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Compensation and Tax Fairness: Evidence From Four Countries

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Abstract

This paper uses a conjoint survey experiment fielded in the US, Australia, Chile, and Argentina to develop and test the compensatory theory of tax fairness, which states that higher taxes on the rich can be used to compensate for other benefits unequally granted by the state. Drawing on social psychology, this paper argues that evidence of preferential treatment by the state violates well-established fairness principles and shows, experimentally, that it leads to taxation to restore equality in crisis times, irrespective of wealth and across a variety of settings. The paper makes two important contributions: it provides the first direct, causal evidence of the importance of compensatory arguments for tax preferences and presents unfounded estimates of the effect of more established fairness considerations as benchmarks against which to compare the importance of compensatory arguments.

Keywords: Survey experiment; fairness; tax preferences; public opinion; redistribution

Introduction

Over the last forty years, political economists have been confronted with a puzzling combination of events: growing income inequality, muted demand for redistribution, and falling tax progressivity. The inconsistency between this reality and the predictions of a broad class of theoretical models has led researchers to reassess many of their assumptions regarding the determinants of redistributive preferences and to engage in an ambitious programme of empirical research.

When it comes to tax preferences, the focus of this paper, two important alternatives to self-interest and efficiency – the main components of the traditional political economy approach – have gained prominence: elite cues and fairness concerns. The first studies the social construction of preferences to highlight how political and business interests can influence individual preferences through their control of the public discourse on wealth taxation (see, for example, Emmenegger and Marx (2019) or Fastenrath et al. (2022)). The second underscores the importance of other-regarding drivers of preferences (Dimick, Rueda, and Stegmüller 2018) and finds that fairness views are one of the key factors shaping support for progressivity (Stantcheva 2021). More generally, this literature has shown that tax preferences are rarely determined by inequality per se – as assumed by the models mentioned above – but rather by fairness concerns (Starmans, Sheskin, and Bloom 2017). A better grasp of fairness principles, their interactions, and cross-cultural validity thus becomes crucial to understanding individual preferences (Trump 2020) and making sense of the above-mentioned patterns.

In this paper, I contribute to our understanding of tax fairness preferences by developing and testing the compensatory theory of tax fairness, which is claimed to have been responsible

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for the largest increases in tax progressivity in the twentieth century (Scheve and Stasavage 2016). This theory argues that higher taxes on the rich are considered fair when they are used to compensate for other benefits unequally granted by the state. Prior work has shown that when the state is perceived as benefiting the rich in the context of massive asymmetric shocks, progressive taxes have been demanded as a way of restoring equal treatment (Limberg 2020; Scheve and Stasavage 2016). However, no direct, causal evidence that this fairness criterion is applied by individuals when judging tax fairness has thus far been provided. In this paper, I draw on social psychology to argue that evidence of preferential treatment by the state violates well-established distributive and procedural fairness principles, and show, experimentally, that it leads to the use of taxation as a means of restoring equality not only in times of crisis, irrespective of wealth, and across a variety of settings.

The relevance of the compensatory fairness criterion can only be ascertained in relation to other fairness arguments. These tell us people consider taxes to be fair when they are distributed on the basis of two main criteria. The first is ability to pay: in a world of decreasing marginal utility of income, equal sacrifice translates into higher tax rates for the rich (Ballard-Rosa, Martin, and Scheve 2017; Roosma, Van Oorschot, and Gelissen 2016). The second is deservingness: if income is the result of varying levels of effort, those making greater effort deserve to keep more of their income through lower tax rates (Alesina and Angeletos 2005; Durante, Putterman, and Weele 2014). Yet determining the relevance of different fairness arguments in explaining individual tax preferences is a task riddled with confounding. Observationally, it is hard to disentangle between competing theories because trends in aggregate data can be consistent with many of them. People may want the rich to pay higher tax rates because they have more money (ability to pay), because they think they have made less effort (deservingness), or because they think they have been unfairly benefited by the state (compensation), among other potential reasons. Even experimental approaches that focus on individual fairness theories are confounded by the assumptions respondents make about potentially correlated (such as income and effort) or underspecified (such as luck) attributes.

