# Rivalry and Equity Considerations in Mass Support for Corporate Income Tax Policy

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Paper Presented for the 2021 International Political Economy Society Annual Meeting

#### Abstract

Competition for mobile capital in the global economy gives rise to tax competition, in which countries lower domestic corporate taxes in order to attract investment. Given labor immobility, governments overcome ensuing revenue shortfalls by raising income taxes, a policy domain that is heavily constrained by public opinion. What are the determinants of mass preferences regarding corporate taxes, and how do voters adjudicate the trade-offs between corporate taxes and individual income taxes? Drawing from theories of international political economy and social psychology, we hypothesize that concerns about inter-jurisdictional rivalry and equity vis-à-vis individual tax burdens shape public support for corporate tax regimes. Leveraging survey experiments on nationally representative samples of American voters, we investigate how each factor shapes citizen preferences. We find, first, that baseline support for raising corporate taxes is high, and increases pointedly when citizens weigh fairness considerations in the decision to tax capital versus labor. The second experiment places citizens in the role of policymakers deciding how to respond to tax-competition from rivals. Here, citizens allow tax-competition to affect their optimal tax rates, and fairness considerations do not attenuate preferences. When the U.S. is directly pitted against economic competitors, voters de-prioritize equity concerns in determining preferences over corporate tax rates. Our findings indicate that political rhetoric influences how citizens adjudicate trade-offs in corporate taxation: elites might be able to offset broad-based support for higher corporate taxes by invoking rivalry considerations.

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<sup>&</sup>lt;sup>‡</sup>We thank Alessandra Casella, Lorenzo Crippa, Nina Eichacker, Peter Enns, Robert Gulotty, Adam Levine, Suzanne Mettler, Jamila Michener, Will Nomikos, Rick Moore, Lauren Pinson, Gerald Schneider, Mike Tomz, Steven Ward, Chris Way, and participants at the 2020 American Political Science Association Annual Meeting, 2021 International Studies Association Annual Meeting, and 2021 Midwest Political Science Association Annual Meeting for helpful comments. Aura Gonzalez, Simone Paci, and Kylan Rutherford provided excellent research assistance.

Taxation and redistribution are among the most important policy levers that governments use to address socioeconomic inequality. Scholars and policymakers have paid considerable attention to explicating the determinants of public opinion regarding individual income taxes, as well as other forms of taxes paid by citizens, such as estate taxes and sales taxes (cf. McCall and Kenworthy 2009; Williamson 2017). Individual income taxes are theoretically linked with corporate taxes, yet our understanding of how voters adjudicate the trade-offs involved when governments attempt to raise revenues through corporate taxes vis-à-vis individual income taxes remains sharply limited. This is a notable omission. Debates over the appropriate extent and scope of corporate taxation—whether at the local, state, national or international level—have captured political attention in recent periods. They featured prominently in campaign platforms during the run-up to the 2016 presidential election, informed President Trump's 2017 corporate tax policy overhaul, and continue to shape international negotiations to implement a global minimum corporate tax rate. As policymakers devise taxation regimes that are equitable, enjoy mass support, and protect national competitiveness in the global economy, understanding the factors that shape individual attitudes regarding corporate tax policy becomes all the more a pressing task.

What are the determinants of public opinion on corporate tax policy? This paper presents a theoretical framework and a series of experimental tests to study the drivers of mass preferences related to business taxation. Theoretically, we hypothesize that rivalry and equity considerations have opposing effects on the public's preferences. On the one hand, global competitiveness concerns should lead individual voters to come out in favor of lower corporate tax rates. To the extent that nations compete with one another on corporate tax policy milieus in order to attract multinational corporations, voters should prefer lower tax rates as a necessary policy maneuver aimed at maintaining a competitive national advantage in the global economy. Underlying this perspective, citizens view lower corporate tax rates as a channel to maintain the domestic business presence needed to spur employment, investment, and growth. On the other hand, because corporate taxes represent a key source of government revenue, either augmenting or serving as a substitute to individual income taxes, preferences regarding corporate tax policy are predicted to be shaped by equity considerations. Voters may prefer taxing corporations at higher rates based on the premise of a societal contract in which capital owners are responsible for sharing gains with labor. According to this logic, norms of fairness should lead voters to support the state-led redistribution of corporate

earnings, especially as they weigh the tradeoff between funding welfare state policies through either corporate or individual income taxes.<sup>1</sup>

In order to adjudicate between the theoretical considerations related to the global and domestic political context discussed above, we conducted two survey experiments on a nationally representative sample of American adults. Our research design consisted of two points of randomization in which respondents were asked to view theoretically-relevant information predicted to inform preferences regarding corporate tax rates. In the first experiment, respondents were assigned to one of four conditions: a control condition, an equity treatment, a rivalry treatment, or a combined equity and rivalry treatment. To invoke equity considerations, we first elicited respondents' ideal preferences regarding the share of federal tax revenues raised from of corporate taxes and individual income taxes, and then presented respondents with the actual contributions of both types of taxes to the federal budget. Noteworthily, we document a wide chasm between ideal and actual contributions, with citizens vastly preferring higher corporate taxes than those actually in effect. We highlighted rivalry broadly, presenting respondents with information regarding global tax competition and its effect on corporate mobility and, in turn, macroeconomic outcomes such as employment, investment and innovation.

In this experiment, we find that baseline support for increasing corporate taxes is high; 63% of respondents in the control group advocated for business tax hikes. This support received a substantial boost (12 percentage points, p < 0.00) when respondents weighed equity considerations associated with the relative tax burdens of capital and labor. Importantly, the effect of broadly described rivalry considerations is minimal. Both when rivalry is primed independently and in tandem with fairness considerations, it does not qualitatively shift support.

That fairness norms appear to guide mass preferences on business preferences so strongly is instructive. It helps explain trends in historical aggregate public opinion data on preferences toward corporate taxation that we independently analyze and report: There is substantial support among the American citizenry for raising taxes on corporations, and this support has in fact grown considerably since the 1950s. Yet, this high level of support for corporate taxes that we identify in our experimental and observational analyses parallels an opposite trend; as we document, countries

<sup>&</sup>lt;sup>1</sup>Importantly, politicians routinely highlight these tradeoffs in political rhetoric surrounding corporate tax policy debates, suggesting that election-minded officeholders view these theoretical considerations to be important drivers of public opinion on tax policy.

around the world have largely lowered corporate tax rates over the last half century.

Our second experiment helps provide an answer to this puzzle. It probes preferences when respondents are forced to consider the threat of businesses moving capital from the U.S. to countries with lower corporate tax rates. In this study, citizens assumed the role of policymakers deciding how to respond to precisely specified tax-competition threats from peer-group economic rivals. Respondents were first randomly assigned to either a control condition or a fairness treatment. The fairness treatment alerted respondents to the tradeoff that governments seeking to maintain revenue bases face between lowering corporate tax rates and raising individual income taxes. The primary experimental interventions in this study pertained to the provision of information related to the specific corporate tax rate of a set of competitor nations juxtaposed with the current U.S. corporate tax rate. Respondents either received notice of a higher or a lower competitor corporate tax policy.

We find that citizens respond in line with race-to-the-bottom globalization theories, allowing tax-competition to affect their preferred tax rates. When presented with a lower-rate competitor, the preferred U.S. corporate tax rate falls by seven percentage points (p<0.00). In other words, tangible, explicit trade-offs associated with rivalry significantly shifted public opinion on corporate tax policy. Notably, we find that equity considerations play no role in attenuating these preferences. Taken together, these results help shed light on the seemingly discordant gap between public opinion and policy related to corporate taxation. There is considerable mass support for raising corporate tax rates in the U.S., and equity considerations are key drivers of this support. Yet when rivalry is operationalized to mirror the real-world, where the U.S. is directly pitted against economic competitors, voters are willing to suppress equity concerns and support lowering corporate taxes. The theoretical mechanisms in globalization theory guide public opinion, leading voters to become willing to accommodate decreases in the corporate tax rate.

These findings suggest that elite-led messaging around corporate taxes can have significant effects on the preferences of the mass public, and that the content of political rhetoric regarding corporate taxation is important. Elites may be able to offset the public's aversion to lowering business taxes by invoking rivalry considerations in public discourse. We conclude by presenting an analysis of media and elite rhetoric surrounding corporate taxation in the U.S. in recent years, finding that rivalry considerations are much more frequently invoked than equity considerations. The relationship between political rhetoric and policy support that we highlight potentially helps

explain policymaking dynamics surrounding business tax regulations, while informing debates about the role of the private sector in supporting the size and scope of the welfare state.

## Public Policy and Public Opinion on Corporate Taxation

We begin by documenting that at the international level, the trajectory of corporate taxation rates across countries depicts a clear and widespread downward trend since the 1950s. As illustrated in Figure 1, over the last seventy years, the OECD average has almost halved, from just under 50% to around 25%. Already noticeable in the 50s and 60s, this downward trajectory appears to have gained speed in the past three decades, with sharp rate cuts across countries. In line with the predictions of theories of international tax competition, these empirical observations provide prima facie evidence for a race-to-the-bottom in capital taxation as economic globalization has increased.

