# Where Should Multinationals Pay Taxes?

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The international tax system is a pillar of the post-war economic order, but it faces major challenges with the rise of global value chains, digitalization, and tax avoidance. Debates over international tax reform usually occur within a small epistemic community of experts and technocrats. In this article, we step outside this restricted circle to assess the sources of bottom-up legitimacy and support for the rules that govern where multinationals must report profits and which governments are entitled to tax those profits. We conduct survey experiments in Brazil, France, and the United States to assess mass attitudes toward the allocation of the tax base across countries. We find that people's views clash with the core principles of the current regime, but are aligned with reform proposals that allocate more taxing rights to market jurisdictions. These findings are strikingly consistent across three countries and three distinct studies. At first glance, the consistency of attitudes across countries could spell good things for international cooperation in this arena. However, we also find a significant level of "home bias" in the public's views on tax allocation. These results shed new light on the legitimacy of tax reform and on the prospects for cooperation in a key area of international economic relations.

El sistema fiscal internacional es un pilar del orden económico de la posguerra, pero se enfrenta a importantes retos debido al aumento de las cadenas de valor mundiales, la digitalización y la evasión fiscal. Los debates sobre la reforma fiscal internacional suelen producirse dentro de una pequeña comunidad epistémica de expertos y tecnócratas. En este artículo, salimos de este círculo restringido para valorar las fuentes de la legitimidad ascendente y el apoyo a las normas que rigen dónde las multinacionales deben declarar sus beneficios y qué gobiernos tienen derecho a gravar dichos beneficios. Llevamos a cabo experimentos con encuestas en Brasil, Francia y Estados Unidos para valorar las actitudes de las masas hacia la asignación de la base imponible en los distintos países. Comprobamos que los puntos de vista de los ciudadanos chocan con los principios básicos del régimen actual, pero se alinean con las propuestas de reforma que asignan más derechos de imposición a las jurisdicciones de mercado. Estos hallazgos son sorprendentemente coherentes en estos tres países y estos tres estudios distintos. A primera vista, la coherencia de las actitudes entre los diferentes países podría parecer positiva para la cooperación internacional en este ámbito. Sin embargo, también comprobamos la existencia de un nivel significativo de «sesgo nacional» en las opiniones de los ciudadanos en lo que se refiere a afectación de los impuestos. Estos resultados arrojan nueva luz sobre la legitimidad de la reforma fiscal y las perspectivas de cooperación en un área clave de las relaciones económicas internacionales.

Le système fiscal international constitue un pilier de l'ordre économique d'après-guerre. Toutefois, il est confronté à des défis majeurs, tels que l'émergence de chaînes de valeur à l'échelle mondiale, la numérisation ou encore l'évasion fiscale. Or, les débats autour d'une réforme de la fiscalité internationale sont généralement limités à une petite communauté épistémique, composée d'expertées et de technocrates. Dans cet article, nous souhaitons nous extraire de ce cercle restreint afin d'analyser les sources de légitimité  $\ll$  bottom-up  $\gg$  (approche ascendante), qui défendent les règles régissant à la fois les lieux dans lesquels les multinationales doivent déclarer leurs bénéfices et les gouvernements habilités à taxer lesdits bénéfices. Nous avons réalisé des enquêtes au Brésil, en France et aux États-Unis, destinées à évaluer l'attitude du grand public en matière de répartition de l'assiette fiscale entre les pays. Nous constatons que l'opinion des personnes interrogées s'oppose aux principes fondamentaux du régime actuel et est, en revanche, en phase avec les propositions de réforme consistant à octroyer davantage de compétences fiscales aux différentes juridictions où les firmes vendent leurs produits et services. Ce constat est remarquablement homogène pour les trois pays concernés et les trois études menées. D'emblée, cette homogénété de l'opinion publique dans les trois pays pourrait être de bon augure pour la coopération internationale dans ce domaine. Néanmoins, nous trouvons également, chez les personnes interrogées, un degré relativement élevé de « préférence nationale » en matière d'imposition. Ces résultats apportent un nouvel éclairage sur la légitimité de la réforme fiscale et sur les perspectives de coopération dans un domaine clé pour les relations économiques internationales.

# Starbucks launched its first London café in 1998. Over the next 14 years, the company opened nearly 800 new outlets

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Author's Note: We thank Leo Ahrens, Larry Bartels, Eduardo Baistrocchi, Sarah Bauerle Danzman, Laurie Beaudonnet, Alison Christians, Ruth Dassonneville, Rita de la Feria, Rasmus Christensen, Loriana Crasnic, Raphael Cunha, Erick Duchesne, Fernando Feitosa, Geoffrey Gertz, Benjamin Guinaudeau, Martin Hearson, Peter Hongler, Alexandra Jabbour, Mitchell Kane, Richard Krever, Lyne Latulippe, Marco Mendoza Aviña, Frédéric Mérand, Irma Mosquera, Theodore McLauchlin, Erica Owen, Krzysztof Pelc, Amy Pond, Thomas Rixen, Aanor Roland, Indra Römgens, Semra Sevi, Edoardo Traversa, Calvin Thrall, Mathieu Turgeon, and François Vaillancourt. We are grateful for the feedback of anonymous reviewers and editors. The data underlying this article are available on the ISQ Dataverse at https://dataverse.havard.edu/dataverse/isq. A pre-analysis plan for this study was submitted to the Open Science Framework on July 19, 2020. in the United Kingdom, hired thousands of employees, and made billions of dollars in sales. In earnings calls, Starbucks executives regularly described their UK operations as "profitable," yet the company reported net losses and no taxable income during all but one of those years. When this story came to light, it resonated strongly with the British public, sparking protests at several retail locations, and pushing the European Commission to open an official inquiry into the tactics used by Starbucks to shift profits to low-tax jurisdictions (Bergin 2012; Campbell and Helleloid 2016).<sup>1</sup>

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<sup>&</sup>lt;sup>1</sup>These strategies included royalty payments to various foreign subsidiaries, transfer pricing arrangements with Swiss and Dutch companies, and intercompany debt structured with favorable terms. In 2015, the European Commission

Starbucks is far from the only company to use aggressive tax optimization schemes. Indeed, whistleblowers and investigative journalists have released massive caches of private documents about the operations of shell companies in tax havens, and about the (low) tax bills of tech giants like Apple, Facebook, and Microsoft.<sup>2</sup> The fact that many companies can use such controversial-though often legalstrategies to avoid paying income tax in the jurisdictions where they operate raises key questions for international relations scholars. It calls our attention to issues of fairness and social responsibility in an era of extreme global inequality (Lockwood 2021), highlights the constraints imposed by capital mobility on the fiscal capacity of the state (Dietsch 2015), and vividly illustrates how corporate power operates in an interdependent world, where companies can exploit gaps and contradictions in complex governance regimes (Alter and Meunier 2009).

These are consequential issues because multinational enterprises play a dominant role in our modern economy. They account for a third of global output and half of the world's exports (Cadestin et al. 2018). They earn sizeable profits but return a smaller share of those profits to public coffers than purely domestic firms (Costa and Gravelle 2011). This low tax burden can be attributed in part to the planning strategies that companies use to exploit loopholes in the international tax system (Davies et al. 2017).

In recent years, civil society actors have pressed governments to close those loopholes and rethink their approach to the taxation of multinationals (TJN 2020). International organizations have urged member states to enact laws to make tax avoidance more difficult (OECD 2020). Legal scholars, philosophers, economists, and political scientists have debated plans to fundamentally reshape the international tax system (Pogge and Mehta 2016; Dietsch and Rixen 2016; Piketty 2017).

These calls for reform do not come as a surprise. Indeed, the principles that govern the taxation of multinational enterprises were laid out in the 1920s, before the massive increase in cross-border investment of the postwar era and before the digital revolution. Today, the international tax system faces a dual legitimacy crisis related to the *level* of taxation and the *allocation* of taxing rights across jurisdictions. Solving this crisis requires us to answer two questions with deep distributional implications: *How much* should multinationals pay in taxes and *where* should profits be reported?

There is a vast literature on the factors that determine the level of taxation chosen by national governments. Some political economists emphasize fairness motives (Ballard-Rosa, Martin, and Scheve 2016; Scheve and Stasavage 2016; Limberg 2019). Others focus on the partisan, institutional, or economic constraints that shape policy (Clark and Hallerberg 2000; Plümper, Troeger, and Winner 2009; Genschel, Lierse, and Seelkopf 2016). Most contributions to this field are concerned with the level of taxation set via national policies. In contrast, this article addresses the allocation of taxing rights through international tax law.

This distinction between level and allocation matters because, in a globalized economy, tax liabilities depend on both the national tax rates and the international rules that determine which governments are entitled to tax multinationals. While political economists pay a great deal of attention to tax rates, they tend to ignore a second axis of distributional conflict: the international rules that determine *where* multinationals must report their profits and pay taxes.

This oversight is important because the current international tax system leads to massive distortions in the geographic distribution of reported profits and tax revenues. To illustrate, Figure 1 shows the location of profits declared by US-based multinational companies in 2017 (Internal Revenue Service 2019). Conspicuously, American companies declare nearly twice as much profit in the Cayman Islands as in Canada, the US's most important trade and investment partner. Clearly, the mere fact that a company declares profits in a given jurisdiction does not mean that it creates economic value there.

