#### SPRING 2016

## NEW YORK UNIVERSITY SCHOOL OF LAW COLLOQUIUM ON TAX POLICY AND PUBLIC FINANCE

"The Structure of American Income Tax Policy Preferences"

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February 2, 2016

4:00-5:50 p.m. Vanderbilt Hall-208 Week #3

#### SCHEDULE FOR 2016 NYU TAX POLICY COLLOQUIUM

(All sessions meet on Tuesdays from 4-5:50 pm in Vanderbilt 208, NYU Law School)

- 1. <u>January 19</u> Eric Talley, Columbia Law School. "Corporate Inversions and the Unbundling of Regulatory Competition."
- 2. January 26 Michael Simkovic, Seton Hall Law School. "The Knowledge Tax."

## 3. <u>February 2</u> – Lucy Martin, University of North Carolina at Chapel Hill, Department of Political Science. <u>"The Structure of American Income Tax Policy Preferences."</u>

- 4. <u>February 9</u> Donald Marron, Tax Policy Center, Urban Institute and Brookings Institution. "Should We Tax Unhealthy Foods and Drinks?"
- <u>February 23</u> Reuven Avi-Yonah, University of Michigan Law School.
   "Taxation after the Crisis: Why BEPS and MAATM are Inadequate Responses, and What Should Be Done about It."
- 6. <u>March 1</u> Kevin Markle, University of Iowa Business School. "Income Shifting Incentives and Implicit Taxes."
- March 8 Theodore Seto, Loyola Law School, Los Angeles. "The Nonfalsifiability of Welfarism: Some Implications of Preference-Shifting for Optimal Tax Theory"
- 8. <u>March 22</u> James Kwak, University of Connecticut School of Law. "Reducing Inequality With a Retrospective Tax on Capital."
- 9. <u>March 29</u> Miranda Stewart, Australian National University. "Transnational Tax Law: Reality or Fiction, Future or Now?"
- <u>April 5</u> Richard Prisinzano, U.S. Treasury Department, and Danny Yagan, University of California at Berkeley Economics Department. "Partnerships in the United States: Who Owns Them and How Much Tax Do They Pay?"
- 11. April 12 Lily Kahng, Seattle University School of Law. "Who Owns Human Capital?"
- 12. <u>April 19</u> James Alm, Tulane Economics Department, and Jay Soled, Rutgers Business School. "Whither the Tax Gap?"
- 13. <u>April 26</u> Jane Gravelle, Congressional Research Service.
  "Policy Options to Address Corporate Profit Shifting: Carrots or Sticks?"
- 14. <u>May 3</u> Monica Prasad, Northwestern University Department of Sociology. "The Popular Origins of Neoliberalism in the Reagan Tax Cut of 1981."

# The Structure of American Income Tax Policy Preferences<sup>1</sup>

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<sup>1</sup>We thank Jens Hainmueller and John Huber for valuable feedback and advice, seminar participants at Duke University and Stanford University for helpful comments, and Stanford University's Department of Political Science for financial support.

#### Abstract

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 paper 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.

## 1 Introduction

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. Yet, 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 potential disproportionate role of well-funded interest groups or the relative attention that policymakers pay to the policy opinions 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.

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 anti-poverty programs, social insurance, or preferences over the size of government more generally. This line of research has typically supported arguments rooted in self-interest and deservingness to explain why individuals do not want more welfare spending. In contrast, the effects of taxation on inequality—and voter preferences over such effects—have received much less attention. To the extent that these preferences have been considered, it has generally been as

<sup>&</sup>lt;sup>1</sup>See Bartels (2008), Gilens (2012), Bonica et al. (2013), among many others.

<sup>&</sup>lt;sup>2</sup>See, e.g., Alesina and Angeletos (2005), Alesina and Glaeser (2004), Franko et al (2013), Fong (2001), Gilens (1999), Kelly and Enns (2010), Kuziemko et al. (2015), Lupu and Pontusson (2011), and Luttmer (2001).

a unidimensional measure of the size of government, while studies that examine progressivity have typically focused on taxes levied on a single tax bracket, often the rich.

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 could raise the same level of revenue; 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, including a sense of the relative importance of each bracket.<sup>3</sup>

This paper 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

<sup>&</sup>lt;sup>3</sup>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.

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 additional 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 show that there is significant heterogeneity in tax policy preferences across respondents. Our analysis reveals that conflict over taxation is primarily over taxing the rich; some groups have a slight preference for lower taxes on the rich, although preferences remain inelastic, while other groups have highly elastic preferences for higher taxes on those making over \$375,000 a year. We find that *economic self-interest* and *fairness concerns* each explain significant variation in preferences for multidimensional taxation. We also examine how tax preferences relate to *party identification*, finding significant partian differences not only over taxing the rich but also over the taxes that middle-income Americans should pay. Subgroup analysis not only provides evidence on factors that predict tax preferences – those who oppose taxes in general, those who prefer strongly progressive plans that tax the rich highly, and those who have progressive preferences overall, but who have relatively inelastic preferences over taxing wealthy Americans.

### 2 Tax Policy and Multi-Dimensional Policymaking

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 (Romer 1975; Meltzer & Richard 1981). 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>4</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 & Glaeser 2004; Huber & Stanig 2010; Rodden 2010; Shayo 2009).

This unidimensional framework has proven theoretically and empirically powerful. Yet, while it is reasonable to assume that individuals who support redistributive spending may also favor higher levels of taxation to afford such expenditures, reducing 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 on tax policy largely relies on results drawn along a single dimension, often focusing on support for taxing individuals making over \$200,000.<sup>5</sup> While these rates 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>6</sup> 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

<sup>&</sup>lt;sup>4</sup>See Roemer (1999) for one theory of policymaking over a multidimensional tax policy.

<sup>&</sup>lt;sup>5</sup>Most of these studies rely on observational data in which citizens evaluate marginal, often unidimensional, changes to the existing tax code. By experimentally varying tax proposals, rather than relying on policies which are already part of public debate and therefore potentially subject to partian framing effects, our approach enables us to uncover citizens' underlying preferences for progressivity.

<sup>&</sup>lt;sup>6</sup>See Roberts & Hite (1994), Roberts, Hite, & Bradley (1994), and Gaines, Rivers, & Vavreck (2009) for previous work investigating public opinion about progressivity. These studies employ different methodologies for measuring preferences and do not investigate how the factors thought to be important for determining variation in support for redistribution translate into preferences for multi-dimensional taxation and progressivity.

preferences for tax progressivity.

We argue that tax preferences are driven by three groups of factors: *self-interest*, *fair*ness norms, and partisan identity. Standard theories in political economy suggest three key ways that self-interest and economic concerns more generally can determine views over redistributive policy. First, we expect that individuals should prefer lower marginal taxes on their own income group, and higher taxes on others; this implies that poor individuals will favor highly progressive policies, while rich individuals may favor a flatter tax system (Gilens 2009). Second, preferences may be driven by beliefs regarding the efficiency of taxation. Those who believe that taxation hurts individual incentives for effort—or the economy more generally—are likely to want lower taxes overall (Durante, Putterman, & van der Weele 2013); this will mechanically reduce preferences for progressivity among individuals who already favor low taxes on poorer groups.<sup>7</sup> Finally, we expect tax preferences to depend on individuals' real or perceived economic mobility. For example, poorer individuals may favor lower tax rates on the rich if they expect to be upwardly mobile in the future (Alesina & La Ferrara 2005; Benabou & Ok 2001); this may dampen the effects of income, leading to less progressive preferences. Alternately, individuals who fear downward mobility through income shocks may favor higher levels of taxation to fund increased unemployment insurance; this may be particularly pronounced among risk-averse individuals (Iversen & Soskice 2001; Margalit 2013; Moene & Wallerstein 2001; Rehm, Hacker, & Schlesinger 2012). However, it is less clear whether exposure to income shocks will affect progressivity of preferences, or only preferences for overall spending levels.

Some recent research contests the relationship between economic self-interest and redistributive preferences.<sup>8</sup> For example, Bartels (2005) documents a puzzling disconnect: while many Americans dislike growing economic inequality and believe that the rich should pay

<sup>&</sup>lt;sup>7</sup>Fisman et al. (2014) find in interaction between income shocks and efficiency concerns: exposure to the most recent recession appears to increase selfishness and concerns with the efficiency of a policy.

<sup>&</sup>lt;sup>8</sup>Beramendi & Rehm (2014) argue that the mixed result is at least in part due to variation in the progressivity of tax and transfer systems.

more in taxes, support for the Bush tax cuts of 2001 and 2003 outweighed opposition by a factor of nearly two to one. This was true despite the fact that these plans benefited the rich significantly more than other income groups. Bartels argues that this seemingly inconsistent set of views is best explained by a pattern of "unenlightened 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 individuals are asked to consider a tax plan generated *de novo*. In other recent work, Cavaille & 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 tradeoff between concerns over efficiency and equality.

Fairness concerns can affect support for taxation and redistribution through beliefs about whether income was earned fairly; whether everyone is contributing their fair share of the tax burden; and whether the beneficiaries of redistribution deserve such transfers. A large body of evidence suggests that individuals care deeply about the role of luck in determining wealth – when income is believed to be the result of hard work, individuals prefer much lower rates of taxation than when it is perceived as determined by luck (Alesina & Angeletos 2005; Durante, Putterman, & van der Weele 2013; Fong 2001). Therefore, we expect individuals who view the rich as primarily "lucky" (and thus less deserving) to favor more progressive tax policies, while those who believe that income is the result of individual effort may prefer lower taxes on all income groups, but especially on the rich, implying less progressive preferences.

Theories of tax morale and reciprocity suggest that individuals are much more likely to support tax policies when it is believed that everyone is contributing and few people are shirking their fiscal duties. However, norms of tax "fairness" are likely to vary depending on whether individuals equate fairness with "equal treatment" or with "ability to pay;" thus, the fairest policy can be interpreted as either a flat tax or a progressive tax, with strong implications for the overall incidence of a tax plan (Scheve & Stasavage 2016). Finally, support for redistribution may be lower if the beneficiaries of welfare programs, or of spending in general, are perceived as undeserving; this theory has been used to explain lower levels of support among whites in the United States for welfare programs that are believed to be targeted at racial minorities (Alesina & Glaeser 2004; Gilens 1999; Luttmer 2001; Kinder & Sanders 1996). In a society where race and class are often correlated, this may lead—especially among individuals with strong racial resentment—to preferences for higher taxes on the poor or lower taxes on the rich, both of which lead to less progressive tax preferences.<sup>9</sup>

Finally, a large body of evidence finds that partisanship strongly shapes individual preferences over redistribution (Bartels 2008; Franko et al. 2013; Lenz 2009; Lupia et al. 2007). In unidimensional tax settings, this is easily identified as Republican opposition to increasing the size of government. However, in our multidimensional tax framework (which mirrors the actual implementation of taxation in the real world), 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, utilizing 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.

Our approach provides at least four 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 defined above.

<sup>&</sup>lt;sup>9</sup>Closely related and in some cases equivalent to these fairness considerations that we review here are various forms of "other-regarding" preferences including altruism, envy, and inequality aversion. See e.g. Dimick, Rueda, and Stegmueller (2015) and Lü and Scheve (2014).

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: when individuals respond more negatively to a higher marginal rate on poorer groups than on richer ones, this is general evidence of progressive preferences. Yet by combining information on both the sign and the intensity of preferences on marginal rates, 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 across the income distribution, we shine new light on how individuals prefer the tax burden to be distributed.

Third, by identifying where this switch from negative to positive support lies we can address an open question in survey work: how exactly the American public defines "the rich" as opposed to everyone else (Gaines, Rivers & Vavrek 2009). Even among progressives who favor higher taxes on the wealthy, we do not know how exactly such individuals define these income categories. By explicitly disaggregating taxpayers into those income groups used by the IRS, our approach can more precisely identify which groups the American public actually identifies as rich and therefore potentially deserving of higher taxes.