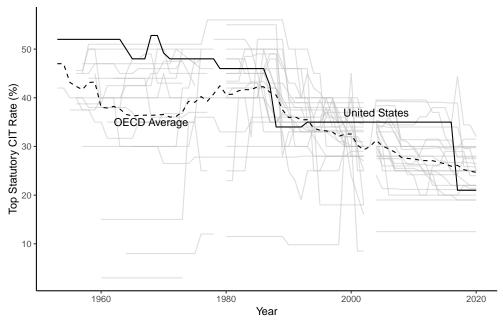


Figure 1: Top Statutory Corporate Tax Rate Across Countries (1952-2020)

The top statutory rate refers to the marginal rate in the highest bracket for corporate taxation, excluding deductions and preferential provisions. The figure covers 30 OECD countries. Additional details provided in the Appendix. Sources: World Tax Database; OECD.

Figure 1 also indicates that the American experience matches the overall worldwide trend toward lower corporate taxation. Indeed, present-day American corporations face tax rates less than half as high as their 1950 counterparts. The historical trend highlights the impact of the Reagan-era

reforms in the late 80s and the more recent cuts under the Trump administration. Additionally, while the U.S. rate tracks the larger global trend, the graph evidences a degree of lag. Aside from the immediate aftermath of the two reforms, for the greater part of the covered interval, the American rate is above the OECD average and ranks toward the higher end of the global distribution. Finally, it is worth emphasizing that although corporate tax rates slope downwards, they never reach zero.

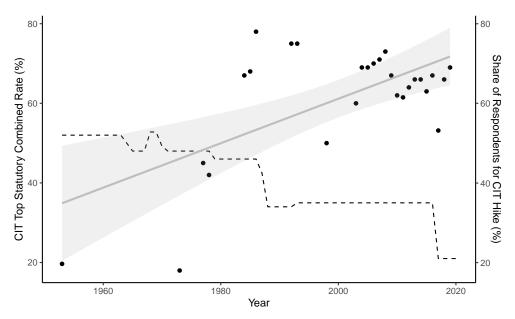
Given this downward trajectory in corporate tax rates, which has been noted extensively in existing scholarship (cf. Christensen and Hearson 2019), how have mass preferences toward corporate taxation evolved over time? To interrogate this question, we compare aggregate policy changes with historical public opinion data in the United States, reconstructing trends in popular support for corporate tax policy outcomes. In order to map the evolution of public opinion, we gathered all available public opinion sources on this topic and aggregated responses across surveys.<sup>2</sup> This exercise allowed us to go beyond the span of any single survey panel and ascertain trends in American public opinion dating back to the post-war era.

In Figure 2, we contrast the top statutory corporate income rate (dashed line) with the share of respondents in public opinion polls who expressed support for increasing U.S. corporate income taxes across surveys, displayed as a scatter plot with a linear fit line. As the graph illustrates, the American experience of the past half century exhibits a strong disconnect between public policy and public opinion on corporate taxation. On the one hand, as discussed above, public policy regarding the corporate tax rate follows the global downward path. On the other hand, over the same time period, American public opinion moved in the *opposite* direction. Since the late 1980s, at least 70% of U.S. adults have supported increases of the tax burden shouldered by American corporations. Importantly, the period of majoritarian public support for business tax hikes covers both sharp drops in the U.S. rate.<sup>3</sup>

<sup>&</sup>lt;sup>2</sup>Ideally, our analysis would rely on panel survey data posing identically worded question over time. Unfortunately, no single public opinion firm has polled the American public on corporate taxation in such a consistent manner. At the same time, given that several pollsters have probed where Americans stand on the topic of corporate taxation, we are able to leverages a wealth of data collected from a diverse range of sources to reconstruct temporal changes in public opinion.

<sup>&</sup>lt;sup>3</sup>Aggregating across polling sources entails working with heterogeneous question formats; in order to maximize consistency, Figure 2 draws on bidirectional closed-choice questions that asked on a three-point scale whether respondents supported raising, lowering, or keeping unchanged the U.S. corporate tax rate, and presents the percentage of respondents supporting increasing rates. Appendix Figure 10 presents data on the percentage of respondents expressing support for lowering the corporate tax rate, leaving the corporate tax rate unchanged, or not expressing an opinion. Appendix Figure 11 presents this data in the form of yearly-average trend lines rather than linear trend lines. Finally, Appendix Figures 12 and 13 probe whether alternative question phrasing—in particular, unidirectional questions that focused on either only corporate tax cuts or hikes—influenced responses. Noteworthily,

Figure 2: Public Support for Increasing the Corporate Tax Rate and the Top Statutory Corporate Tax Rate in the U.S. (1950-2020)



This graph provides a linear trend illustrating the share of the American public that supported increasing U.S. corporate tax rates (solid line). It also maps the U.S. top statutory corporate tax rate (dashed line). The Appendix provides trend lines reflecting public opinion on other responses, as well as further details on data gathering and aggregation. Sources: IRS for the US rate; Roper Database for Public Opinion Data.

This apparent contrast between public policy and public preferences is puzzling. At a minimum, it raises the question as to why, when considering the politics of corporate taxation, consistent popular demand for higher taxes has not been met with a corresponding policy response; public opinion and policy rates have instead moved inversely. An immediate explanation for these discordant trends is that the public at large does not matter for corporate taxation, and that policymakers cater to other constituencies (e.g., businesses) when setting corporate tax rates (cf. Smith 2000).<sup>4</sup> Yet there are strong theoretical connections between the politics of corporate taxation and individual income taxation, and scholarly work, to which we now turn, documents a central role for public opinion in the setting of both income tax (Williamson 2017) and corporate tax policies (Plümper, Troeger and Winner 2009).

across all of theses analyses a similar pattern emerges. There appears to be increasing demand for corporate tax hikes, irrespective of question types and modes of aggregation.

<sup>&</sup>lt;sup>4</sup>For scholarship on the political power of corporations, see: Bachrach and Baratz 1962; Lindblom 1982; Gourevitch and Shinn 2007; Hacker and Pierson 2002, 2011; Korpi 2006; Vogel 1989; Moe 2005.

## Theoretical Determinants of Public Opinion on Corporate Tax Policy

Our starting point for examining the determinants of mass preferences regarding corporate taxes is the theory of international tax competition. This literature explicates how competition for mobile capital in the global economy leads countries to alter their general tax policy regimes and lower corporate taxes in order to attract investment (cf. Diamond and Mirrlees 1971; Gordon and Hines 2002; Hines and Summers 2009).<sup>5</sup> Tax competition occurs when a government alters its overall tax policy applicable to all firms within its jurisdiction in order to attract overseas investment or prevent domestic corporations from relocating abroad.<sup>6</sup> Corporate taxes feature as the most salient policy lever for attracting investment from overseas corporations.

The mobility or the potential mobility of economic activity, as well as the sensitivity of firms to tax rate differences across jurisdictions, drives the incentive structure of governments setting taxes. If there are many jurisdictions producing a single identical good that relies on a combination of immobile inputs like land and labor as well as mobile capital, and if governments raise revenues by taxing the different factors of production, then in the absence of international coordination, governments will face incentives to lower tax rates on the internationally mobile capital. There is downward pressure on the corporate tax rate because increased international capital mobility and the resulting competition for foreign direct investment incentivizes governments to court firms with lower tax regimes. Governments lower corporate tax rates because they compete for the macroeconomic benefits—such as increased employment and innovation—associated with domiciling firms within their own jurisdictions:

Rising levels of worldwide foreign direct investment have the potential to trigger rounds of competitive business tax reductions, as countries seek to attract the employment opportunities, productivity spillovers, and other economic benefits commonly associated with greater investment, particularly foreign investment. Countries have incentives to reduce business tax rates if they believe that lower tax rates will be associated with greater economic activity, a higher tax base, or both. (Hines and Summers 2009, 130)

An key prediction arising from international political economy theories of competition for

<sup>&</sup>lt;sup>5</sup>For the literature in international political economy on tax competition, see: Binder 2019; Christensen and Hearson 2019; Eskelinen and Ylönen 2017; Martin and Swank 2004; Rixen 2011b; Sharman 2010; Strange 1996; Swank and Steinmo 2002. For the scholarship in economics, see: Bucovetsky and Wilson 1991; DePeter and Myers 1994; Oates and Schwab 1988.

<sup>&</sup>lt;sup>6</sup>Brittain-Catlin 2006; Johnston 2003.

investment is that increased capital mobility results in downward pressure on capital taxes, with immobile factors like labor bearing a larger share of taxation for governments seeking to maintain their revenue bases. According to Swank and Steinmo (2002, 642-645), for example, globalization theory predicts that there should both be "notable declines in effective tax rates on capital income, corporate profits, and high income earners" and "shifts toward taxation of relatively immobile factors." Rixen (2011b, 209) notes specifically that with globalization, "tax burdens are shifted from capital income to labour income," and that "lowering nominal corporate tax rates undermines the progressivity of personal income taxes." The opposing trajectories of taxes on mobile and immobile factors of production have been observed across both industrialized and emerging economies. Swank (2016, 185) finds, for example, that "in the developing world, international liberalization has also been associated with reduced revenues from trade taxes and increased pressures for expansion of the value added tax and income tax revenue intake." Together, these trends are what Desai (2012, 3) describes as "the cruel logic of corporate tax in a global economy—that its burden falls most heavily on workers."