The mismatch between value creation and the geographic distribution of taxable profits has important ramifications. It is well known that multinationals shoulder a lighter tax burden than purely domestic companies. Costa and Gravelle (2011) estimate that the average foreign tax rate that American multinationals pay abroad is little more than half of the average tax rate of all corporations on US soil (see also Jensen 2013; Bilicka 2019). This disparity can be partly explained by companies' ability to exploit loopholes in the rules that govern international taxation. Indeed, multinationals often engage in transfer pricing manipulation, and they locate assets strategically to steer profits toward low-tax jurisdictions (Karkinsky and Riedel 2012; Davies et al. 2017). Multinationals' ability to report profits in tax havens has major consequences for public finance: Clausing (2020) estimates that profit shifting cost the American government \$100 billion in revenue for the 2017 year alone.

A few authors have examined the origins of the laws that determine where multinationals' profits are reported and taxed (Rixen 2008; Arel-Bundock 2017; Shin 2019; Hakelberg 2020). Others have highlighted the challenges of applying these laws when value chains span the globe (Findley, Nielson, and Sharman 2014; Seabrooke and Wigan 2017). Prior works have made key contributions to our understanding by developing interest-based, power-based, institutionalist, and ideational accounts of the politics of international taxation (Hearson and Rixen 2021). These accounts are important, but they tend to be state-centric or focus on the roles of elite actors such as tax professionals or technocrats. The present article breaks from these traditions by adopting a bottom-up perspective, and by focusing on mass attitudes toward international taxation.

In doing so, we make three contributions to the study of taxation in particular, and to international relations scholarship more generally. First, our study foregrounds the relationship between public opinion and policies, which are typically perceived to be the domain of backdoor deals and quiet politics (Culpepper 2010). Christensen and Hearson (2019, 1089) note that in the wake of the Panama Papers scandal, and "in the context of populism and politicization, a more diverse set of domestic interests is pressurising international tax policy-makers, and actors from civil society and academia have entered directly into dialogue with the transnational tax community." By mapping the contours of public opinion in this field, our study invites international tax scholars to take seriously the politics of social acceptability and democratic accountability.

Second, by surveying the public's views on the taxation of multinationals, our study ties the research of international tax scholars to the behavioral revolution in international relations, where many researchers have pointed to the important place of political psychology and mass attitudes in foreign policymaking (Hafner-Burton et al. 2017; Kertzer and Tingley 2018). In recent years, scholars have published

found that Starbucks had benefited from an illegal selective advantage in the Netherlands, but this decision was annulled by the General Court of the European Union in 2019.

<sup>&</sup>lt;sup>2</sup>See, for example, the Panama Papers, Paradise Papers, Pandora Papers, Lux Leaks, and Suisse Secrets.

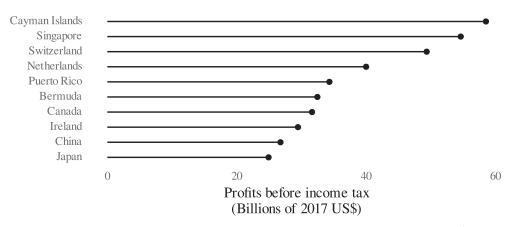


Figure 1. Top ten locations of foreign profits declared by US-based multinational companies in 2017.

path-breaking work on the public's reaction to trade (Mansfield and Mutz 2009; Pelc 2013; Guisinger 2017), foreign direct investment (Pandya 2013; Feng, Kerner, and Sumner 2019), capital controls (Steinberg and Nelson 2019), immigration (Hainmueller and Hopkins 2014), foreign aid (Milner and Tingley 2013), and offshoring (Mansfield and Mutz 2013; Owen and Johnston 2017). In contrast, little attention has been paid to mass attitudes toward international tax policy, one of the most important and controversial topics in international political economy. Our study shows that, with careful research design, we can elicit meaningful and internally consistent intuitions from the general public about complex issues in international relations. In so doing, we chart a path for the development of a grounded theory of fiscal policy in a modern globalized economy.

Third, our results have important implications for both policymaking and for our understanding of the mass politics of international economic relations. Indeed, one of our key findings is that people's views on the taxation of multinationals are driven to a substantial degree by a form of "home bias": the average survey respondent wants to allocate much more tax revenue to their local government than to foreign ones. This ethnocentric bias is consistent with recent work in political psychology and international relations. For example, in their study of outsourcing, Mutz and Lee (2020) find that Americans were unwilling to sacrifice 1 job on US soil to create 1,000 jobs abroad.<sup>3</sup> Likewise, Brutger and Rathbun (2021) find that "Americans have an egoistically biased sense of fairness, responding particularly negatively to any outcome that leaves the United States relatively worse off."

In that light, our results on home bias confirm that the public views international economic relations as partly zero-sum, which could spell bad things for the prospect of international cooperation on tax policy and beyond. However, our results also highlight major areas of agreement between the publics of three large and very different democracies. People in Brazil, France, and the United States seem aligned in their opposition to some of the core principles of the current international tax system, and in support of reform proposals that would allocate more taxing rights to market jurisdictions. These findings are strikingly consistent across countries and across three distinct studies. In short, by highlighting areas of conflict and agreement across countries, our results paint a nuanced portrait of a complex topic. They should be viewed as a first step on a path toward a better understanding of a key but understudied topic in international relations.

# Where Should Multinationals Pay Taxes?

To answer this question, we do not rely on normative arguments or economic theory. Instead, our contribution is empirical and explicitly descriptive. Like Gerring (2012), who lamented the decline of descriptive work in political science, we believe that rigorous, theoretically informed, and policy-relevant description should take up more space in the pages of professional journals in international relations. In that spirit, we exploit novel experimental designs to establish key stylized facts about mass attitudes toward international taxation. In doing so, we hope that our study will yield new insights into the legitimacy and feasibility of tax reform and clear a path for future research.

To assess how ordinary people answer the "where" question, we conduct a series of survey experiments in Brazil, France, and the United States. In our main experiment, we ask respondents to allocate the taxes paid by fictional multinationals to the countries where they operate, and we assess the weight that people give to various factors when they choose to grant more revenues to some governments over others. Two follow-up studies confirm and add nuance to the results of our main experiment.

Our results show that people's views clash with fundamental principles of international law, namely, that a multinational's profits should be taxed where it is headquartered or where it has a physical presence, rather than where it sells goods and services. Although the locations of a firm's headquarters, capital, and workers matter to some extent, survey respondents attach much more importance to the location of customers when determining which governments should draw tax revenues. This observation is confirmed in a follow-up study in which we directly elicit people's views. It is also consistent with the results of a framing experiment in which we ask respondents if they support the digital services tax (DST), a prominent reform proposal that ties governments' taxing rights to the location of multinationals' customers or users.

These results are strikingly robust and consistent. Despite the highly technical nature of international tax law, the survey responses display coherent patterns in two distinct preregistered experiments, in a ranking task, and across three countries with very different political environments and positions in the global economy. Moreover, our experiments show that intuitions about international tax reform can be surprisingly resistant to framing effects and

 $<sup>^{3}</sup>$  Canadians are willing to sacrifice one job on Canadian soil to create ten jobs abroad.

counterarguments. This suggests that people's views on international economic policy are not purely epiphenomenal or elite-driven.

The rest of this article has four sections. First, we argue that there are strong normative and practical reasons to explore mass attitudes toward the taxation of multinationals. Second, we briefly review key features of the current international tax system to identify the most important policy dimensions along which we need to query public opinion. Third, we use a series of randomized experiments to assess the fiscal intuitions of mass publics in three large countries. Finally, we discuss some of the limitations of our study and identify opportunities for future work.

## The Fiscal Intuitions of Mass Publics Matter

Ever since the international tax system was created in the 1920s, dissatisfied commentators have proposed plans to improve global tax governance. Despite the great societal importance of the issue, debates over international tax reform occur within a relatively closed epistemic community, that is, between members of an elite network of tax professionals, academics, technocrats, and politicians (Seabrooke and Wigan 2016; Hearson 2018; Christensen 2020). To some extent, this is normal, because tax law is a highly technical field. Much like other areas of international political economy, such as trade and investment, tax policy is often driven by elite actors engaged in quiet politics (Dür and De Bièvre 2007; Bauerle Danzman 2019; Christensen 2020).

In recent years, however, corporate tax avoidance has become a salient political issue, sparking conversation and action well outside the walls of universities and parliaments. Stories like the *Panama Papers* leak were prominently covered by the world's major newspapers, including *Süddeutsche Zeitung, The New York Times, El País, The Guardian,* and *Le Monde.* Anti-tax avoidance protesters filled streets in the United Kingdom, France, and several other countries. Vast fortunes were seized by authorities, and elected officials embroiled in tax scandal were forced to resign.<sup>4</sup>

These developments have raised the stakes for politicians, who are keenly aware that the problem of tax avoidance resonates with many voters. This is evident in the work of Mérand (2021), who conducted an embedded ethnography of decision making at the highest levels of the European Commission. After observing international negotiations and behind-the-scenes discussions between key actors, the author concludes that Pierre Moscovici and his colleagues designed initiatives to curb tax avoidance as an explicit left-wing response to the rising tide of right-wing populism in Europe.

