

# The Structure of American Income Tax Policy Preferences

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**Cameron Ballard-Rosa**, University of North Carolina, Chapel Hill

**Lucy Martin**, University of North Carolina, Chapel Hill

**Kenneth Scheve**, Stanford University

In recent decades inequality in the United States has increased dramatically, but policy responses in terms of redistribution have been limited. This is not easily explained by standard political economy theory, which predicts a positive relationship between inequality and redistribution. One set of explanations for this puzzle focuses on whether and why redistributive preferences are muted in the presence of high inequality. While much recent research has focused on citizens' preferences over government spending, we argue that preferences over taxation are a central piece of this puzzle. This article implements an experimental conjoint survey design to measure American income tax preferences across six income brackets. We find that policy opinions are generally progressive but that preferences do not vary substantially from current tax policies, and support for taxing the rich is highly inelastic. We show that both economic and fairness concerns affect individual tax preferences and find that conflict is primarily over taxing high incomes.

Rising economic inequality has become a touchstone issue in American politics. In 2013, President Obama called income inequality “the defining challenge of our time,” and a number of political movements, from Occupy Wall Street to the Tea Party, have claimed a mantle of representing dissatisfaction with inequality today. Despite stagnant real income growth for a majority of Americans, coupled with dramatic increases for the very upper end of the income distribution, American democracy has largely responded with stagnant or even falling levels of redistribution. What accounts for this outcome?

Many explanations for this limited redistributive response have focused on identifying shortcomings in the democratic process, such as the disproportionate role of well-funded interest groups or the relative attention that policy makers pay to the views of wealthier voters.<sup>1</sup> Alternative explanations focus on whether and why redistributive preferences are muted

in the presence of high inequality.<sup>2</sup> Yet to date, most work in this vein has equated preferences over taxation and preferences over expenditure as a single conceptual dimension.<sup>3</sup>

In fact, governments have two main redistributive instruments via which they can affect inequality: the way that government is funded, primarily taxation, and the ways in which these funds are spent. Most prior research on redistributive preferences has focused on the spending side of the equation, in particular the determinants of support for antipov-erty programs, social insurance, or preferences over the size of government more generally. This line of research has typically explained low redistributive demands using theories based on self-interest and “deservingness.” In contrast, the effects of taxation on inequality—and voter preferences over such effects—have received much less attention. Many studies consider taxation as a unidimensional measure of the size of government, while studies that examine progressivity have

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Cameron Ballard-Rosa (cambr@email.unc.edu) is an assistant professor of political science at the University of North Carolina at Chapel Hill, Chapel Hill, NC 27599. Lucy Martin (lucy.martin@unc.edu) is an assistant professor of political science at the University of North Carolina at Chapel Hill, Chapel Hill, NC 27599. Kenneth Scheve (scheve@stanford.edu) is a professor of political science and senior fellow at the Freeman Spogli Institute for International Studies at Stanford University, Stanford, CA 94305.

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1. See Bartels (2008), Bonica et al. (2013), Gilens (2012), among many others.

2. As in, e.g., Alesina and Angeletos (2005), Alesina and Glaeser (2004), Franko et al. (2013), Gilens (1999), Kelly and Enns (2010), Kuziemko et al. (2015), McCall and Kenworthy (2009), and Luttmer (2001).

3. See, e.g., Fong (2001), Lupu and Pontusson (2011), and Meltzer and Richard (1981).

typically focused on taxes levied on a single tax bracket, often the rich.<sup>4</sup>

However, the structure of the tax code affects inequality not only by providing a pool of resources to be transferred. For a given revenue target, a host of potential tax plans are possible; the degree to which taxation is progressive or regressive, identified by the incidence of taxation distributed across the population, is a fundamental policy choice that affects the redistributive nature of the state. A full understanding of citizens' preferences for redistribution therefore requires identifying preferences in a multidimensional tax framework.<sup>5</sup>

This article develops and implements precisely such a framework, employing a conjoint experiment to identify American citizens' preferences for tax progressivity—controlling for the revenue a given plan raises—as a function of varying marginal tax rates on each of the existing tax brackets in the United States. Our approach not only isolates ideal rates for each income group but also captures the intensity of such preferences, as measured by elasticities of support for a given tax plan with respect to changes in marginal rates. These elasticities are critical to understanding how much weight is assigned by voters to tax rates on particular segments of the income distribution. This approach also allows us to employ subgroup analysis to examine the correlates of tax preferences, including economic and fairness concerns; to identify the extent to which these predictors of preferences over redistribution may differ when considering taxation and spending separately; and to identify where in the income distribution conflict over taxation is most pronounced.

We find strong evidence that the American public has progressive tax preferences on average, disliking taxes on the poor while favoring higher tax rates on the rich, at least to a point. Preferences do not, however, vary substantially from current tax policies. We also demonstrate that the degree to which support changes for a given marginal tax rate varies greatly across the income distribution. Respondents have extremely elastic preferences on taxing the poor, with support for a tax plan dropping rapidly as taxes on those making less than \$35,000 increase. In contrast, preferences over taxing the rich are relatively inelastic. While respondents do favor higher taxes on the rich, they are essentially indifferent over a wide range of tax rates on those making more than \$375,000. This suggests a new further reason why taxes on

high incomes in the United States are not higher, even given rising levels of inequality, as such relatively flat citizen preferences may allow politicians more leeway in responding to their own policy concerns or those of highly organized wealthy interests.

We also find significant heterogeneity in respondents' tax policy preferences. Our analysis reveals that conflict over taxation is primarily over taxing the rich. While some groups have a slight preference for lower taxes on the wealthy, other groups have highly elastic support for increasing taxes on those making over \$375,000 a year. We find that economic concerns and fairness norms each explain significant variation in preferences, while party identification predicts preferences not only over taxing the rich but also over the taxes that middle-income Americans should pay.

## TAX POLICY AND MULTIDIMENSIONAL POLICY MAKING

Conflict over redistribution is a central feature of politics. Most scholarly work on the subject has treated redistribution as a single dimension of state policy, focusing on identifying the sources of redistributive preferences and the factors that influence the policy outcomes of this conflict (Meltzer and Richard 1981; Romer 1975). In these models, actors have preferences over a single-dimensional tax or spending policy, and political processes generate policy outcomes in this space; in general, rising levels of economic inequality are expected to lead to more demands for redistribution.<sup>6</sup> Even when authors have introduced other dimensions to political conflict (including race, religion, geography, or nationality), they have still generally viewed the policy instrument under debate as unidimensional (Alesina and Glaeser 2004; Huber and Stanig 2011; Rodden 2010; Shayo 2009).

This unidimensional framework has proven theoretically and empirically powerful. Yet while individuals who support redistributive spending may also favor higher levels of taxation to afford such expenditures, collapsing preferences over taxation to a simple budget balancing exercise ignores the fact that the incidence of taxation also directly affects the income distribution in an economy. Extant research that uses unidimensional taxation usually takes one of two forms. The first, following closely formal models that levy a single tax rate on all taxpayers, tends to refer to taxes levied on all groups as a single object, not distinguishing between different marginal rates paid by different brackets. For example, Bartels (2005) discusses preferences among the American public for tax cuts proposed by President Bush, while in actuality these cuts were

4. As can be found in Franko et al. (2013) or Kuziemko et al. (2015).

5. Cavaille and Trump (2015) make a related distinction between public opinion about redistribution from the wealthy and redistribution to the poor but do not focus specifically on tax policy preferences across the income distribution.