We note at the outset that the race-to-the-bottom theory of corporate tax policy is an aggregate, national-level theory. Governments—driven by policymakers and elites—set corporate tax policies after weighing how capital mobility and labor immobility affects investment decisions that impact the country's corporate tax base and have knock-on effects on other parts of the economy. But while policymakers are the decision-makers in conventional accounts, there are two theoretical reasons why citizens as voters are key players of influence in setting of corporate tax policy.

First, motivating lower corporate taxes is the desire for inward investment by multinational corporations that is predicted to increase national income and economic growth by generating employment, educating work-forces, transferring managerial experience and technology, and spurring investment. That is, lower corporate tax revenues are rationalized by the macro-economic gains that are projected from higher investment flows. The public opinion literature has shown that voters care deeply about the impact of policy regimes on economy-wide outcomes (cf. Cruces, Perez-Truglia and Tetaz 2013; Fernández-Albertos and Kuo 2018; Kuziemko et al. 2015; Mohan,

<sup>&</sup>lt;sup>7</sup>This view is echoed in Frieden (1991, 434)'s claim that "increasing the options of capital presumably reduces those of labor by making it less costly for capital to move rather than accede to labor demands." See also Christensen and Hearson (2019) and Dietsch and Rixen (2016, 10), which points "to the fact that corporate taxation acts as a backstop for income taxation."

<sup>&</sup>lt;sup>8</sup>See also: Culpepper 2010; Dietsch and Rixen 2016; Mosley 2000; Oatley 2019; Rixen 2011a.

Norton and Deshpandé 2015). This indicates that the relationship between inter-jurisdictional competition, tax policies, and economy-wide outcomes is potentially of considerable importance to voters, shaping mass preferences over a country's overall tax policy regime. We dub these as "rivalry considerations" in the shaping of public opinion on corporate tax policy. Our research design will examine explicitly whether and how voters weigh rivalry when determining their preferred domestic corporate tax rates.

As discussed, the corollary of lower corporate taxes in international tax competition theory is higher taxes on immobile assets such as labor since governments must offset lower revenues from capital taxes by obtaining higher revenues from individual income taxes. This relationship points to the second reason why voter preferences are ingredients in the politics of corporate tax policymaking. An expansive literature documents that public opinion is a central determinant of income tax policy outcomes. Given the substitutability of corporate taxes and individual income taxes, mass preferences must logically constrain corporate tax policies as well.

Based on what factor do voters adjudicate the trade-offs between corporate taxes and individual income taxes? We focus here on "equity considerations." The tax preferences literature argues that fairness is a dominant concern driving public opinion on income taxation. Fairness centers around who pays taxes, how much, and relative to whom. While fairness has been studied extensively in the public opinion literature on taxation and redistribution, it is also predicted to influence the trade-offs between corporate taxes and individual income taxes, with voters demonstrating sensitivity to the relative contributions of capital versus labor to government budgets.

Citizens prefer avoiding taxes on immobile factors on equity grounds. Hakelberg (2016, 513) notes that "fairness concerns voiced by the electorate ... are likely to constrain any government in shifting the tax burden away from corporations and towards consumers and employees." According to Genschel (2002, 263), "it is difficult to gain popular acceptance for high taxes on labor ... Why should poor laborers pay more taxes than wealthy capital owners? Maintaining a certain level of perceived fairness is important." Equity norms held by the public play key roles in formal models

<sup>&</sup>lt;sup>9</sup>Bartels 2008; Cavaillé and Trump 2015; Compton and Lipsmeyer 2019; Corneo and Grüner 2002; Goerres, Karlsen and Kumlin 2018; Mettler 2011; Trump 2018.

<sup>&</sup>lt;sup>10</sup>In economics, see: Alesina and Angeletos 2005; Benabou and Ok 2001; Durante, Putterman and van der Weele 2014. For political science scholarship, see: Alt and Iversen 2017; Clark and D'Ambrosio 2015; Feierherd, Schiumerini and Stokes 2020; Kelly and Enns 2010; Lupu and Pontusson 2011; McCall et al. 2017.

<sup>&</sup>lt;sup>11</sup>See also: Kuziemko et al. 2014; Atkinson, Piketty and Saez 2011; Nair 2018.

<sup>&</sup>lt;sup>12</sup>Additionally, Swank (2006, 856) argues that as a result of "the redistributive character of the corporate and

seeking to explain why corporate taxes do not converge to zero in the global economy.<sup>13</sup> Plümper, Troeger and Winner (2009, 762-766) argues that "societal demand for tax equity" and the fact that the "the domestic electorate favors a low tax burden" prevents a race-to-the-bottom in capital taxes. Basinger and Hallerberg (2004, 267) summarize:

Any reduction in one tax might force a government to reduce spending, increase deficits, avoid repaying debt, or shift the tax burden (such as onto less mobile factors of production). A governing party's constituents' preferences affect the costs of each of these options.

The discussion above highlights that voters are theoretically predicted to weigh both rivalry and equity considerations while developing attitudes toward corporate tax policy, and that these preferences influence policy outcomes. Yet the public opinion scholarship hasn't to our knowledge systematically examined the determinants of individual attitudes regarding business taxation. Do voters respond to rivalry rationales by supporting lower domestic corporate tax rates? Or do they support higher corporate taxation when primed to consider norms of fairness related to corporate and individual income taxes? These questions motivate our research design, to which we turn.

## Research Design

To measure citizen preferences for corporate taxation, we employ two survey experiments that operationalize our theoretical framework. We recruit respondents by contracting the firm Lucid to direct a nationally representative online panel to our surveys hosted on the Qualtrics survey platform (Coppock and McClellan 2019). The treatments as viewed by respondents are shown in the Appendix.

### Experiment 1

In the first experiment, we adjudicate between two distinct theoretical considerations when citizens form preferences for corporate taxation vis-á-vis individual taxes. To this end, respondents

personal income tax system ... influential portions of mass electorates are likely to resist rapid and deep neoliberal policy change." See also: Garrett (1995, 671), Swank and Steinmo (2002, 646), Steinmo (1994, 13).

<sup>&</sup>lt;sup>13</sup>Note that there are several reasons why corporate taxes do not reach zero percent in practice. Countries that provide public goods or facilitate other forms of economic rents may be able to extract taxes from firms so long as after-tax profit margins are high. See also: Hakelberg and Schaub 2017; Haufler and Wooton 1999; Swank 2016.

are randomly assigned—with equal probabilities—to one of four treatments: a control condition, a fairness treatment, a rivalry treatment, or a combined fairness and rivalry treatment.

Respondents assigned to the control condition view excerpts from an article on the environmental effects of plastic bag bans. Those assigned to the *fairness treatment* condition view information on two pages. On the first page, they are asked what percentage individuals and corporations each *should* contribute to overall federal tax revenue. For example, if a respondent states a split of 40%-60% between individuals and corporations, this means that the respondent believes that 40% (60%) of total federal tax revenue should be paid for by individuals (corporations). Immediately following this question, respondents are presented with information on a second page which compares their ideal contribution split between individuals and corporations with the actual figures: in 2018, of the contributions made by individuals and corporations to federal tax revenue, 93% was from individual income taxes and payroll taxes while 7% was from corporate income taxes paid on profits.<sup>14</sup>

It is important to note that the fairness treatment is "bundled" by design. The first component, which elicits ideal preferences, primes respondents to think about what is equitable when individuals and corporations contribute to the common pool. The second component, which compares respondents' ideal preferences to the actual contributions of individuals and corporations, makes salient any divergence between what was thought to be fair and the actual state of the world. Implicit in this setup is an expectation that respondents will prefer corporations to contribute more to tax revenues than they currently do, thereby priming considerations of fairness. The rationale for this expectation derives from previous work showing that citizens vastly underestimate distributional inequalities as well as our own pilot studies (see, e.g., Norton and Ariely (2011); Kiatpongsan and Norton (2014)).

Separate from the fairness treatment, respondents can also be assigned to a rivalry treatment.

 $<sup>^{14}</sup>$ In 2018, the federal government raised \$3.3 trillion in tax revenues. Individual income taxes, corporate income taxes, social insurance and retirement receipts, excise taxes, and other sources accounted for 51%, 6%, 35%, 3%, and 5% of total revenue (White House Office of Management and Budget). We combine individual income taxes and social insurance and retirement receipts (payroll taxes) as taxes paid by individuals on their income; while in theory employers and employees split the payroll tax burden, it has been well established that a disproportionate share of employer contributions are withheld from employee wages. As excise taxes and other sources make up a relatively small share of total tax revenue (less than 10%), and both for the sake of tractability and because fairness norms in globalization theory relate specifically to the relative tax burdens of capital and labor, we limit our attention to the contributions of individuals and corporations. Normalizing these two categories, such that they add to 100%, individuals contribute (51 + 35)/(51 + 35 + 6) = 93% and corporations contribute 6/(51 + 35 + 6) = 7% to total federal tax revenue.

Those assigned to this treatment view a short, broadly-worded vignette that describes how nations compete for corporate tax revenue by adjusting their corporate tax rates to be lower than economic rivals. Additionally, the treatment spells out the consequences for higher-tax jurisdictions of losing companies to lower-tax competitors—that corporate flight could lead to loss of tax revenue and jobs, while making the economic climate less competitive and less attractive for innovative companies.