For politicians, the success of such initiatives is often measured by the extent to which they resonate with the perceptions and demands of voters. Consider the 2021 announcement that the Biden administration would support the introduction of a Global Minimum Tax. Under this plan, the country where a multinational's headquarter is located would apply a top-up tax to ensure that the company's effective tax rate crosses a specified threshold (e.g., 15 or 21 percent). Left-leaning commentators celebrated this change in American policy, but much of the expert discussion missed a crucial point: This Global Minimum Tax would increase the *level* of taxation and undermine tax havens, but it would do little to correct the unbalanced *allocation* of taxing rights between non-haven countries.

Both the level and the allocation of taxes are salient political issues. In 2020, for example, the French finance minister declared: "It's not possible, not sustainable, that we tax manufacturing industries while billions in profits earned by Google, Apple, Facebook, and Amazon on European soil evaporate" (emphasis added).<sup>5</sup> The same year, the Czech finance minister argued that "Internet giants do not pay taxes in our country to an extent that would match their profits in our country" (emphasis added).<sup>6</sup> Under Biden's Global Minimum Tax, digital giants would pay higher taxes in the United States, since this is where their headquarters are located. However, French voters who spend hours on Facebook every week may still be shocked to learn that the company pays little to no corporate income tax to the French government.<sup>7</sup> Unless it addresses both the level and allocation issues, a Global Minimum Tax may not quell the wave of cynicism and popular discontent that ignited the recent "digital tax wars."

Our study is thus motivated by a strong belief that the taxation of multinationals is a salient political issue in the electorate; that politicians know that this issue resonates with the public, and they craft policies in response to—or in an attempt to exploit—popular sentiment; and that tax reform proposals vary widely in the extent to which they address the public's perception of the problem.

Beyond these political considerations, the closed nature of the tax community is also problematic from a normative perspective. In a democratic system, the legitimacy of public policy must rest on the assent of citizens. The fact that most people have not considered the technical details behind specific tax reforms does not entail that we should ignore their views. To the contrary, our stance is that academics and policymakers must take into account the views of ordinary citizens when they design new policies, even if those views are not well-informed and are considered technical judgments. If a policy clashes with citizens' intuitions, then, policymakers must bear the extra burden of education. Engaging with citizens' views is an imperative in a democracy.

Our interest in mass attitudes requires us to ask questions about a technical topic to a population of nonspecialists. As a result, we have to be especially careful in designing our survey questionnaire and in interpreting our findings. We cannot assume that people hold well-formed *ex ante* preferences or opinions about a topic as complex as international tax law. Instead, our survey experiments are designed to elicit what we call "fiscal intuitions," which we interpret as a set of dispositions toward the appropriateness of broad and simplified policy options, rather than specific technical proposals.

# Tax Base Allocation in a Globalized Economy

Our investigation of mass attitudes toward international taxation is designed to produce stylized facts that are both theoretically motivated and policy relevant. To identify the most important dimensions along which we should query public opinion, we now give a brief overview of the current international tax system and of some key reform proposals. This overview leads us to focus on four principled factors that could guide the geographic allocation of taxing rights:

<sup>&</sup>lt;sup>5</sup>Cited in Melander (2020).

<sup>&</sup>lt;sup>6</sup>Cited in Tax Analysts (2020).

<sup>&</sup>lt;sup>4</sup> In 2020, the Swiss government froze \$900 million in assets belonging to an Angolan oil tycoon. In 2016, the Icelandic prime minister was ousted in the midst of a tax scandal.

<sup>&</sup>lt;sup>7</sup> The OECD reform proposal also includes a *Pillar 1*, which would reallocate part of the tax revenues to market jurisdictions, but projections suggest that the amount of taxes reallocated in this way would be small.

residence, capital, labor, and sales. We also highlight the importance of one psychological phenomenon that could impede international cooperation in this arena: home bias.

# Tax Bbase Allocation: Residence versus Source

The principles that underpin the international tax system were developed in the interwar years, as governments were laying foundations for the post–World War I economic recovery (Jogarajan 2018). Since then, those principles have been enshrined in thousands of bilateral tax treaties (BTTs) (Rixen 2008; Dagan 2017).

The primary goal of BTTs is to coordinate tax policies across borders to avoid double taxation. Consider the case of Royal Dutch Shell. In 2018, the company owned subsidiaries in over eighty countries. If every one of those governments taxed Shell's worldwide profits at the full corporate tax rate, without making allowance for taxes paid in other jurisdictions, than the company's profits would soon evaporate. This would eliminate incentives to make cross-border investments and have negative consequences for trade and FDI. Clearly, national governments need to coordinate to forestall double taxation.

BTTs achieve this coordination by relying on a convenient, but problematic, legal fiction: the arm's length principle.<sup>8</sup> Under this principle, the operations of a multinational in different countries are treated *as if* they were conducted by unrelated entities, and transactions between related parties are required to be conducted at market price (see Avi-Yonah 2007 for details).

Roughly speaking, the rights to tax the profits of each pseudo-independent entity are split between governments from the "source" and "residence" countries. In that context, the expression "residence" usually refers to the country where a firm is incorporated, or where it's "mind and management" are located. The expression "source" refers to the location where the economic activity actually takes place.

Governments in countries of residence usually have wide latitude to tax income from passive sources, such as royalties, interest, and dividends. In contrast, most BTTs severely constrain the ability of source countries to tax the same streams of income by reducing withholding tax rates on outbound cross-border payments. This allocation of the passive tax base is one of the reasons why critics claim that most tax treaties favor residence over source jurisdictions; they point out that intragroup dividends, interest, and royalty payments can often be used to strip income from capital-importing countries toward capital-exporting countries where multinationals tend to be headquartered (Hearson 2021).

Whereas passive income is typically taxed at residence, the primary right to tax active business income lies in the source jurisdictions. When two countries sign a BTT, they agree to a physical test that defines the conditions under which a source government can apply its corporate income tax. When a firm creates a "permanent establishment" in a jurisdiction—such as a branch, offices, factories, or mines—the government of that jurisdiction gains the right to tax the active business profits of the firm at source.

From a practical perspective, the residence criterion for taxation is relatively unambiguous.<sup>9</sup> To identify the residence, we can look at specific indicators such as the jurisdiction where a firm is legally incorporated, the place where its board meets, etc.

In contrast, the source criterion can be hard to conceptualize and operationalize. Indeed, when a firm's operations span jurisdictions, it can be difficult to establish the true "source" of profits, that is, the geographic location where the most important economic activities occur. As Justice Brandeis noted in a 1920 Supreme Court opinion, a government that wishes to tax returns from cross-border commercial activity often faces "the impossibility of allocating specifically the profits earned by the processes conducted within its borders (U.S. Reports 1920)."

The problem that Brandeis highlighted 100 years ago has only grown since, with the rise of global value chains and digitalization. How can we determine what share of Facebook's global profits arises from the labor of American engineers, the capital used in data centers in Sweden, the ads sold in Germany, or the user engagement data collected from French users?

# The Sources of Value Creation: Labor, Capital, and Sales

Thomas Sewall Adams, one of the founding figures of the field of public finance, lamented our inability to find a "scientific" solution to the problem of assigning economic value to the geographically dispersed activities of a firm.<sup>10</sup> As a second-best alternative, he recommended the adoption of uniform "rules of thumb" that would roughly align states' taxing rights to the value creation that occurs within their borders (Adams 1917). These rules of thumb have to be defined with both *theoretical* and *policy* considerations in mind. From a theoretical perspective, this entails identifying the economic origins of value creation. From a policy perspective, sources of value creation have to map onto observable characteristics of the firm.

The first factor that we consider comes to us from Adam Smith, whose labor theory of value influenced generations of political economists, including Marx and Ricardo. The basic idea is straightforward: people's physical and intellectual labor is the ultimate source of value creation, and the exchange value of a good is tightly linked to the labor that it commands. The widespread appeal of this account, centered on the productive role of workers, seems undeniable. It permeates culture and politics, from Brecht's ballad about the water that drives the millwheel but cannot rise above,<sup>11</sup> to the economic grievances of modern day populists. One explanation for the enduring appeal of the labor theory of value is that, as Schumpeter (1954, 532) notes, it carries "meta-economic" meaning of an ethical color consonant with the views of those who defend the interests of workers.

The second factor that may drive value creation is capital. Even if they often espoused the labor theory of value, the giants of political economy recognized that labor alone was insufficient. In his *Principles of Political Economy*, J.S. Mill (1848, Book I.7) identifies capital as one of the "requisites" of production, and develops a theory of capital as a form

<sup>&</sup>lt;sup>8</sup>The arm's length principle is a problematic legal fiction. It treats entities as unrelated when they are, in fact, related. It seeks to find market prices for transactions that have no market analogue, or that might not occur at all if multinationals were unable to exploit their ownership and internalization advantages (Dunning 1980). As a result, many subjective and *ad hoc* elements inevitably creep into transfer pricing analysis. This often makes it possible for multinationals to manipulate the prices of intra-firm transactions in order to strip income from entities in high-tax jurisdictions. See our online appendix or Malesky (2015) for an introduction to transfer pricing manipulation.

<sup>&</sup>lt;sup>9</sup>Ambiguities can and do arise when jurisdictions apply different—sometimes conflicting—tests to determine where a firm resides.

<sup>&</sup>lt;sup>10</sup>Adams drafted the first successful progressive income tax in the United States and had a lasting influence on international tax policy (Graetz and O'Hear 1997).