6. See Roemer (1999) for one theory of policy making over a multidimensional tax policy.

not uniform in their reduction of a tax burden across the board. Survey questions asked respondents about their views on the tax cuts as a whole, not on the particular rates levied on particular groups. While critical to helping understand the public's view on proposed tax plans, work of this sort does not allow us to investigate how respondents construct their preferences over a multidimensional tax policy.<sup>7</sup>

Rather than implying uniformity in tax rates, other work examines progressivity by focusing on support for taxes on one particular group. For example, Franko, Tolbert, and Witko (2013) investigates public support for a ballot initiative in Washington state to add an income tax for individuals making more than \$200,000; similarly, McCall and Kenworthy (2009) note a disconnect between rising inequality and more or less constant support among Americans for taxing "the rich." While rates levied on the wealthy are important, individuals' tax preferences also encompass beliefs about the proper fiscal burden to be shouldered by the rest of society; accounts that focus on a single rate risk oversimplification.<sup>8</sup> In addition, by studying factors that affect preferences for taxing a single part of the income distribution, we are left unsure whether the same dynamics drive beliefs about the proper tax burden to be borne by other income groups. As detailed more explicitly below, standard theories about tax preferences in a unidimensional space are not always straightforward to extend to a multidimensional structure. Yet the notion of progressivity is fundamentally multidimensional: we can understand progressive preferences only by identifying how much one tax bracket pays in relation to others. Thus, a fuller understanding of citizens' redistributive preferences requires an investigation of how citizens believe the tax burden should be borne across the income distribution—that is, of preferences for tax progressivity.

Our approach provides at least three important advantages in measuring preferences for income taxation in a multidimensional space. First, we can separately identify whether

the sign of preferences for varying marginal tax rates levied on different segments of the income distribution is positive or negative. This allows us to estimate the ideal tax plan for the American public overall, as well as for key subgroups, and allows us to separate views over the proper tax burden to be borne by each segment of the income distribution. By not collapsing tax preferences to a single dimension, we shed new light on the ways in which factors that predict progressivity do not resonate symmetrically across the rich and the poor.

Second, we can identify the relative weight that respondents attach to each income group; measuring the elasticities of support allows us to identify not only the direction of individual tax preferences for different income groups but also the relative intensity of such preferences. Comparing elasticities across income groups suggests one natural definition of progressivity: those with progressive preferences should respond more negatively to a higher marginal rate on poorer groups than on richer ones. Yet by combining information on both the sign and the intensity of preferences, our analysis tests for an even stronger version of progressivity, in which individual support for a tax plan decreases as taxes rise on the poor but increases as taxes rise on the rich. By capturing not only ideal tax rates but the responsiveness of support to different rates, we provide new evidence on how individuals prefer the tax burden to be distributed, including which tax brackets have the largest effect on support.

Finally, by evaluating how the sign and elasticity of support for taxation on different income brackets vary across different subsets of the population, we identify the primary locus of political conflict over taxation as a redistributive tool. Different views on taxation suggest that conflict might center on rates imposed on the poor, the middle class, or the rich. If individuals are purely self-interested, we might expect to find conflict over taxing the middle class, with poor individuals favoring high taxes on all higher groups, while middle-class and wealthy individuals favor reduced taxation on themselves (Iversen and Soskice 2006). Alternately, differing notions of what a "fair" tax code looks like could lead to conflict over taxing both the poor and the rich, especially if beliefs vary over the deservingness of the rich to their wealth and the poor to perceived transfers. Unlike in unidimensional studies that focus on taxes paid by only one group, our analysis identifies rather than assumes where disagreement over tax rates exists in the American public.

We argue that multidimensional tax preferences are driven by three groups of factors: "economic concerns," "fairness norms," and "partisan identity." Theories of self-interest predict that individuals should favor lower taxes on their own income bracket but favor higher taxes on other, especially wealthier, income groups; this implies that poor individuals

7. Most existing research on taxation uses observational data to examine preferences within the confines of existing partisan debates. Theoretically, we expect individuals to have latent preferences that are affected by these cues or frames. We seek to discover what these latent preferences are. By experimentally varying tax proposals, rather than relying on policies that are already part of public debate and therefore potentially subject to partisan framing effects, our approach enables us to uncover citizens' underlying preferences for progressivity.

8. See Gaines, Rivers, and Vavreck (2009), Roberts and Hite (1994), and Roberts, Hite, and Bradley (1994) for previous work investigating public opinion about progressivity. These studies employ different methodologies for measuring preferences but do not investigate how the factors thought to be important for determining variation in support for redistribution translate into preferences for multidimensional taxation and progressivity.

will favor highly progressive policies, while rich individuals may favor a flatter tax system (Gilens 2009). However, these preferences may be tempered by beliefs about one's own mobility (Alesina and La Ferrara 2005, Benabou and Ok 2001). Individuals who anticipate future wealth may favor lower taxes on high incomes, as they expect to reap benefits in the future, and respondents who are wealthier than their parents may also exhibit different preferences over taxation based on their experience of upward mobility. Concerns about downward mobility through job loss or other income shocks may also affect tax preferences, with individuals facing higher risks (or those who are more risk averse) seeking insurance through more taxation or social spending (Alt and Iversen 2013; Iversen and Soskice 2001; Margalit 2013; Moene and Wallerstein 2001; Rehm, Hacker, and Schlesinger 2012).

Beyond own-income effects, prior research suggests that respondents' beliefs about the efficiency costs of taxation should affect preferences. A standard result in the public finance literature is that deadweight losses to the economy are increasing in taxation; these costs may arise from reduced incentives for labor force participation, from distortionary effects on productivity-enhancing investments, or from other inefficiencies of implementation (Durante, Putterman, and van der Weele 2014). Once these costs are considered, even poor citizens may have ideal tax rates of less than 100%. However, while efficiency concerns imply preferences for lower taxation overall, it is more ambiguous how such concerns will affect preferences for the distribution of taxation across different income groups.

Some recent research contests the relationship between economic self-interest and redistributive preferences.<sup>9</sup> For example, Bartels (2005) documents a puzzling disconnect: while many Americans dislike growing economic inequality and believe that the rich should pay more in taxes, support for the Bush tax cuts of 2001 and 2003—which benefited the rich significantly more than other income groups—outweighed opposition by a factor of nearly two to one. Bartels explains this seeming inconsistency using the concept of “un-enlightened self-interest”; individuals' desire to pay slightly lower taxes themselves outweighed the net losses generated from foregone redistribution. For a given tax plan presented as a *fait accompli*, this suggests that individuals may accept a less progressive set of rates, so long as the tax rate on their own bracket is reduced. However, it is less straightforward to expect the same regressive pressure to exist when indi-

viduals are asked to consider a tax plan generated *de novo*, as we do in this article. These factors may also interact; Cavaille and Trump (2015) suggest that preferences result from a mix of self-interested and other-oriented concerns, while Fisman et al. (2015) explicitly characterize American distributional preferences as a trade-off between concerns over efficiency and equality.

Tax preferences may also be affected by beliefs about the fairness of redistribution (Scheve and Stasavage 2016). We expect that beliefs about the fairness of a tax plan will resonate in two normative loci: assignment of the tax burden and distribution of tax monies to particular groups. A large body of evidence suggests that individuals prefer much lower rates of taxation when income is believed to be the result of hard work rather than luck (Alesina and Angeletos 2005; Durante et al. 2014; Fong 2001). However, it is more difficult to translate these unidimensional findings to a multidimensional tax structure, particularly if such beliefs can have asymmetric effects on individual preferences. If beliefs about deservingness are symmetric on preferences for taxation on the rich and poor alike, individuals who believe that economic success is due to “hard work” should also believe that lack of economic success is due to lack of effort. This could manifest in preferences for lower taxes on the rich and higher taxes on the poor, especially if individuals believe that the poor should finance the government benefits they receive. Alternately, if beliefs about deservingness are asymmetric, then believing that wealth is due to hard work may lead to lower tax preferences on the rich, without necessarily impacting preferences for the poor.

Beliefs about the deservingness of transfer beneficiaries are also likely to affect tax preferences, with support for redistribution through more progressive taxation decreasing when respondents view the recipients of government transfers as undeserving.<sup>10</sup> To obtain a baseline measure of tax preferences, our experiment intentionally left the intended purpose of government funds unspecified.<sup>11</sup> That said, particular subgroups may vary systematically in their views of deservingness. Alesina and Glaeser (2004), Gilens (1999), Kinder and Sanders (1996), and others have argued that relatively low support for welfare programs and redistribution in the United States can be explained by racial resentment among whites, who believe that redistribution disproportion-

9. Beramendi and Rehm (2016) argue that the mixed result is at least in part due to variation in the progressivity of tax and transfer systems across countries.