To deal with these issues, I developed a conjoint experiment that randomly varies the level of income, source of income, and share of income paid in sales taxes in paired profiles and asks respondents to pick which profile should pay a higher tax rate. Conjoint experiments, which have been shown to uncover the determinants of multidimensional decision-making (Hainmueller, Hopkins, and Yamamoto 2014), are particularly suited to the task of identifying the relative importance of different fairness considerations. The experiment thus allows me to identify which fairness considerations people apply when deciding how to distribute the tax burden, whether that be ability to pay, deservingness, or compensation. This allows me not only to test the compensatory theory but also compare its relative importance against unconfounded measures of alternative fairness considerations, and examine their interactions. To assess the generalizability of my findings, I conduct comparable – and locally validated – versions of this survey in the US, Australia, Chile, and Argentina, four countries with broadly different institutions, cultures, levels of inequality, and of redistributive effort.

Results show that compensatory theory is grounded in our justice judgments, exerts a large influence on tax preferences, and is widely used by mass publics across a variety of settings, suggesting it represents a basic, shared expectation regarding the role of the state. The paper makes three important contributions. First, it develops the compensatory theory of tax fairness by drawing on justice judgment theory to provide its psychological foundation. This theory explains why compensatory arguments can be a powerful driver of fairness preferences and provides testable empirical implications. Second, it tests the relevance of the compensatory theory for individuals' tax judgments. Past research highlighted its importance in elite rhetoric during critical historical junctures (Scheve and Stasavage 2016), but these results were subject to confounding and, critically, never tested at the individual level. Third, it assesses the importance of compensatory theory relative to other more established fairness arguments.

This paper's findings can offer insight into current dynamics. In recent years, demands for taxing the rich have quickly gained ground in the context of the Covid-19 pandemic.¹ The massive asymmetric shock of the pandemic thus seems to have set the stage for growing compensatory demands by bringing to the fore an unequal and unfair distribution of burdens, as well as the critical role played by the state in it.

Studying Tax Fairness

Research on tax fairness has traditionally studied fairness principles one at a time, providing little insight into the relative importance of, and potential interactions between, different conceptions of fairness.² In this paper, I expand upon prior research by studying compensatory fairness alongside ability to pay and deservingness, arguably the two best-studied drivers of tax fairness. Before introducing the compensatory theory of tax fairness and the role played by social justice judgments, I briefly explain how these other fairness principles have been conceptualized and studied.

Standard Approaches to Tax Fairness

The ability to pay principle, regularly encountered in normative and positive models of taxation, essentially argues that when it comes to paying taxes, everyone should make the same level of sacrifice, which, given the basic fact of the decreasing marginal utility of income, means the rich should pay a higher tax rate. Empirical research has convincingly shown that, on average, the American public's tax preferences are progressive, a finding that has been interpreted as evidence of the prevalence of ability to pay principles (Ballard-Rosa, Martin, and Scheve 2017; Roosma, Van Oorschot, and Gelissen 2016). However, unless respondents' beliefs regarding the source of wealth are controlled for, these preferences could be confounded by other fairness beliefs. For example, Gee, Migueis, and Parsa (2017) argue that, at least in a lab setting, respondents use observed income as a signal of unobserved deservingness.

More recently, researchers have started to conceptualize fairness also as deservingness. This principle refers to the notion that, depending on how income (or wealth) is produced, some people are more deserving of it than others and should, therefore, be entitled to retain a higher share through lower tax rates. In the economics and political science literature, deservingness has been operationalized in two distinct ways. Formal and observational studies have focused on the role of abstract beliefs about how income is produced to show that people who believe that income is the result of effort prefer lower taxes than those who believe it is the result of luck. These beliefs have most notably been used to explain differences regarding the preferred level of taxation in the US and Europe (Alesina and Angeletos 2005; Alesina and Glaeser 2004; Piketty 1995). On the other hand, experimental studies have manipulated the source of income to show that subjects prefer higher taxes when income results from luck than when it results from effort (Chow and Galak 2012; Durante, Putterman, and Weele 2014; Fong and Luttmer 2011; Lefgren, Sims, and Stoddard 2016). Durante, Putterman, and Weele (2014) expand upon this distinction to include income resulting from initial conditions or opportunity and find that it results in intermediate levels of taxation.

¹See, for example, *The Washington Post*, 'Should the rich pay for the pandemic? Argentina thinks so, other countries are taking a look', 19 February 2021, https://www.washingtonpost.com/world/the_americas/coronavirus-argentina-wealth-tax/2021/02/19/96fd1ec4-711b-11eb-93be-c10813e358a2_story.html (accessed 14 March 2021), and *The Guardian* 'The pandemic is helping the rich get even richer. It's time to tax their obscene wealth', 11 August 2020, <https://www.theguardian.com/commentisfree/2020/aug/11/the-pandemic-is-helping-the-rich-get-even-richer-its-time-to-tax-their-obscene-wealth> (accessed 14 March 2021).