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 and redistribution suggest 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. Alternately, conflicting notions of what a "fair" tax code looks like could lead to conflict over taxing either the poor or the rich. Individuals who believe that the "fairest" tax is one in which the same rate is levied on all groups would likely favor "flat taxes" that increase taxation on the poor and decrease taxes on the rich, relative to current levels. On the other hand, individuals who equate fairness with "equal burdens" rather than "equal rates" may prefer lower taxes on the poor and higher taxes on the rich. Unlike in unidimensional studies that focus on a tax rate paid by only one group (at the risk of masking conflict over taxation of others), our analysis identifies rather than assumes where disagreement over tax rates exists in the American public.

## 3 Data and Methods

We use an original 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>10</sup> The sample size was 2,000 adults.

Conjoint analysis methods have respondents rank or rate two or more hypothetical choices that have multiple attributes with the objective of estimating the influence of each attribute on respondent choices or ratings.<sup>11</sup> We devised a conjoint experiment in which each respondent is shown two 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 a given tax plan relative to another.<sup>12</sup> Each respondent

<sup>&</sup>lt;sup>10</sup>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 & Rivers (2013) and Ansolabehere & Schaffner (2013) show that matched sampling produces accurate population estimates and replicates the correlational structure of random samples using telephones and residential addresses.

<sup>&</sup>lt;sup>11</sup>Hainmueller et al. (2014) analyze the properties of conjoint analysis in the potential outcomes framework for causal inference.

<sup>&</sup>lt;sup>12</sup>The choice task is in line with previous research suggesting a preference for concrete,

was shown eight such binary comparisons.<sup>13</sup> For each tax plan that a given 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>14</sup>

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 amt of revenue	Much Less Revenue $(<75)$
(%  of current revenue)	Less Revenue (75-95)
	About the Same Revenue (95-105)
	More Revenue $(105-125)$
	Much More Revenue $(125+)$

Table 1: *Conjoint Attribute Values*. 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.

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>15</sup> For each tax plan pair a respondent sees, the tax rates for each income level are randomly assigned.<sup>16</sup>

non-abstract survey questions on tax policy preferences (Roberts, Hite, & Bradley 1994).

<sup>13</sup>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.

<sup>14</sup>The pilot (N=500) also asked respondents to rate their support for each tax plan on a ten-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.

<sup>15</sup>Hansen (1998) discusses the importance of incorporating budgetary tradeoffs in measuring public finance preferences.

<sup>16</sup>See Appendix for full survey protocols. Balance tests (Tables A-18 and A-19) show that treatments did not vary systematically by respondent characteristics.

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 U.S. 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>17</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 U.S. electorate. For each bracket, respondents could see one of four to six 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>18</sup>

The final dimension—revenue raised from each tax plan—was estimated based on the randomly selected marginal tax rates for each income group. To calculate the estimated revenue we used the most recent IRS data on the breakdown of federal income tax returns.<sup>19</sup> For each income group these data provide explicit information on the amount of income that was taxed at each marginal rate. We then calculated tax revenue raised under a new tax proposal 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.

After calculating the total dollar amount of federal income taxes raised under a given set of marginal tax rates, we 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 actual taxes raised. To reflect uncertainty about the effects of new policies, we then added to this ratio a normally distributed error term. Based on this "noisy" ratio, the final attribute of each tax plan

<sup>&</sup>lt;sup>17</sup>Table A-2 maps these income brackets to the distribution of income in the United States.

<sup>&</sup>lt;sup>18</sup>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.

<sup>&</sup>lt;sup>19</sup>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.

presented respondents with information on revenue raised, 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%).<sup>20</sup>

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>21</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>22</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>23</sup>

## 4 Public Preferences over Tax Progressivity

#### Tax Rate Preferences across the Income Distribution

Figure 1 reports our estimates of the AMCE of a given value for each characteristic of a tax plan on the probability of supporting a plan, as well as the impact of the revenue raised by a given tax reform plan. The bars indicate 95% confidence intervals and the points without bars indicate the reference category for each tax plan dimension. The interpretation

<sup>&</sup>lt;sup>20</sup>The distribution of the error term was  $\epsilon \sim N(0, 0.07)$ . 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.

<sup>&</sup>lt;sup>21</sup>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.

<sup>&</sup>lt;sup>22</sup>All results use survey weights. Figure A-6 (online appendix) provides the results employing unweighted OLS, yielding qualitatively similar estimates. Estimates which add demographic control variables are virtually identical to our baseline specification (Figure A-7).

<sup>&</sup>lt;sup>23</sup>The conditional treatment effects in our subgroup analysis are also identified as long as the respondent characteristics and the treatments are conditionally independent.

of each estimate is relative to the reference category for that dimension; 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>24</sup>

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. That is, individuals with "progressive" preferences should dislike the poor paying a given rate even more than they dislike the rich doing so. Yet our basic specification provides evidence for a much stronger version of progressivity: whereas (on average) respondents are *less likely* to support a given tax plan as the tax rate on the poorest three groups increases, respondents are *more likely* to support an income tax policy when the tax rate on the richest two groups increases, at least to a point. Consider average preferences for taxing individuals in the lowest three income groups: compared to a baseline level of support for a zero marginal tax rate, preferences for a tax plan fall monotonically at higher marginal rates on each bracket, 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 on 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

 $<sup>^{24}</sup>$ 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.

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.

This significant drop in support for plans with higher taxes on poorer individuals stands in stark contrast to the pattern of 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; this 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. A similar change to that discussed above (from 15% to 25%) on those making more than \$375,000 a year increases support for a given tax plan 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 tax rate on the wealthy between 25% and 55%, despite the enormous fiscal consequences of such a choice.

Note that these findings stand in stark contrast to popular accounts of average American tax preferences. For example, a Gallup poll conducted in April 2015 found that 62% of respondents felt that upper-income people paid too little in federal taxes, as opposed to a mere 11% that felt they paid too much and 25% that felt they paid "their fair share." Despite nearly two-thirds of Americans declaring that the rich pay too little, we find that increasing the tax burden levied on the wealthy does little to actually increase preferences for a given tax plan. It would be difficult to assume that this arises from the sort of "unenlightened self-interest" identified by Bartels (2005): given random assignment of marginal rates in our tax plans, higher tax rates on the wealthy were no more likely to occur next to high tax rates on lower tax brackets, and thus respondents should not have favored lower taxes on the wealthy as part of lower taxes on themselves (as Bartels argues was the case with the Bush tax cuts).

Interestingly, support for a given tax plan does not seem to 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 considerations 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.

Our baseline 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  $(\{0\%, 5\%, 15\%, 15\%, 35\%, 35\%\}$  versus  $\{10\%, 15\%, 25\%, 28\%, 33\%, 39.6\%\}$ ) suggesting that Americans support tax plans that do not radically depart from existing policy, particularly in terms of taxes levied on the wealthy.<sup>25</sup> Importantly, however, there is an asymmetry in

 $<sup>^{25}</sup>$ 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 online appendix for question wording. This

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 additional 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 in favor of 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 & Pierson 2010); 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. 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, U.S. 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 more progressivity in the tax code.<sup>26</sup>

conclusion comes with the caveat that 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.

<sup>&</sup>lt;sup>26</sup>Our results are robust to numerous alternative specifications, detailed in online appendix D. The results hold when excluding respondents who failed an attention check; when respondents were not told how much revenue a plan raised; and when we restrict analysis to plans that were weakly monotonic, thus eliminating "difficult to understand" plans. Appendix D also shows that the results hold when we eliminate respondents with low numeracy and knowledge about how taxation functions.

#### 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; our survey intentionally contained no reference to how tax funds might be used, so as to not bias respondents towards considering a specific use of government money that benefited any particular group in society.<sup>27</sup> Yet, given this lack of 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 respondents' reaction to the growing dispersion of American incomes, we embedded in our survey a question asking respondents how they felt about the income gap between the bottom 50% and the top 10% of earners in the U.S.<sup>28</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; similar measures have been used to capture redistributive support more generally in other work (e.g., Kuziemko et al. (2015)). 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>29</sup>

<sup>&</sup>lt;sup>27</sup>Of course, this does not mean that certain respondents did not *believe* that tax funds might go to certain groups, a point we return to below. However, on average via randomization these respondent beliefs should be orthogonal to a given set of tax rates.

 $<sup>^{28}</sup>$ The exact question was "The 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?"

<sup>&</sup>lt;sup>29</sup>Because inequity aversion is closely associated with political preferences for progressive tax policies, subgroup analysis of this group is intended primarily to test the construct validity of our experiment rather than to suggest an explanation for tax preferences.



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 90% of Americans and top 1% 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.

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 also express 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. We take these findings as strong evidence that our multidimensional framework captures an important aspect of redistributive preferences, and that support for more progressive preferences is driven at least in part by concern over societal inequality.

## 5 Correlates of Preferences over Tax Progressivity

The previous section established that a multi-dimensional approach generates new insights about the structure of American tax policy preferences over progressivity of the income tax, one of the fundamental arms of redistributive action by the state. In this section we explore variation in these preferences. We first identify how policy preferences differ by partisanship, including the key areas of conflict. We then use subgroup analysis to test how individual characteristics such as economic self-interest and fairness concerns affect preferences about absolute rates of taxation and progressivity, as well as the intensity of these preferences, in a multi-dimensional system. All subgroup analysis uses covariates collected in a short survey following the conjoint experiment.

Three tax preference types emerge from the analysis below.<sup>30</sup> While all types prefer low rates on those making less than \$85,000 a year, we find stark differences for preferences over taxing the rich. The first group we refer to as "anti-tax." These individuals decrease their support as taxes increase for all six tax brackets; support for a tax plan peaks when tax rates are 0-5% for the poor and 15% for the rich. The second group, the "strong progressives,"

<sup>&</sup>lt;sup>30</sup>These three types correspond to the "steep progressives," "mild progressives," and "flatraters" described in Roberts & Hite (1994). This similarity in our results is interesting in that is based on data collected decades apart using very different methodologies.

prefer low taxes on the poor and high taxes on the rich. For the top income groups they demonstrate increasing elasticities of support as taxes on the rich increase, with ideal rates on the top group of 45-55%. They typically also favor somewhat higher taxes on the 85-175K income bracket. Finally, we find evidence for a large third group whom we call "weak progressives." This group favors low taxes on the poor and middle incomes, and favors at least somewhat higher taxes on the rich. However, in contrast to the other two groups, these individuals are essentially indifferent between a wide range of taxes on the rich, typically 25-45%. In identifying these three types of taxation preferences, we also locate conflict over income taxation in the U.S. squarely within the domain of taxes on the rich.

#### 5.1 Partisanship

One of the defining issues separating political parties is the proper role of government in redistributing income from the wealthy to the poor; the progressivity of the income tax is a central policy in this debate. We expect partian 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>31</sup> However, current debates over tax policy among Republicans leave unclear whether such preferences will be for lower taxes on the wealthy only, for a flatter tax burden generally, or perhaps opposition to all forms of taxation.

Figure 3 demonstrates that consideration of partian tax preferences in a multidimensional space reveals several new intuitions about American fiscal policy. The general shape of multidimensional preferences for Republicans and Democrats follows the progressive trend established in the general sample: 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

<sup>&</sup>lt;sup>31</sup>In some accounts, this relationship is thought to be causal while others emphasize that individuals choose their partianship based in part on their redistributive preferences. Our analysis focuses on establishing the correlation between partianship and multidimensional tax preferences which is important for understanding tax politics under both interpretations.

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 policy. In contrast, Democratic support for taxes above their own ideal rate indicates much less elasticity – raising the marginal rate paid by the wealthiest income group from 45% to 55% hardly decreases support from Democrats at all. In general, Republicans look more like "weak progressives" while Democrats are "strong progressives."

We also reveal an unexpected divergence in the intensity of partian 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 partian separation on middle-class taxes as well, further demonstrating the importance of our multidimensional approach. While partian identity is strongly associated with individual tax preferences, it cannot explain the factors underlying these preferences. We now consider the economic and normative factors that affect tax policy preferences more directly.