10. Various other forms of “other-regarding” preferences are closely related or equivalent to these fairness considerations, including altruism, envy, and inequality aversion. See, e.g., Dimick, Rueda, and Stegmüller (forthcoming) and Lü and Scheve (2014).

11. Due to random assignment, the distribution of beliefs about spending should be balanced across treatment groups and should not affect the internal validity of our estimates.

ately benefits nonwhite Americans and that such groups are undeserving of these benefits. However, there is little evidence on whether racial resentment affects preferences for taxation as well as spending, with several outcomes theoretically plausible. If racial resentment primarily generates preferences for a smaller government, such individuals could favor lower taxes on all groups. However, if race and class are correlated, high racial resentment may lead to preferences for higher taxes on the poor and lower taxes on the rich, affecting preferences for progressivity as well as size of government. Alternately, if individuals form their preferences over proper rates paid by the rich and the poor separately, racial resentment may be associated with less demand for taxation from the rich, without implying an effect on the proper rate that should be paid by poorer individuals.

Finally, preferences over redistribution, and the proper role of government more generally, are strongly shaped by partisanship (Bartels 2008; Franko et al. 2013; Lenz 2009; Lupia et al. 2007); income tax progressivity is a central policy in this debate. In unidimensional tax settings, this is easily identified as Republican opposition to increasing the size of government. However, in a multidimensional tax framework, Republican opposition to taxation may take a number of forms, including reduced taxation on the rich, higher taxes on the poor, or opposition to any taxes at all. In contrast, we expect Democrats to want higher taxes on the rich, but it is less clear whether they should also want higher or lower taxes on middle and lower income groups. Below, using our novel methodology, we provide strong evidence in favor of accounts that link self-interest, concerns over fairness, and partisanship to redistributive preferences over the progressivity of income taxation.

## DATA AND METHODS

We designed a choice-based conjoint survey experiment to evaluate how taxing different incomes at different rates, accounting for different amounts of revenue that such plans may generate, influences public support for varying income tax policies in the United States. Our survey was conducted by YouGov in June 2014 over the Internet on representative samples of the adult population.<sup>12</sup> The sample size was 2,000

12. YouGov employs matched sampling to approximate a random sample of the adult population. Matched sampling involves taking a stratified random sample of the target population and then matching available Internet respondents to the target sample (Rivers 2011). Ansolabehere and Rivers (2013) and Ansolabehere and Schaffner (2013) show that matched sampling produces accurate population estimates and replicates the correlational structure of random samples using telephones and residential addresses. Explicit discussion of the sample composition and sampling technique is provided in section A in the appendix.

adults. Conjoint analysis methods have respondents rank two or more hypothetical choices that have multiple attributes with the objective of estimating the influence of each attribute on respondent choices or ratings (Hainmueller, Hopkins, and Yamamoto 2014).

In our experiment, each respondent is shown pairs of randomly generated income tax plans and asked to choose which plan they would rather see enacted in the United States. This forced-choice design allows us to assess the influence of different tax rates across the income distribution, controlling for revenue raised, on how individuals evaluate one tax plan relative to another.<sup>13</sup> Each respondent was shown eight such binary comparisons.<sup>14</sup> For each tax plan that a respondent considered, we constructed the variable *Tax Plan Support* and coded it 1 if an individual chose that tax plan and 0 if they did not.<sup>15</sup>

Table 1 shows the dimensions and values used in the conjoint experiment. The key issue that we explore in this study is preferences for different marginal tax rates on different levels of income while taking into account the revenue effects of a given tax plan.<sup>16</sup> For each tax plan pair a respondent sees, the tax rates for each income level are randomly assigned.<sup>17</sup>

The six income brackets used in the experiment had cutoffs of \$10,000, \$35,000, \$85,000, \$175,000, and \$375,000; these cutoffs closely match the existing US tax code. Replicating existing income tax thresholds offered two advantages: these income groups match the actual experience of American taxpayers and allow us to accurately calculate the revenue raised by each plan.<sup>18</sup> The set of possible levels for each tax bracket was chosen based on pretesting results and previous work on ideal marginal tax rates among the US electorate. For each bracket, respondents could see one of four to six

13. The choice task is in line with previous research suggesting a preference for concrete, nonabstract survey questions on tax policy preferences (Roberts et al. 1994).

14. We find no evidence that repetition influenced our estimates. There are no significant differences between results based on the initial four choices and the final four choices, or when only considering the first set of choices that each respondent considered.

15. The pilot ( $N = 500$ ) also asked respondents to rate their support for each tax plan on a 10-point scale. The average plan was ranked 4/10. The main results for the forced-choice question also hold for the ratings in the pilot. To allow a larger number of comparisons for each respondent, the rating question was dropped for the full sample.

16. Hansen (1998) discusses the importance of incorporating budgetary trade-offs in measuring public finance preferences.

17. See appendix B for full survey protocols. Balance tests (tables A19, A20) show that treatments did not vary systematically by respondent characteristics.

18. Table A2 maps these income brackets to the distribution of income in the United States.

Table 1. Conjoint Attribute Values

Tax Plan Dimension	Possible Levels
<\$10,000	0%, 5%, 15%, 25%
\$10,000–\$35,000	5%, 15%, 25%, 35%
\$35,000–\$85,000	5%, 15%, 25%, 35%
\$85,000–\$175,000	5%, 15%, 25%, 35%
\$175,000– \$375,000	5%, 15%, 25%, 35%, 45%
>\$375,000	5%, 15%, 25%, 35%, 45%, 55%
Total amount of revenue (% of current revenue)	Much less revenue (<75) Less revenue (75–95) About the same revenue (95–105) More revenue (105–125) Much more revenue (>125)

Note. This table reports the attribute values for each dimension of the experiment. The first six dimensions indicate the marginal tax rates on a given income bracket. Respondents were presented with two randomly generated tax plans for comparison.

potential tax rates. All brackets included rates of 5%, 15%, and 25%. We allow for zero taxation only on the lowest bracket (those making less than \$10,000 a year). All higher categories included a 35% rate, the top two brackets included a 45% rate, and the top group included a 55% rate. Pretesting confirmed that the selected rates map the full shape of the average respondent's preference curve.<sup>19</sup>

The final dimension presented to respondents—revenue raised—was estimated based on the randomly selected marginal tax rates for each income group for that plan. To calculate estimated revenue we used the most recent IRS data on the breakdown of federal income tax returns.<sup>20</sup> For each income group these data provide explicit information on the amount of income that was taxed at each marginal rate. We calculated revenue raised under each plan by multiplying the taxable income in each bracket by the new plan's marginal tax rate on that group, then summing these values to generate the new total revenue. We then divided this number by the actual income tax revenue collected by the IRS to create the ratio of taxes raised under the proposed plan versus current rates.<sup>21</sup> Based on this ratio, the final attribute of each tax

19. We separately asked respondents to report their ideal tax rate for different income brackets. For the top income bracket over 90% of respondents selected a tax rate of 50% or lower, while for the lowest bracket over 98% of respondents selected a rate of 25% or lower.

20. IRS data were from 2011. For the purposes of these calculations, we assumed that the new tax plan would have no effect on the level or distribution of taxable income.

21. There exists some uncertainty regarding how new tax plans will affect economic decisions such as labor supply; these decisions may in

plan presented respondents with possible values categorized relative to current revenue: much less revenue (<75%), less revenue (75%–95%), about the same revenue (95%–105%), more revenue (105%–125%), or much more revenue (>125%).