<sup>&</sup>lt;sup>11</sup>See The Ballad of the Waterwheel from Round Heads and Pointed Heads (1934).

or "stored-up" labor, accumulated through past savings. If production is made possible by this embodied labor, then it seems reasonable to argue that capital is a source of value creation.

The third factor—sales—may best be understood as a proxy for value, rather than as a source of value *per se.*<sup>12</sup> In every introduction to economics class, students learn that market exchanges generate benefits in the form of consumer and producer surplus. From there, it is a small leap to conclude that the price people are willing to pay and the quantity they are willing to buy reflect the value they derive from a transaction. More intuitively, it seems reasonable to think about sales as entering in the revenues column of a firm's accounts, whereas labor and capital enter in the costs column. If people associate sales with the creation of value and profits, then our survey respondents should prefer a cross-border allocation of taxing rights that matches the geographic distribution of a company's sales.

## Value Creation and International Tax Reform

The three factors that we identified above—labor, capital, and sales—are not only important because of their theoretical links to classical political economy. They also matter because they are reflected in the most prominent policy alternative to the current international tax system: *formulary apportionment* (FA).

FA has been used for decades to split the corporate tax base among American states and Canadian provinces; tax-focused NGOs have made FA a pillar of their advocacy strategy, and many academics have studied and promoted the approach (Dietsch and Rixen 2016).<sup>13</sup> Like the arm's length principle, FA is a legal mechanism that can be used to split the taxable profits of a company between the jurisdictions where it operates (Clausing 2016). Unlike the current system, FA does not treat subsidiaries and parent companies as independent entities but rather considers them part of a whole (i.e., "unitary taxation").

To allocate taxing rights, FA proceeds in two steps. First, a multinational reports its group-wide profits, that is, the total profits that the parent and all its subsidiaries make throughout the world. Second, those taxable profits are assigned to different governments based on the geographic distribution of economic activities:

$$t_j = \pi \cdot r_j \left[ w_k \frac{K_j}{K} + w_l \frac{L_j}{L} + w_s \frac{S_j}{S} \right], \tag{1}$$

where  $t_j$  represents the taxes paid by a firm to the government of country j;  $\pi$  is the firm's worldwide profits;  $r_j$  is the corporate tax rate in country j;  $K_j/K$  is the proportion of the firm's total capital assets located in j;  $L_j/L$  is the percentage of the firm's employees who work in j; and  $S_j/S$ is the share of sales made to customers from j. Finally,  $w_k$ ,  $w_l$ ,  $w_s$  are weights that determine the relative importance of each factor in the allocation process. For example, when  $w_s$  is large, most of the tax revenues are collected where companies sell their products.<sup>14</sup> The weights in Equation (1) are important for both practical and conceptual reasons. On the practical side, if international negotiations lead to the adoption of an FA system, than the choice of weights will be one of the most consequential decisions that governments will have to make. Indeed, the theoretical literature on FA suggests that different weighting schemes could have very different distributional implications (McLure 1980; Gordon and Wilson 1986).

Conceptually, the weights of the apportionment formula give us a nice framework to make sense of international tax reform. Indeed, the FA equation draws a link between classical theories of value creation and the practice of tax base allocation, and it helps frame the main normative question at hand: Should multinationals pay taxes where capital is located  $(w_k)$ , where employees work  $(w_l)$ , or where goods and services are sold  $(w_s)$ ?

The FA equation can also act as a conceptual umbrella to organize our thinking about various alternatives to the current international tax system. For example, in recent years, experts and politicians have made several reform proposals, including the *digital services tax* (Cui 2020), *sales-only formulary apportionment* (Auerbach et al. 2017), *destination-based cash flow tax* (Auerbach et al. 2017), and *pillar one* (OECD 2019). These proposals differ in important respects, but they share a key feature: all of them allocate tax revenues to different governments chiefly based on the geographic location of a firm's customers or users (i.e., the  $w_s$  weight in Equation (1)).

Proponents of these market-based methods are often motivated by classic theoretical results about the efficiency cost of taxation, going all the way back to Ramsey (1927). In this tradition, taxes are expected to be more efficient when applied to inelastic (or immobile) goods and factors. Auerbach et al. (2017) note that market-based methods are "built on the intuition that taxing companies on the basis of something that is relatively immobile-which we take consumers, by and large, to be-limits the scope for the gaming that has caused such difficulties within the current international tax framework."<sup>15</sup> By focusing on the  $w_s$  factor of the apportionment formula, these methods allocate taxing rights based on a relatively inelastic factor. In doing so, they also decouple international tax law from classical theories that emphasize the role of labor and capital in value creation.

Among the market-based methods that have been proposed in recent years, the most salient and controversial is undoubtedly the DST.<sup>16</sup> With a DST, a government imposes a fixed percentage tax (e.g., 3 percent) on gross revenues from digital advertising, online sales, social networks, user data sales, and other digital activities. Typically, companies pay this tax to governments in proportion to the location of their end users, identified by Internet Protocol addresses. As of 2020, over thirty countries have announced, drafted, or implemented legislation for a DST or similar digital taxes (KPMG 2020). Since their introduction, DSTs have been the object of important diplomatic skirmishes (Wearden 2020).

The main argument in favor of DSTs is an appeal to fairness. Under current rules, a company can have a *digital* 

 $<sup>^{12}\,\</sup>mathrm{But}$  see Cui (2020) who argues that user engagement with online platforms creates value.

<sup>&</sup>lt;sup>13</sup>Like any major tax reform, FA is an imperfect solution to the thorny problems at hand. First, Hines (2010) has argued that the weights used in typical apportionment formulas do not accurately reflect the geography of value creation and that they could distort economic incentives. Second, FA shifts incentives for firms and governments, and it could have major implications for tax competition and the distribution of the tax burden across society (McLure 1980; Arel-Bundock and Parinandi 2018). Finally, FA could open new tax-planning and income-stripping opportunities for multinationals (Auerbach et al. 2017, 797).

<sup>&</sup>lt;sup>14</sup>Table A1 in the online appendix illustrates how to apply the formula using a numerical example. Traditionally, FA systems have applied a "Massachusetts formula" with equal weights, but other schemes are increasingly common.

<sup>&</sup>lt;sup>15</sup> This quote refers specifically to the destination-based cash flow tax. An important caveat is that sales may not be the most elastic factor in every industry. In the extractive sector, for example, capital can be immobile and less elastic than sales.

<sup>&</sup>lt;sup>16</sup>Strictly speaking, the DST does not allocate taxing rights to the location of sales *per se*, but rather to jurisdictions where customers and users reside.

*presence* with millions of users in a country, but it pays no corporate income tax unless it also has a *physical presence*. This is viewed as unfair by many.

There are two main arguments against DSTs: industry and location-based discrimination. The *industry* argument is that ring-fencing profits from digital operations is difficult to implement, arbitrary, and discriminatory: It hits digital firms but not others. The *location* argument is that DSTs usually apply only to large digitalized companies, and that most such companies are American. Thus, DSTs discriminate based on both the industry and the nationality of firms.

# Tax Reform in the Real World: Home Country Bias

The discussion above suggests that it makes sense to probe the relationship between fiscal intuitions, the residence criterion (location of management), and the source criterion (location of labor, capital, and sales). These criteria could help us adopt "rules of thumb" to allocate taxing rights to different governments.

Of course, these principled factors are unlikely to be people's sole consideration when they express views on the allocation of tax revenues to different governments. Recent experimental work in international political economy shows that the public's views on international economic matters often stray from economic or philosophical principles. For instance, we know that with respect to trade policy, mass publics exhibit a strong bias in favor of outcomes that benefit conationals (Mutz and Lee 2020; Brutger and Rathbun 2021).

Similarly, if we ask people the question, "which governments should have the right to tax multinationals?" their answers are likely to be driven by a form of home country bias. In the empirical portion of this paper, we quantify the strength of this bias by measuring how much more tax revenues people tend to allocate to their own government.

# **Three Empirical Studies, Replicated in Three Countries**

We have made the case that there are sound empirical and normative reasons to study the intuitions of mass publics with respect to the taxation of multinationals. We argued that these fiscal intuitions could be associated with four distinct factors (residence, labor, capital, and sales), as well as driven by people's tendency to favor conationals.

We now shed empirical light on these issues through three complementary studies, including two randomized experiments and a direct elicitation question that were preregistered. Each of those studies was conducted in the context of large-scale surveys and were replicated in three countries: Brazil, France, and the United States. All respondents participated in all three of our studies, in the order in which they are presented here, in the context of a single web survey per country.

In our main study, we present fictional multinational companies and ask respondents to split a fixed amount of tax revenue between the jurisdictions where those companies operate. This research design allows us to examine the relative weight that people place on the dimensions of value creation, and to ascertain the magnitude of bias in favor of the home country.

To validate the results of our main experiment, we conduct a follow-up study in which we directly elicit respondents' views over international tax policy. Specifically, we ask them to rank the relative importance of the three tax base allocation factors. Finally, since market-based methods like the DST have become increasingly salient in recent years, we ascertain the extent to which allocating the corporate income tax on the basis of sales accords with people's fiscal intuitions. In particular, we measure respondents' support for the DST, and conduct a randomized framing experiment to determine if support for this tax can be dented by counterarguments. Taken together, our three studies provide crucial insights into mass attitudes about the geography of taxation in a digital economy.