#### 5.2 Economic Self-Interest

As discussed in Section 2, 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 & La Ferrara 2005, Benabou & Ok 2001). Poor individuals who anticipate being richer in the future may favor lower taxes on wealthy individuals, as they expect to reap benefits in the future, and respondents who are wealthier than their parents may also exhibit different



Figure 3: Experimental Conjoint Estimates of Income Tax Preferences: Partisanship. 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 partisan self-identification. 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.

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 & Iversen 2013; Iversen & Soskice 2001; Moene & Wallerstein 2001; Rehm, Hacker, & Schlesinger 2012).

Beyond own income effects, political economy models also predict that respondents' beliefs about the efficiency costs of taxation should affect preferences. A standard result in the public finance literature is that the deadweight losses to the economy are increasing in taxation. Once this is incorporated into models of redistributive preferences, even poor citizens will have an ideal tax rate of less than 100%, especially when the labor elasticity with respect to taxation of the wealthy is high (Durante, Putterman, & van der Weele 2013).

Figure 4 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 general population prefers higher rates on that group.<sup>32</sup> This result contrasts to 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 their support for taxing the lowest three income categories is less sensitive than the support of lower-income individuals, 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 progressivity 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 the next 10 years. Results of

 $<sup>^{32}\</sup>mathrm{Due}$  to sample size, the point estimates for those making more than \$375,000 are not precisely estimated.

this analysis are included in the Appendix (see Tables A-13, A-14); there is no evidence that expected or realized upward mobility affects preferences over progressivity. 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, as reported in Figure A-8 and Table A-15, individuals who have faced recent job losses do not appear to favor more strongly progressive tax plans.<sup>33</sup> Future work should probe the robustness of this novel finding: one possibility is that mobility affects only preferences for spending and not for tax progressivity.

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 5 shows the results from subgroup analysis 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 anti-tax: they have downward sloping support for all six tax bracket.<sup>34</sup> 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. Additional analysis that interacts the three belief groups with the treatments confirms that the differences apparent in Figure 5 are largely significant; similar results for the second efficiency question are reported in Table A-16.

<sup>&</sup>lt;sup>33</sup>We similarly find few significant differences between risk-averse and risk-seeking respondents, as identified by a payoff-relevent question regarding lotteries (Figure A-9).

<sup>&</sup>lt;sup>34</sup>Those who believe that taxation does not affect the economy are on average similar to the strong progressives, although with lower elasticities at the top of the income distribution, compared to the "Help Economy" group.







Figure 5: *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.

#### 5.3 Tax Fairness Considerations

Beliefs about the fairness of redistribution also has the potential to affect tax preferences (Scheve and Stasavage 2016). We expect that beliefs about the fairness of a tax plan will resonate in three normative loci: assignment of the tax burden, collection of tax revenues, and distribution of tax monies to particular groups. 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 & Angeletos 2005; Durante, Putterman & van der Weele 2013).

Individuals also differ in the extent to which they condition their support for a tax plan on the contributions of others. We use a payoff-relevant survey measure of reciprocity to examine this possibility. Respondents were asked how much of a \$100 endowment to pass to an anonymous partner; they could condition this amount based on the five \$25 increments the partner could choose to send. We used this measure to identify two theoretically-relevant subgroups: "freeriders" and "strong reciprocators." "Freeriders" gave \$0 to their partner in all cases, while "strong reciprocity" types' contributions were strictly increasing in the partner's contribution.<sup>35</sup> It is not theoretically clear how these preferences will map onto tax preferences: free-riders may prefer lower taxes on themselves and higher taxes on others, or they may oppose taxation altogether. Reciprocators, in contrast, will likely support tax plans in which they believe everyone is paying a fair share. However, fairness could be construed either as a flat tax (equal rates) or as progressivity (equal sacrifice).

Finally, beliefs about the "deservingness" of transfer beneficiaries are likely to affect tax preferences, with support for more progressive (and thus, more redistributive) plans decreasing when respondents do not view the recipients of government transfers as deserving. Our tax experiment intentionally left the intended purpose of government funds unspecified, to

<sup>&</sup>lt;sup>35</sup>See Table A-12 for descriptions of other respondent types and their preferences.

provide a baseline level of support for government taxation in general.<sup>36</sup> That said, particular subgroups may vary systematically in their views of deservingness. Kinder & Sanders (1996), Gilens (1999), Alesina & Glaeser (2004), and others have argued that relatively low support for welfare programs in the United States, as well as redistribution more generally, can be explained by racial resentment among whites, who believe that redistribution disproportionately benefits non-white Americans and that such groups are undeserving of these benefits. However, to date there is little evidence on whether racial resentment affects support for taxation as well as spending. Whites who exhibit high levels of racial resentment could prefer lower taxes on everyone, or could exhibit less progressive preferences if they believe that poor individuals (who may also be racial minorities) should bear a higher proportion of the tax burden.

We find support for all three types of fairness arguments. Figure 6 shows results broken down by whether a respondent believes that hard work was most important for economic success, or whether they believe that luck plays a role. While there are few strong differences in preferences for taxing the lower three income groups (elasticities are slightly lower for taxing the poor among the "hard work" group), there are strong differences in preferences for taxing the rich. Respondents who believe luck plays a role in economic success most closely resemble strong progressives, although preferences over taxing the 175-375K bracket are relatively flat. Respondents who believe that success is primarily due to hard work are on average weak progressives; 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 income 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.

Figure 6 also reports the results broken down by views of reciprocity. We find that "strong reciprocators" have strongly progressive preferences at both the top and bottom of

<sup>&</sup>lt;sup>36</sup>As tax plans were randomly assigned, the distribution of beliefs about spending should be balanced across our treatment groups, and thus should not affect the internal validity of our estimates.

the income scale. In contrast, "freeriders" have weakly progressive preferences, but do still favor higher taxes on the rich and very low taxes on the poor. This suggests that norms concerning pro-social behavior affect personal preferences over redistribution more generally.

The results broken down by race and racial resentment are similarly instructive. 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 address those differences.<sup>37</sup> Figure 6 includes results for whites broken down by whether they were above the sample median for racial resentment. Whites with low levels of racial resentment resemble 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 A-9) look more like those of strong progressives, although elasticities of support at the top and bottom tax brackets are less elastic than those of the 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>

## 6 Conclusion

While much prior work on redistributive preferences has tended to equate desires for expenditure with support for taxation, the collapse of tax policy to a single measure of the

<sup>&</sup>lt;sup>37</sup>See Appendix C for the text of these questions, introduced by Kinder & Sanders (1996). These questions were only asked of respondents who self-identified as "white".

 $<sup>^{38}</sup>$ In additional analysis, we found that individuals that attended religious services more frequently were less likely to support more progressive tax plans (Stegmueller 2013; Huber & Stanig 2011; Scheve & Stasavage 2006); see Figure A-11 for details.





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 especially 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 beyond the standard unidimensional framework.

This paper 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 distribution. 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 effects 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 the overall revenue raised by the plan.

We find strong evidence for progressive preferences over taxation among the American public: whereas, on 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 poorer income groups, preferences over taxing higher-income groups are relatively flat. We also uncover substantial heterogeneity in these results, especially with regards to preferences over taxing the highest income groups.

We 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 selfinterest and concerns about the efficiency costs of taxation predict redistributive demands in a multi-dimensional 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 regards to taxing the rich, while Democrats exhibit a greater tolerance for middle class taxation.

Our results help to explain current debates over taxation in the United States. Most importantly, our paper significantly bolsters the argument that at least part of the answer to the question of why American public policy has not responded more than it has to rising inequality is that there is not sufficient support for progressive policies that differ substantially from the status quo. We also demonstrate that conflict over the taxes that should be paid by 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 the taxes paid by 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 debates in the popular press over top income tax rates, the estate tax, capital gains, and other tax policies that primarily affect wealthier groups. In addition, our finding of relatively flat preferences over varying tax rates suggest a new additional explanation for why U.S. tax policy has not responded to rising inequality with higher taxes on top incomes: if the average voter is indifferent between taxing the rich over a wide range of rates, politicians may be able to maintain lower taxes consistent with either their own preferences or those of influential interest groups.

This study suggests a number of avenues for further research. First, other dimensions of taxation could be studied using this methodology, including the capital gains tax, tax credits and deductions, and the negative income tax. Second, although our experiment explicitly encouraged respondents to think about 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 consideration of these cuts on public services is not made explicit. We would emphasize that although the revenue constraint 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. Third, we focus exclusively on tax policy across the income distribution as a policy instrument for redistribution; we intend in future studies to focus more explicitly on targeted spending policies across the income distribution. Finally, greater dispersion in economic inequality has not been limited to the U.S. in recent years – expansion of our multidimensional framework to the analysis of tax preferences in other countries could prove a fruitful complement to existing work in comparative political economy.

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## A Supplemental Materials: Sample

The survey was conducted in the summer of 2014 by YouGov. Respondents from their internet panel were subsequently matched down to a sample of 2,000 based on gender, age, race, education, party identification, ideology, and political interest. The matched set of respondents was then weighted to the marginal distributions of sociodemographics in the country's total population. Weights were applied to remove remaining imbalances after the matching procedure. Table A-1 shows the distributions of the sociodemographics in the population, the weighted sample, and the raw sample.

- Interview period: June 2014
- Sample size: 2,000
- Source of data on population socio-demographics: 2010 American Community Survey, the 2010 Current Population survey and the 2007 Pew Religious Life Survey
- Weights range from 0.143 to 7.039, with a mean of 1 and a standard deviation of 1.028.

Group	Population	Weighted Sample	Raw Sample
Age: 18-34	30.5	27.8	25.0
Age: 35-54	36.6	32.5	34.2
Age: $55+$	32.9	39.7	40.8
Gender: Male	48.2	48.6	43.3
Gender: Female	51.8	51.4	56.7
Education: HS or less	45.0	43.6	37.9
Education: Some College	30.0	30.8	31.8
Education: College Graduate	16.3	16.7	19.2
Education: Postgraduate	8.8	8.8	11.1

Table A-1: Distribution of Socio-demographics in the Survey Sample and the Population. The table shows the distributions of socio-demographics in the population, the weighted sample, and the raw sample. See text for data sources on the population socio-demographics.

Income Categories	%ile Range (US Indiv. Income)	Actual IRS Categories
<\$10,000	23%	<\$8,500
\$10,000 - \$35,000	23 - $58%$	\$8,500 - \$34,500
\$35,000 - \$85,000	58 - 89%	\$34,500 - \$83,600
\$85,000 - \$175,000	89 - 98.4%	\$83,600 - \$174,400
\$175,000 - \$375,000	98.4 - 99.5%	\$174,400 - \$379,150
375,000+	99.5% +	379,150+

Table A-2: *Marginal Income Tax Brackets*. This table maps the income tax brackets used in the conjoint experiment against 1) the income percentiles in the U.S. (using U.S. Census Bureau Current Population Reports, 2009 (release 2011) and IRS AGI data)) and 2) the 2011 IRS marginal tax brackets.

#### **B** Supplemental Materials: Conjoint Instructions

The directions for the conjoint experiment appeared immediately before the respondent began choosing between tax plans. The exact text was:

Many observers in the United States have discussed the possibility of changing the federal income tax code to address a number of issues. We are interested in what you think about how income taxation in United States should look.

We will now provide you with several proposals for new federal income tax codes. We will always show you two possible proposals in comparison. For each comparison we would like to know which of the two tax codes you prefer. You may like both or not like either one. In any case, choose the one you prefer the most. In total, we will show you eight comparisons. All tax brackets refer to *individual* income. Also, all tax rates refer to marginal rates this means that all individuals only pay that rate on the portion of their income that falls into that income category. People have different opinions about this issue and there are no right or wrong answers. Please take your time when reading the potential tax codes.

Each respondent then was presented with a table describing two plans and then asked:

Which of these plans would you rather see enacted in the United States?