Our primary analysis estimates the average marginal component-specific effect (AMCE) of a change in values of one of our six dimensions of a tax plan on the probability that that plan is chosen by the respondent. Hainmueller et al. (2014) show that, under the conditional independent randomization of the attribute values, the AMCE can be estimated using linear regression.<sup>22</sup> Specifically, we regress the variable *Tax Plan Support* on a set of dummy variables for each value of each dimension, excluding one value in each dimension as the baseline.<sup>23</sup> The regression coefficient for each dummy variable indicates the AMCE of that value of the dimension relative to the omitted category. We report standard errors clustered by respondent to account for within-respondent correlations.<sup>24</sup>

#### PUBLIC PREFERENCES OVER TAX PROGRESSIVITY

Figure 1 reports the estimated AMCE of a given value for each characteristic of a tax plan on the probability of supporting that proposal. The bars indicate 95% confidence intervals (CIs), and the points without bars indicate the reference category for each tax plan dimension. The interpretation of each estimate is relative to that dimension's reference category; we use as reference categories the lowest tax level for each attribute. For example, increasing the marginal rate levied on individuals making less than \$10,000 a year from 0% to 5% decreases support for a tax plan by 2.1 percentage points (CI = [−4.4, 0.0]), while increasing from 0% to 25% decreases support by 24.2 percentage points (CI = [−27.6, −20.7]).<sup>25</sup>

turn affect the revenue raised by a given tax plan. To reflect this uncertainty, we added to the revenue-raised ratio an error term drawn from a normal distribution [ $\epsilon \sim N(0, 0.07)$ ]. Based on 10,000 simulations, we found that about 75% of all revenue labels match the expected revenue raised level, about 24% are either one level higher or lower, and less than 1% were two levels higher or lower.

22. It is also necessary to assume that there are no profile-order effects, and that respondents' decisions do not depend on previous comparisons. Given that our revenue attribute is based, in part, on the tax levels drawn, our analysis always conditions on the revenue raised.

23. All results use survey weights. The results are unchanged when employing unweighted OLS or when including demographic controls; see appendix F.

24. The conditional treatment effects in our subgroup analysis are also identified as long as the respondent characteristics and the treatments are conditionally independent.

25. The constant can be interpreted as the average support for a plan that taxes the poorest group at 0%, all other groups at 5%, and raises "much less (<75%) revenue.

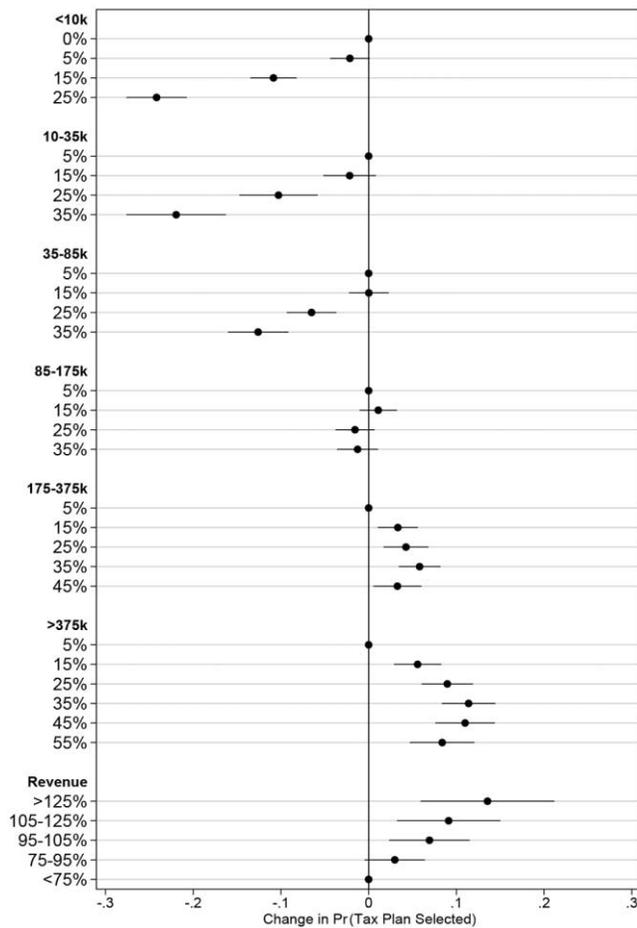


Figure 1. Experimental conjoint estimates of income tax preferences. This plot shows estimates of the effect of randomly assigned attribute values (primarily tax rates) for different tax plan dimensions (primarily income groups) on the probability of supporting a tax plan ( $n = 32,000$  plans). Estimates are based on the regression of *Tax Plan Support* on dummy variables for the values of the tax plan dimensions with SEs clustered by respondent. The bars indicate 95% confidence intervals, and the points without bars indicate the reference category for a given tax plan dimension.

Considering tax preferences in a multidimensional setting reveals several findings. First, we find strong support for progressive preferences over federal income taxes among the American public. A basic conceptualization of progressivity would demand that marginal elasticities for a given tax rate on poorer groups should be more sharply negative than the same rate on a richer group; individuals with “progressive” preferences should dislike the poor paying a given rate even more than they dislike the rich doing so. Yet our analysis provides evidence for a much stronger version of progressivity: respondents are less likely to support a given tax plan as the tax rate on the poorest three groups increases but more likely to support an income tax policy when the tax rate on the richest two groups increases, at least to a point. Support for a tax plan falls monotonically as marginal rates on the lowest three brackets increase, as all coefficients are (increasingly)

negative. However, this relationship is reversed for marginal rates on the richest two income brackets; estimated coefficients are positive for all marginal rates higher than 5% levied on the wealthy. Standard unidimensional approaches to assessing tax preferences cannot demonstrate this sort of asymmetry; questions about taxes in general or about one tax bracket therefore tell only part of the full story of American redistributive preferences as manifested in tax progressivity.

It is also clear that respondents do not weigh the interests of all groups evenly—in addition to the broad shape of progressive preferences described above, we find that the elasticities of support for income taxes differ markedly across the tax brackets. For the lowest income group (individuals making less than \$10,000 a year), support for a tax plan drops sharply as the rate on that group increases, while for the next two lowest income groups, the results are similar but less elastic. For example, raising taxes on the poorest group from 15% to 25% drops support for a tax plan by 13 percentage points, whereas the same increase on those making between \$35,000 and \$85,000 drops support by only 6.5 percentage points.

These elastic preferences on taxing poorer individuals stand in stark contrast to the results for the wealthiest two income brackets (incomes greater than \$175,000 per year), which differ in two key ways. First, respondents on average favor higher taxes on wealthier individuals; support peaks at 35%. Second, respondents’ support for a tax plan is less elastic regarding taxes on the rich, compared to taxes on the poor. Increasing taxes on those making more than \$375,000 from 15% to 25% does increase support for a plan but only by about 3 percentage points. More generally, while support for higher tax rates on the wealthiest two brackets is always significantly different from the baseline of 5%, there is no statistically significant difference in support for any high-income tax rate between 25% and 55%, despite the enormous fiscal consequences of such a choice. These findings contrast sharply with popular accounts of American tax preferences. For example, an April 2015 Gallup poll found that 62% of respondents felt that upper-income people paid too little in federal taxes. Despite this majority view, we find that increasing the tax burden levied on the wealthy does little to actually increase preferences for a given tax plan.

Interestingly, support for a given tax plan does not depend on the tax rate levied on those making between \$85,000 and \$175,000. One plausible explanation for this finding is that the dividing line between “the rich” and everyone else for the average American falls somewhere in this range. If, as our results suggest, Americans generally prefer progressive tax policies, an important component of such considera-

tions involves determining which groups are wealthy enough to bear the burden of higher taxes. In future work, we intend to disaggregate this income group further in order to explore precisely where this cutoff lies.

The results for the final attribute—revenue—show that respondents favor tax plans that generate revenue more efficiently; compared to the baseline of a tax plan that would raise “much less” revenue than the current tax code, support for a plan that would raise “much more” revenue increases by nearly 9 percentage points. Given that these estimates condition on randomly assigned tax rates across the income distribution, this preference for more revenue has a natural interpretation as a preference for more efficient tax plans that raise more revenue for a given set of rates. This should not be interpreted as implying that there is an average preference for income tax plans that yield greater revenue as in fact the most preferred plan on average would generate lower revenue than current law.

