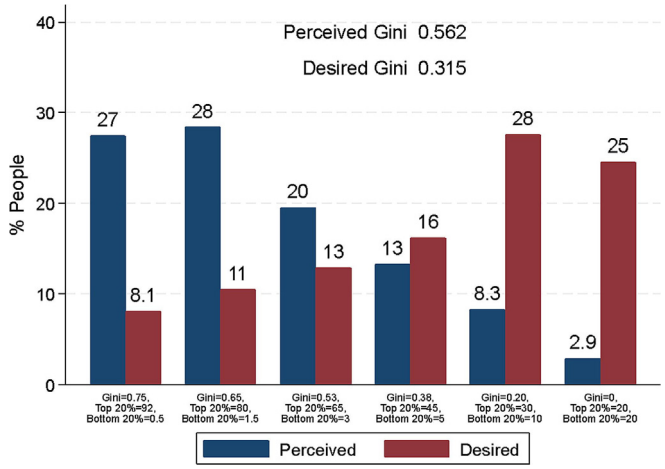

Fig. 3. Perceived inequality. Notes: Authors' calculations. *N* = 2,493. Perceived Gini is calculated using six options of income distribution. The question explains that the images represent how income in the economy is distributed among five groups of equal size. Respondents are asked to choose one of six images that include hypothetical income distributions. In the most unequal the top quintile has 92% of the income, and moving down the other quintiles have 4.5%, 2%, 1% and 0.5%, with an implicit Gini coefficient of 0.75. In the most equal scenario each quintile receives 20% of the income, and the implicit Gini coefficient is 0. The desired Gini coefficient is calculated after the intervention: the respondent is shown the same six images, but the question asks which image Mexican society should look like.

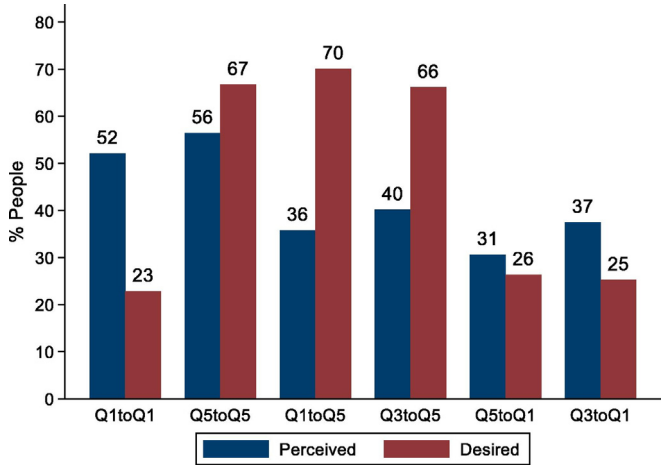

Fig. 4. Perceived social mobility. Notes: Authors' calculations. N = 2,493. For the following questions, each respondent was told to imagine that the Mexican population is divided into five groups of equal size. The first group includes the poorest people and the fifth the richest. Each respondent is asked: "Out of 10 poor (middle-income, rich) children, how many do you think will eventually live in a rich household?" and "Out of 10 rich (middle-income, poor) children, how many will eventually live in a poor household?" In the question about the desired distribution "how many will" is changed to "how many should."

third of the sample a card indicating the current level of inequality as follows: "Out of every $100 pesos the economy generates, approximately $60 pesos go to the richest people in the country (those that are in the top 10% of income). By contrast, the poorest people in the country (those in the bottom 10% of income) receive only $2 pesos." Another third were shown a card noting that "If you are born poor, it is very difficult to move up to the middle or upper class. For every ten people born into poverty, seven will remain poor and not even one will become rich." The remaining third did not receive any information. After the intervention, we elicited desired levels of equality, social mobility, and taxes that should be paid by those who are poor, middle-income, or rich. Participant