The main outcome measure asks respondents whether federal tax rates should be adjusted so that corporations contribute a greater, lesser, or unchanged share to total tax revenues. Respondents are told that federal spending will remain at the current level, thus for corporations to contribute more (less) to total tax revenue, the corporate tax rate would be increased (decreased). Correspondingly, respondents are told that increasing (decreasing) the corporate tax rate would decrease (increase) the average tax rate for individuals/households.

### Experiment 2

While Experiment 1 tests a precise conceptualization of fairness, the rivalry treatment is broader and thus more abstracted from real-world dynamics of countries competing by setting corporate tax rates. In Experiment 2, we home in on rivalry by making the competition between national economies explicit. Respondents who are assigned to either the control or rivalry treatment conditions in Experiment 1 proceed to this follow-on study.<sup>15</sup>

In Experiment 2, all respondents are shown introductory text that is exactly the same as the rivalry vignette in Experiment 1. Following this, respondents are randomly assigned—with equal probability—to either a control or fairness treatment. In the control condition, respondents do not view any additional information. Those respondents assigned to the fairness treatment view a brief vignette that explains the short-term implications of lowering (raising) the corporate tax rate, while keeping government spending fixed: in order to address the resulting shortage (excess) of revenue, individual income taxes could be raised (lowered).

Following this first treatment arm, respondents proceed to the main outcome measure, which includes an embedded second treatment. Respondents are told that the U.S. corporate tax rate is 26% and that government spending will remain at the present level. The U.S. corporate tax rate is

 $<sup>^{15}</sup>$ In other words, respondents who had been assigned to either of the fairness conditions were excluded in Experiment 2.

then compared to those of some other countries that compete to attract companies—this competitor tax rate is randomly assigned to be 12%, 19%, 33%, or 40%. Immediately following, respondents are asked what they believe the US corporate tax rate should be, and are provided with a slider scale to adjust the U.S. tax rate (set at 26%) in either direction, should they choose.

The main outcome measure is designed to mirror the policy decision elites face when determining corporate tax rates. In this regard, respondents are anchored to the current U.S. corporate tax rate while primed to consider the U.S. as either being—with equal probability—more or less competitive than rival countries. This more exact approach to testing rivalry is contrasted with a fairness treatment that is now broader, relative to Experiment 1. The fairness treatment in Experiment 2 is intended to prime respondents to consider the immediate consequences of raising or lowering corporate tax rates vis-á-vis individual income taxes.

#### **Outcomes and Estimation**

We primarily compare outcomes between the treatment groups of interest by using differences-of-proportions and differences-in-means hypothesis tests. For each experiment, we categorize outcomes into families by the theoretical importance of the preference being measured. If a family contains more than one outcome and/or there is more than one comparison of interest between experimental groups, we implement the Benjamini-Hochberg correction ( $\alpha = 0.05$ ) for multiple comparisons when reporting statistical significance (Benjamini and Hochberg, 1995). We preregistered the study on the Evidence in Governance and Politics online registry.

## **Empirical Results**

#### Experiment 1

The goal of Experiment 1 was to measure baseline support for increasing, decreasing, or leaving unchanged the U.S. corporate tax, and to compare this support with preferences under three treatment conditions: when fairness considerations were elicited, when rivalry was primed, and when both fairness and rivalry were invoked. Recall, our strategy to trigger equity considerations involved self-reflection. Without any priming, respondents were asked to disclose their ideal preference for the share of the federal budget that should be raised from corporate taxes and individual income

taxes. They were then provided factual information regarding the proportional contributions of corporate and individual income taxes to federal tax revenues in 2018. Noteworthily, a qualitatively meaningful gap—both in direction and magnitude—separates respondents' ideal tax contributions and tax contributions from both sources in reality, as Table 1 attests.

Table 1: Percentages of Sources to Federal Tax Revenues in 2018

Ideal and Actual

Item	Estimate	SdError	Actual
Individuals	39.63	0.48	93.00
Corporations	60.37	0.48	7.00

Table 1 shows that on average, respondents reported that the percentage of federal tax revenues paid for by individuals/households and corporations should be 40% and 60%, respectively. In 2018, however, individual income taxes constituted the lion's share—an astronomical 93%—of revenues raised from both sources. Corporate taxes, meanwhile, represented proportionally only 7% of combined revenues. Alerting respondents to the difference between their own expressed ideal contributions and the actual contributions from both taxation sources was designed to evoke equity considerations. Manipulation checks, reported in Appendix Figure 8, corroborate that this treatment operated in its intended manner. To

What were our respondents' preferences regarding corporate taxation, and did the experimental treatments shift their attitudes? Figure 3, panel (a), reports results across the four groups in Experiment 1. Table 2 presents estimates of group-wise comparisons across all treatments of interest. We start by scrutinizing baseline preferences in the control group, i.e., subjects who were asked to read an article about the recycling of plastic bags. Interestingly, the majority—63% of respondents—supported increasing the corporate tax rate. In this condition, 27% of subjects were in favor of leaving corporate taxes unchanged, and 10% expressed a desire to decrease corporate taxes. This baseline distribution of preferences is telling; it corresponds with the historical public opinion data that we analyzed in Figure 2, which reported strikingly similar proportions of the

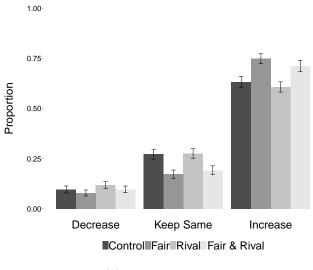
<sup>&</sup>lt;sup>16</sup>Note that approximately 70% of respondents assigned to Fairness Treatment accurately state that their ideal is less (greater) than actual contributions of individual (corporate) taxes.

 $<sup>^{17}</sup>$ Our manipulation check responses are analyzed specifying one-sided alternative hypotheses that the manipulation was successful.

American public expressing support for raising corporate taxes in recent years (see also Appendix Figure 10 for comparisons of support for decreasing and leaving unchanged corporate tax rates).

Figure 3: Support for Altering Corporate Tax Rate

(a) Support



(b) Support Increase

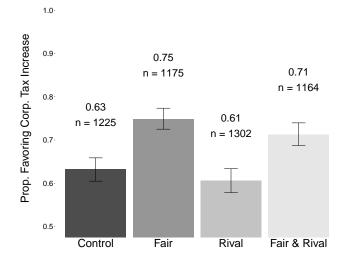


Figure 3, panel (b), zeroes in on the impact of our experimental treatments on *support for increasing corporate taxes*, which we identified in our pre-analysis plan as our *primary outcome* of interest. We first analyze the impact of the fairness treatment. Triggering norms of equity—by alerting respondents to the gap between the actual contributions of corporate and individual

income taxes to federal revenues and respondents' own expressed ideal contributions—produced a substantial boost in support for raising corporate taxes. Respondents in this group were 12 percentage points (p < 0.00) more likely to express support for increasing corporate taxes. This lift in support largely came at the expense of the "Keep Same" category, which registered a statistically significant drop in support; the effect of the fairness treatment on those wishing to decrease corporate taxes was indistinguishable from zero.

In Experiment 1, our rivalry treatment was administered by means of a broad vignette, alerting respondents that "differences in national corporate tax rates often cause companies to move from countries with higher tax rates to countries with lower tax rates." Figure 3 panel (b) shows that the effect of this treatment was qualitatively small (2 percentage points) and only marginally significant (p < 0.10). This drop in support came entirely at the expense of those wishing to reduce corporate taxes. When the fairness and rivalry treatments were presented together, the effect of fairness prevailed. Compared to the control condition, respondents were eight percentage points more likely to support increasing corporate taxes (p < 0.00), and this support came entirely from those wishing to leave corporate taxes unchanged (p < 0.00).

Finally, when comparing levels of support for increasing corporate taxes across the fairness and rivalry conditions, we note a significant chasm. Respondents who were primed to consider rivalry considerations were 14 percentage points (p < 0.00) less likely to support corporate tax increases compared to those from whom fairness considerations were elicited. Rivalry condition respondents were more likely to wish to leave corporate taxes unchanged (10 percentage points, p < 0.00) and to lower corporate taxes (4 percentage points, p < 0.00).

In the Appendix, we show that the experimental results documented in Figure 3 are robust to variations in measurements of degrees of support. Appendix Figure 5 compares the proportion of respondents expressing support for altering corporate tax rates with those that very strongly supported altering corporate tax rates. There is a 13 percentage point (p < 0.00) increase in the proportion of respondents expressing very strong support for increasing corporate taxes in the fairness condition relative to the control. The rival condition has only a marginal impact (2 percentage point decrease in support). The difference between fairness and rivalry is large (15 percentage points, p < 0.00), and when fairness and rivalry are combined, there is a seven percentage point (p < 0.00) increase in support for taxing corporations. In Appendix Table 6, we show that

Table 2: Main Outcomes Experimental Comparisons

Response	Treatment 1	Treatment 2	Est 1	Est 2	Diff	Alt Hyp	P-val	Adj p-val
Increase	Control	Fair	0.63	0.75	0.12	1.00	0.00	0.00
Increase	Control	Rival	0.63	0.61	-0.03	1.00	0.08	0.08
Increase	Fair	Rival	0.75	0.61	-0.14	1.00	0.00	0.00
Increase	Control	Fair & Rival	0.63	0.71	0.08	2.00	0.00	0.00
Keep Same	Control	Fair	0.27	0.17	-0.10	2.00	0.00	0.00
Keep Same	Control	Rival	0.27	0.27	0.00	2.00	0.82	0.82
Keep Same	Fair	Rival	0.17	0.27	0.10	2.00	0.00	0.00
Keep Same	Control	Fair & Rival	0.27	0.19	-0.08	2.00	0.00	0.00
Decrease	Control	Fair	0.10	0.08	-0.02	2.00	0.18	0.24
Decrease	Control	Rival	0.10	0.12	0.02	2.00	0.05	0.09
Decrease	Fair	Rival	0.08	0.12	0.04	2.00	0.00	0.00
Decrease	Control	Fair & Rival	0.10	0.10	0.00	2.00	0.95	0.95

there is a 12 percentage point (p < 0.00) increase in the proportion of respondents either strongly or very strongly expressing support for increasing corporate taxes in the fairness condition relative to the control. The effect of rivalry in insignificant, and when fairness and rivalry are primed in combination, there is a seven percentage point (p < 0.00) increase in support.