We also ran a version of our experiment on a small sample that did not include the revenue raised by a given tax plan explicitly in the treatment. The results from this subsample, as compared to our baseline findings, show that the shape of the preference curve is more or less identical across the two groups, with one important exception: for those respondents that were not presented with revenue information, an increase in the (implicit) amount of revenue raised by a tax plan has no significant effect on support. We believe that this comparison helps speak to our broader argument about the importance of including revenue information explicitly in our task.<sup>26</sup>

These findings demonstrate a strong general preference for progressivity in the federal tax code among Americans; on average, support for a tax plan decreases with taxation on the poor and increases in taxation on the rich. The marginal rates that maximize public support are lower than or approximately equal to comparable existing rates ([0%, 5%, 15%, 15%, 35%, 35%] vs [10%, 15%, 25%, 28%, 33%, 39.6%]) suggesting that Americans support tax plans that do not radically depart from existing policy, particularly in terms of taxes levied on the wealthy.<sup>27</sup> Importantly, however, there is an asymmetry in the elasticity of these preferences. Support for income tax plans is highly elastic with respect to policies for low-income citizens, with support decreasing

significantly with higher rates on low incomes. In contrast, above a minimum threshold, support for income tax plans is relatively inelastic with respect to policies for high-income citizens.

This asymmetry suggests a new explanation for why public opinion about taxing the rich may have a limited impact on policy outcomes. While the public can be expected to react strongly to lower taxes on the poor, they are indifferent across a range of rates on high incomes. This inelasticity may give politicians greater leeway to respond to special interests or their own policy preferences on this dimension of tax policy (Bartels 2008; Hacker and Pierson 2011); raising rates on the rich generates little additional support among the public but may be extremely costly for politicians in terms of interest group support in the future.<sup>28</sup> Indeed, despite survey work that commonly finds that two-thirds of Americans would favor higher taxes on the wealthy, when divorced from a particular spending priority, we reveal a novel explanation for why rising inequality has not been met with greater redistribution: when asked in general terms about their tax preferences, US citizens appear to prefer rates quite close to existing policy. Thus, lacking strong public pressure to raise taxes on the rich, there is little reason to expect government to respond with a more progressive tax code.<sup>29</sup>

## PROGRESSIVITY AS RESPONSE TO INCOME INEQUALITY

Despite rising economic inequality in the United States, we find muted demands on average among Americans for the state to increase redistribution through a more progressive income tax system. Above we have argued for the need to separate preferences over taxation and spending as two distinct measures for combating income inequality; for this reason our survey intentionally contained no reference to how tax funds might be used. Yet without an explicit target for federal expenditures, can we be sure that our results on income tax rates truly capture a dimension of redistributive preferences?

We believe they do. While economic inequality is indisputably on the rise, opinion about the need for government to do anything about it varies across the population. To assess this, we embedded in our survey a question asking re-

26. See figure A5 for these results.

27. Our results in asking more directly preferred ideal rates suggest a similar conclusion with average ideal rates for each income group (in sequential order): 4.9%, 9.6%, 16.2%, 23.7%, 28.1%, 32.8%. See appendix C for question wording. However, support for higher rates might be more evident with more concrete consequences for valued public services or with the provision of greater information about existing rates.

28. This result holds when we restrict analysis to respondents who voted in the last presidential election; see figure A6 for these results.

29. Our results are robust to numerous alternative specifications, including when excluding respondents who failed an attention check and when we eliminate “difficult to understand” plans by restricting analysis to weakly monotonic plans. Our results also hold when we eliminate respondents with low numeracy and knowledge about how taxation functions. See appendix D.

spondents how they felt about the income gap between the bottom 50% and the top 10% of earners in the United States.<sup>30</sup> Respondents who indicated that the income gap should be smaller than it is now were coded as inequity averse, in contrast to individuals who felt the existing gap was acceptable or even too small. This captures precisely the set of individuals who should favor increased redistribution in response to inequality; similar measures have been used to capture redistributive support more generally in other work (Kuziemko et al. 2015; McCall and Kenworthy 2009). We expect inequity-averse individuals to favor more progressive tax policies and to have more elastic preferences regarding tax rates on the wealthiest groups.<sup>31</sup>

Figure 2 reports the results broken down by inequity aversion. As expected, those who are inequity averse have more elastic preferences across the income distribution, and a higher ideal tax rate on the wealthy, than the sample average. Strikingly, while individuals who are not inequity averse do favor lower taxes on the poor, their preferences for higher taxes on the rich are extremely flat, with support for rates between 15% and 45% virtually identical. These findings provide strong evidence that our multidimensional framework captures an important aspect of redistributive preferences: support for more progressive preferences is correlated with concern over societal inequality.

**CORRELATES OF PREFERENCES OVER TAX PROGRESSIVITY**

The previous section established that a multidimensional approach generates new insights about the structure of American tax policy preferences over progressivity of the income tax, one of the fundamental redistributive arms of the state. The theoretical discussion above predicted that economic concerns, fairness norms, and partisanship will also affect preferences over tax progressivity, including the intensity of these preferences, in a multidimensional system; these results allow us to identify the locus of redistributive conflict in taxation.<sup>32,33</sup>

30. The question was “American households with incomes in the top 10% earn an average of \$230,000 per year, and households with incomes in the bottom 50% earn an average of \$25,000 per year. Should this difference be bigger, smaller, or about what it is now?”

31. Because inequity aversion is closely associated with political preferences for progressive tax policies, this analysis is intended primarily to test the construct validity of our experiment rather than to suggest an explanation for tax preferences.

32. The results below also suggest a classification of three main types of tax preferences; this is discussed further in section E of the appendix.

33. All subgroup analysis uses covariates collected in a post-experimental survey.

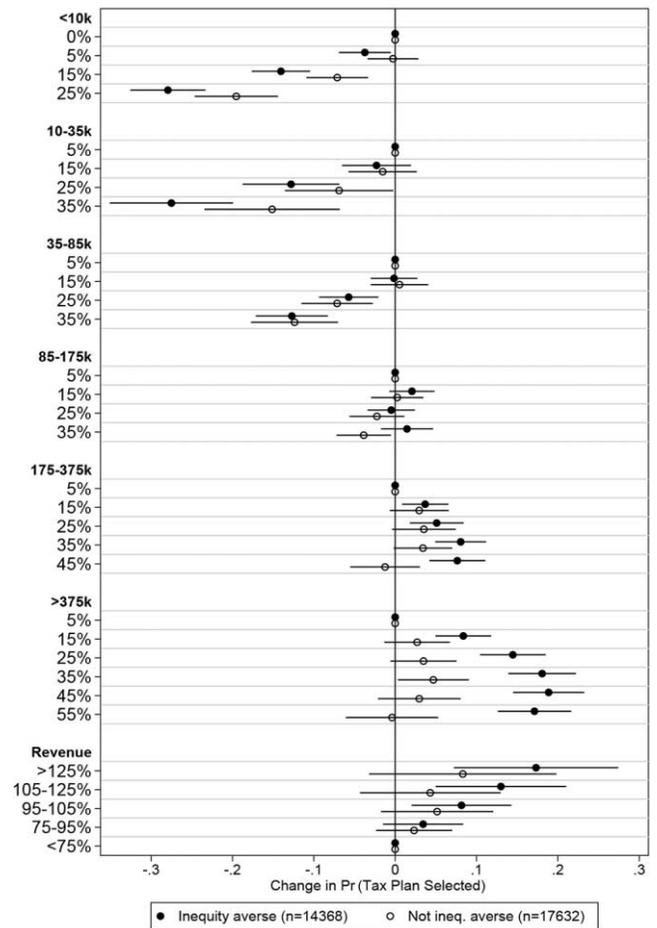


Figure 2. Experimental conjoint estimates of income tax preferences: Inequity aversion. This plot shows estimates of the effect of randomly assigned attribute values for different tax plan dimensions on the probability of supporting a tax plan by level of inequity aversion. Inequity aversion is a dummy that takes a value of 1 if the respondent answered that the gap between the income of the bottom 50% of Americans and top 10% of Americans was too large and 0 otherwise. Estimates are based on the regression of *Tax Plan Support* on dummy variables for the values of the tax plan dimensions with SEs clustered by respondent. The bars indicate 95% confidence intervals, and the points without bars indicate the reference category for a given tax plan dimension.