#### Case Selection

We field surveys in three countries: Brazil, France, and the United States.<sup>17</sup> This three-country design is important because views about international tax policy could be affected by a country's position in global production chains, or by elite cues from respondents' home country governments.

One of the key objectives of our research design is to obtain estimates of the quantities of interest that can be compared across countries. Our survey experiments involve fictional companies whose characteristics are randomized across countries. To ensure that cross-country comparisons are valid, we need to conduct parallel experiments in which the exact same company characteristics are randomized. Another constraint is that the features of each fictional company (e.g., location of the headquarter) must appear realistic to respondents. Therefore, we needed to select three countries where both foreign and domestic multinationals are active.

In addition, we sought to find countries that vary across two key dimensions: they hold different places in the global economy, and their governments have advocated different policies with respect to international taxation. The United States is home to many of the world's largest multinational corporations and to most of the dominant digital firms. Historically, the American government has argued that multinationals should be taxed on their worldwide profits in the country where they are headquartered (Avi-Yonah 2007).

France is another major economy, but its government holds very different views with respect to international tax policy. In particular, it has recently been promoting the DST, a special tax on the profits of digital firms like Facebook, to be collected not where a firm is headquartered but rather where its users/consumers are located (Khan, Barker, and Toplensky 2018). The US government is strongly opposed to this tax because it would disproportionately affect American companies.

Finally, Brazil is an emerging market, a capital importer, and a country with some multinationals, but fewer than France or the United States. Since Brazil holds a different position in the global economy, economic theory suggests that the optimal tax policies for Brazil may not be the same as for the other two countries (Baistrocchi 2008; Hines 1998). Moreover, the Brazilian government has long challenged the international tax orthodoxy by advocating rules that benefit governments in countries where employees are located and where resources are extracted rather than countries where multinationals are headquartered.

<sup>&</sup>lt;sup>17</sup> Data were collected on the Qualtrics platform between July 23 and August 8, 2020. In Brazil, Netquest recruited participants to fill nationally representative quotas by age, gender, socio-economic level, and state. In France and the United States, Dynata recruited participants to fill nationally representative quotas by age, gender, education, and state/region.

# Study #1: FA

Our first survey experiment is designed to assess the fiscal intuitions of respondents about the allocation of taxing rights across jurisdictions. More specifically, it is designed to show how much weight people think should be given to residence, labor, capital, and sales in the allocation of these rights. The experiment also allows us to measure the extent of home bias in allocation decisions.

The vast majority of survey respondents do not think about international taxation regularly, so answering questions about such a complex topic could feel jarring to them. To prepare respondents, we thus begin by asking all of them to read a short introductory text about Zara, a multinational company with operations in many countries (see online appendix). This text primes respondents to think about the geographic distribution of business activities before they begin the experimental task. Then, respondents are introduced to a hypothetical multinational company. This company does business in three countries: Brazil, France, and the United States.

To convey information about the geographic distribution of economic activities, we display a set of bar charts that show the amount of capital, labor, and sales in each country. The geographic distribution of business activities is randomly generated, as is the location of the company's headquarter. Figure A8 in the online appendix shows one of the images used in the experiment. <sup>18</sup>

The outcome variable is measured by respondents' answer to this question: "Suppose that this company must pay a total of ten million [dollars/euros/reals] in corporate tax across the three countries. How much tax should be paid in each country?" Importantly, respondents are constrained to split a fixed amount of taxes among three governments. This is a key feature of the design, because our analytical goal is to distinguish the object of interest in our study-the allocation of taxing rights and revenues across jurisdictionsfrom the level of taxation.<sup>19</sup> This distinction is important substantively because, while complementary, the allocation of taxing rights and statutory tax rates are outcomes of different political processes: the former is the domain of diplomatic relations and international tax law, whereas the latter are set through national-level politics, protected by strong norms of state sovereignty.

The experimental task generates three data points for our dependent variable: The share of taxes allocated to each of the three countries where the firm operates. Each respondent completes four tasks with four different randomized companies. Thus, each respondent generates twelve distinct data points for the dependent variable. The unit of analysis is respondent-task-country. With about 2,000 respondents, this gives us approximately 24,000 observations per country.

To analyze the results, we estimate linear regression models with five explanatory variables: the shares of capital, labor, and sales in each country; a binary variable equal to 1 if the firm's headquarter is in the jurisdiction that collects taxes; and a binary variable that equals 1 when a respondent is asked to allocate revenues to their own government. We estimate three linear regression models with heteroskedasticity-consistent standard errors, one for each of the surveys (Brazil, France, and the United States). The full regression results are reported in Table A5 in the online appendix. Several alternative models are also considered in the online appendix to ensure that our results are robust to specification choices.

Figure 2 shows the estimated treatment effects of sales, labor, capital, and headquarter location on respondents' tax allocation decisions. According to respondents, the most important factor in determining where a multinational should pay taxes is the location of its sales. In the extreme case where a company shifted all its sales to a new country, Brazilian and American respondents indicate that the company's tax liabilities in that country should increase by nearly two million (out of ten million); French respondents indicate that the revenue allocated to that government should increase by nearly three million. This treatment effect is substantively large, even if we were to consider smaller changes in the geographic distribution of economic activities.

The estimated effect of *Sales* on tax revenue allocation is about twice as large as the effects of *Capital* or *Labor*. It is also much larger than the *Headquarter location* coefficient, which captures the "taxation at residence" principle. These results provide crucial insights into people's intuitions with respect to the taxation of multinational corporations.

First, allocating taxation rights based on the location of sales clashes with the arm's length principle, the residence principle, and the permanent establishment test, which states that taxation at source should occur where a firm has a physical presence. In other words, the fiscal intuitions of mass publics clash with the core principles of the current international tax system.

Second, the fiscal intuitions that we document here are in line with efficiency-based arguments from public finance, which emphasize the benefits of taxing immobile or inelastic factors. This suggests that international taxation may be a policy area where the intuitive dispositions of people are fortuitously compatible with the efficiency-based arguments made by several economists.

Third, international taxation is a technical issue area, and specialists may legitimately wonder if ordinary citizens can hold consistent views on such a complicated topic. If not, than the survey responses would be noisy, and we would find little difference between the treatment effects associated with capital, labor, and sales. Instead, we find large systematic differences in those quantities.

The patterns are remarkably similar in Brazil, France, and the United States, despite the fact that these three countries hold very different positions in the international political economy and that their national governments have different stances on the taxation of multinational corporations. Despite such crucial contextual differences, the general public in all three countries agrees on the most important factors for tax base allocation. This suggests that a tax reform that would allocate corporate tax revenues based on the location of sales would be an easy policy choice to explain to the general public.

Another important set of findings relates to the regression coefficient that measures the extent of home bias, that is, the extent to which respondents allocate more tax revenues to their own government (see online appendix for full results). On average, Brazilians allocate R\$842,000 more tax revenue to their own government, the French assign an extra € 595,000 to the French government, and Americans give \$545,000 more in tax revenues to the US government. This treatment effect is substantively large: on average, people want to allocate about 6 percent more taxes

<sup>&</sup>lt;sup>18</sup>To avoid implausible situations where, for example, a country has all of its employees but none of its capital in a country, we constrain the height of the bars to be {18.3, 33.3, 48.3} and to sum to 1. The order of countries and factors is randomized at the respondent level but stays constant across tasks.

<sup>&</sup>lt;sup>19</sup>To be even more consistent with our substantive question of interest, the survey question would have had to ask about *taxing rights* instead of *tax revenues*. However, after workshopping various alternatives, we concluded that the idea of "taxing rights" was too complex and abstract for a general population survey.

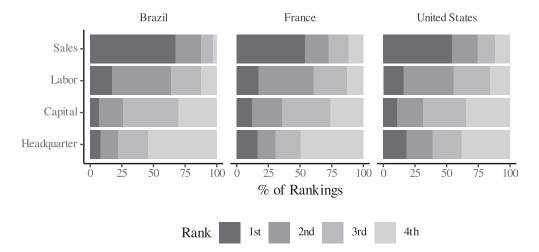


Figure 2. Respondent rankings of four tax allocation factors in three countries.

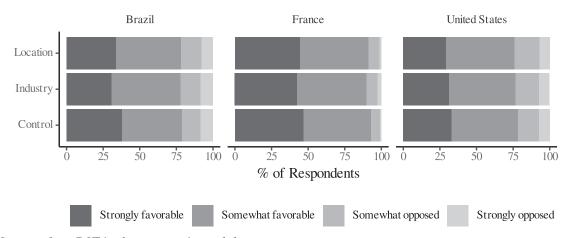


Figure 3. Support for a DST in three countries and three treatment groups.

to their own home government, regardless of firm characteristics, activities, or nationality.<sup>20</sup> This finding is consistent with prior results from the trade literature showing that nationalistic considerations color policy preferences in international economics.

#### Study #2: Direct Elicitation

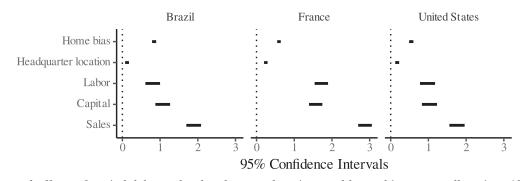
To validate the results of our first experiment, we directly elicit respondents' views about the allocation of taxation rights across countries. Specifically, we ask the following: "The amount of taxes that a multinational company pays in the different countries where it does business should depend first and foremost on...." Respondents choose their response from a list of four possibilities: (1) the amount of sales in the different countries, (2) the number of employees in the different countries, (3) the amount of equipment in the different countries, (4) the location of the headquarters and owners. After choosing the most important factor, respondents are asked to rank the second factor from among the remaining possibilities, and so on, until all four factors are ranked.