²I am aware of two exceptions. The work by Lefgren, Sims, and Stoddard (2016) varies both reward and effort. However, it examines peoples' preferences for rewarding effort (by focusing on the interaction between the level of effort and reward) rather than disentangling the effect of each. Weinzierl (2017) asks participants in an allocation game to explain why they chose a progressive distribution of costs: ability to pay or classical benefit-based taxation. While indicative that ability to pay is not as prevalent as generally assumed, this observational result is subject to confounding, and benefit-based taxation is not clearly distinct from deservingness.

The relevance of both of these approaches for individual's decisions regarding how to distribute the tax burden will be tested alongside the compensatory theory of tax fairness, which has heretofore been used to justify higher taxes on the rich. In what follows, I draw on justice judgment theory to explain why the compensatory criterion might be compelling and why it might apply more broadly.

A Compensatory Theory of Tax Fairness

The idea that higher taxes on the rich might be justified as a way of compensating for other benefits unequally granted by the state is not new. The compensatory theory of progressive taxation was first documented by Edwin Seligman in 1893, who used the term to describe an extant argument in favour of tax progressivity: "where differences in wealth may fairly be presumed to be in a measure due to the state's own acts of omission and commission, allowance should be made therefor in the tax system" (Seligman 1893, 223). Seligman discarded this defence of progressive taxation – known as the general compensatory theory – as impracticable but acknowledged that a more restricted version of this argument, which he called the special compensatory theory, was more compelling. The latter focuses exclusively on state interventions via the tax system to argue that a progressive direct tax can be justified as a way of compensating for the regressive incidence of indirect taxes. The historical record shows that this (special) type of compensatory argument in favour of progressive direct taxation has been used repeatedly since as early as the fourteenth century (Scheve and Stasavage 2016).

Key elements of this compensatory theory are worth noting. First, the goal of compensatory fairness is to achieve – or rather, restore – equal treatment by the state. Second, compensatory fairness refers to benefits unequally granted *by the state* (as opposed to the market). Third, compensatory fairness refers to benefits *unequally* granted by the state. It is not about absolute but relative benefits, as this is what violates the expectation of equal treatment. Fourth, these benefits can take different forms: tax benefits (as in the special compensatory theory) or other non-tax benefits (as in the general compensatory theory).

The compensatory theory is most closely related to what Seligman (1893) calls the theory of benefits or classical benefit-based taxation (Weinzierl 2018). According to this theory, individual tax liabilities should correspond to how much an individual benefits from the activities of the state. In that sense, it is similar to compensatory theory. However, it is distinct in that it is a general theory of how an *overall* tax system should be structured based on who receives what in terms of *public goods*. There are crucial differences, both in what is being compensated and how. While the benefit theory focuses on public goods provision as the determinant of individual benefits, the compensatory theory is broader in that it seeks to compensate for any 'acts of omission and commission' with unequal distributional implications.³ Moreover, the benefit theory channels compensation through the overall design of the tax system while the compensatory theory is narrower in that it argues that an individual policy change – for example, with respect to a specific tax – can be justified on compensatory grounds.

In their book, Scheve and Stasavage review the fairness arguments that have historically been used to justify tax progressivity and highlight the political power of compensatory arguments (2016). They argue that in the context of last century's mass mobilization wars, compensatory arguments were responsible for the adoption of the highest levels of tax progressivity in modern history. In both cases, the claim was that while the poor were giving their lives for their country, the rich were not sacrificing to the same extent, and some were even benefiting from the war industry (Scheve and Stasavage 2010; Scheve and Stasavage 2012). In line with the general compensatory theory, steeply progressive direct taxes were presented as a way of compensating for non-tax privileges granted by the state to the rich. As a result, the First World War led to an increase in top marginal income tax rates in participating countries from under 10 per cent to

³A clear example of this is wartime conscription.

over 50 per cent; the Second World War pushed them even further to above 90 per cent in some countries (Scheve and Stasavage 2016).

Limberg (2020) builds upon this work to argue that not just mass mobilization wars but other kinds of massive asymmetric shocks have also led to increases in tax progressivity through compensatory fairness concerns. He claims this was the case in the 2008 financial crisis, during which low-income households bore the brunt of the recession while the rich benefited from a broad array of state privileges.