- Plan A
- Plan B

# C Supplemental Materials: Measurement of Racial Resentment

Table A-9 reports the subgroup results broken down by race and, for white respondents, racial resentment. This was measured using the following four questions, which were first used by Kinder and Sanders (1996). Respondents were asked whether they strongly agreed, agreed, disagreed, or strongly disagreed with each of the following. The order of the questions was randomized, and only respondents who self-identified as white received these questions.

- 1. "Over the past few years, blacks have got less than they deserve."
- 2. "The Irish, Italians, Jews, Vietnamese and other minorities overcame prejudice and worked their way up. Blacks should do the same without any special favors."
- 3. "It's really a matter of some people not trying hard enough; if blacks would only try harder they could be just as well off as whites."
- 4. "Generations of slavery and discrimination have created conditions that make it difficult for blacks to work their way out of the lower class."

### **D** Supplemental Materials: Robustness of Results

We evaluate the robustness of our primary results in a number of ways. As our survey was administered online, it is possible that respondents' attention to our questions was divided among any number of other computer tasks, and so we ran the analysis above dropping the 8.2% of the sample (164 individuals) who failed an attention check embedded in the survey (see Figure A-1); our primary findings are unchanged.

As marginal tax rates were randomly selected for the policy pairs, one might also worry that respondents would be presented with very "strange" plans, increasing the complexity of selecting a preferred plan. To assess this possibility we identified the "easy" set of tax plans as those where marginal rates increased over the income distribution, or where decreases from one group to the next did not exceed 10%. The results are not appreciably different across plans that were "easy" or "hard" to evaluate, reducing worry that respondents were unable to form coherent preferences over tax plans with randomly generated rates (see Figure A-2).

Another concern might be that respondents lacked a general awareness of how taxation functions, or perhaps lacked the numeracy necessary to estimate tax burdens arising under different systems; this worry is particularly poignant given Bartel's (2005) finding that more well-informed respondents were more likely to oppose the Bush-era tax cuts. All respondents answered a series of questions on general economic knowledge and numeracy; in support of Bartel's findings, we find that high levels of numeracy and economic knowledge are associated with preferences for more progressive tax policies (see Figures A-3 and A-4). However, the basic pattern of preferences for lower taxes on the poor and higher taxes on the rich remains the same for all groups.

Finally, for the main experiment, respondents were shown explicitly the estimated revenue generated by a given tax plan. This was included to force respondents to consider how plans may affect government spending options. Because the revenue attribute was not fully independently randomized, we also ran a version of the survey (N=250) that was identical

to the main survey except that respondents did not see the revenue attribute. The results from this sample are reported in Figure A-5: while the small sample size means that the estimates are less precise, the point estimates are largely unchanged when compared to the version with revenue.



Figure A-1: Experimental Conjoint Estimates of Income Tax Preferences: Attention to Survey. This plot compares our results for the subgroup (8.2%) of respondents who failed an attention check in the course of taking the survey and those who passed. The plot shows estimates of the effect of randomly assigned attribute values for different tax plan dimensions on the probability of supporting an agreement. 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.



Figure A-2: Experimental Conjoint Estimates of Income Tax Preferences: Tax Plan Monotonicity. This plot compares our results for plans that were weakly monotonic and those that were not. The plot shows estimates of the effect of randomly assigned attribute values for different tax plan dimensions on the probability of supporting an agreement. 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.



Figure A-3: Experimental Conjoint Estimates of Income Tax Preferences: Numeracy. This plot compares results by respondent numeracy, based on two questions involving basic computations. The first asked respondents to compute how much income would be remaining to an individual if she paid a specified amount of income taxes; the second asked how much income would remain if an individual were to pay a specified percentage of her income in taxation. "High" numeracy corresponds to individuals who answered both questions correctly. For high and low numeracy respondents, the plot shows estimates of the effect of randomly assigned attribute values for different tax plan dimensions on the probability of supporting an agreement. 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 pointes without bars indicate the reference category for a given tax plan dimension.



Figure A-4: Experimental Conjoint Estimates of Income Tax Preferences: Economic Knowledge. This plot compares results by levels of economic knowledge, based on response to two questions about the economy. The first asked whether the inflation rate or unemployment rate was higher in the U.S.; the second asked respondents to make a simple calculation involving inflation and interest rates. "High" economic knowledge corresponded to individuals who answered both questions correctly. For high and low economic knowledge respondents, the plot shows estimates of the effect of randomly assigned attribute values for different tax plan dimensions on the probability of supporting an agreement. 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 <sup>4</sup>Or a given tax plan dimension.



Figure A-5: Experimental Conjoint Estimates of Income Tax Preferences: Revenue Explicit. This plot compares results by whether respondents were presented explicitly with the revenue consequences of a given tax plan. 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. Estimates for the revenue values for the "Didn't see rev." subgroup are based on the implicit revenue raised by a plan, as a function of the marginal rates given.

**E** Supplemental Materials: Additional Figures



Figure A-6: Experimental Conjoint Estimates of Income Tax Preferences: Weighted vs. Unweighted. This plot compares our main weighted results with unweighted estimates. The plot shows estimates of the effect of randomly assigned attribute values for different tax plan dimensions on the probability of supporting an agreement. 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.



Figure A-7: Experimental Conjoint Estimates of Income Tax Preferences: With and Without Individual Control Variables. This plot compares our main results with estimates that add control variables for gender, age, race, education, partisanship, and ideology. The plot shows estimates of the effect of randomly assigned attribute values for different tax plan dimensions on the probability of supporting an agreement. 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.



Figure A-8: Experimental Conjoint Estimates of Income Tax Preferences: Unemployment Experience. 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 current or recent experience with unemployment. Estimates are based on regressions as described in Figure 1.



Figure A-9: *Experimental Conjoint Estimates of Income Tax Preferences: Risk 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 risk aversion. Estimates are based on regressions as described in Figure 1.



Figure A-10: *Experimental Conjoint Estimates of Income Tax Preferences: Altruism.* 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 altruism type. Estimates are based on regressions as described in Figure 1.



Figure A-11: Experimental Conjoint Estimates of Income Tax Preferences: Religious Attendance. 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 religious attendance. Estimates are based on regressions as described in Figure 1.

**F** Supplemental Materials: Regression Tables

Variables	Baseline	
<10K		
5%	-0.021*	(0.012)
15%	-0.109***	(0.013)
25%	-0.242***	(0.018)
10K-35K		
15%	-0.022	(0.015)
25%	-0.103***	(0.023)
35%	-0.219***	(0.029)
35K-85K		
15%	0.000	(0.012)
25%	-0.065***	(0.014)
35%	-0.126***	(0.018)
85K-175K		× ,
15%	0.011	(0.011)
25%	-0.016	(0.011)
35%	-0.013	(0.012)
$175  ext{K} - 375  ext{K}$		× ,
15%	$0.033^{***}$	(0.012)
25%	$0.043^{***}$	(0.013)
35%	$0.058^{***}$	(0.012)
45%	$0.033^{**}$	(0.014)
>375K		× ,
15%	$0.056^{***}$	(0.014)
25%	$0.090^{***}$	(0.015)
35%	$0.114^{***}$	(0.016)
45%	$0.110^{***}$	(0.017)
55%	$0.084^{***}$	(0.019)
Revenue		
> 125%	$0.135^{***}$	(0.039)
105 - 125%	$0.091^{***}$	(0.030)
95 - 105%	0.069***	(0.023)
75 - 95%	$0.030^{*}$	(0.018)
Constant	$0.559^{***}$	(0.026)
Observations	32,000	. /
R-squared	0.055	

Robust standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A-3: *Experimental Conjoint Estimates of Income Tax Preferences: Baseline.* This table reports estimates from regression of *Tax Plan Support* on randomly assigned attributes of a given tax plan. Robust standard errors, clustered by individual, are in parentheses.

Variables	Not Ineq	uity Averse	Inequity	Averse
<10K				
5%	-0.003	(0.016)	-0.037**	(0.016)
$15\%^\dagger$	-0.071***	(0.019)	-0.140***	(0.018)
$25\%^\dagger$	-0.195***	(0.026)	-0.279***	(0.024)
10K-35K				
15%	-0.015	(0.021)	-0.023	(0.022)
25%	-0.069**	(0.034)	-0.128***	(0.030)
$35\%^\dagger$	$-0.151^{***}$	(0.042)	-0.275***	(0.039)
35K-85K				
15%	0.005	(0.018)	-0.001	(0.015)
25%	$-0.071^{***}$	(0.022)	-0.057***	(0.019)
35%	$-0.124^{***}$	(0.027)	$-0.127^{***}$	(0.023)
85K- $175$ K				
15%	0.003	(0.016)	0.021	(0.014)
25%	-0.022	(0.017)	-0.005	(0.015)
$35\%^\dagger$	-0.039**	(0.017)	0.015	(0.016)
175K- $375$ K				
15%	0.030	(0.018)	$0.037^{**}$	(0.014)
25%	$0.035^{*}$	(0.020)	$0.051^{***}$	(0.017)
35%	$0.034^{*}$	(0.018)	$0.081^{***}$	(0.016)
$45\%^\dagger$	-0.012	(0.022)	$0.076^{***}$	(0.017)
>375K				
$15\%^\dagger$	0.027	(0.021)	$0.084^{***}$	(0.017)
$25\%^\dagger$	$0.035^{*}$	(0.021)	$0.145^{***}$	(0.021)
$35\%^\dagger$	$0.047^{**}$	(0.022)	$0.181^{***}$	(0.021)
$45\%^\dagger$	0.030	(0.026)	$0.189^{***}$	(0.022)
$55\%^\dagger$	-0.004	(0.029)	$0.171^{***}$	(0.023)
Revenue				
> 125%	0.083	(0.059)	$0.173^{***}$	(0.051)
105-125%	0.043	(0.044)	$0.130^{***}$	(0.041)
95-105%	0.052	(0.035)	$0.082^{***}$	(0.031)
75-95%	0.023	(0.024)	0.034	(0.025)
Constant	$0.612^{***}$	(0.040)	$0.498^{***}$	(0.034)
Observations	$14,\!368$		$17,\!632$	
$R^2$	0.039		0.086	
k	*** p<0.01,	** p<0.05, *	<sup>c</sup> p<0.1	

Table A-4: Experimental Conjoint Estimates of Income Tax Preferences: By Inequity Aversion. This table reports subgroup analysis broken down by whether a respondent is inequity averse. Inequity aversion is a dummy that takes a value of 1 if the respondent answered that the gap between the income of the bottom 90% of Americans and top 1% of Americans was too large and 0 otherwise. † indicates that, in a regression that interacted "inequity averse" with each treatment dummy, the coefficient on the interaction with "inequity averse" is statistically significant at the 5% level. Robust standard errors, clustered by individual, are in parentheses.