Finally, we investigated whether our treatments impacted preferences that are outside the tax policy domain. To this end, we asked two secondary outcome questions regarding support for antitrust regulations (i.e., "the government should break up large corporations") and corporate campaign finance policies ("the government should restrict business money in politics"). In our pre-analysis plan, we noted that we do not have strong theoretical expectations regarding the presence and direction of these potential spillover effects, and hence specified two-sided hypothesis tests. Appendix Figure 7 presents the results of our experimental primes on these secondary outcomes. Interestingly, the effects of our fairness prime appear limited to the tax domain; there are only muted knock-on effects on preferences regarding antitrust and campaign contributions, although we note that when both fairness and rivalry are primed, support for regulation rises.

Taken together, the results from Experiment 1 indicate that considerations of fairness—specifically, fairness in adjudicating the relative tax burden of capital and labor that lies at the heart of global tax competition theory—are a significant determinant of public attitudes regarding corporate taxation. When asked to explicitly weigh the trade-off that governments face in raising revenues from capital and labor, American voters shift support toward

taxing capital. The effect is qualitatively meaningful and precisely estimated. For the "support increase" outcome, there is a significant effect for all groups that viewed the fairness prime; this is notable, as support for raising taxes on capital is already high at baseline. In contrast, rivalry, when primed in a general sense, appears to neither weaken this support substantively nor temper the effect of the fairness treatment, and when rivalry and fairness are combined, fairness dominates. Evidently, a referendum to raise corporate taxes would pass muster and win majoritarian support under all conditions in Experiment 1.

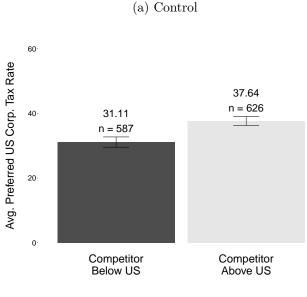
### Experiment 2

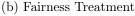
In Experiment 1, we tested whether rivalry considerations—when primed broadly by outlining the underlying logic of global tax competition—have an effect on mass preferences. Yet globalization theory predicts step-wise decreases in corporate tax rates both when governments weigh competition dynamics broadly and when governments consider the tax rates adopted by specific sets of competitor nations in the global economy. We therefore wanted to examine whether and how voters responded to distinct tax rates in cohorts of nations that either did or did not threaten the competitiveness of the U.S. economy. Experiment 2 was in turn designed to examine the effect of finely specified threats in tax competition theory.

Recall that the experiment provided respondents with information comparing the current U.S. corporate tax rate (26%) with the average corporate tax rate in "some other countries that compete in the global economy to attract companies." Competitor tax rates were randomly assigned at 12%, 19%, 33%, or 40%. In our pre-analysis plan, we specified that for the purposes of our main analysis, we would combine the 12% and 19% rates into a lower-than-the-U.S. corporate tax rate treatment and the 33% and 40% rates into a higher-than-the-U.S. corporate tax rate treatment, and measure if and how respondents shift their preference regarding the optimal corporate tax rate in the U.S. Orthogonal to the four rivalry treatments, respondents were assigned to either a control or fairness treatment. Here, we adopted an inverse approach compared to Experiment 1, priming fairness broadly by pointing out that "lowering the corporate tax rate would leave the government with less revenues" such that "individual income taxes could be raised." Note, as discussed, that only respondents who were assigned to the control or rivalry treatments in Experiment 1 participated in Experiment 2, a design adopted to ensure that Experiment 2 subjects had not previously received

any priming related to fairness.

Figure 4: What should the US corporate tax rate be?





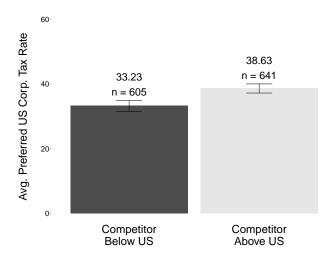


Figure 4 presents the main results of Experiment 2. We begin by analyzing the effect of the rivalry treatments in the control condition (upper panel). Being assigned to a consider a competitor nation that has a lower tax rate compared to a competitor that has a higher tax rate than the U.S. leads to a seven percentage point decrease (p < 0.00) in respondents' preference for America's optimal corporate tax rate. This is compelling evidence that voters respond to precisely defined threats related to competition for mobile capital in the global economy by supporting downward shifts in domestic corporate taxation.

It is instructive to interpret the results of Experiment 2 in the context of Experiment 1. In Experiment 1, we found broad-based support for increasing the U.S. corporate tax rate across all treatment conditions. Tellingly, a similar pattern appears in our Experiment 2 findings. Even when the competitor nation has a tax rate below the effective U.S. corporate tax rate, which voters were informed was 26%, respondents still chose to raise the U.S. rate to 31%. Nevertheless, they are sensitive—in both a substantively and statistically significant manner—to business competition threats provoked by economic rivals, reporting a 21% proportional difference in their ideal tax rate when evaluating higher- versus lower-tax competitors.

Do these competitive dynamics affect public opinion when fairness considerations are primed? For groups that received the fairness treatment, being assigned to consider a lower tax competitor results in a five percentage point decrease (p < 0.00) in one's preferred tax rate. Clearly, appealing to fairness in broad terms does not appear to mitigate the effect of precisely defined rivalry threats.

We analyze the independent and interactive effects of the fairness and rivalry treatments in Table 3. While lower tax rate rivals drive down preferences for the tax rate by six percentage points (p < 0.00), the fairness treatment has a far more modest overall effect (two percentage points, p < 0.05). More importantly, when we examine if the rivalry treatment has a different effect in the fairness condition vis-à-vis the control condition, we find that the difference-in-difference is insignificant.

<sup>&</sup>lt;sup>18</sup>Recall that while the outcome in Experiment 1 probed support for raising, lowering, or leaving unchanged the corporate tax rate following treatments administered via vignettes, the second experiment measured respondents' preference for the optimal U.S. corporate tax rate.

Table 3: Experiment 2 Results

	Model 1	Model 2	Model 3
(Intercept)	38.14	34.48	37.64
	[37.16; 39.12]	[33.43; 35.53	[36.27; 39.01]
Competito	r		
Below US	-5.96		-6.53
	[-7.45; -4.46]		[-8.61; -4.45]
Fairness		1.52	0.99
		[0.02; 3.03]	[-0.97; 2.94]
Competito	r		
Below US			
X			
Fairness			1.13
			[-1.86; 4.11]
Num. obs.	2459	2459	2459

Figure 4 and Table 3 aggregate the two lower and two higher tax rates when analyzing the effect of rivalry. In Appendix Figure 9, we present respondents' average preferred U.S. corporate tax rates for each of the four competitor tax rates (i.e., 12%, 19%, 33%, and 40%). The results are corroboratory. For lower tax competitors in both the control and fair treatment groups, there is little difference in tax policy responses. For higher tax competitors, a 40% tax rival prompts a marginally higher ideal tax rate preference relative to a 33% competitor.

We conclude by contrasting the results obtained across Experiment 1 and 2. Experiment 1 tested for fairness specifically by eliciting fairness norms as they pertain to the relative tax burden of labor and capital in global tax competition theory. Meanwhile, Experiment 1 primed rivalry in broad terms. We found that fairness had a notably large effect in Experiment 1. The effect of the rivalry prime was negligible and rivalry considerations were almost entirely dominated by fairness considerations. By contrast, Experiment 2 probed rivalry by specifically invoking the threats that arise when competitor nations lower tax rates—in line with the race-to-the-bottom mechanism in global tax competition theory—while testing fairness broadly. Here an opposite pattern emerges, with tangible, explicit trade-offs associated with rivalry emerging as a significant determinant of public opinion on corporate tax policy, and broad appeals to fairness playing no role in mitigating these effects. In both experiments, then, we find that broad frames are inadequate movers of individual attitudes, indicating that corporate tax policy preferences are sticky and don't shift

simply with positive or negative primes. By contrast, preferences shift when specific theoretical mechanisms in globalization theory are invoked and triggered, suggesting that the public responds to precisely defined theoretical predictors of individual attitudes on corporate taxation. These findings indicate that particular types of political rhetoric regarding corporate taxation are better suited in convincing the mass public to support revisions to the tax code. They also suggest that although baseline support for raising taxes is high, voters are willing to accept tax decreases when elites rationalize these by invoking specific tax competition threats in the global economy.