Given the complexity of the issue, it would have been unreasonable to ask respondents to rank the tax allocation factors without offering more context. For this reason, we purposely designed our questionnaire to ensure that respondents would rank allocation factors after completing the experiment introduced in the previous section. It seems reasonable to expect that after deciding how to split the tax liabilities of four hypothetical companies, respondents will have reflected on their own intuitions and will be able to express them in a simple ranking task.<sup>21</sup>

Figure 3 shows the results from this direct elicitation study. They are remarkably consistent with the experimental results. In all three countries, over half of respondents believe that the amount of taxes paid to different governments should depend first and foremost on the location of sales. Over 75 percent of respondents believe that sales should be one of the top two factors to consider. The location of employees is also an important factor for people's preferred tax base allocation, whereas capital and headquarters location trail far behind.

 $<sup>^{20}</sup>$  When comparing the substantive size of this causal effect to the *sales*, *labor*, and *capital* coefficients, it is important to remember that those three variables are coded on a 0 to 1 scale.

<sup>&</sup>lt;sup>21</sup> Importantly, since the features of the companies in the preceding experiment were chosen randomly, we do not expect it to contaminate the ranking task by systematically biasing responses toward any of the factors. To ensure that the results of the third experiment (see next section) are robust to this type of interference, Table A10 in the online appendix reports the results from alternative regression models with controls for the treatments received by the respondents in the first experiment. These alternative models produce substantively equivalent results.



**Figure 4.** Estimated effects of capital, labor, sales, headquarter location, and home bias on tax allocation. All regressors are on a 0–1 scale. Taxes (outcome) are on a 0–10 scale, denominated in millions of local currency units.

# Study #3: DST

Our first two studies assessed how respondents ranked the importance of each factor in the FA formula. We found that survey respondents assign a great deal of importance to the location of sales in allocating tax revenues to different governments. This suggests that market-based methods have considerable potential for international reform because they are consistent with both efficiency-based arguments and people's intuitions.

Our final experiment is designed to measure the level and malleability of public support for one of the most prominent and controversial market-based methods: the DST. To do this, we asked respondents in all treatment arms to read an introductory text that explains what is a DST and why some governments have adopted it. In the control condition, respondents see no other text. In two separate treatment arms (Industry and Location), we augment the vignette with the two principal anti-DST arguments, related to discrimination against digital or American multinationals.<sup>22</sup> Finally, we ask the following: "How favorable or opposed are you to imposing a special tax on big digital companies?" The responses to this question allow us to ascertain the overall level of support for such a tax (the results in the control group) and the extent to which standard objections to the tax reduce that support (the treatment effects).

The results of this experiment are shown in Figure 4. Each column shows the responses from a different country. Each row shows the responses in one of the treatment arms. Support for a DST is very high in all three countries. In Brazil and the United States, over 75 percent of respondents are either somewhat or strongly favorable toward a DST. In France, that proportion exceeds 90 percent. Interestingly, support for a DST does *not* seem to be affected by counterarguments related to discrimination against digital or American firms, even in the US sample. The differences across treatment groups are substantively small, and the groups are statistically indistinguishable. Support for a DST is widespread and strong.

# Conclusion

This article focused on an important but neglected question in international political economy: Where should multinationals pay taxes? To answer this question, we conducted a series of survey experiments in Brazil, France, and the United States. These experiments allowed us to examine the foundations of mass attitudes toward international taxation.

Despite the fact that international tax law is a highly technical field, ordinary citizens' fiscal intuitions are strikingly consistent. Across two experiments and a direct elicitation study, we find clear and regular patterns in survey responses. The same results emerge in Brazil, France, and the United States, three countries that occupy very different positions in our increasingly globalized and digitalized economy. Moreover, not only are the fiscal intuitions that we uncover consistent, but our experiments also show that they are difficult to manipulate through framing and counterarguments. This suggests that to avoid facing an uphill battle for acceptance and legitimacy, policy entrepreneurs would do well to consider how public forms views about international taxation.

Overall, we find that people's intuitions clash with fundamental pillars of the current international tax system, but we find substantial support for reform proposals that would fundamentally transform the legal landscape. Respondents in Brazil, France, and the United States support allocating some tax revenues to jurisdictions where multinationals hold capital and employ workers, but the location where they make sales is about twice as important. This finding lends support to proposals for market-based tax apportionment methods like those proposed by Avi-Yonah, Clausing, and Durst (2008) and Auerbach et al. (2017).

These findings are interesting from a theoretical perspective because they reveal an unexpected area of agreement between economic theory and the fiscal intuitions of ordinary citizens in three very different countries. Classic works in public finance suggest that governments should prioritize the taxation of relatively immobile factors to limit the dead-weight loss of taxation, and several economists argue that since the location of customers is typically less easy to manipulate than the location of capital or labor, sales are a more efficient basis on which to design an international tax system (Auerbach et al. 2017). Our empirical results show that this efficiency-based argument is compatible with the views of citizens in three large democracies. Our research has thus highlighted a special case where the mass public and economists, perhaps for different reasons, agree about what should be done in a key policy area.<sup>23</sup>

As Hafner-Burton et al. (2017) note, the "analysis of social preferences provides an obvious foundation for studies of cooperation," but an analysis of preferences alone cannot fully capture the processes through, which mass attitudes are translated into foreign policy. Indeed, the public and its leaders can fall prey to biases which can have important

<sup>&</sup>lt;sup>22</sup> In the *Industry* case, we use the following text: "Opponents of the digital tax argue that it is unfair because it targets big digital companies but not other kinds of companies." In the *Location* treatment, we use the following: "Opponents of the digital tax argue that it is unfair because it mostly targets big digital companies from the United States but not companies from other countries."

<sup>&</sup>lt;sup>23</sup> It is important to reiterate the caveat from footnote 18 that the elasticity of sales, capital, and labor may vary from industry to industry, and that sales may not always be the most inelastic factor.

consequences for strategic interactions in international relations. Our results illustrate this tension. On the one hand, we find that fiscal intuitions are strikingly similar across countries, which suggests that there is space for international cooperation because two governments could agree to a policy that satisfies both of their publics. On the other hand, we find that the views expressed by survey respondents in all three countries are tinted by a home-country bias. By documenting key stylized facts about individual views on taxation, our study raises important questions about preference formation and aggregation. It suggests that existing interest-based theories of taxation (Hearson and Rixen 2021) could be enriched by a fuller account of the electoral incentives faced by politicians. Doing so could yield a better understanding of the "win-set" available in the two-level game of international tax negotiations (Putnam 1988).

Much work remains to be done in this field. For example, one limitation of our surveys is that they were consciously designed to isolate people's views on the *allocation* of taxing rights to different governments from concerns about the absolute *level* of taxation. It was essential to make the analytical distinction between those two problems in order to answer the research question that we posed in the title: Where should multinationals pay taxes? Of course, in real life, concerns about level and allocation are intertwined. We now need to develop more complex research designs to address both issues, and to integrate explicitly the tax avoidance strategies of multinationals and offshore financial centers.

Another important limitation of our experiments is that they were not designed to probe the mechanisms through which certain tax base allocation schemes come to be seen as "appropriate" or "fair." Future work should unpack the psychological mechanisms that underlie preference formation. For instance, we need to understand why market-based taxation is so intuitively appealing to non-specialists.

Our interest in the cross-country allocation of the tax base, and our research designs, led us to consider a sample of countries that are both the homes of some multinationals, and the hosts of others. Given the large costs of cross-national surveys and the difficulties of conducting interviews in authoritarian contexts, we chose to limit our attention to three diverse and economically important democracies: Brazil, France, and the United States. In the future, it would be interesting to assess whether mass attitudes about international taxation are similar in other settings, or if they vary at the individual level.

Finally, our study leaves open many questions about preference heterogeneity at the country, dyadic, and individual levels. At the country level, future research could explore variation in mass attitudes between places that occupy radically different places in Global Value Chains (i.e., farther apart than Brazil and the United States). For instance, citizens in low-income countries may have distinct views on the taxation of multinationals headquartered in rich countries. People in capital-importing countries may not like a market-based mechanism for tax base allocation if it does not yield much revenue for the local government. Residents of tax havens are likely to have very different interests than those who live in high-tax jurisdictions. In combination with the home country bias uncovered here, this could further impede international cooperation in this area.

At the dyadic level, an open question is whether people's preferences exhibit patterns beyond the home-country bias we identified here. For example, in the online appendix, we show preliminary evidence that Brazilian and French citizens tend to allocate less revenue to the American government than to other foreign governments. In contrast, American citizens do not appear to discriminate when they allocate revenues to either the Brazilian or French governments.<sup>24</sup> Documenting and explaining such discrepancies could allow international relations scholars to shed new light on key determinants of public opinion and political behavior, such as ideology and liberal democratic norms (Chu 2021); cultural similarity (Spilker, Bernauer, and Umaña 2016); foreign side-taking and interventions (Walter et al. 2018; Bush and Prather 2020); ethno-linguistic divisions (Beesley 2020); as well as transnational, migrant, and social networks (Pandya and Leblang 2017; Prather 2020; Zeitz and Leblang 2021).