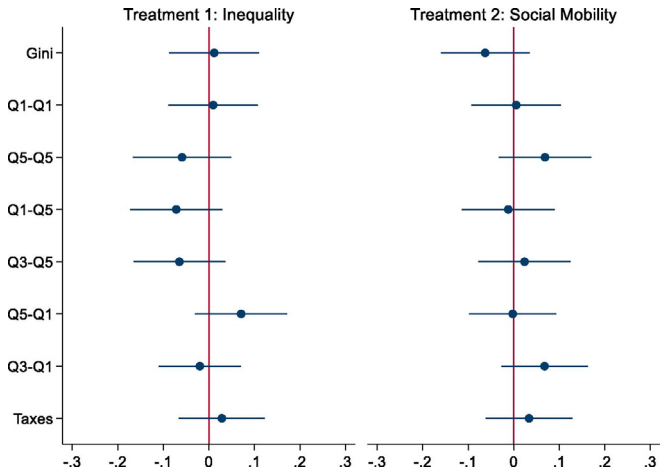

Fig. 5. Results of the intervention. Notes: Authors' calculations. N = 2,493. Treatment 1 provides information on inequality; Treatment 2 provides information on social mobility. Estimates are interpreted with respect to the control group. Dependent variables refer to the desired level after the intervention. Each row shows the effect of each treatment on the dependent variable (y-axis) and is a different regression. Dependent variables are standardized to facilitate comparison. In addition to treatment variables, the following control variables are included: fixed effects by city, dummy variables for sex, marital status, employment status, and standardized variables for age, SES, index of beliefs about poverty, and index of belief in individualism versus collectivism. In addition, each regression includes the perceived level of the dependent variable. For example, for the Gini coefficient the dependent variable refers to the desired inequality level and includes a control variable for the perceived inequality level. All regressions include sampling weights. Robust 95% confidence intervals are shown.

characteristics were balanced across the different treatments (Table 1). However, the variables for years of schooling and the percentage whose parents speak an indigenous language are not balanced, but are among the ranges that are significant due to random chance. For this reason, we include a full set of control variables in the results shown in Table 1.

Fig. 5 shows the results of the intervention, with each row representing a separate regression. To ease comparison, all dependent variables are standardized. The dependent variables are in rows, the key explanatory variables are the different treatments (inequality or social mobility, interpreted with respect to the control group), and all regressions include the same control variables: fixed effects by city, dummy variables for sex, marital status, and employment status, and standardized variables of age, SES, index of beliefs about poverty, index of belief in individualism versus collectivism, and the perceived level of the dependent variable (results are robust to the exclusion of control variables). Robust confidence intervals at the 95% level are shown.

In general, and in contrast with previous studies (Fernández-Albertos & Kuo, 2018; Gallego, 2016; Gimpelson & Treisman, 2018), the different treatments show no effect on desired levels of inequality with respect to the control group. The estimates are relatively small, all within 0.1 standard deviations from the mean (analysis of results by subgroups of beliefs about poverty, collectivism, or by those who over- or underestimate inequality levels produces broadly similar results). These results are intuitive because respondents are well informed about the levels of poverty and inequality in their country:[17] providing information about those levels has no effect on the levels they would like to see. Information about inequality and social mobility also has no effect on the tax rate they would like to see. These results are important because

[17] Mexico had a presidential election in July 2018, and the topics of poverty and inequality were extensively covered during the campaign and the debates. It is likely that these events helped inform people in Mexico about the issues.

it might be assumed that to create support for redistribution it is necessary to inform people about existing levels of inequality and social mobility. Indeed, some studies have found that redistribution preferences change after information treatments, at least among certain subgroups of the population (Cruces et al., 2013; Fernández-Albertos & Kuo, 2018; Karadja et al., 2017). Our study suggests that this is not the case in Mexico, consistent with the finding of Kuziemko et al. (2015) that the effects on redistribution preferences of providing information about inequality are small. This result is also in line with the multi-country study by Hoy and Mager (2018), who find that information about the overall level of inequality and the degree of mobility does not have significant effects on perceptions of inequality or on preferences for redistribution in Mexico.[18]

One of the reasons for such divergent results might lie in the way redistribution preferences are defined (as discussed above). However, two additional reasons emerge from these findings, considered in light of previous studies.[19] First, it could be that participants do not connect the image of their ideal distribution with redistribution on an ontological level, although they believe in the possibility of upward social mobility improving their own position. Kuziemko et al. (2015) show that while participants adjust their perceptions of inequality, they do not necessarily demand more redistribution.[20]

3.4. Desired tax rates

Our results suggest that people in Mexico would like much lower levels of inequality (Figure 3) and higher social mobility rates (Fig. 4) than those they believe to exist. Informing them about the current levels of inequality and social mobility does not affect the levels they seek (Fig. 5). However, the poor want more mobility with respect to the level they perceive than the rich do. How do they think this is possible? By comparing perceived and desired taxation in our study to actual rates we are able to check whether participants' desires are realistic.

Our survey respondents believe on average that they pay 39% of their income in taxes. Official calculations of the Treasury Secretary estimate revenue from value-added, income, and excise taxes, plus social security contributions, at approximately 22.1% of gross household income: respondents thus overestimate their tax burden by approximately 76%. Campos-Vazquez et al. (2018) offer an additional comparison in pointing out that approximately 60% of GDP is disposable income. Tax revenue, including social security contributions, is approximately 15% of GDP (SHCP, 2019). The amount of tax paid is thus close to 25% of disposable income, also far from participants' perception of 39%.