## Political Rhetoric on Corporate Taxation

These experimental results help shed light on why citizens, who disproportionately favor raising corporate taxes on equity grounds are willing to lend support to policies that lower corporate taxes. We focus here on the role of political rhetoric in shaping citizen preferences. It is noteworthy that the U.S.—until President Trump's corporate tax overhaul in 2017—had higher corporate tax rates than most advanced industrial nations (see Figure 1), which in turn led a number of American companies to move their investments to foreign countries with lower taxation regimes. A 2016 report from the non-governmental organization Citizens for Tax Justice (CTJ) estimated that Fortune 500 corporations were avoiding up to \$695 billion in U.S. federal taxes because they had approximately \$2.4 trillion stored in offshore holdings. Political elites have frequently highlighted examples of American companies moving investments to foreign countries with lower taxation regimes as rationales for lowering the domestic corporate tax rate. Indeed, a major rationale offered by the Trump administration for reducing corporate taxes was to alter the incentive structure for corporations to curb tax offshoring practices and repatriate corporate economic activity back to the United States. <sup>20</sup>

Similar justifications in political rhetoric have been made by elites across party lines. For example, in his 2011 State of the Union address, President Obama declared:

[T]o help our companies compete, we also have to knock down barriers that stand in

<sup>&</sup>lt;sup>19</sup>Hodgson, Paul. 2016. "How Sanders and Trump Aim to End Offshore Corporate Tax Havens." Fortune Magazine, March 11. See, also: Brittain-Catlin 2006; Johnston 2003.

<sup>&</sup>lt;sup>20</sup>Holodny, Elena. 2017. "Trump's Tax Plan Could Lead to Billions of Dollars Flooding Back to the US." *Business Insider India*, November 2; Petroff, Alanna. 2018. "U.S. Companies Will Pay Billions in Tax on Offshore Cash Piles." *CNN Business*, January 2.

the way of their success ... [U.S. companies] are hit with one of the highest corporate tax rates in the world. It makes no sense, and it has to change. So tonight, I'm asking Democrats and Republicans to simplify the system. Get rid of the loopholes. Level the playing field. And use the savings to lower the corporate tax rate for the first time in 25 years.<sup>21</sup>

A Chicago-Tribune article quoting several Republican politicians, including Representative Kevin Brady and Senator Paul Ryan, likewise noted:

The changes would remove incentives for U.S. companies to seek offshore tax addresses for lower tax bills, said Rep. Kevin Brady, the chairman of the tax-writing House Ways and Means Committee. "America will leapfrog from dead last" among developed economies in terms of business-friendly tax policy, "to the lead pack," said Brady, a Texas Republican ... "We want America to be the best place in the world to do business," Ryan said.<sup>22</sup>

These examples of political rhetoric are anecdotal, yet they indicate that elites consider it important to sell the public on lower corporate taxes using tax competition rationales—specifically the need to reduce taxes in order to promote national competitiveness in the global economy to incentivize companies to remain in or return to the US.

We therefore set out to analyze in a more systematic manner how the media and how political elites in particular frame public discourse surrounding corporate taxation. Table 4 displays the results of a word-search analysis leveraging the Nexis Uni database, a news article repository. Specifically, we examined all articles published in the U.S. since 2015 that mentioned corporate income taxation, and then proceeded to measure the typologies of article pools that included rivalry and equity terminology.<sup>23</sup>

Starting with general articles on corporate taxation, Table 4 shows that rivalry terminology is consistently invoked more frequently than equity language. While 24% of all media articles included rivalry-related commentary, the corresponding proportion of articles discussing equity considerations was 13%. This contrast becomes ever more evident when looking at news articles identified as

<sup>&</sup>lt;sup>21</sup>"Remarks by the President in State of Union Address." January 25, 2011. The White House Office of the Press Secretary." URL: https://bit.ly/34VXEv2.

<sup>&</sup>lt;sup>22</sup>Rowley, James. "Ryan tax plan cuts corporate rate to 20 percent to stem inversions." June 24, 2016. *Chicago Tribune*. URL: https://bit.ly/32TqHgu.

<sup>&</sup>lt;sup>23</sup>The searches are based on the following combinations of search words. CIT news: "Corporate Income Tax"; Rivalry argument: "competition / competitiveness / rival"; Equity argument: "personal income tax / individual tax / personal tax"; Elite discourse: "senator / president / candidate / congressperson / congressman / congresswoman"; Democratic: "democrat/democratic/progressive"; Republican: "republican/conservative". The "Republican/Democratic only" were obtained excluding articles mentioning words associated with the other side.

Table 4: Salience of Rivalry and Equity Arguments in News Articles

CIT News Type	N	Rivalry Subset	Equity Subset
All	42,257	23.9% (10,137)	13.3% (5,632)
Elite-Discourse	18,176	36.3% (6,612)	$12.4\% \ (2,260)$
Only Democratic	2,245	32.3% (727)	18.3% (413)
Only Republican	3,638	28.5% (1040)	19.6% (714)
Rep. and Dem.	4,739	$28.2\% \ (1339)$	24.0% (1138)

containing political elite discourse, where we find that the ratio of rivalry-to-equity mentions is 3:1. Articles containing elite discourse were more likely to reference Republican politicians (n = 3,638) than Democratic politicians (n = 2,245), but Republican and Democratic rhetoric similarly prioritized rivalry considerations over equity considerations.

Table 5: Mentions of Rivalry and Equity Arguments by Presidential Candidates

2016 Candidate	Total CIT News	Rivalry Subset	Equity Subset
Trump	830	27.7% (230)	17.8% (148)
Cruz	170	44.7% (76)	16.4% (28)
Rubio	104	37.5% (39)	21.1% (22)
Kasich	57	49.1% (28)	17.5% (10)
Clinton	582	39.7% (231)	17.0% (99)
Sanders	267	37.4% (100)	17.9% (48)
2020 Candidates			
Biden	720	42.08% (303)	14.03% (101)
Sanders	1,354	33.9% (459)	17.2% (234)
Warren	2,274	38.1% (868)	14.4% (329)
Harris	1,347	42.6%~(575)	17.0% (230)
Buttigieg	42	45.2% (19)	14.2% (6)
Klobuchar	97	50.5% (49)	21.6% (21)

Table 5 shows that this pattern persists if we focus on articles mentioning presidential primary candidates from the last two electoral cycles. In both 2016 and 2020, candidates across the ideological spectrum seemingly made use of rivalry arguments at twice or more the rate at which they invoked equity arguments. In other words, rhetoric surrounding competition appears to feature more prominently in elite discourse compared to rhetoric addressing equity considerations. Next, to understand the type of rhetoric associated with the rivalry and equity arguments, both in general and at the elite level, we performed preliminary content analysis. As Appendix Table 6 shows, mentions of growth and investment dominate the discourse surrounding corporate taxation. While these topics feature in articles highlighting equity considerations, they are more commonly invoked in the

rivalry subset of articles. This analysis suggests that arguments circling around rivalry overshadow those highlighting equity concerns, especially in elite discourse. Our experimental findings indicated that the content of messaging around corporate taxes matters for public opinion; it appears that the disproportionate focus on competition dynamics in media and elite rhetoric in recent years has helped offset the public's underlying adherence to norms of equity and associated support for higher business taxes. Conversely, the fact that taxes have not converged to zero may be indicative of fairness norms in public opinion constraining race-to-the-bottom pressures.

### Conclusion

This paper set out to examine whether global and domestic political contexts inform citizens' demands for distributive business regulations. Using two experiments on a nationally representative sample of American voters, we found that there is considerable underlying mass support for raising corporate taxes, and that this support is bolstered by norms of fairness. When citizens weigh equity considerations regarding the relative tax burdens of capital and labor that lie at the heart of globalization theory, they evidence sharply higher support for business tax hikes. At the same time, when fairness is primed broadly and when rivalry threats are precisely specified, citizens report lower optimal domestic corporate tax rates. If the U.S. is pitted directly against economic competitors, citizens respond to the mechanisms predicting downward taxes in global tax competition theory; rivalry concerns dominate and voters de-emphasize equity in formulating tax preferences. Our findings imply that the content of elite rhetoric on corporate tax policy—which disproportionately highlights rivalry over equity considerations—may help explain why the public has been willing to accept policy changes lowering corporate taxes.

This study contributes to a large body of social scientific research that seeks to understand the theoretical and empirical factors surrounding mass preferences related to tax policy. Most existing work focuses on explicating the determinants of individual attitudes toward income taxation, yet we bring to this body of scholarship insights from globalization theory to show that labor and capital taxes are closely linked, and that the mass public in turn adjudicates trade-offs related to the tax burdens of both factors of production while developing tax preferences. We show here that competitive pressures arising from the global economy can therefore inform and constrain

public opinion regarding domestic taxation. From a policy perspective, the study offers insights into important policy debates regarding corporate taxation currently underway in the U.S. as well as in many other advanced industrialized democracies. Given that tax policy reform typically needs broad societal approval, explicating the determinants of public opinion on corporate tax policy can help scholars and policymakers alike glean insights regarding the popular bases of support for taxing mobile capital in an increasingly globalized world.