At the individual level, we know that people's sociodemographic characteristics and their information environment can affect their views on globalization (Guisinger 2017), and that international economic policymaking can have markedly different consequences in people's lives, depending on their gender and other characteristics (Betz, Fortunato, and O'Brien 2021). We also know that workers and firms in certain industries can be more vulnerable to extraction and competition in a globalized economy (Owen and Johnston 2017; Pond and Zafeiridou 2020). It would thus be very interesting to chart how preferences over international tax policy line up, at the firm or worker level, with preferences for other economic policies. Our research is a great starting point for such work because it shows that the public has consistent views about the taxation of multinational corporations and that these views must be considered when proposing reforms of the international tax system.

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#### Supplementary Information

Supplementary information is available in the *International Studies Quarterly* data archive.

#### References

- ADAMS, THOMAS S. 1917. "The Taxation of Business." Proceedings of the Annual Conference on Taxation under the Auspices of the National Tax Association 11: 185–94.
- ALTER, KAREN J., AND SOPHIE MEUNIER. 2009. "The Politics of International Regime Complexity." *Perspectives on Politics* 7(1): 13–24.
- AREL-BUNDOCK, VINCENT. 2017. "The Unintended Consequences of Bilateralism: Treaty Shopping and International Tax Policy." *International Organization* 71(2): 349–71.
- AREL-BUNDOCK, VINCENT, AND SRINIVAS PARINANDI. 2018. "Conditional Tax Competition in American States." *Journal of Public Policy* 38(2): 191–20.
- AUERBACH, ALAN J., MICHAEL P. DEVEREUX, MICHAEL KEEN, AND JOHN VELLA. 2017. "International Tax Planning under the Destination-Based Cash Flow Tax." *National Tax Journal* 70(4): 783–02.
- AVI-YONAH, REUVEN. 2007. International Tax as International Law: An Analysis of the International Tax Regime, Cambridge Tax Law Series. Cambridge: Cambridge University Press.
- AVI-YONAH, REUVEN, KIMBERLY CLAUSING, AND MICHAEL DURST. 2008. "Allocating Business Profits for Tax Purposes: A Proposal to Adopt a Formulary Profit Split." *Florida Tax Review* 9: 497.
- BAISTROCCHI, EDUARDO. 2008. "The Use and Interpretation of Tax Treaties in the Emerging World: Theory and Implications." *British Tax Review* 2008(4): 352–91.

 $<sup>^{24}</sup>$  These analyses were not preregistered, so the results should be interpreted with an extra dose of caution.

BALLARD-ROSA, CAMERON, LUCY MARTIN, AND KENNETH SCHEVE. 2016. "The Structure of American Income Tax Policy Preferences." *The Journal of Politics* 79(1): 1–16.

- BAUERLE DANZMAN, SARAH. 2019. Merging Interests: When Domestic Firms Shape FDI Policy. Cambridge: Cambridge University Press.
- BEESLEY, CELESTE. 2020. "Foreign Policy Preferences in Ukraine: Trade and Ethnolinguistic Identity." International Studies Quarterly 64(1): 35–44.
- BERGIN, TOM. 2012. "Special Report: How Starbucks Avoids UK Taxes." *Reuters*, October 15. https://www.reuters.com/article/us-britainstarbucks-tax-idUKBRE89E0EX20121015.
- BETZ, TIMM, DAVID FORTUNATO, AND DIANA Z. O'BRIEN. 2021. "Women's Descriptive Representation and Gendered Import Tax Discrimination." American Political Science Review 115(1): 307–15.
- BILICKA, KATARZYNA ANNA. 2019. "Comparing UK Tax Returns of Foreign Multinationals to Matched Domestic Firms." American Economic Review 109(8): 2921–53.
- BRUTGER, RYAN, AND BRIAN RATHBUN. 2021. "Fair Share? Equality and Equity in American Attitudes Toward Trade." *International Organization* 75(3): 880–900.
- BUSH, SARAH SUNN, AND LAUREN PRATHER. 2020. "Foreign Meddling and Mass Attitudes Toward International Economic Engagement." *International* Organization 74(3): 584–609.
- CADESTIN, CHARLES, KOEN DE BACKER, ISABELLE DESNOYERS-JAMES, SÉBASTIEN MIROUDOT, MING YE, AND DAVIDE RIGO. 2018. "Multinational Enterprises and Global Value Chains: New Insights on the Tradeinvestment Nexus." https://doi.org/10.1787/194ddb63-en.
- CAMPBELL, KATHERINE, AND DUANE HELLELOID. 2016. "Starbucks: Social Responsibility and Tax Avoidance." *Journal of Accounting Education* 37: 38–60.
- CHRISTENSEN, RASMUS CORLIN. 2020. "Elite Professionals in Transnational Tax Governance." *Global Networks* 21(2): 265–93.
- CHRISTENSEN, RASMUS CORLIN, AND MARTIN HEARSON. 2019. "The New Politics of Global Tax Governance: Taking Stock a Decade after the Financial Crisis." *Review of International Political Economy* 26(5): 1068–88.
- CHU, JONATHAN A. 2021. "Liberal Ideology and Foreign Opinion on China." International Studies Quarterly 65(4): 960–72.
- CLARK, WILLIAM ROBERTS, AND MARK HALLERBERG. 2000. "Mobile Capital, Domestic Institutions, and Electorally Induced Monetary and Fiscal Policy." American Political Science Review 94(2): 323–46.
- CLAUSING, KIMBERLY A. 2016. "The US State Experience under Formulary Apportionment: Are There Lessons for International Reform?" National Tax Journal 69 (2): 353–86.

— 2020. "How Big Is Profit Shifting?" https://ssrn.com/abstract= 3503091 or http://dx.doi.org/10.2139/ssrn.3503091.

- COSTA, MELISSA, AND JENNIFER GRAVELLE. 2011. "Taxing Multinational Corporations: Average Tax Rates Symposium on International Taxation and Competitiveness." *Tax Law Review* 65(3): 391–414.
- CUI, WEI. 2020. "The Digital Services Tax: A Conceptual Defense." Tax Law Review 73(1): 69–112.
- CULPEPPER, PEPPER D., 2010. Quiet Politics and Business Power: Corporate control in Europe and Japan. Cambridge: Cambridge University Press.
- DAGAN, TSILLY., 2017. International Tax Policy: Between Competition and Cooperation. Cambridge: Cambridge University Press.
- DAVIES, RONALD B., JULIEN MARTIN, MATHIEU PARENTI, AND FARID TOUBAL. 2017. "Knocking on Tax Haven's Door: Multinational Firms and Transfer Pricing." *The Review of Economics and Statistics* 100(1): 120–34.
- DIETSCH, PETER., 2015. Catching Capital: The Ethics of Tax Competition. Oxford: Oxford University Press.
- DIETSCH, PETER, AND THOMAS RIXEN. 2016. Global Tax Governance: What's Wrong, and How to Fix It. Colchester, UK: ECPR Press.
- DUNNING, JOHN H. 1980. "Toward an Eclectic Theory of International Production: Some Empirical Tests." *Journal of International Business Studies* 11(1): 9–31.
- DÜR, ANDREAS, AND DIRK DE BIÈVRE. 2007. "Inclusion without Influence? NGOs in European Trade Policy." *Journal of Public Policy* 27(1): 79–101.
- FENG, YILANG, ANDREW KERNER, AND JANE L. SUMNER. 2019. "Quitting Globalization: Trade-Related Job Losses, Nationalism, and Resistance to FDI in the United States." *Political Science Research and Methods* 9(2): 1–20.
- FINDLEY, MICHAEL G., DANIEL L. NIELSON, AND JASON SHARMAN. 2014. Global Shell Games: Experiments in Transnational Relations, Crime, and Terrorism, Number 128. Cambridge: Cambridge University Press.
- GENSCHEL, PHILIPP, HANNA LIERSE, AND LAURA SEELKOPF. 2016. "Dictators Don't Compete: Autocracy, Democracy, and Tax Competition." *Review* of International Political Economy 23(2): 290–315.