Variables	Republica	an	Democrat	t	Independ	ent
<10K						
5%	0.017	(0.020)	-0.046**	(0.019)	-0.025	(0.024)
15%	-0.075***	(0.021)	-0.112***	(0.022)	-0.152***	(0.031)
25%	-0.204***	(0.026)	-0.253***	(0.028)	-0.294***	(0.040)
10K-35K						
$15\%^\dagger$	-0.038*	(0.021)	0.023	(0.025)	-0.059*	(0.035)
$25\%^\dagger$	-0.128***	(0.038)	-0.040	(0.034)	-0.174***	(0.054)
$35\%^\dagger$	$-0.261^{***}$	(0.047)	-0.136***	(0.044)	-0.314***	(0.067)
35K-85K						
$15\%^\dagger$	-0.035*	(0.021)	$0.032^{*}$	(0.016)	-0.011	(0.025)
$25\%^\dagger$	-0.095***	(0.026)	-0.033	(0.021)	-0.093***	(0.033)
$35\%^\dagger$	-0.198***	(0.030)	-0.072***	(0.024)	-0.146***	(0.044)
85K-175K						
15%	-0.000	(0.018)	0.010	(0.016)	0.004	(0.024)
25%	-0.016	(0.019)	-0.010	(0.018)	-0.045*	(0.025)
35%	-0.038*	(0.021)	0.006	(0.016)	-0.026	(0.029)
175K-375K						
15%	$0.052^{**}$	(0.020)	0.028*	(0.017)	0.010	(0.025)
25%	$0.053^{**}$	(0.021)	$0.040^{**}$	(0.020)	0.022	(0.029)
35%	$0.061^{***}$	(0.018)	$0.080^{***}$	(0.019)	0.016	(0.028)
$45\%^\dagger$	-0.005	(0.021)	$0.071^{***}$	(0.019)	0.027	(0.037)
>375K						
15%	$0.042^{**}$	(0.020)	$0.083^{***}$	(0.021)	0.032	(0.032)
25%	$0.093^{***}$	(0.021)	$0.120^{***}$	(0.024)	0.042	(0.036)
$35\%^\dagger$	$0.097^{***}$	(0.029)	$0.172^{***}$	(0.023)	0.041	(0.034)
$45\%^\dagger$	$0.059^{**}$	(0.029)	$0.184^{***}$	(0.026)	0.049	(0.038)
$55\%^\dagger$	0.004	(0.031)	$0.183^{***}$	(0.030)	0.028	(0.040)
<b>Revenue Raised</b>						
> 125%	$0.121^{*}$	(0.066)	0.055	(0.058)	$0.288^{***}$	(0.090)
$105  ext{-} 125\%^{\dagger}$	0.078	(0.049)	0.025	(0.042)	$0.211^{***}$	(0.074)
95 - 105%	0.023	(0.036)	0.040	(0.035)	$0.170^{***}$	(0.057)
75-95%	0.008	(0.029)	-0.005	(0.026)	$0.116^{***}$	(0.042)
Constant	$0.639^{***}$	(0.041)	$0.470^{***}$	(0.041)	$0.634^{***}$	(0.061)
Observations	$10,\!352$		$14,\!160$		$6,\!288$	
R-squared	0.066		0.071		0.053	
	*** p<	<0.01, **	p<0.05, * ]	p<0.1		

Table A-5: Experimental Conjoint Estimates of Income Tax Preferences: By Partisanship. This table reports subgroup analysis broken down by the respondent's self-identification as Republican, Democrat, or Independent. † indicates that, in a regression that interacted "Democrat" with each treatment dummy, the coefficient on the interaction with "Democrat" is statistically significant at the 5% level. Robust standard errors, clustered by individual, are in parentheses.

VARIABLES	Help Eco	nomy	Hurt Eco	nomy	nomy No Effect		
<10K							
5%	-0.028*	(0.016)	-0.004	(0.025)	-0.023	(0.022)	
15%	-0.116***	(0.018)	-0.062**	(0.030)	-0.137***	(0.027)	
25%	-0.250***	(0.024)	-0.218***	(0.038)	-0.247***	(0.036)	
10K-35K							
15%	-0.021	(0.020)	-0.013	(0.033)	-0.028	(0.032)	
25%	-0.080***	(0.031)	-0.122***	(0.046)	-0.140***	(0.048)	
35%	-0.194***	(0.040)	-0.263***	(0.061)	-0.227***	(0.058)	
35K-85K							
15%	0.004	(0.016)	0.002	(0.021)	-0.011	(0.023)	
25%	-0.048**	(0.020)	-0.065**	(0.027)	-0.092***	(0.032)	
$35\%^\dagger$	-0.104***	(0.025)	-0.182***	(0.030)	-0.107***	(0.037)	
85K-175K		. ,		. ,			
15%	$0.034^{**}$	(0.014)	-0.021	(0.020)	-0.015	(0.024)	
25%	0.010	(0.015)	-0.046**	(0.023)	-0.048**	(0.023)	
$35\%^\dagger$	0.019	(0.016)	-0.057**	(0.025)	-0.036	(0.024)	
175K-375K		. ,		. ,		. ,	
15%	$0.049^{***}$	(0.016)	0.007	(0.023)	0.028	(0.026)	
25%	$0.069^{***}$	(0.017)	0.020	(0.028)	-0.004	(0.026)	
$35\%^\dagger$	$0.101^{***}$	(0.017)	-0.002	(0.024)	0.024	(0.024)	
$45\%^\dagger$	$0.092^{***}$	(0.019)	-0.063**	(0.027)	-0.008	(0.029)	
>375K							
15%	$0.064^{***}$	(0.019)	0.025	(0.025)	$0.074^{**}$	(0.031)	
$25\%^\dagger$	$0.112^{***}$	(0.022)	0.034	(0.026)	$0.097^{***}$	(0.030)	
$35\%^\dagger$	$0.155^{***}$	(0.020)	-0.008	(0.032)	$0.146^{***}$	(0.036)	
$45\%^\dagger$	$0.171^{***}$	(0.024)	-0.064**	(0.032)	$0.152^{***}$	(0.037)	
$55\%^\dagger$	$0.172^{***}$	(0.026)	-0.138***	(0.036)	$0.120^{***}$	(0.039)	
Revenue Raised				· · · ·		· · · ·	
> 125%	$0.138^{**}$	(0.054)	$0.155^{**}$	(0.077)	0.096	(0.081)	
105 - 125%	$0.104^{**}$	(0.042)	0.054	(0.057)	0.092	(0.065)	
95 - 105%	0.070**	(0.032)	0.056	(0.043)	0.078	(0.055)	
75 - 95%	0.016	(0.023)	0.027	(0.031)	0.053	(0.043)	
Constant	0.457***	(0.037)	0.742***	(0.053)	0.606***	(0.048)	
Observations	18,016	. ,	7,632	. /	6,352	. /	
R-squared	0.068		0.070		0.071		
	*** p<	<0.01, **	p<0.05, * ]	p<0.1			

Table A-6: Experimental Conjoint Estimates of Income Tax Preferences: By Efficiency
Beliefs. This table reports subgroup analysis broken down by respondents' beliefs about
whether raising taxes on those making more than \$375,000 a year would help the econ-
omy, hurt the economy, or have no effect. † indicates that, in a regression that interacted
"help economy" with each treatment dummy, the coefficient on the interaction with "help
economy" is statistically significant at the 5% level. Robust standard errors, clustered by
individual, are in parentheses.

VARIABLES	Not Risk	Averse	Risk Ave	rse
<10K				
5%	-0.033	(0.026)	-0.020	(0.013)
15%	-0.111**	(0.043)	-0.109***	(0.014)
25%	-0.225***	(0.051)	-0.245***	(0.019)
10K-35K				
15%	0.016	(0.036)	-0.027	(0.017)
25%	-0.047	(0.066)	-0.111***	(0.024)
35%	-0.173*	(0.097)	-0.225***	(0.030)
35K-85K				
15%	0.034	(0.037)	-0.004	(0.012)
25%	-0.017	(0.041)	-0.071***	(0.015)
35%	-0.107*	(0.056)	-0.129***	(0.018)
85K-175K				
$15\%^\dagger$	$0.069^{**}$	(0.031)	0.004	(0.011)
25%	0.001	(0.028)	-0.017	(0.012)
35%	-0.008	(0.032)	-0.013	(0.013)
175K-375K				
15%	0.031	(0.035)	$0.034^{***}$	(0.012)
25%	-0.014	(0.046)	$0.049^{***}$	(0.013)
35%	0.057	(0.036)	$0.057^{***}$	(0.013)
45%	0.010	(0.038)	$0.036^{**}$	(0.015)
>375K				
$15\%^\dagger$	$0.128^{***}$	(0.036)	$0.044^{***}$	(0.015)
25%	$0.137^{***}$	(0.035)	$0.082^{***}$	(0.016)
35%	$0.108^{***}$	(0.041)	$0.114^{***}$	(0.017)
45%	$0.163^{***}$	(0.046)	$0.102^{***}$	(0.019)
55%	0.091	(0.058)	$0.082^{***}$	(0.020)
<b>Revenue Raised</b>				
> 125%	0.157	(0.125)	$0.132^{***}$	(0.040)
105 - 125%	0.057	(0.090)	$0.096^{***}$	(0.032)
95 - 105%	0.069	(0.059)	$0.069^{***}$	(0.025)
75-95%	0.037	(0.046)	0.030	(0.019)
Constant	$0.470^{***}$	(0.084)	$0.572^{***}$	(0.027)
Observations	3,952		28,016	
R-squared	0.056		0.057	
*** b	0<0.01, ** p	o<0.05, *	p<0.1	

Table A-7: Experimental Conjoint Estimates of Income Tax Preferences: By Risk Preferences. This table reports subgroup analysis broken down by respondents' risk preferences. These were measured using a payoff-relevant question in which respondents chose whether to enter a lottery or receive a certain payoff with the same expected value. † indicates that, in a regression that interacted "risk averse" with each treatment dummy, the coefficient on the interaction with "risk averse" is statistically significant at the 5% level. Robust standard errors, clustered by individual, are in parentheses.

VARIABLES	Luck Play	ys a Role	Hard Wo	rk
<10K				
5%	-0.041**	(0.016)	0.002	(0.016)
$15\%^\dagger$	-0.134***	(0.018)	-0.075***	(0.020)
25%	-0.257***	(0.025)	-0.221***	(0.024)
10K-35K				
15%	0.002	(0.023)	-0.049**	(0.020)
25%	-0.081**	(0.032)	$-0.128^{***}$	(0.032)
35%	-0.191***	(0.040)	-0.250***	(0.040)
35K-85K				
15%	0.002	(0.016)	-0.003	(0.017)
25%	-0.052**	(0.021)	-0.081***	(0.019)
35%	-0.099***	(0.023)	-0.160***	(0.028)
85K-175K				
15%	0.015	(0.015)	0.004	(0.015)
25%	-0.016	(0.016)	-0.015	(0.016)
35%	-0.006	(0.016)	-0.021	(0.018)
175K- $375$ K				
15%	$0.029^{*}$	(0.016)	$0.037^{**}$	(0.017)
25%	$0.049^{***}$	(0.018)	$0.036^{*}$	(0.019)
35%	$0.054^{***}$	(0.016)	$0.062^{***}$	(0.018)
45%	$0.050^{**}$	(0.019)	0.012	(0.020)
>375K				
15%	$0.056^{***}$	(0.019)	$0.056^{***}$	(0.020)
25%	$0.100^{***}$	(0.020)	$0.077^{***}$	(0.023)
35%	$0.136^{***}$	(0.020)	$0.089^{***}$	(0.024)
$45\%^\dagger$	$0.151^{***}$	(0.022)	$0.060^{**}$	(0.027)
$55\%^\dagger$	$0.134^{***}$	(0.025)	0.024	(0.028)
<b>Revenue Raised</b>				
> 125%	$0.130^{**}$	(0.053)	$0.136^{**}$	(0.058)
105 - 125%	$0.088^{**}$	(0.042)	$0.090^{**}$	(0.042)
95 - 105%	$0.055^{*}$	(0.031)	$0.085^{**}$	(0.037)
75-95%	0.032	(0.025)	0.026	(0.025)
Constant	$0.522^{***}$	(0.037)	$0.606^{***}$	(0.038)
Observations	$17,\!872$		$14,\!112$	
R-squared	0.061		0.055	
***	p<0.01, **	p<0.05, *	p<0.1	

Table A-8: Experimental Conjoint Estimates of Income Tax Preferences: By Whether Success is Due to Hard Work or Luck. This table reports subgroup analysis broken down by respondents' beliefs about whether economic success is due to hard work, luck, or a mix of hard work and luck. Those who replied either that luck was more important, or that luck and hard work were equally important, are coded as "luck plays a role". † indicates that, in a regression that interacted "hard work" with each treatment dummy, the coefficient on the interaction with "hard work" is statistically significant at the 5% level. Robust standard errors, clustered by individual, are in parentheses.