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## **Appendix**

### **Experiment 1 Treatments**

Figure 1: Experiment 1 Control Treatment

#### Please read the article below. You will be allowed to continue in 20 seconds.

It was only about 40 years ago that plastic bags became standard at U.S. grocery stores. This also made them standard in sewers, landfills, rivers and the Great Pacific Garbage Patch. They clog drains and cause floods, litter landscapes and kill wildlife. The national movement to get rid of them is gaining steam — with more than 240 cities and counties passing laws that ban or tax them since 2007. New York recently became the second U.S. state to ban them. But these bans may be hurting the environment more than helping it.

University of Sydney economist Rebecca Taylor started studying bag regulations. Taylor found these bag bans did what they were supposed to: People in the cities with the bans used fewer plastic bags, which led to about 40 million fewer pounds of plastic trash per year. But people who used to reuse their shopping bags for other purposes, like picking up dog poop or lining trash bins, still needed bags. "What I found was that sales of garbage bags actually skyrocketed after plastic grocery bags were banned," she says. Trash bags are thick and use more plastic than typical shopping bags. "So about 30 percent of the plastic that was eliminated by the ban comes back in the form of thicker garbage bags," Taylor says.

(Excerpt from "Are Plastic Bag Bans Garbage?" by Greg Rosalsky, Planet Money Newsletter, 4/9/2019)

Figure 2: Experiment 1 Fairness Treatment

(a) Page 1

Please read the text below carefully and answer the question. You will be allowed to continue in 10 seconds.

Assume that <u>taxes paid by individuals/households</u> on their incomes <u>and taxes paid by corporations</u> on their profits <u>account for 100% of federal tax revenues</u>.

In your ideal world, what percentage of federal tax revenues do you think **should** be paid for by individuals/households versus corporations?

Fill in the blanks in the table below to <u>enter the percentage you think each source **should contribute** to federal tax revenue.</u>

(Note: The categories must add to 100.)

Taxes paid by individuals/households on their incomes: (Income taxes and payroll taxes deducted from each paycheck)	0	%
Taxes paid by corporations on the profits they make:	0	%
Total	0	%

(b) Page 2 (note: respondent answers carried forward from page 1)

Please read the text below and answer the following questions. You will be allowed to continue in 10 seconds.

On the previous page, we asked you how much individuals/households versus corporations **should** contribute to federal tax revenues.

Please take a moment and read the information below which compares the actual contributions in 2018 to your response:

1. <u>Taxes paid by individuals/households on their incomes:</u> Income taxes and payroll taxes deducted from each paycheck

Actual contribution: 93%

Your answer: \${q://QID9/ChoiceNumericEntryValue/1}

2. Taxes paid by corporations on the profits they make:

Actual contribution: 7%

Your answer: \${q://QID9/ChoiceNumericEntryValue/7}

Compare your answers to the actual contributions of each source to total federal tax revenue in 2018...

Figure 3: Experiment 1 Rivalry Treatment

Please read the text below carefully and answer the following question. You will be allowed to continue in 10 seconds.

Differences in national corporate tax rates often cause companies to move from countries with higher tax rates to countries with lower tax rates. This is because companies looking to maximize profits are able to avoid higher taxes by moving to countries where they will be taxed at lower rates.

When this happens, countries with higher corporate tax rates can lose jobs and tax revenues that were created by the companies that moved to countries with lower tax rates. In addition, losing companies could lead higher tax countries to become less competitive in the global economy and less able to attract innovative businesses.

### Experiment 2 Treatments

Figure 4: Experiment 2 Treatments

(a) Fairness Treatment

Please read the text below carefully. You will be allowed to continue in 10 seconds.

Assume that the government continues to spend the same amount as it does now.

In the short run, lowering the corporate tax rate would leave the government with less revenue than it currently needs. This means that individual income taxes could be raised. Conversely, raising the corporate tax rate would give the government more revenue than it currently needs. This means that individual income taxes could be lowered.

(b) Competitor Tax-rate Treatment: 12%, 19%, 33%, or 40%

Please read the text below carefully and answer the following question. You will be allowed to continue in 10 seconds.

The US corporate tax rate is currently **26 percent**.

The average <u>corporate tax rate in some other countries that compete</u> in the global economy to attract companies is **\${e:**//Field/treat3} percent.

Assume that the government continues to spend the same amount as it does now.

In your opinion, what should the US corporate tax rate be?



## Experiments 1 and 2: Additional Analyses

### Variations in Measurement of Strength of Support

Figure 5: Support for Altering Corporate Tax Rates (Support vs. Very Strong Support) (b) VERY Strongly Support (a) Support 1.00 1.00 0.75 0.75 Proportion Proportion 0.50 0.50 0.25 0.25 0.00 Keep Same Keep Same Increase Decrease Increase Decrease ■Control Fair Rival Fair & Rival ■Control Fair Rival Fair & Rival (c) Support Increase (d) VERY Strongly Support Increase 1.0 0.8 Prop. Favoring Corp. Tax Increase Prop. Very Strongly Favoring Corp. Tax Increase 0.9 0.75 0.46 0.71 n = 1175 n = 1174 0.40 n = 1164n = 1164 0.8 0.33 0.31 0.63 n = 1225 0.61 n = 1301n = 1225 n = 1302 0.7 0.2 0.6 0.5 0.0

35

Fair & Rival

Rival

Control

Fair

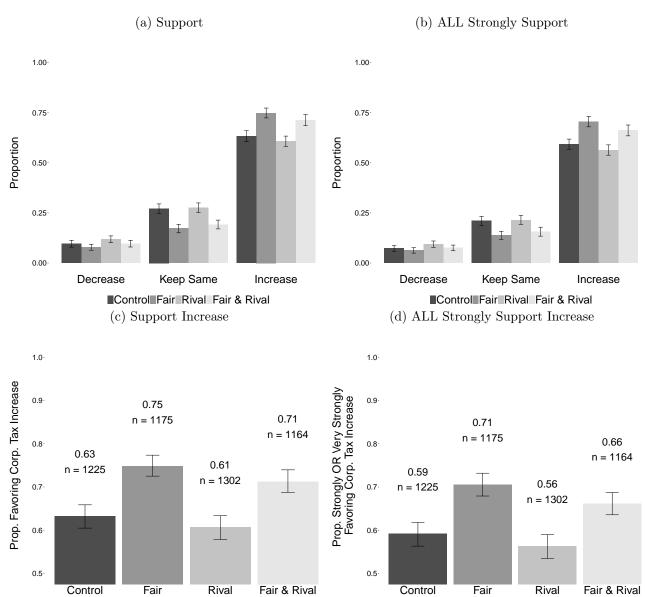
Control

Fair

Rival

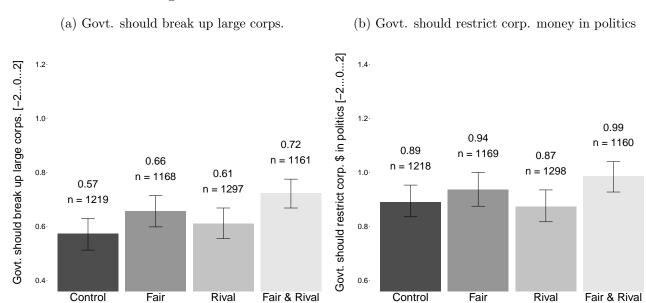
Fair & Rival

Figure 6: Support for Altering Corporate Tax Rates (Support vs. All Strongly Support)



### **Experiment 1 Secondary Outcomes**

Figure 7: Effect of Treatments on Non-tax Outcomes



### **Experiment 1 Manipulation Checks**

Fair

Rival

Control

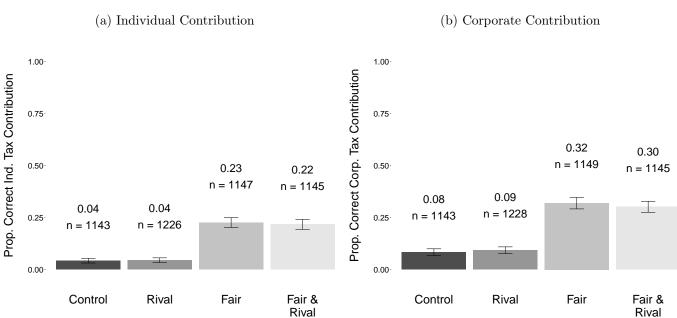


Figure 8: Experiment 1 Fairness Treatment Recall

Control

Fair

Rival

### Experiment 2 Main Outcomes Dis-aggregated

60 Avg. Preferred US Corp. Tax Rate 38.44 36.90 n = 30131.43 n = 32540 30.80 n = 293 n = 29420 Competitor Competitor Competitor Competitor 12% 19% 33% 40% Module 2 = Fair 60 Avg. Preferred US Corp. Tax Rate 40.49 36.84 n = 31433.18 33.27 n = 32740 n = 292n = 313 20 Competitor Competitor Competitor Competitor 12% 19% 33% 40%

Figure 9: What should the US corporate tax rate be?

Module 2 = Control

### **Observational Analyses**

PUBLIC POLICY ON CORPORATE TAXATION

The trends in CIT rates across countries rely on data from two main sources. For the years 1953-2000, we draw from the Word Tax Database, hosted by the University of Michigan<sup>24</sup>. For the years 2000-2020, we take data from the OECD Tax database<sup>25</sup>. The analysis covers a total of 30 OECD countries: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States.