**Economic self-interest**

As discussed above, economic concerns may influence citizens’ tax preferences in several ways. Theories of self-interest predict that individuals should favor lower taxes on their own income bracket but favor higher taxes on other, especially wealthier, income groups. However, these preferences may be tempered by beliefs about one’s own mobility (Alesina and La Ferrara 2005; Benabou and Ok 2001); individuals that perceive of themselves as upwardly mobile may favor lower taxes on wealthy individuals, whereas those who have lost a job or faced another income shock may favor increased taxation on the wealthy to pay for greater job insurance

policies (Alt and Iversen 2013; Iversen and Soskice 2001; Margalit 2013; Moene and Wallerstein 2001; Rehm, Hacker, and Schlesinger 2012). Beyond own-income effects, respondents who believe that taxation leads to inefficiencies in the economy may favor either less progressive taxes or lower taxes overall (Durante et al. 2014).

Figure 3 shows the results broken down by respondents' self-reported income bracket. As expected, respondents consistently prefer lower tax rates on their own income group, even when the average respondent prefers higher rates on that group.<sup>34</sup> This result contrasts with some of the mixed findings on income and redistributive preferences in the literature employing single-dimensional measures. Additionally, the point estimates for respondents making at least \$175,000 suggest that (compared to low-income respondents) they have less elastic preferences for taxing the lowest three income categories, providing some evidence that wealthy individuals favor more regressive policies. Interestingly, preferences for taxing the rich are flattest for individuals at the top and bottom of the income distribution, with those making between \$35,000 and \$175,000 showing slightly more progressive preferences for taxing those making more than \$375,000.

In contrast to previous studies, we fail to find evidence that any form of mobility has a significant impact on preferences over taxation in a multidimensional setting. We test two versions of upward mobility, using whether respondents report being wealthier than their parents and whether respondents expect to be better off in 10 years. We find no evidence that expected or realized upward mobility affects preferences over progressivity (see appendix tables A14 and A15; appendix and tables A1–A20 available online). To measure an individual's labor market risk and thus the possibility of downward mobility, we identified individuals who were currently unemployed or who had experienced unemployment in the past five years. Surprisingly, individuals who have faced recent job losses do not appear to favor more strongly progressive tax plans (see fig. A10, table A16; figs. A1–A13 available online).<sup>35</sup> Future work should probe the robustness of this novel finding; one possibility is that mobility affects only preferences for spending and not taxation.

Finally, we used two survey questions to measure individuals' beliefs about the efficiency of taxation. One asked respondents whether increasing taxation on the those making more than \$375,000 a year would "help the economy,

hurt the economy, or have no effect," while the second asked whether a similar increase would "make people work less." Both measures strongly predict preferences over taxing the richest individuals. Figure 4 shows the results broken down by views on the effect of taxation on the economy. Those who believe raising taxes on the rich will help the economy are on average strong progressives; their support is most elastic for the highest and lowest brackets, with monotonically increasing support for taxing the rich, and monotonically decreasing support for taxing the poor. In contrast, those who believe that taxing the rich will hurt the economy are antitax; they have downward sloping support for all six tax brackets. Note that the ideal tax rates for the "hurt economy" subgroup are typically lower than for the other groups, and that elasticities regarding taxation on the poor are less pronounced than in the other two groups.<sup>36</sup>

### Tax fairness considerations

Beliefs about the fairness of redistribution may also affect tax preferences (Scheve and Stasavage 2016). We expect that beliefs about the fairness of a tax plan will resonate both in the assignment of the tax burden (in terms of how "deserving" the rich are of their wealth), as well as the distribution of tax monies to particular groups (in terms of how "deserving" such groups are of state transfers). We isolate the first effect by separating individuals according to whether they believe that economic success is a result of hard work or luck—previous work has shown that individuals believe that taxing income that results from effort is less fair than taxing wealth that arises serendipitously (Alesina and Angeletos 2005; Durante et al. 2014). However, as discussed above, in a multidimensional setting beliefs that wealth was earned "fairly" should translate to lower preferences for taxation on the rich, but may lead to preferences for either higher or lower taxes on the poor.

Second, beliefs about the deservingness of transfer beneficiaries are likely to affect support for taxation; prior research suggests that whites with high levels of racial resentment may be particularly opposed to redistribution, especially in a society where race and income are correlated (Alesina and Glaeser 2004; Gilens 1999; Kinder and Sanders 1996). We measured racial resentment using a set of four questions that asked respondents for their beliefs about the causes of continuing inequality between white and black Americans and the degree to which public policy should actively

34. The results for those making more than \$375,000 are omitted due to small sample size.

35. We similarly find few significant differences between risk-averse and risk-seeking respondents, as identified by a payoff-relevant question regarding lotteries (fig. A11).

36. Additional analysis that interacts the three belief groups with the treatments confirms that the differences apparent in figure 4 are largely significant; similar results for the second efficiency question are reported in table A17.

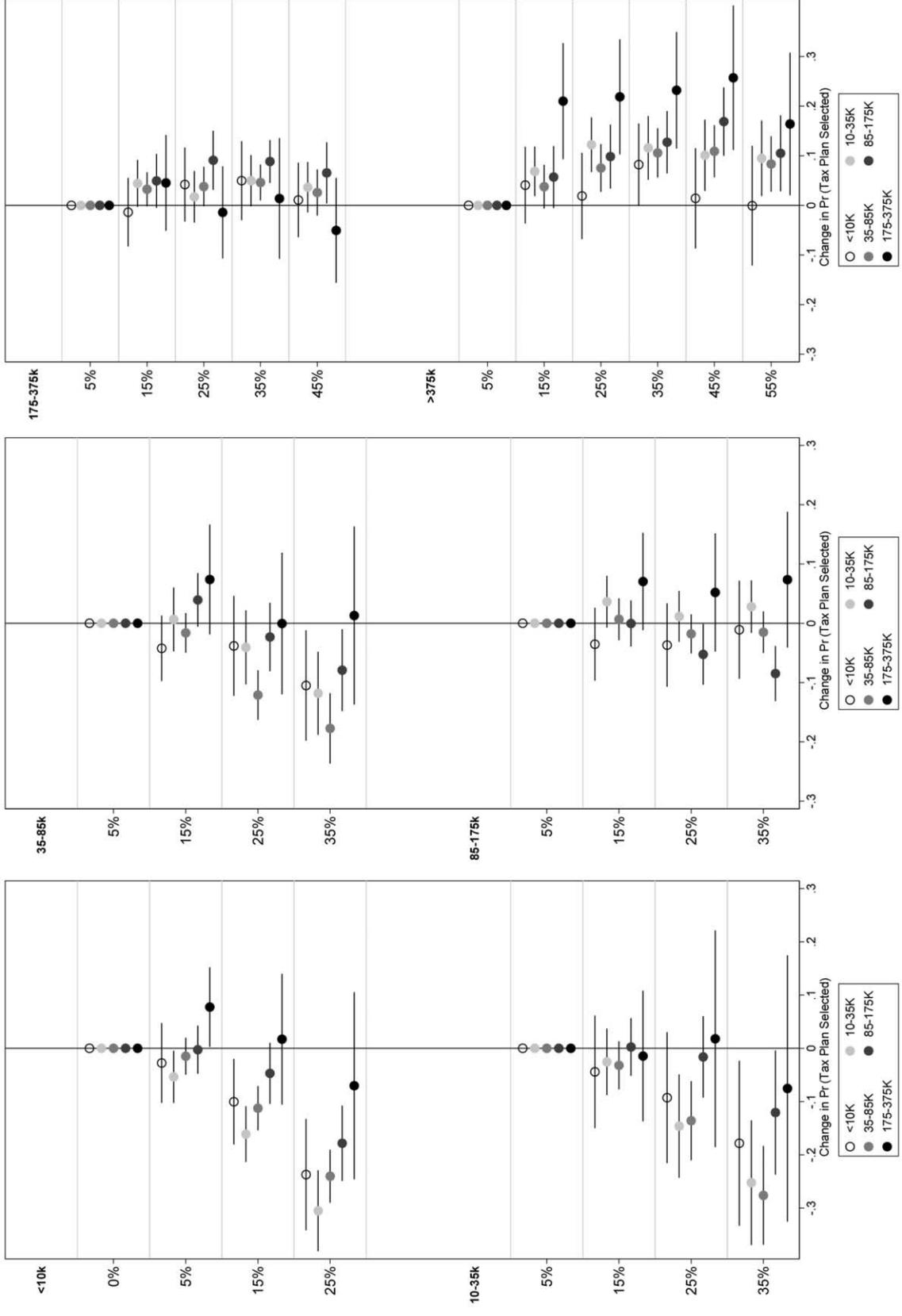


Figure 3. Experimental conjoint estimates of income tax preferences: income group. This plot reports for different respondent income groups estimates of the effect of randomly assigned attribute values for different tax plan dimensions on the probability of supporting a tax plan. Estimates are based on regressions as described in figure 1.