VARIABLES	White: Lo	ow Resent	White: H	igh Resent	Blac	ck	Hispa	anic
<10K								
5%	-0.021	(0.019)	-0.016	(0.017)	-0.070*	(0.038)	0.040	(0.039)
15%	$-0.122^{***}$	(0.021)	$-0.106^{***}$	(0.019)	-0.071	(0.048)	-0.100**	(0.046)
25%	-0.277***	(0.029)	-0.237***	(0.026)	-0.177***	(0.058)	$-0.191^{***}$	(0.055)
10K-35K								
15%	-0.022	(0.029)	-0.037*	(0.020)	0.058	(0.042)	0.004	(0.052)
25%	-0.085**	(0.041)	$-0.136^{***}$	(0.030)	0.002	(0.070)	-0.081	(0.079)
35%	$-0.214^{***}$	(0.050)	$-0.273^{***}$	(0.041)	-0.065	(0.090)	-0.152	(0.099)
35K-85K								
15%	-0.004	(0.021)	0.018	(0.017)	0.042	(0.034)	-0.041	(0.039)
25%	-0.058**	(0.027)	-0.046**	(0.021)	-0.018	(0.038)	$-0.142^{***}$	(0.048)
35%	-0.108***	(0.031)	$-0.154^{***}$	(0.025)	-0.040	(0.053)	-0.168***	(0.056)
85K-175K								
15%	0.011	(0.017)	0.025	(0.016)	0.028	(0.042)	0.001	(0.032)
25%	-0.026	(0.018)	0.001	(0.017)	-0.052	(0.038)	0.035	(0.040)
35%	-0.012	(0.020)	-0.016	(0.019)	-0.014	(0.033)	0.021	(0.045)
175K-375K								
15%	0.018	(0.018)	$0.045^{**}$	(0.019)	0.063*	(0.037)	0.059	(0.037)
25%	0.033	(0.024)	$0.057^{***}$	(0.021)	0.010	(0.033)	0.072*	(0.037)
35%	$0.069^{***}$	(0.020)	$0.068^{***}$	(0.018)	0.063*	(0.034)	0.048	(0.043)
45%	0.058**	(0.024)	0.025	(0.021)	$0.072^{*}$	(0.039)	0.017	(0.047)
>375K								
15%	$0.069^{***}$	(0.024)	$0.043^{**}$	(0.020)	0.060	(0.050)	$0.117^{***}$	(0.044)
25%	$0.129^{***}$	(0.027)	$0.084^{***}$	(0.022)	0.079	(0.052)	$0.110^{***}$	(0.041)
35%	$0.157^{***}$	(0.027)	$0.088^{***}$	(0.023)	0.077	(0.056)	$0.171^{***}$	(0.045)
$45\%^{\dagger}$	$0.168^{***}$	(0.026)	$0.054^{**}$	(0.027)	$0.138^{**}$	(0.064)	$0.124^{**}$	(0.058)
55% <sup>†</sup>	$0.153^{***}$	(0.033)	0.016	(0.025)	0.118*	(0.065)	0.110*	(0.064)
Revenue Raised								
>125%	$0.169^{***}$	(0.065)	$0.120^{**}$	(0.056)	-0.002	(0.127)	0.122	(0.136)
105-125%	0.127**	(0.051)	$0.091^{**}$	(0.042)	-0.048	(0.096)	0.054	(0.103)
95-105%	0.077**	(0.039)	0.066*	(0.034)	0.018	(0.073)	0.028	(0.081)
75-95%	0.037	(0.031)	0.027	(0.026)	-0.050	(0.056)	0.050	(0.057)
Constant	$0.504^{***}$	(0.045)	$0.596^{***}$	(0.036)	$0.495^{***}$	(0.092)	$0.503^{***}$	(0.088)
Observations	12,160		12,288		2,768		2,400	
R-squared	0.072		0.068		0.041		0.062	
		*** n/	0.01 **	p < 0.05	* n<01			
		р~	0.01,	p<0.00,	h/0.1			

Table A-9: Experimental Conjoint Estimates of Income Tax Preferences: By Race and Racial Bias. This table reports subgroup analysis broken down by the respondent's race and, for white respondents, by their responses to four questions from Kinder & Sanders (1996) designed to measure racial resentment. † indicates that, in a regression that interacted "white: high resent" with each treatment dummy, the coefficient on the interaction with "white: high resent" is statistically significant at the 5% level. Robust standard errors, clustered by individual, are in parentheses.

VARIABLES	Attend w	eekly	Don't att	end weekly
<10K				
5%	-0.014	(0.024)	-0.023*	(0.013)
15%	-0.137***	(0.028)	-0.097***	(0.015)
25%	-0.242***	(0.033)	-0.243***	(0.021)
10K-35K				
15%	-0.022	(0.026)	-0.023	(0.019)
25%	-0.149***	(0.040)	-0.087***	(0.027)
35%	-0.262***	(0.052)	-0.207***	(0.035)
35K-85K				
15%	0.017	(0.023)	-0.007	(0.013)
25%	$-0.071^{***}$	(0.025)	-0.063***	(0.017)
35%	-0.138***	(0.034)	-0.123***	(0.021)
85K-175K				
15%	-0.020	(0.020)	$0.022^{*}$	(0.013)
25%	-0.046**	(0.022)	-0.005	(0.013)
35%	-0.031	(0.024)	-0.008	(0.014)
175K- $375$ K				
15%	0.016	(0.022)	$0.038^{***}$	(0.014)
$25\%^\dagger$	0.002	(0.023)	$0.057^{***}$	(0.016)
$35\%^\dagger$	0.020	(0.021)	$0.073^{***}$	(0.014)
45%	0.006	(0.027)	$0.043^{***}$	(0.016)
>375K				
15%	0.030	(0.024)	$0.065^{***}$	(0.016)
25%	$0.053^{**}$	(0.026)	$0.102^{***}$	(0.018)
$35\%^{\dagger}$	$0.063^{**}$	(0.029)	$0.133^{***}$	(0.018)
$45\%^{\dagger}$	0.049	(0.033)	$0.133^{***}$	(0.020)
$55\%^\dagger$	-0.012	(0.036)	$0.121^{***}$	(0.022)
<b>Revenue Raised</b>				
> 125%	$0.237^{***}$	(0.071)	$0.099^{**}$	(0.046)
105 - 125%	$0.129^{**}$	(0.056)	$0.080^{**}$	(0.035)
95 - 105%	$0.083^{**}$	(0.039)	$0.066^{**}$	(0.029)
75-95%	0.032	(0.026)	0.030	(0.022)
Constant	$0.646^{***}$	(0.052)	$0.528^{***}$	(0.030)
Observations	8,320		$23,\!680$	
R-squared	0.045		0.062	
***	p<0.01, **	$^{*} p < \overline{0.05},$	, * p< <u>0.1</u>	

Table A-10: Experimental Conjoint Estimates of Income Tax Preferences: By Religiosity. This table reports subgroup analysis broken down by reported frequency of church attendance. This was used to construct a binary variable for whether a respondent attended religious services at least once a week. † indicates that, in a regression that interacted "attend weekly" with each treatment dummy, the coefficient on the interaction with "attend weekly" is statistically significant at the 5% level. Robust standard errors, clustered by individual, are in parentheses.

VARIABLES	Low Altruism		High Altruism		
<10K					
5%	-0.026**	(0.013)	0.003	(0.024)	
15%	-0.111***	(0.015)	-0.098***	(0.029)	
25%	-0.243***	(0.020)	-0.237***	(0.036)	
10K-35K		. ,			
15%	-0.029	(0.018)	0.015	(0.025)	
25%	-0.106***	(0.026)	-0.090*	(0.046)	
35%	-0.214***	(0.032)	-0.258***	(0.066)	
35K-85K		· · · ·			
15%	0.004	(0.013)	-0.021	(0.024)	
25%	-0.068***	(0.016)	-0.051**	(0.025)	
35%	-0.124***	(0.020)	-0.141***	(0.033	
85K-175K		· /			
$15\%^\dagger$	0.003	(0.012)	0.058***	(0.020)	
25%	-0.017	(0.013)	-0.003	(0.022	
35%	-0.012	(0.013)	-0.016	(0.024	
175K-375K				(	
15%	0.027**	(0.013)	0.068***	(0.024)	
25%	$0.036^{**}$	(0.015)	0.081***	(0.026	
35%	$0.051^{***}$	(0.013)	0.095***	(0.027)	
45%	$0.030^{*}$	(0.016)	0.046	(0.029	
>375K				(	
$15\%^{\dagger}$	0.046***	(0.015)	$0.114^{***}$	(0.026)	
$25\%^\dagger$	$0.079^{***}$	(0.017)	$0.148^{***}$	(0.029	
35%	$0.106^{***}$	(0.017)	$0.165^{***}$	(0.031	
45%	0.108***	(0.019)	$0.123^{***}$	(0.042	
55%	$0.079^{***}$	(0.021)	$0.114^{***}$	(0.043	
Revenue Raised	L			(	
>125%	0.127***	(0.043)	$0.193^{**}$	(0.092)	
105 - 125%	0.088***	(0.034)	$0.117^{*}$	(0.064	
95 - 105%	0.069***	(0.026)	$0.080^{*}$	0.048	
75 - 95%	0.030	(0.020)	0.033	(0.039)	
Constant	0.577***	(0.030)	0.457***	(0.050)	
Observations	26,400	× /	$5,\!600$	× ·	
R-squared	0.054		0 067		

Table A-11: Experimental Conjoint Estimates of Income Tax Preferences: By Altruism.
This table reports subgroup analysis broken down by respondents' altruism, as measured
by a payoff-relevant question. Respondents were told that they would be entered into a
drawing for a \$100 gift card; they could choose whether to give some or all of this giftcard
to a charity of their choice. Those coded as "high altruism" chose to give at least $50\%$
of their giftcard to charity if they won. † indicates that, in a regression that interacted
"high altruism" with each treatment dummy, the coefficient on the interaction with "high
altruism" is statistically significant at the $5\%$ level. Robust standard errors, clustered by
individual, are in parentheses.

VARIABLES	Freerider		Pos_noncond		Recip_strong		Recip_weak	
<10K								
5%	-0.051**	(0.023)	0.005	(0.024)	0.017	(0.021)	-0.035	(0.023)
15%	-0.112***	(0.028)	-0.099***	(0.026)	-0.075***	(0.028)	-0.129***	(0.024)
25%	-0.240***	(0.034)	-0.204***	(0.032)	$-0.255^{***}$	(0.037)	-0.268***	(0.035)
10K-35K								
15%	-0.012	(0.036)	-0.006	(0.029)	-0.036	(0.028)	-0.027	(0.027)
25%	-0.103**	(0.046)	-0.137***	(0.046)	-0.107**	(0.044)	-0.091**	(0.043)
35%	$-0.166^{***}$	(0.058)	$-0.262^{***}$	(0.061)	-0.239***	(0.060)	$-0.242^{***}$	(0.053)
35K-85K								
15%	-0.020	(0.022)	-0.012	(0.021)	-0.029	(0.028)	0.023	(0.021)
25%	-0.051*	(0.029)	-0.058**	(0.026)	-0.078**	(0.036)	-0.068***	(0.026)
35%	$-0.105^{***}$	(0.036)	$-0.145^{***}$	(0.029)	$-0.148^{***}$	(0.041)	$-0.146^{***}$	(0.027)
85K-175K								
$15\%^{\dagger}$	-0.029	(0.020)	0.014	(0.023)	0.037*	(0.021)	0.033	(0.022)
25%	-0.011	(0.024)	-0.043*	(0.024)	-0.009	(0.025)	0.022	(0.022)
35%	-0.024	(0.024)	-0.030	(0.028)	0.011	(0.030)	0.029	(0.022)
175K-375K								
$15\%^{\dagger}$	0.033	(0.021)	0.028	(0.023)	$0.101^{***}$	(0.029)	0.026	(0.022)
$25\%^{\dagger}$	$0.055^{**}$	(0.025)	0.045	(0.028)	$0.133^{***}$	(0.025)	0.035	(0.025)
$35\%^{\dagger}$	$0.064^{**}$	(0.026)	0.040*	(0.022)	$0.113^{***}$	(0.022)	$0.062^{***}$	(0.022)
45% <sup>†</sup>	0.017	(0.029)	0.028	(0.025)	0.102***	(0.026)	0.059**	(0.027)
>375K		(0.020)		(0.020)		(0.020)		(0.0=.)
$15\%^{\dagger}$	0.066**	(0.029)	0.038	(0.029)	$0.129^{***}$	(0.031)	0.042*	(0.023)
$25\%^{\dagger}$	0.103***	(0.029)	0.117***	(0.034)	0.176***	(0.037)	0.069***	(0.025)
35%†	0.079***	(0.030)	0.135***	(0.032)	0.222***	(0.037)	0.117***	(0.031)
45%†	0.116***	(0.031)	0.086**	(0.032)	0.212***	(0.039)	0.096***	(0.035)
==0/1	0.066*	(0.024)	0.005**	(0.030)	0.174***	(0.042)	0.007***	(0.036)
Bevenue Baised	0.000	(0.034)	0.095	(0.040)	0.174	(0.043)	0.097	(0.030)
>125%	0.043	(0.081)	0.148*	(0.085)	0.206***	(0, 077)	0.119*	(0.068)
105-125%	0.025	(0.066)	0.065	(0.059)	0.128**	(0.017)	0.132**	(0.000)
95-105%	0.020	(0.000)	0.000	(0.005)	0.120**	(0.001)	0.058	(0.004)
75-95%	0.002	(0.036)	0.049	(0.045)	0.044	(0.033)	0.039	(0.032)
Constant	0.608***	(0.050)	0.579***	(0.048)	0.389***	(0.052)	0.548***	(0.053)
Observations	8.176	(0.000)	6.256	(0.010)	5.264	(0.002)	8.432	(0.000)
R-squared	0.057		0.066		0.087		0.077	
	4		0.01 44	.0.0	- ¥ .0	1		