These prior works show compensatory fairness arguments are correlated with increases in tax progressivity at the macro level but do not directly test the mechanism linking the two. Hikes in top marginal income tax rates during crises could result from ability to pay concerns as inequality increases or deservingness ones if the rich are seen as profiteering from the crisis. My contribution is to develop and test the psychological micro-foundations linking compensatory arguments with increased demands for tax progressivity at the individual level. In so doing, I provide the key missing mechanism in the above-mentioned studies and advance the compensatory theory as a general fairness criterion guiding tax preferences. The main implication of the compensatory theory is summarized in the following hypothesis:

Compensation hypothesis: *Voters are in favour of higher tax rates for individuals who have received other tax or non-tax benefits from the state.*

The null hypothesis would be that voters do not care about state benefits and, in line with ability to pay and deservingness criteria, only take into consideration individuals' level of income and/or effort when deciding how to fairly distribute the tax burden.

The Importance of Justice Judgments

To explain why compensatory arguments can be compelling at an individual level, I draw on justice judgment theory, a psychological framework used to study perceived fairness in social relationships (Leventhal 1980). While traditionally restricted to the branch of organizational justice research, its application to citizen-state relations is not unprecedented (Tyler 1984). This theory proposes a multidimensional conception of justice, arguing that fairness perceptions are based on several justice rules, with different relative weights according to their contextual importance. It outlines two broad categories of justice rules: distributive and procedural. Distributive justice rules dictate that fairness exists when rewards, punishments, or resources are distributed based on contributions, needs, or equality. Procedural rules dictate that allocative procedures are fair when they satisfy certain criteria, including consistency, bias suppression, and representativeness. The relevance of any given criterion or rule depends on the specific circumstances. When it comes to the political arena, the procedural rule of consistency, or treating everyone equally, has unsurprisingly been found to be particularly important (Tyler 1984).

To the extent that "Distributive justice refers to the distribution of resources across people, while procedural justice is concerned with the processes through which distributions occur" (Tyler 2011, 15), we might think of the compensatory theory as uniquely combining both procedural and distributive concerns. On the procedural side, there is a government action that interferes with what is generally accepted as a fair distribution procedure (that is, the market) (Tyler 2011). On the distributive side, this interference has unequal distributional implications that cannot be justified from a distributive fairness point of view (that is, based on needs, contributions, or equality). As mentioned above, both aspects, that it comes from the state and that it is arbitrarily unequal, are key components of the compensatory theory. Accordingly, whenever the state is perceived as arbitrarily benefiting particular groups, both categories of fairness rules are simultaneously violated. State interventions altering the distribution of benefits/costs in society can be perceived as violating procedural fairness norms. And in terms of distributive fairness, any

unjustified benefit will break both the equality and the contributions – or effort – rules. Benefiting the rich will add to this blatant violation of the needs rule. Compensatory demands can thus be understood as an attempt to restore justice in the form of equal treatment by the state in reaction to the violation of both of these fairness norms.

This approach to compensatory theory indicates that it may apply more broadly than has heretofore been considered. First, it suggests that while it has gained notoriety for promoting progressive taxation, there is nothing inherently progressive about it. What is essential is that an undeserved benefit is given to a particular group, violating expectations that the state should treat everyone equally and that rewards should be fairly distributed. Inasmuch as states can benefit other clearly identifiable social groups in an obvious and significant manner, compensatory arguments could be used to justify placing a higher burden on any group. This is not to say wealth is irrelevant, only that it is not necessary. Indeed, wealth can be important in two ways. It can enhance the perception of unfairness by adding the violation of the needs rule of distributive justice. And it plays an important political role: it is easier to identify and mobilize against unfair advantages granted to the rich than to other groups. Moreover, when benefits are targeted at the rich, compensatory arguments can add to ability to pay arguments to crucially enlarge the support base for progressive taxation.

Second, while compensatory arguments have ostensibly been most successful in the context of massive asymmetric shocks, this is also not necessary. The importance of these types of crises most likely lies in providing the conditions under which unequal burden sharing will be most salient, facilitating political mobilization.