- GERRING, JOHN. 2012. "Mere Description." British Journal of Political Science 42(4): 721–46.
- GORDON, ROGER, AND JOHN D. WILSON. 1986. "An Examination of Multijurisdictional Corporate Income Taxation under Formula Apportionment." *Econometrica: Journal of the Econometric Society* 54(6): 1357–1373.
- GRAETZ, MICHAEL J., AND MICHAEL M. O'HEAR. 1997. "The Original Intent of U. S. International Taxation." Duke Law Journal 46(5): 1021–109.
- GUISINGER, ALEXANDRA. 2017. American Opinion on Trade: Preferences without Politics, 328. New York: Oxford University Press.
- HAFNER-BURTON, EMILIE M., STEPHAN HAGGARD, DAVID A. LAKE, AND DAVID G. VIC-TOR. 2017. "The Behavioral Revolution and International Relations." *International Organization* 71(S1): S1–S31.
- HAINMUELLER, JENS, AND DANIEL J. HOPKINS. 2014. "Public Attitudes Toward Immigration." Annual Review of Political Science 17: 225–49.
- HAKELBERG, LUKAS. 2020. The Hypocritical Hegemon: How the United States Shapes Global Rules against Tax Evasion and Avoidance. New York, NY: Cornell University Press.
- HEARSON, MARTIN. 2018. "Transnational Expertise and the Expansion of the International Tax Regime: Imposing 'Acceptable' Standards." *Review of International Political Economy* 25(5): 647–71.
- \_\_\_\_\_. 2021. Imposing Standards. New York, NY: Cornell University Press.
- HEARSON, MARTIN, AND THOMAS RIXEN. 2021. "The Political Science of Global Tax Governance." In *Research Handbook on International Taxation*, edited by Yariv Brauner and Hugh Culverhouse. Northampton, MA, USA: Edward Elgar.
- HINES, JAMES R. JR. 1998. ""Tax Sparing" and Direct Investment in Developing Countries." NBER Working Paper No. 6728.
- HINES, JAMES R.. 2010. "Income Misattribution under Formula Apportionment." *European Economic Review* 54(1): 108–20.
- INTERNAL REVENUE SERVICE. 2019. "Country-by-Country reports (Form 8975)." https://www.irs.gov/statistics/soi-tax-stats-country-by-country-report
- JENSEN, NATHAN M. 2013. "Domestic Institutions and the Taxing of Multinational Corporations." *International Studies Quarterly* 57(3): 440–48.
- JOGARAJAN, SUNITA., 2018. Double Taxation and the League of Nations. Cambridge: Cambridge University Press.
- KARKINSKY, TOM, AND NADINE RIEDEL. 2012. "Corporate Taxation and the Choice of Patent Location within Multinational Firms." *Journal of International Economics* 88(1): 176–85.
- KERTZER, JOSHUA D., AND DUSTIN TINGLEY. 2018. "Political Psychology in International Relations: Beyond the Paradigms." Annual Review of Political Science 21: 319–39.
- KHAN, MEHREEN, ALEX BARKER, AND ROCHELLE TOPLENSKY. 2018. "Google, Facebook and Apple Face 'Digital Tax' on EU Turnover." *Financial Times*, March 15. https://www.ft.com/content/e38b60ce-27d7-11e8b27e-cc62a39d57a0.
- KPMG. 2020. "Taxation of the Digitalized Economy: Developments Summary." Accessed February 22, 2023. https://tax.kpmg.us/content/ dam/tax/en/pdfs.
- LIMBERG, JULIAN. 2019. "Tax the Rich'? The Financial Crisis, Fiscal Fairness, and Progressive Income Taxation." European Political Science Review 11(3): 319–36.
- LOCKWOOD, ERIN. 2021. "The International Political Economy of Global Inequality." *Review of International Political Economy* 28(2): 421–45.
- McLURE, CHARLES E., JR. 1980. The State Corporate Income Tax: Lambs in Wolves' Clothing. In *The Economics of Taxation*, edited by Henry J. Aaron and Michael J. Boskin. Washington, DC: The Brookings Institution.
- MALESKY, EDMUND J. 2015. "Transfer Pricing and Global Poverty." International Studies Review 17(4): 669–77.
- MANSFIELD, EDWARD D., AND DIANA C. MUTZ. 2009. "Support for Free Trade: Self-Interest, Sociotropic Politics, and Out-Group Anxiety." *International Organization* 63(3): 425–57.
- 2013. "US Versus Them: Mass Attitudes Toward Offshore Outsourcing." World Politics 65(4): 571–08.
- MELANDER, INGRID. 2020. "France, Germany Want Progress on Taxing Tech Giants." *Reuters*, February 7. https://www.reuters.com/article/us-eutax-digital-france/france-germany-want-progress-on-taxing-tech-giantsidUSKBN1FR29K.
- MILL, JOHN STUART. 1848. Principles of Political Economy. Oxford, UK: J.W. Parker.
- MILNER, HELEN V., AND DUSTIN TINGLEY. 2013. "Public Opinion and Foreign Aid: A Review Essay." International Interactions 39(3): 389–01.
- MUTZ, DIANA C., AND AMBER HYE-YON LEE. 2020. "How Much is One American Worth? How Competition Affects Trade Preferences." *American Political Science Review* 114(4): 1179–94.

- MÉRAND, FRÉDÉRIC., 2021. The Political Commissioner: A European Ethnography. Oxford: Oxford University Press.
- OECD. 2019. "Public Consultation Document: Secretariat Proposal for a 'Unified Approach' under Pillar One." Accessed February 22, 2023. https://www.oecd.org/tax/beps/public-consultationdocument-secretariat-proposal-unified-approach-pillar-one.pdf.
- ——. 2020. "Base Erosion and Profit Shifting: International Collaboration to End Tax Avoidance." Accessed February 22, 2023. https://www.oecd.org/tax/beps/.
- OWEN, ERICA, AND NOEL P. JOHNSTON. 2017. "Occupation and the Political Economy of Trade: Job Routineness, Offshorability, and Protectionist Sentiment." *International Organization* 71(4): 665–99.
- PANDYA, SONAL, AND DAVID LEBLANG. 2017. "Risky Business: Institutions vs. Social Networks in FDI." *Economics & Politics* 29(2): 91–117.
- PANDYA, SONAL S., 2013. Trading Spaces: Foreign Direct Investment Regulation, 1970–2000. Cambridge: Cambridge University Press.
- PELC, KRZNSZTOF J. 2013. "Googling the WTO: What Search-Engine Data Tell Us About the Political Economy of Institutions." *International Organization* 67(3): 629–55.
- PIKETTY, THOMAS., 2017. Capital in the Twenty-First Century. Reprint édition ed. Belknap Press: An Imprint of Harvard University Press.
- PLÜMPER, THOMAS, VERA E. TROEGER, AND HANNES WINNER. 2009. "Why Is There No Race to the Bottom in Capital Taxation?" *International Studies Quarterly* 53 (3): 761–86.
- POGGE, THOMAS, AND KRISHEN MEHTA eds. 2016. *Global Tax Fairness*. Oxford: Oxford University Press.
- POND, AMY, AND CHRISTINA ZAFEIRIDOU. 2020. "The Political Importance of Financial Performance." *American Journal of Political Science* 64(1): 152–68.
- PRATHER, LAUREN. 2020. "Transnational Ties and Support for Foreign Aid." International Studies Quarterly 64(1): 133–47.
- PUTNAM, ROBERT D. 1988. "Diplomacy and Domestic Politics: The Logic of Two-Level Games." *International Organization* 42(3): 427–60.
- RAMSEY, F.P. 1927. "A Contribution to the Theory of Taxation." *The Economic Journal* 37(145): 47–61.
- RIXEN, THOMAS., 2008. The Political Economy of International Tax Governance. London: Palgrave MacMillan.

- SCHEVE, KENNETH, AND DAVID STASAVAGE, 2016. Taxing the Rich: A History of Fiscal Fairness in the United States and Europe. Princeton, NJ: Princeton University Press.
- SCHUMPETER, JOSEPH A. 1954. *History of Economic Analysis*. New York, NY, USA: Routledge.
- 2016. "Powering Ideas through Expertise: Professionals in Global Tax Battles." *Journal of European Public Policy* 23(3): 357–74.
- SEABROOKE, LEONARD, AND DUNCAN WIGAN. 2017. "The Governance of Global Wealth Chains." *Review of International Political Economy* 24(1): 1–29.
- SHIN, MI JEONG. 2019. "Why Do Countries Change the Taxation of Foreign-Source Income of Multinational Firms?" *International Political Science Review* 41 (2): 287–302.
- SPILKER, GABRIELE, THOMAS BERNAUER, AND VÍCTOR UMAÑA. 2016. "Selecting Partner Countries for Preferential Trade Agreements: Experimental Evidence from Costa Rica, Nicaragua, and Vietnam." *International Studies Quarterly* 60(4): 706–18.
- STEINBERG, DAVID A., AND STEPHEN C. NELSON. 2019. "The Mass Political Economy of Capital Controls." *Comparative Political Studies* 52(11): 1575–609.
- TAX ANALYSTS. 2020. "Czech Finance Ministry Proposes 7 Percent DST." Accessed February 22, 2023. https://www.taxnotes.com/tax-notestoday-international/digital-economy/czech-finance-ministryproposes-7-percent-dst/2019/09/06/29x7d.
- TJN. 2020. "Tax Justice Network." Accessed February 22, 2023. https://www.taxjustice.net/.
- U.S. REPORTS. 1920. "Underwood Typewriter Company v. Chamberlain, Treasurer of the State of Connecticut." 254 US 113. Judge: Louis Dembitz Brandeis.
- WALTER, STEFANIE, ELIAS DINAS, IGNACIO JURADO, AND NIKITAS KONSTANTINIDIS. 2018. "Noncooperation by Popular Vote: Expectations, Foreign Intervention, and the Vote in the 2015 Greek Bailout Referendum." *International Organization* 72(4): 969–94.
- WEARDEN, GRAEME. 2020. "Davos 2020: Prince Charles, Donald Trump and Sajid Javid Speak -Day Two as It Happened." *The Guardian*, January 23. https://www.theguardian.com/business/live/2020/jan/22/davos-2020-mark-carney-prince-charles-climate-trade-trump-business-live
- ZEITZ, ALEXANDRA O., AND DAVID A. LEBLANG. 2021. "Migrants as Engines of Financial Globalization: The Case of Global Banking." *International Studies Quarterly* 65(2): 360–74.