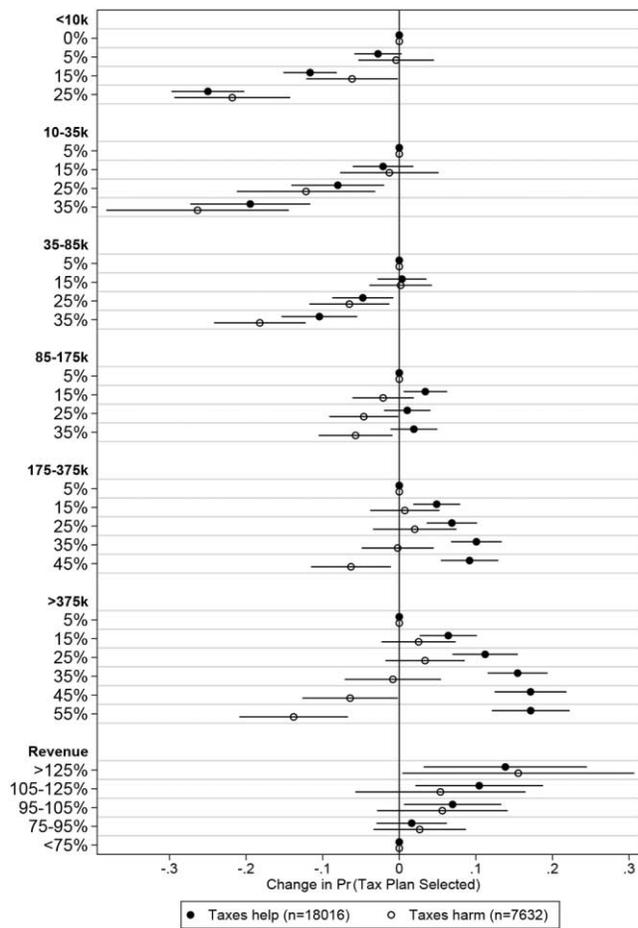


Figure 4. Experimental conjoint estimates of income tax preferences: efficiency beliefs. This plot shows estimates of the effect of randomly assigned attribute values for different tax plan dimensions on the probability of supporting a tax plan across individuals with different efficiency beliefs. Estimates are based on regressions as described in figure 1.

address those differences.<sup>37</sup> While a distaste for redistribution to poorer minorities suggests preferences for lower taxes on the wealthy, it is not clear whether identical considerations should be applied to taxes levied on the poor.

We find support for both types of fairness arguments. Figure 5 shows results broken down by whether a respondent believes that hard work was most important for economic success or whether luck plays a role. While there are few strong differences in preferences for taxing the lower three income groups (the “hard work” group has slightly lower elasticities for taxing the poor), there are strong differences in preferences for taxing the rich. Respondents who believe luck plays a role in economic success are more strongly pro-

37. See appendix C for the text of these questions, introduced by Kinder and Sanders (1996). These questions were only asked of respondents who self-identified as “white.”

gressive, although preferences over taxing the \$175K–\$375K bracket are relatively flat. Respondents who believe that success is primarily due to hard work have weakly progressive preferences; they somewhat favor higher taxes on the rich compared to the poor but are indifferent between tax rates of 25% to 45% on the richest group. These differences are somewhat surprising, in that respondents who believe that success is due to hard work do still favor somewhat higher taxes on the rich.

The results broken down by race and racial resentment are similarly instructive. Figure 5 includes results for whites according to whether they were above the sample median for racial resentment. Whites with low levels of racial resentment are strong progressives, with high elasticities of support for taxing both the rich and the poor. Whites with higher racial resentment scores are weakly progressive—while they do favor some taxes on the rich, the elasticities are low, especially over the 25% to 45% rates. Black and Hispanic respondents (see table A10) look more like strong progressives, although they have less elastic preferences for the top and bottom tax brackets than whites with low racial resentment. These results provide partial support for the racial resentment argument—progressivity is lower among whites with high racial resentment—although strikingly we do not find evidence that such respondents strongly oppose progressive tax plans, only that they are more indifferent over a range of tax rates on the rich. More generally, however, it appears that perceptions of fairness are strong predictors of multidimensional tax preferences.<sup>38</sup>

### Partisanship

One of the defining issues separating political parties is the proper role of government in redistributing income; the progressivity of the income tax is a central policy in this debate. We expect partisan identity to be a strong correlate of redistributive preferences, with Republicans having less progressive preferences (Franko et al. 2013; Lenz 2009; Lupia et al. 2007).<sup>39</sup> However, current debates over tax policy among Republican politicians leave unclear whether such preferences will be for lower taxes on the wealthy only, for a flatter

38. In additional analysis, we found that individuals who attended religious services more frequently were less likely to support more progressive tax plans (Huber and Stanig 2011; Scheve and Stasavage 2006; Stegmueller 2013); see figure A13 for details.

39. Some accounts believe this to be causal, while others emphasize that individuals choose their partisanship based in part on their redistributive preferences. Our analysis focuses on establishing the correlation between partisanship and multidimensional tax preferences which is important for understanding tax politics under both interpretations.