After the intervention, we ask participants about the total tax rate with respect to income that they would like to see, not only for themselves, but also for people who are poor, middle income, and rich. This is a key innovation that goes beyond previous studies: it provides evidence about the type of social contract individuals of different levels of SES desire and expect. Fig. 6 shows the perceived and desired tax rates for different socioeconomic groups with respect to the SES rank of the respondent. Panel A shows the tax rate respondents would prefer for themselves. The desired tax rate of 22% is a little more than half of the perceived rate of 39%. Neither varies by SES: rich and poor alike overestimate their taxes paid and wish to pay less. Since tax incidence is 8.9% of gross personal income for the poorest decile and gradually rises to 30.2% for the richest decile (SHCP, 2017), the estimates of the poor are further from reality. Panel B shows results for the tax rate that respondents believe should be paid by the poor, the middle-income, and the rich. On average, respondents believe that the poor should pay 14.5% of their income in taxes and the middle-income should pay 22.7%. The tax rate respondents wish for themselves is approximately the same as the rate they support for the middle-income, which indicates that they think of themselves as close to the middle. Moreover, this level is remarkably close to actual taxes paid. The tax rate respondents desire for the poor does not vary with SES, but is higher than what the poor actually pay. The tax rate respondents wish to see for the middle-income has a negative relation to SES, but the magnitude is small: on average, the poorest 10% of respondents want them to pay a rate of 23% and the richest 10% wants them to pay close to 20%.

Panel B also shows the relationship between the desired tax rate for the rich with respect to SES. Here there is a clear negative relationship. On average, respondents believe that rich people should pay 40.8% of their income in taxes. The poorest 10% want the rich to pay a tax rate close to 50%, while the richest 10% wants the rich to pay close to 32%, which is close to the actual tax incidence (SHCP, 2017).

Unlike studies examining particular redistributive tools (like inheritance tax or food stamps for the poor), we ask about progressivity preferences for the entire tax structure. We find a negative relationship between preferences for a more progressive tax structure and SES rank, independent of information treatment. Doherty, Gerber, and Green (2006) find that increasing affluence relates to (marginally) lower support for redistribution among lottery winners. However, their effects are smaller, and unlike our study, theirs finds no significant impact of affluence on views about inequality.

In sum, Fig. 6 shows two key results. First, people overestimate the tax rate they pay and desire to pay a lower tax rate than what they think they pay. Second, people desire a progressive tax system in which the poor have a positive tax rate, with higher rates for higher-income individuals. It also shows that the poor want a more progressive redistribution than the rich. These findings confirm the results of Guillaud (2013), who identifies income as the primary driver of individual preferences for redistribution. There is agreement on what the tax rate should be for poor and middle-income people. However, the poor want the rich to have a higher tax rate than the rich want for themselves.

Respondents to our survey thus want more social mobility, less inequality, and lower taxes. Future research needs to address potential channels that explain these outcomes. On the one hand,

[18] However, Hoy and Mager (2018) ask more general questions about redistributional preferences: to what extent respondents agree with the statement "It is the responsibility of the government to reduce the gap between the rich and the poor" and "How urgent or not urgent does the difference in incomes between rich and poor in (COUNTRY X) need to be resolved by the (COUNTRY X) government?" In contrast, we ask about the desired tax rates and then calculate whether they are consistent with the desired levels of equality.

[19] An alternative explanation that we cannot test with our data is that even though information might change concerns about inequality, distrust in government inhibits respondents from translating those concerns into support for redistribution by the government (Kuziemko et al., 2015). Support for this hypothesis could be found in the fact that Mexico ranks 138th out of 175 countries, according to the 2018 Corruption Perceptions Index reported by Transparency International.

[20] In the Supplementary Materials (Fig. A9) we explore how the difference between perceived and desired inequality varies with wealth and the treatments. First, greater SES positively affects the gap between perceived and desired social mobility for all individuals, independent of whether they are in the control or treatment group. As the gap is negative (desired levels of upward mobility are higher than perceived levels), this means that increased SES closes the gap. In other words, the gap between desired and perceived is greater for poor participants than for the rich: the poor want a greater increase in mobility over their perceived level than the rich over theirs. Second, the effect of the inequality treatment on the difference between the perceived and desired Gini coefficient is negative: providing participants with information about inequality reduces the gap between the perceived and desired level of inequality. This result is driven i) by individuals that perceive very low inequality levels: when given information about actual levels of inequality their desired inequality level seems to be closer to the actual one than that of the control group (Fig. A10); and ii) by individuals with higher SES, who perceive a smaller gap than individuals with lower SES.