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A-12: Experimental Conjoint Estimates of Income Tax Preferences: By Reciprocity Type. This table reports subgroup analysis broken down by respondents' reciprocity type. Reciprocity is measured using a payoff-relevant question in which respondent must choose how much of a \$100 endowment to pass to an anonymous partner; they can condition this amount based on the five \$25 increments the partner could choose to send. "Freeriders" gave \$0 to their partner in all cases; "Pos\_noncond" respondents gave the same positive amount to their partner regardless of what the partner chose; "Recip\_strong" and "Recip\_weak" refers to those whose contribution was strictly or weakly increasing in the partner's contribution, respectively. Individuals who did not fit into one of the previous categories were omitted. † indicates that, in a regression that interacted "strong reciprocity" is statistically significant at the 5% level. Robust standard errors, clustered by individual, are in parentheses.
VARIABLES	Not Bett	er Off Than Parents	Better Off than Parents			
<10K						
5%	-0.037**	(0.016)	-0.007	(0.016)		
15%	-0.117***	(0.020)	-0.099***	(0.018)		
25%	-0.266***	(0.027)	-0.221***	(0.022)		
10K-35K						
15%	-0.035	(0.025)	-0.012	(0.019)		
25%	-0.115***	(0.036)	-0.093***	(0.028)		
35%	-0.222***	(0.046)	$-0.217^{***}$	(0.036)		
35K-85K						
15%	-0.006	(0.018)	0.006	(0.015)		
25%	-0.060***	(0.023)	-0.069***	(0.018)		
35%	-0.115***	(0.026)	-0.137***	(0.024)		
85K-175K						
15%	0.005	(0.016)	0.016	(0.015)		
25%	0.000	(0.017)	-0.030**	(0.015)		
35%	-0.007	(0.017)	-0.019	(0.017)		
175K- $375$ K						
15%	0.018	(0.018)	$0.046^{***}$	(0.015)		
25%	$0.046^{**}$	(0.020)	$0.040^{**}$	(0.017)		
35%	$0.042^{**}$	(0.019)	$0.072^{***}$	(0.016)		
45%	0.007	(0.022)	$0.057^{***}$	(0.018)		
>375K						
15%	$0.051^{**}$	(0.021)	$0.060^{***}$	(0.018)		
25%	$0.101^{***}$	(0.020)	$0.079^{***}$	(0.022)		
35%	$0.088^{***}$	(0.023)	$0.135^{***}$	(0.021)		
45%	$0.084^{***}$	(0.025)	$0.132^{***}$	(0.024)		
55%	$0.055^{**}$	(0.027)	$0.112^{***}$	(0.026)		
<b>Revenue Raised</b>						
> 125%	$0.146^{**}$	(0.062)	$0.126^{***}$	(0.048)		
105-125%	$0.092^{*}$	(0.048)	$0.091^{**}$	(0.037)		
95 - 105%	$0.079^{**}$	(0.037)	$0.060^{**}$	(0.029)		
75-95%	0.034	(0.030)	0.026	(0.020)		
Constant	$0.592^{***}$	(0.041)	$0.531^{***}$	(0.034)		
Observations	$15,\!168$		$16,\!816$			
R-squared	0.053		0.060			
	*** p	<0.01, ** p<0.05, * p<	< 0.1			

Table A-13: Experimental Conjoint Estimates of Income Tax Preferences: By Generational Mobility. This table reports subgroup analysis broken down by whether a respondent reported that he or she was financially better off than his or her parents were at the same age. No coefficient was found to be statistically different in a regression that interacted each treatment level with a dummy for whether an individual considered herself as better off than her parents. Robust standard errors, clustered by individual, are in parentheses.

VARIABLES	Not Bett	er Off in 10 Yrs	Better Off in 10 Yrs			
<10K						
5%	-0.009	(0.016)	-0.033**	(0.017)		
15%	-0.084***	(0.019)	-0.128***	(0.019)		
25%	-0.223***	(0.025)	-0.255***	(0.024)		
10K-35K						
15%	-0.042**	(0.021)	-0.001	(0.022)		
25%	-0.123***	(0.032)	-0.078**	(0.032)		
35%	-0.235***	(0.043)	-0.198***	(0.039)		
35K-85K						
15%	0.021	(0.017)	-0.017	(0.016)		
25%	-0.038*	(0.021)	-0.087***	(0.019)		
35%	-0.113***	(0.024)	-0.133***	(0.025)		
85K-175K						
15%	0.000	(0.015)	0.021	(0.016)		
25%	-0.025	(0.016)	-0.008	(0.016)		
35%	-0.010	(0.016)	-0.013	(0.018)		
175K- $375$ K						
15%	$0.031^{*}$	(0.016)	$0.037^{**}$	(0.017)		
25%	$0.055^{***}$	(0.018)	$0.033^{*}$	(0.018)		
35%	$0.056^{***}$	(0.017)	$0.061^{***}$	(0.018)		
45%	0.022	(0.020)	$0.044^{**}$	(0.019)		
>375K						
15%	$0.038^{**}$	(0.019)	$0.070^{***}$	(0.020)		
25%	$0.076^{***}$	(0.018)	$0.102^{***}$	(0.023)		
$35\%^\dagger$	$0.073^{***}$	(0.021)	$0.150^{***}$	(0.022)		
45%	$0.096^{***}$	(0.024)	$0.124^{***}$	(0.025)		
55%	$0.062^{**}$	(0.027)	$0.109^{***}$	(0.026)		
<b>Revenue Raised</b>						
> 125%	$0.112^{**}$	(0.057)	$0.146^{***}$	(0.053)		
105 - 125%	$0.088^{**}$	(0.042)	$0.086^{**}$	(0.042)		
95 - 105%	0.048	(0.034)	$0.082^{**}$	(0.033)		
75-95%	0.025	(0.025)	0.032	(0.025)		
Constant	$0.575^{***}$	(0.038)	$0.540^{***}$	(0.037)		
Observations	15,168		$16,\!816$			
R-squared	0.054		0.060			
	*** p<0.0	01, ** p<0.05, * p	< 0.1			

Table A-14: Experimental Conjoint Estimates of Income Tax Preferences: By Beliefs over Future Mobility. This table reports subgroup analysis broken down by whether a respondent believed that he or she would be financially better off in ten years than he or she was today. † indicates that, in a regression that interacted "better off in 10 yrs" with each treatment dummy, the coefficient on the interaction with "better off in 10 yrs" is statistically significant at the 5% level. Robust standard errors, clustered by individual, are in parentheses.

VARIABLES	No Recer	nt Hardship	Recent Hardship			
<10K						
5%	-0.015	(0.014)	-0.036*	(0.021)		
15%	-0.102***	(0.016)	$-0.125^{***}$	(0.025)		
25%	-0.221***	(0.021)	-0.288***	(0.031)		
10K-35K						
15%	-0.008	(0.017)	-0.049	(0.032)		
25%	-0.075***	(0.026)	-0.166***	(0.044)		
$35\%^\dagger$	$-0.175^{***}$	(0.034)	-0.322***	(0.055)		
35K-85K						
15%	0.000	(0.014)	-0.000	(0.021)		
25%	-0.078***	(0.018)	-0.034	(0.023)		
35%	-0.134***	(0.022)	-0.110***	(0.027)		
85K-175K						
15%	0.013	(0.013)	0.006	(0.020)		
25%	-0.006	(0.013)	-0.036	(0.022)		
35%	-0.013	(0.014)	-0.009	(0.023)		
175K- $375$ K						
15%	$0.035^{***}$	(0.014)	0.030	(0.022)		
25%	$0.042^{***}$	(0.015)	$0.046^{*}$	(0.025)		
35%	$0.060^{***}$	(0.014)	$0.055^{**}$	(0.023)		
45%	$0.028^{*}$	(0.017)	$0.046^{*}$	(0.026)		
>375K						
15%	$0.047^{***}$	(0.016)	$0.074^{***}$	(0.026)		
$25\%^\dagger$	$0.064^{***}$	(0.017)	$0.145^{***}$	(0.029)		
35%	$0.110^{***}$	(0.018)	$0.123^{***}$	(0.029)		
45%	$0.109^{***}$	(0.020)	$0.113^{***}$	(0.032)		
55%	$0.085^{***}$	(0.021)	$0.081^{**}$	(0.037)		
<b>Revenue Raised</b>						
> 125%	$0.088^{*}$	(0.045)	$0.243^{***}$	(0.075)		
105 - 125%	$0.058^{*}$	(0.034)	$0.170^{***}$	(0.059)		
95 - 105%	0.040	(0.027)	$0.134^{***}$	(0.045)		
75-95%	0.017	(0.020)	0.057	(0.036)		
Constant	$0.562^{***}$	(0.032)	$0.551^{***}$	(0.047)		
Observations	22,736		9,264			
R-squared	0.053		0.066			
**>	* p<0.01, *	* p<0.05, * p	0<0.1			

Table A-15: Experimental Conjoint Estimates of Income Tax Preferences: By Recent Hardship. This table reports subgroup analysis broken down by whether a respondent reported being unemployed or losing a house in the past 5 years. † indicates that, in a regression that interacted "recent hardship" with each treatment dummy, the coefficient on the interaction with "recent hardship" is statistically significant at the 5% level. Robust standard errors, clustered by individual, are in parentheses.