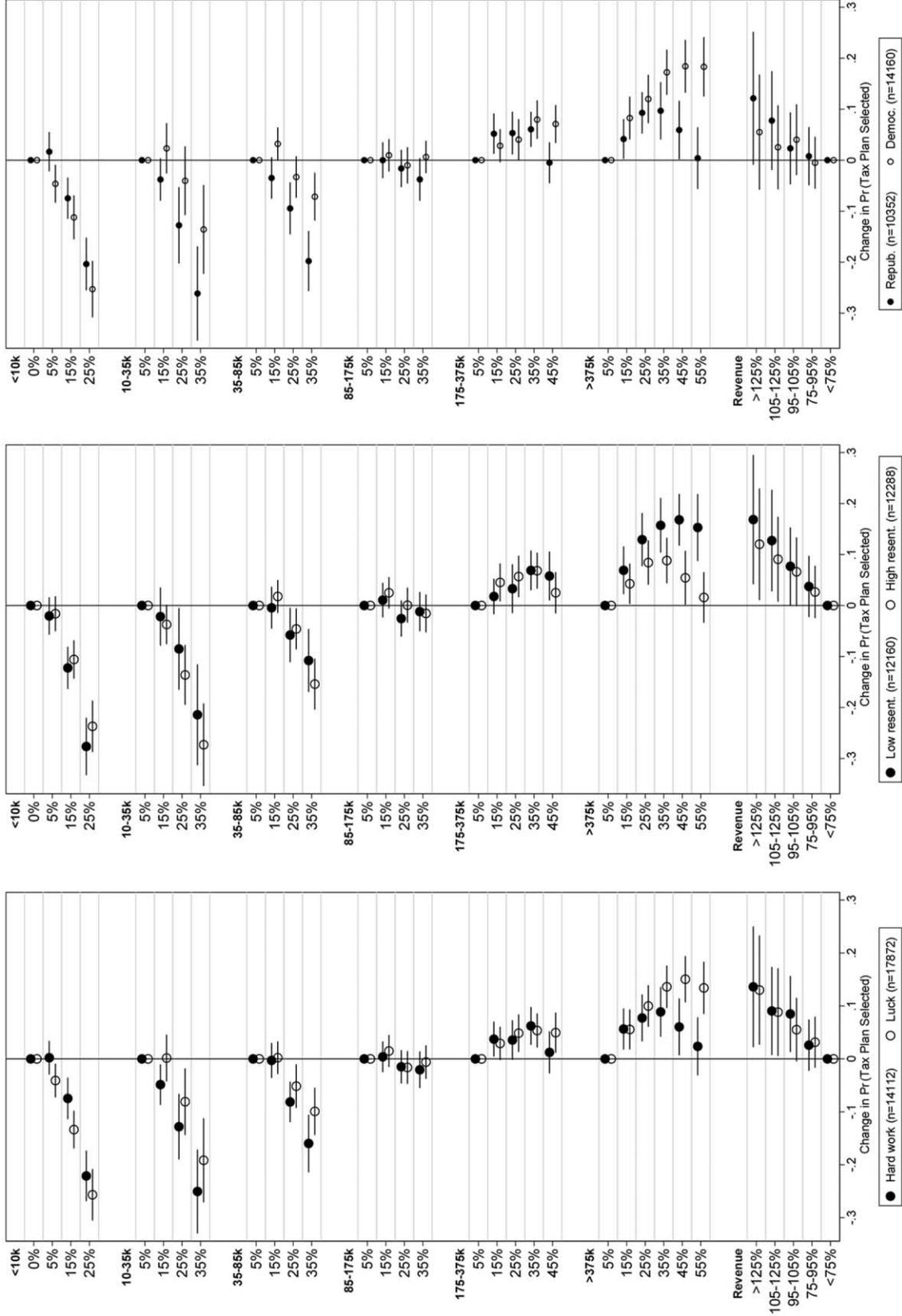


Figure 5. Experimental conjoint estimates of income tax preferences: Fairness and partisanship. This plot reports the effect of randomly assigned attribute values for different tax plan dimensions on the probability of supporting a tax plan by: views on work versus luck as determinants of income (left), racial resentment (center), and partisanship (right). Estimates are based on regressions as described in figure 1.

tax burden generally, or perhaps opposition to all forms of taxation.

The results in figure 5 reveal several new intuitions about American fiscal policy in a multidimensional setting. First, Republicans and Democrats share generally progressive preferences; supporters of both parties favor lower taxes on the poor and somewhat higher taxes on the rich. Note that this is not the only shape such preferences could take; indeed, we were surprised to find rising support for higher taxes on the wealthy among conservatives, instead of falling support for tax plans that raised taxes at all. However, while Republicans do demonstrate some support for taxing the rich, their ideal points are a full 10 percentage points lower than Democrats. The results also suggest that Republican support for a tax policy falls much faster as rates continue above this ideal rate. In contrast, Democrats have less elastic support for higher taxes; raising the marginal rate paid by the wealthiest income group from 45% to 55% hardly decreases support from Democrats at all. In general, Republicans have weakly progressive preferences, while Democrats are strong progressives.

We also reveal an unexpected divergence in the intensity of partisan preferences over taxation of the upper working class and middle class; Republicans are still strongly opposed to taxes on those making between \$10,000 and \$85,000, while Democrats have much less elastic preferences, with higher ideal rates on those making \$10K–85K than the general sample. Work on tax preferences that focuses solely on unidimensional questions about taxation on the wealthy could not reveal this partisan separation on middle-class taxes, further demonstrating the importance of our multidimensional approach.

## CONCLUSION

While much prior work on redistributive preferences equates desires for expenditure with support for taxation, collapsing tax policy to a single measure of the size of government masks the multiplicity of ways in which identical revenue targets can be raised. Actual tax policies vary widely in the extent to which the incidence of taxation is distributed regressively or progressively; who bears the burden of income taxes has a direct effect on the distribution of income in society. Yet understanding citizen beliefs about the proper distribution of taxation requires evaluating tax preferences outside the standard unidimensional framework.

This article provides the first experimental evidence on multidimensional preferences for taxation and progressivity in a revenue-constrained setting. Our conjoint experimental methodology allows us to uncover preferences regarding how the tax burden should be spread across the income dis-

tribution. By independently varying the marginal tax rates on six income brackets that are comparable to those actually in use in the United States, we recover the average marginal component-specific effect of increasing taxes on a particular group on the support for an overall tax plan, giving us a map of the shape of the preference function for the American public over tax policy while controlling for revenue raised.

We find strong evidence for progressive preferences over taxation among the American public; whereas average support for a tax plan decreases as tax rates rise on poorer income groups, it instead increases as a plan levies higher rates on wealthier individuals, at least to a point. Preferences do not, however, vary substantially from current tax policies. We also demonstrate that the degree to which support changes for a given marginal tax rate varies significantly across the income distribution. While respondents react strongly to increasing taxes on the poor, preferences over taxing higher-income groups are relatively flat.

We also find that a number of individual characteristics correlate with preferences over tax progressivity. Importantly, inequity-averse individuals demonstrate much stronger support for higher taxes on the wealthy, substantiating our claim that preferences over income tax progressivity are a key part of preferences over redistribution. We find that economic self-interest and concerns about the efficiency costs of taxation predict redistributive demands in a multidimensional framework, as do differing views of the fairness of taxation (both in terms of who is taxed and who benefits). Surprisingly, we find little evidence that tax policy preferences are predicted by actual or expected income mobility, or by risk preferences. Finally, we find that partisan identity is strongly associated with preferences for taxing the middle class and the rich; Republican preferences are less elastic with regard to taxing the rich, while Democrats support slightly higher taxes on the middle class.

Our results help to explain current debates over taxation in the United States. Most importantly, our article significantly bolsters the argument that insufficient support for more progressive policies is a key reason why American public policy has not responded more strongly to rising income inequality. We also demonstrate that conflict over taxing lower income groups is modest, with virtually all subgroups agreeing that those who make less than \$85,000 should pay relatively low taxes. Our findings regarding taxing the top two income groups—particularly the heterogeneity in such preferences among different subgroups—suggest that conflict over taxation is primarily conflict over taxing the rich. This accords well with popular debates over top income tax rates, the estate tax, capital gains, and other tax policies that primarily affect wealthier groups. Our finding of relatively flat

preferences over varying tax rates suggest an additional explanation for why US tax policy has not responded to rising inequality with higher taxes on top incomes; if the average voter is indifferent between a wide range of high income tax rates, politicians may be able to maintain lower taxes consistent with either their own preferences or those of influential interest groups.

Further work is needed to refine these results. First, we deliberately designed the experiment to elicit tax preferences in isolation from public debate or partisan cues. However, this potentially limits the extent to which these results can be extrapolated to support for specific policy proposals; extensions of this article are needed to examine how framing effects may influence multidimensional tax preferences. Second, although our experiment explicitly encouraged respondents to consider the revenue consequences of the tax rate plans that they chose, the most favored set of rates would raise substantially less revenue than current policy. Further research is needed to determine whether this is because the effects of these cuts on public services is not made explicit. We would emphasize that although this issue may imply that our survey underestimates the ideal federal income tax rates for Americans on average, we think it nonetheless provides informative estimates of the degree of progressivity in income tax policy opinions, the relative elasticity of tax preferences across the income distribution, and the sources and incidence of political conflict over the income tax. We intend in future studies to focus more explicitly on targeted spending policies as well. Finally, this study suggests additional avenues for further research. Other dimensions of taxation could be studied using this methodology, including the capital gains tax, tax credits and deductions, and the negative income tax. As greater dispersion in economic inequality has not been limited to the United States in recent years, expansion of our multidimensional framework to the analysis of tax preferences in other countries could also prove a fruitful complement to existing work in comparative political economy.

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