Justice judgment theory thus provides a key scope condition as well as testable empirical implications regarding the functioning of compensatory tax fairness. The scope condition, which validates the implementation of my experiment during peacetime, is that the use of the compensatory fairness criterion should not be restricted to situations of crisis. The following hypotheses summarize the empirical implications, which will be tested in the experiment presented below.⁴

Generalizing hypothesis: *Individual use of the compensatory fairness criterion is independent of recipient income.*

Progressivity hypothesis: *Individual use of the compensatory fairness criterion is increasing in recipient income.*

Experimental Design

To test whether compensatory fairness matters for people's tax preferences, and do so in a way that informs us of its relative importance with respect to more established fairness considerations, I conducted conjoint survey experiments. These experiments "ask respondents to choose from or rate hypothetical profiles that combine multiple attributes, enabling researchers to estimate the relative influence of each attribute value on the resulting choice or rating" (Hainmueller, Hopkins, and Yamamoto 2014, 2). Conjoint are particularly suited to the task at hand because they not only capture the direction of respondents' preferences, but also their intensity (Abramson, Koçak, and Magazinnik 2022).⁵ We can thus think of conjoint estimates as representing the weights assigned to different fairness rules for a particular task, as depicted by justice judgment theory. In this case, respondents were presented with pairs of profiles in which income level, source of income, and percentage of income paid in sales taxes were randomly varied, and

⁴Another implication that is difficult to manipulate experimentally and not tested here is that reliance on compensatory logic will be stronger in the context of a crisis.

⁵While there is some debate regarding the value of this feature when it comes to studying electoral behaviour (see Abramson, Koçak, and Magazinnik (2022); Bansak et al. (2020)), its value for understanding the drivers of policy preferences is unquestionable.

Table 1. Attributes, attribute levels and fairness tests

Attribute	Attribute levels	Fairness criterion
Annual income	<low (~40th percentile)> <medium (~80th percentile)> <high (~95th percentile)>	Ability to pay
Source of income	<effort> <luck> <social background> <state benefit>	Deservingness
Percentage of income paid in sales taxes	<low> <medium> <high>	General compensation Special compensation

Note: Actual attribute levels vary by country. See Table A.1 in the SI for the full list.

asked to choose which of the profiles should pay a higher tax rate.⁶ Since distributive fairness judgements are always relative rather than absolute (Tyler 1984), this approach is expected to be intuitively appealing to respondents.

This design allows me to identify which attributes people take into consideration when deciding how to distribute the tax burden, as a way of getting at which fairness considerations they are applying: ability to pay, deservingness, and compensation, both in its general and special versions.⁷ The main intuition, summarized in Table 1, is that if people apply ability to pay considerations (that is, they think richer people should pay more taxes), they should choose on the basis of level of income; if they apply deservingness considerations (that is, they believe people who did not exert effort should pay more), they should choose on the basis of source of income; and if they apply compensatory considerations (that is, they think people who have benefited from the state should pay more), they should choose on the basis of whether the source of income resulted from a state benefit and/or the percentage of income paid in sales taxes. The former choice would be aligned with the general compensatory theory (in which taxes compensate for non-tax state benefits), while the latter would be aligned with the special compensatory theory (where one type of tax compensates for another).

An important feature of conjoint experiments that is worth noting is that the sign and magnitude of any effects depend on the specific set of attributes included (Abramson, Koçak, and Magazinnik 2022). Attribute selection is thus fundamental. The attributes included here encompass the fairness concerns that have been most studied in the literature and therefore represent meaningful benchmarks.

This conjoint design offers several advantages. First, estimates for all attributes represent effects on the same outcome (the probability that a profile will be chosen to receive the higher tax rate). This means they can be compared to assess the relative influence of different attributes (and, ultimately, fairness considerations). Second, the fact that attributes vary randomly allows me to identify the independent effects of correlated attributes and overcome the confounding issues mentioned above. Third, the forced choice component – as opposed to asking respondents to directly assign a tax rate to each profile – neutralizes attitudes about the overall level of taxation. This allows me to disentangle preferences regarding the size of taxation from the distributive issues linked to its shape (Barnes 2015). Fourth, leaving the intended use of the revenue collected unspecified means I can focus on respondents' tax policy preferences, as distinct from preferences for spending or social insurance (Cavaillé and Trump 2015). Fifth, I can assess the existence of heterogeneity by respondent characteristics and potential interactions between

⁶See supplemental information (SI) section A.2 for a description of the survey.

⁷As noted above, the general compensatory theory argues that higher taxes can be used to compensate for any form of state benefit, while the more restricted special compensatory theory argues that higher taxes can be used to compensate for other tax benefits.

attributes. Finally, the absence of material stakes in conjoint designs helps to minimize the presence of self-serving bias.