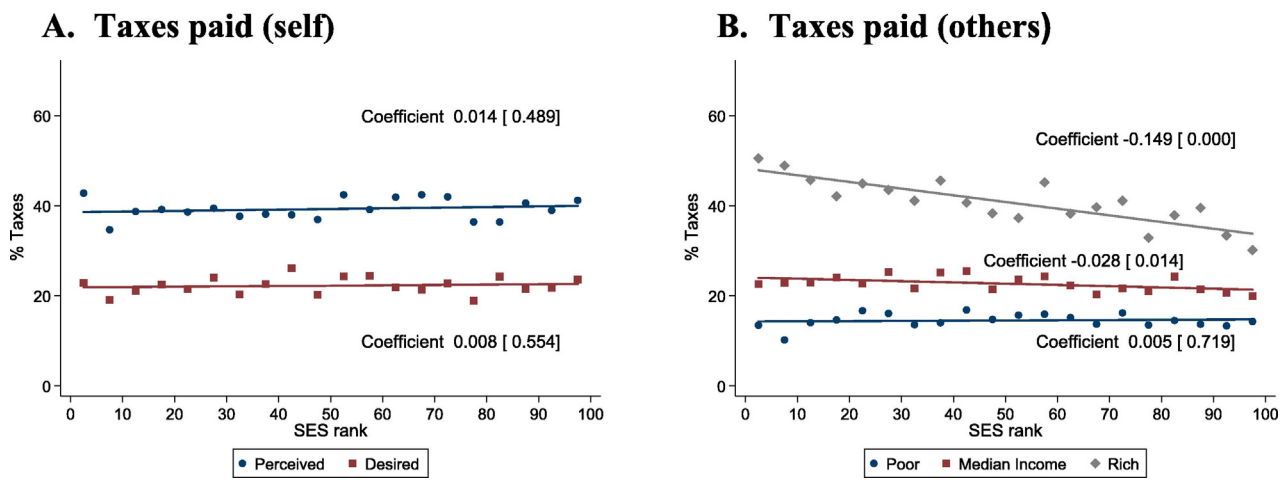

Fig. 6. Desired tax rates Taxes paid (self) Taxes paid (others). Notes: Authors' calculations. N = 2,493. Coefficient is obtained from a regression of the y-axis variable against an SES rank variable. P-values in brackets. Panel A refers to the rate respondents want for their own taxes and panel B to the rates they want for the poor, middle-income, and rich.

it seems that they believe a lower level of inequality is possible based on a misconception that there are many more rich people than there actually are (we explore this channel in the Supplementary Materials). As they also desire higher taxes for the rich, they may perceive it is possible to obtain more funds. On the other hand, they might believe that lower taxes lead to higher economic growth that reduces poverty and inequality.

4. Conclusions

In this paper, we explore how perceptions of inequality and social mobility affect preferences for redistribution. We develop an original survey that collects detailed information on people's perceptions and desired levels of inequality and social mobility, as well as their perceptions of taxes paid and desired levels of taxes for the poor, the middle-income, and the rich, as well as for themselves.

Our respondents have accurate perceptions of inequality and persistence rates at the bottom and the top of the distribution. However, there is considerable variation in their perception of income distribution based on the SES rank of individuals. Poor people imagine a polarized distribution with large clusters of the poor at the bottom and another cluster of the rich at the top. Rich people perceive a more graduated distribution, including a larger middle-income group. For poor people, there is also a larger gap between perceived and desired social mobility than there is for the rich: the poor want a greater increase in mobility than the rich.

Informing participants of the actual levels of inequality and social mobility has a null effect on the desired levels of inequality, social mobility, and tax rates. We also show that people want a progressive tax system in which the poor have a positive tax rate, with higher rates for higher-income individuals. Future studies should continue to investigate whether information about the size of the tax base and the distributive impact of alternative tax regimes encourages people to support more aggressive redistributive policies.

The goal of a more just and equal society is, therefore, a challenge. On the one hand, people want a society with lower levels of inequality and higher social mobility. On the other hand, they want lower taxes. One possible explanation of this paradox is that people believe that taxing the rich is enough to support the desired redistribution (either because they overestimate the number of rich individuals in a society or because they underestimate the tax rate on the rich needed for such a redistribution). Another possibility is that people believe that low taxes are enough to generate inclusive economic growth that decreases poverty and inequality. In any case, these beliefs substantially limit state capacity to increase redistribution levels. Future studies should analyze in more detail this contradiction, especially in countries with a high degree of inequality, in order to identify tax policies that are consistent with lower levels of inequality.

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CRediT authorship contribution statement

Raymundo M. Campos-Vazquez: Methodology, Conceptualization, Data curation, Formal analysis, Visualization, Writing – review & editing. **Alice Krozer:** Methodology, Investigation, Conceptualization, Writing – review & editing. **Aurora A. Ramírez-Álvarez:** Data Curation, Formal analysis, Visualization, Writing – review & editing. **Rodolfo de la Torre:** Methodology, Conceptualization, Data curation, Formal analysis, Writing – review & editing. **Roberto Velez-Grajales:** Methodology, Conceptualization, Formal analysis, Writing – review & editing.

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Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at https://doi.org/10.1016/j.worlddev.2021.105778.

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