<sup>&</sup>lt;sup>24</sup>https://www.bus.umich.edu/otpr/otpr/default.asp [Last Accessed: August 8th, 2020]

<sup>&</sup>lt;sup>25</sup>https://www.oecd.org/tax/tax-policy/tax-database/ [Last Accessed: August 8th, 2020]

The analysis employs data on the top marginal statutory corporate income tax rate. In other words, the rate corresponds to the maximum legal tax burden, shouldered by corporations on income in the highest tax bracket, in the case of graduated tax systems. Additionally, the tax rate does not include the impact of deductions or preferential treatment given to corporate income from specific sources. Similarly, it does not take into account firm tax minimization efforts and how national tax systems may differ in the number and accessibility of legal loopholes.

Among the several alternative methods to examine corporate taxation across countries, the top marginal statutory corporate income tax rate offers the greatest coverage and comparability. However, this approach is not without limitations. The main disadvantage is that it is prone to overestimate the actual tax burden that companies face. In the US, for instance, while the 2010 statutory rate was 35%, the average effective rate hovered around 27%, according to a 2014 congressional report. <sup>26</sup>

Like much of the existing literature, we recognize that our observational analysis may suffer from such limitations and take the statutory rate as an upper-bound on actual corporate taxation. However, the possibility of even lower effective CIT rates adds, if anything, to the motivating puzzle of our project.

#### PUBLIC OPINION ON CORPORATE TAXATION

In order to reconstruct time trends of US public opinion on corporate taxation, we relied on polls gathered through the Roper database. While this exercise allows to cover a longer time interval, it also introduces a degree of noise through question and sample heterogeneity. Conducting our observational analysis, we sought to maximize poll homogeneity while retaining sufficient coverage and managing any potential bias.

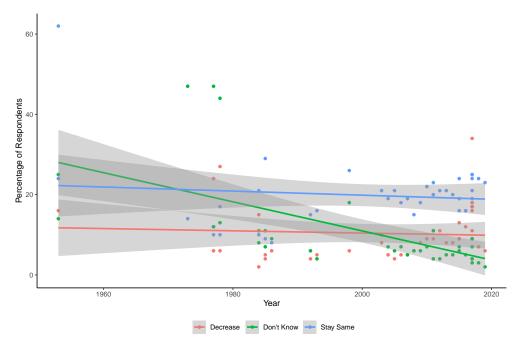
As a first consideration, in Figure 1 in the main text, we only included the support for increases in the CIT. However, the available survey data informs on all four positions: increasing the CIT, decreasing the CIT, maintaining it the same, and not sure. With the first two figures below, we fill that gap. First, we show that all three alternative responses ("decrease CIT", "keep equal", and "Don't Know") trend downward over the same period of time – which complements the upward trend of support for CIT hikes. the second figure further illustrates the yearly averages for all four positions. Visualizing all four positions depicts the stark contrast between the majoritarian support for increases starting in the 1980s and the marginal support for decreasing the CIT, which never exceeds 20% in the time interval covered.

Second, in order to deal with poll heterogeneity, we categorized historical polls depending on the type of question and response wording. This distinction is relevant as aggregating across question types may introduce bias in the trend estimation. Specifically, some pollsters posed multi-directional questions, providing respondents with equivalent choices of decreasing CIT rates, increasing them, or maintaining them stable. By contrast, other pollsters only asked whether individuals supported CIT hikes or cuts, without including the opposite option. The latter phrasing may bias respondents towards the type of policy it is asking about. In particular, we show below that asking individuals about CIT cuts without mentioning the alternative possibility of CIT hikes increases substantially support for the policy. In order to avoid biasing the trend estimation by aggregating apples and oranges, the main analysis in the paper relies solely on questions that included both cuts and hikes as alternative choices.

Comparing the public opinion trends across question types also provides information on the structure of individual preferences for CIT. The two graphs below depict how question phrasing can impact resulting support for CIT cuts or hikes. In particular, in the graphs, we compare public

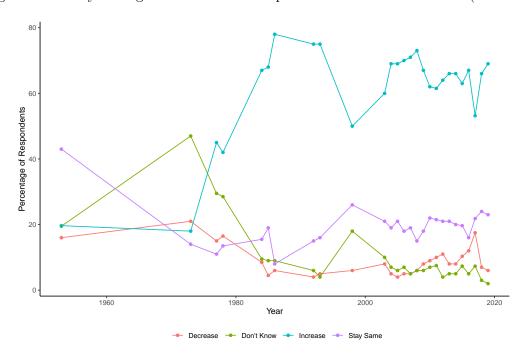
<sup>&</sup>lt;sup>26</sup>https://fas.org/sgp/crs/misc/R41743.pdf [Last Accessed: August 8th, 2020]

Figure 10: Linear Trends in Public Opinion on the CIT in the U.S. (1950-2020)



Sources: Roper Database.

Figure 11: Yearly-Average Trends in Public Opinion on the CIT in the U.S. (1950-2020)



Sources: Roper Database.

opinion trends derived from biased and unbiased phrasing, which is present and prevalent for both questions on CIT hikes and cuts.

In the first place, the graphs show that while the absolute levels of support for CIT hikes and cuts differ across question types, the overall trend is similar. This similarity suggests the general robustness of the pattern discussed in our paper: support for increasing the CIT has increased in the US, while support for decreasing the CIT has stagnated at lower levels.

In the second place, this comparison sheds light both on the bias dynamic highlighted above. In the case of support for increasing the CIT, it seems that while the trend of responses to biased polls is slightly higher, the difference is not statistically significant. By contrast, in the case of support for CIT cuts, the question phrasing has a strong impact, with as much as 20% difference in support depending on whether the question is biased. One interpretation of this pattern is that individuals may not need as much "convincing" when it comes to CIT increases, whereas support for CIT cuts is much more contingent on framing. Of course, this reading is only one explanation. An alternative hypothesis could be that pollsters asking biased question may themselves be partisan, which could impact the resulting public opinion trends through sample selection as well as question phrasing.

In conclusion, the main analysis of public opinion trends on CIT in the US relies on questions that include both increasing and decreasing the CIT as options. While this categorization still introduces a degree of question heterogeneity, we think it strikes the right balance in the trade-off between homogeneity and coverage. Most of the questions included in this exercise shared the same basic format. For instance: "Here is a list of some different types of people or groups. Would you go down that list, and for each one tell me whether you think they have to pay too much in income taxes, or too little in income taxes or about the right amount? Large business corporations." or "As I read off some different groups, please tell me if you think they are paying their fair share in federal taxes, paying too much or paying too little?...(rotated) Large corporations".

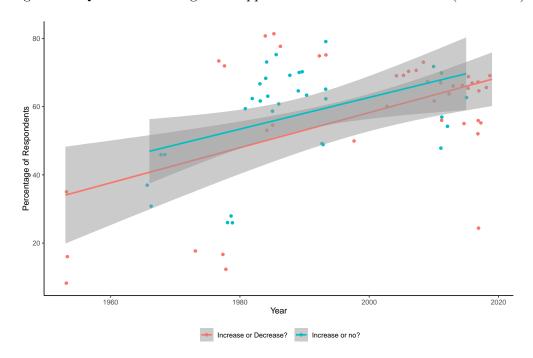


Figure 12: Question Phrasing and Support for CIT Hikes in the U.S. (1950-2020)

Sources: Roper Database.

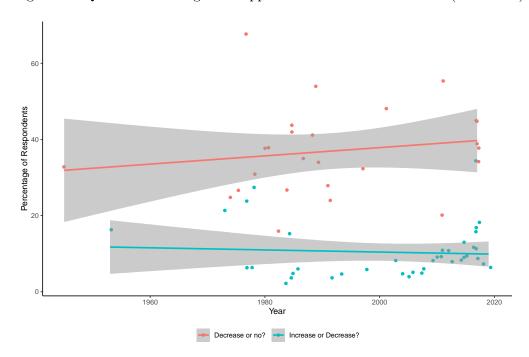


Figure 13: Question Phrasing and Support for CIT Cuts in the U.S. (1950-2020)

#### DISCOURSE ANALYSIS

Going deeper in our discourse analysis, we also performed some preliminary content analysis to understand the type of rhetoric associated with the rivalry and equity arguments, both in general and at the elite level. As we can see from Table 6 below, mentions of growth and investment dominate the discourse surrounding corporate taxation. While prevalent in articles mentioning personal income taxation (the equity subset), economic concerns seem to be slightly more associated with the competition narrative of the rivalry subset. Fairness concerns were not as prevalent and indeed seemingly more present in the rivalry subset. Finally, class-politics terminology seems to be utilized more frequently in equity articles.

Table 6: Content Analysis of Rivalry and Equity Arguments

Keywords	Rivalry Subset	Equity Subset	Elite Rivalry Subset	Elite Equity Subset
	(10,137)	(5,632)	(6,612)	(2,260)
Growth/Investment	86.6% (8,786)	59.4% (3,349)	89.5% (5,923)	71.3% (1,612)
Fair/Fairness/Justice	43.5% (4,413)	27.4% (1,546)	50.2% (3,320)	37.2% (841)
Rich/Wealthy	14.8% (1,505)	19.5% (1,101)	18.1% (1,199)	30.5% (691)