VARIABLES	Work Les	S	No Effect / Work More				
<10K							
5%	0.015	(0.024)	-0.029**	(0.013)			
15%	-0.080***	(0.028)	-0.115***	(0.015)			
25%	-0.217***	(0.041)	-0.247***	(0.019)			
10K-35K							
15%	0.020	(0.032)	-0.032*	(0.017)			
25%	-0.080*	(0.045)	-0.108***	(0.026)			
35%	-0.227***	(0.055)	$-0.217^{***}$	(0.033)			
35K-85K							
15%	-0.034	(0.026)	0.009	(0.013)			
25%	-0.101***	(0.032)	-0.056***	(0.016)			
$35\%^\dagger$	-0.211***	(0.036)	-0.106***	(0.020)			
85K-175K							
15%	-0.019	(0.025)	0.017	(0.012)			
25%	-0.028	(0.025)	-0.014	(0.013)			
35%	-0.052*	(0.030)	-0.003	(0.013)			
175K-375K							
15%	0.027	(0.025)	$0.035^{***}$	(0.013)			
25%	0.026	(0.026)	$0.046^{***}$	(0.015)			
35%	0.017	(0.025)	$0.067^{***}$	(0.014)			
$45\%^\dagger$	$-0.051^{**}$	(0.024)	$0.049^{***}$	(0.016)			
>375K							
15%	0.043	(0.029)	$0.057^{***}$	(0.015)			
25%	0.046	(0.029)	$0.098^{***}$	(0.017)			
$35\%^\dagger$	0.043	(0.034)	$0.128^{***}$	(0.017)			
$45\%^{\dagger}$	-0.025	(0.035)	$0.139^{***}$	(0.019)			
$55\%^\dagger$	-0.058	(0.036)	$0.113^{***}$	(0.021)			
Revenue Raised							
> 125%	0.121	(0.080)	$0.137^{***}$	(0.043)			
105 - 125%	0.042	(0.061)	$0.102^{***}$	(0.034)			
95 - 105%	0.011	(0.045)	$0.083^{***}$	(0.027)			
75 - 95%	-0.012	(0.033)	$0.040^{**}$	(0.020)			
Constant	$0.707^{***}$	(0.050)	$0.528^{***}$	(0.030)			
Observations	$5,\!840$		26,160				
R-squared	0.070		0.058				
*>	** p $< \overline{0.01},$	** $p < 0.0$	5, * p $<0.1$				

Table A-16: Experimental Conjoint Estimates of Income Tax Preferences: By Beliefs about the Effect of Taxation on Work Ethic. This table reports subgroup analysis broken down by whether respondent believes that raising taxes on income over \$375,000 a year would "make people work less". † indicates that, in a regression that interacted "work less" with each treatment dummy, the coefficient on the interaction with "work less" is statistically significant at the 5% level. Robust standard errors, clustered by individual, are in parentheses.

VARIABLES	Saw Rev		No Rev		Saw Rev		No Rev		
<10K									
5%	-0.021*	(0.012)	-0.078***	(0.025)	-0.013	(0.011)	-0.075***	(0.026)	
15%	-0.109***	(0.013)	-0.124***	(0.030)	-0.083***	(0.011)	-0.113***	(0.031)	
25%	-0.242***	(0.018)	-0.255***	$-0.255^{***}$ (0.035)		(0.013)	-0.236***	(0.033)	
10K-35K									
15%	-0.022	(0.015)	0.004	(0.032)	0.007	(0.011)	0.004	(0.024)	
25%	-0.103***	(0.023)	-0.089*	(0.051)	-0.036***	(0.012)	-0.075**	(0.034)	
35%	-0.219***	(0.029)	-0.191***	(0.066)	-0.120***	(0.013)	-0.149***	(0.030)	
35K-85K									
15%	0.000	(0.012)	-0.036	(0.033)	0.014	(0.011)	-0.030	(0.029)	
25%	-0.065***	(0.014)	-0.008	(0.035)	-0.038***	(0.012)	0.003	(0.027)	
35%	-0.126***	(0.018)	-0.129***	(0.036)	-0.085***	(0.012)	-0.111***	(0.027)	
85K-175K									
15%	0.011	(0.011)	0.010	(0.026)	0.016	(0.011)	0.012	(0.027)	
25%	-0.016	(0.011)	-0.013	(0.026)	-0.007	(0.011)	-0.010	(0.026)	
35%	-0.013	(0.012)	$-0.055^*$ (0.031)		0.001	0.001 (0.012)		(0.029)	
175K- $375$ K									
15%	$0.033^{***}$	(0.012)	0.019	(0.029)	$0.037^{***}$	(0.012)	0.019	(0.029)	
25%	$0.043^{***}$	(0.013)	0.060	(0.041)	$0.050^{***}$	(0.013)	0.062	(0.041)	
35%	$0.058^{***}$	(0.012)	0.061	(0.037)	$0.069^{***}$	(0.012)	$0.065^{*}$	(0.037)	
45%	$0.033^{**}$	(0.014)	0.053	(0.038)	$0.048^{***}$ (0.013)		0.057	(0.036)	
>375K									
15%	$0.056^{***}$	(0.014)	$0.107^{***}$	(0.033)	$0.064^{***}$	(0.013)	$0.109^{***}$	(0.034)	
25%	$0.090^{***}$	(0.015)	$0.174^{***}$	(0.039)	$0.106^{***}$	(0.014)	$0.179^{***}$	(0.040)	
35%	$0.114^{***}$	(0.016)	$0.185^{***}$	(0.044)	$0.138^{***}$	(0.014)	$0.190^{***}$	(0.043)	
45%	$0.110^{***}$	(0.017)	$0.165^{***}$	(0.039)	$0.143^{***}$	(0.015)	$0.175^{***}$	(0.040)	
55%	$0.084^{***}$	(0.019)	$0.138^{***}$	(0.043)	$0.125^{***}$	(0.016)	$0.153^{***}$	(0.046)	
<b>Revenue Raised</b>									
> 125%	$0.135^{***}$	(0.039)	0.056	(0.083)					
105-125%	$0.091^{***}$	(0.030)	-0.004	(0.069)					
95 - 105%	$0.069^{***}$	(0.023)	0.021	(0.053)					
75-95%	$0.030^{*}$	(0.018)	-0.037	(0.047)					
Constant	$0.559^{***}$	(0.026)	$0.572^{***}$	(0.067)	$0.501^{***}$	(0.022)	$0.535^{***}$	(0.058)	
Observations	32,000		4,000		32,000		4,000		
R-squared	0.055		0.077		0.054		0.075		
		***	o<0.01, ** p	o<0.05, *	p<0.1				

Table A-17: Experimental Conjoint Estimates of Income Tax Preferences: By Whether Saw Revenue Attribute. This table compares our main results with a small sample of respondents (250 respondents, 8,000 tax plans) who considered tax plans that did not include the revenue dimension. The first two regressions include the estimated revenue raised by the plan, while the second two regressions do not. Note that, for the second regression, the revenue raised was not observed by respondents, but was left as an implicit attribute. Robust standard errors, clustered by individual, are in parentheses.

## **G** Supplemental Materials: Balance Tests

	<10K				10-35K		35-85K			
VARIABLES	5%	15%	25%	15%	25%	35%	15 %	25~%	35~%	
Female	0.014	0.000	-0.020	-0.010	-0.004	-0.044*	-0.028	$0.047^{**}$	0.001	
	(0.024)	(0.025)	(0.024)	(0.024)	(0.024)	(0.024)	(0.023)	(0.024)	(0.024)	
Republican	0.005	0.047	0.010	-0.043	-0.130**	-0.085	0.107*	0.063	0.093	
	(0.070)	(0.057)	(0.070)	(0.071)	(0.064)	(0.062)	(0.057)	(0.065)	(0.064)	
Democrat	0.047	0.019	0.019	-0.006	-0.078	-0.051	0.083	0.025	0.067	
	(0.068)	(0.055)	(0.068)	(0.069)	(0.062)	(0.060)	(0.055)	(0.062)	(0.062)	
Independent	-0.007	0.027	-0.007	-0.057	-0.141**	$-0.105^{*}$	0.088	0.002	0.085	
	(0.071)	(0.059)	(0.071)	(0.072)	(0.065)	(0.062)	(0.058)	(0.065)	(0.064)	
Education	-0.004	-0.009	0.003	-0.005	-0.002	0.003	-0.004	0.004	0.003	
	(0.008)	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	
Ineq. Aversion	-0.018*	-0.009	-0.009	-0.003	-0.002	-0.009	-0.001	-0.017*	0.006	
	(0.010)	(0.010)	(0.010)	(0.010)	(0.009)	(0.010)	(0.010)	(0.009)	(0.010)	
Own Income	0.001	0.002	0.005	0.000	0.006	-0.010*	-0.001	-0.001	0.003	
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	
White	0.014	0.000	-0.027	0.017	0.026	0.005	-0.006	-0.027	-0.060**	
	(0.028)	(0.029)	(0.029)	(0.029)	(0.029)	(0.028)	(0.028)	(0.029)	(0.029)	

Table A-18: Balance Tests A. This table reports estimates from multinomial logit regression of the first three conjoint tax characteristics on a host of common socio-demographic controls. One model was estimated for each characteristic, with standard errors clustered by individual in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. N=31,808 in all models.

		85-175K			175-375K					375K+				Rev.		
VARIABLES	15%	25%	35%	15%	25%	35%	45%	15%	25%	35%	45%	55%	Much more	More	Same	Less
Female	-0.003	-0.019	-0.024	0.018	-0.016	0.035	0.008	-0.019	0.005	0.010	0.000	-0.007	-0.043*	0.002	-0.050*	-0.013
	(0.024)	(0.024)	(0.024)	(0.025)	(0.025)	(0.025)	(0.026)	(0.026)	(0.027)	(0.027)	(0.027)	(0.026)	(0.025)	(0.025)	(0.028)	(0.025)
Republican	0.015	0.091	$0.113^{*}$	-0.009	0.005	-0.045	-0.054	-0.011	-0.045	-0.067	-0.178**	0.002	-0.073	-0.072	-0.079	-0.059
	(0.067)	(0.074)	(0.067)	(0.073)	(0.077)	(0.072)	(0.071)	(0.075)	(0.071)	(0.076)	(0.069)	(0.067)	(0.065)	(0.071)	(0.076)	(0.079)
Democrat	0.003	0.079	0.105	-0.010	-0.012	-0.051	-0.037	-0.014	-0.060	-0.089	$-0.146^{**}$	-0.041	-0.062	-0.060	-0.073	-0.059
	(0.066)	(0.073)	(0.065)	(0.071)	(0.075)	(0.071)	(0.070)	(0.073)	(0.069)	(0.073)	(0.068)	(0.065)	(0.062)	(0.069)	(0.074)	(0.077)
Independent	-0.037	0.050	0.103	-0.036	-0.036	-0.053	-0.063	-0.018	-0.070	-0.053	-0.230***	-0.032	-0.108*	-0.084	-0.089	-0.055
	(0.069)	(0.076)	(0.068)	(0.073)	(0.077)	(0.072)	(0.072)	(0.077)	(0.073)	(0.076)	(0.071)	(0.068)	(0.065)	(0.071)	(0.077)	(0.079)
Education	-0.012	-0.010	-0.002	0.007	-0.005	0.004	0.010	0.013	0.014	$0.026^{***}$	0.010	$0.025^{***}$	0.014	0.002	0.002	0.010
	(0.009)	(0.009)	(0.008)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.009)	(0.009)	(0.009)	(0.010)	(0.009)
Ineq. Aversion	-0.001	0.012	0.003	-0.024**	-0.001	-0.009	-0.021**	0.001	-0.000	0.013	0.008	-0.006	-0.002	-0.014	0.011	0.019**
	(0.011)	(0.010)	(0.010)	(0.010)	(0.010)	(0.009)	(0.010)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.010)	(0.010)	(0.011)	(0.010)
Own Income	-0.008	-0.005	-0.001	-0.003	-0.008	-0.003	-0.008	-0.002	-0.001	-0.003	0.004	-0.008	-0.006	0.004	0.004	-0.000
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)
White	-0.009	-0.020	0.009	0.009	0.043	0.012	0.014	-0.021	-0.003	-0.080***	0.019	-0.024	-0.035	-0.035	-0.047	-0.036
	(0.030)	(0.030)	(0.029)	(0.031)	(0.031)	(0.031)	(0.031)	(0.032)	(0.033)	(0.031)	(0.032)	(0.032)	(0.029)	(0.029)	(0.033)	(0.031)

Table A-19: Balance Tests B. This table reports estimates from multinomial logit regression of the last three conjoint tax characteristics on a host of common socio-demographic controls. One model was estimated for each characteristic, with standard errors clustered by individual in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. N=31,808 in all models.