Regarding the attribute levels used, annual incomes are chosen to represent low, middle, and high-income levels (around the 40th, 80th, and 95th percentiles of each country's income distribution, respectively).⁸ Sources of income were chosen through formative studies run on independent samples in each country with the purpose of identifying sources that would be interpreted as intended (resulting from effort, luck, social background, and state benefit), and were relatively orthogonal to one another and to the level of income.⁹ Shares of income paid in sales taxes were chosen so as to approximate the actual shares of income paid by families at different points in each country's income distribution.¹⁰

Interpretation of the source of income attribute warrants clarification. Sources of income were chosen so as to represent the components of deservingness considered in past research, in addition to state benefit.¹¹ The rationale behind them is not that individual income taxes should vary with the source of income, but to show that people's tax preferences are guided by deservingness considerations linked to the source of income. Their practical implication can be found in substantiating special rates on lottery winnings, inheritance, or war profit taxes, and, presumably, also wealth taxes if the rich – as a class – are perceived as having been unfairly benefited by the state.

The share of income paid in sales tax attribute tests Seligman's special compensatory theory, which called for progressive direct taxes to compensate for the regressivity of indirect ones. When taken by itself, this attribute aims to assess whether respondents perceive the unequal effect of this state intervention as a violation of equal treatment and key fairness norms.¹² Moreover, by looking at its interaction with the level of income attribute, we can directly test whether respondents do indeed use one type of tax to compensate for the other. Two potential concerns are worth addressing. The first is whether the fact that level of income and share of income paid in sales taxes are correlated in the real world but independent in the experiment may confuse respondents. Full randomization was necessary to tease out the independent effect of each attribute and justified by evidence suggesting that taxpayers in developed and developing democracies are generally unaware of sales taxes and their regressive incidence (Milner et al. 2023; Williamson 2017). The second is the implication of this lack of awareness for the interpretation of our findings. The fact that people are unaware of the actual regressivity of sales taxes means we can interpret this attribute's individual effects as support for the claim that people think it is fair to use one type of tax to compensate for the unequal incidence of another, regardless of wealth or level of income.¹³

Analogously, having a source of income resulting from a state benefit is included as a test of the general compensatory theory, which claims that taxes can be used to compensate for other non-tax benefits unequally granted by the state. In line with the discussion above, the state benefit sources of

⁸ The survey was programmed using the "Conjoint Survey Design Tool" (Strezhnev et al. 2014).

⁹ See SI section A.3 for details on the formative study.

¹⁰ For the US, evidence indicates that, on average across all states, families in the lowest 20 per cent of the income distribution pay 7 per cent of their family income on sales and excise taxes, while families in the top 1 per cent only pay 0.9 per cent (Wiehe et al. 2018). Percentages were adjusted upward in Chile and Argentina to account for the fact that their VAT rates (19 and 21 per cent, respectively) are much higher than in Australia (10 per cent) or the US.

¹¹ It is worth noting that, to the extent that compensatory demands are based on the perception that a special privilege granted by the state was not warranted or deserved, we can think of compensation as an additional component of deservingness.

¹² A potential critique here is that sales taxes – but also subsidies or bailouts – do not strictly represent a violation of procedural fairness as the norm is the same for everyone. While this is true, individuals may still consider state interference with the market distribution of outcomes as procedurally unfair.

¹³ While this special type of compensatory argument has historically been used to promote progressive direct taxes, a reviewer is right to note that it could also be used to justify a proportional system (by counterbalancing one type of tax with another). Indeed, Seligman himself notes that while the general compensatory theory is inherently progressive, the special one promotes "a progressive income or property tax in practice, without upholding general progression in theory" (Seligman 1893, 224).

income that are used – owning a business that was bailed out by the government, owning a company that receives government subsidies – are ones that are not exclusively enjoyed by the rich.¹⁴ Thus, I test whether people apply compensatory logic – whether they want to use taxes to compensate for a state benefit – even when those benefited are not rich, as suggested by justice judgment theory.

Case Selection and Data

A recent handbook on the politics of taxation highlighted the lack of empirical research conducted in the Global South as one of the major gaps in this literature (Hakelberg and Seelkopf 2021). This paper addresses this gap by conducting equivalent versions of the experiment described above in four countries: the US, Australia, Chile, and Argentina. This allows me to both expand the scope of comparative research on tax fairness and increase the generalizability of my findings. Indeed, this case selection covers a great deal of variation in both market inequality and redistributive effort, two variables that could potentially be associated with redistributive preferences at the country level.¹⁵ Moreover, including Latin American countries is of particular interest because, despite the singularity of their tax regimes, we still know relatively little about tax preferences, particularly tax fairness preferences, among their publics.¹⁶ Nonetheless, to ensure comparability with US and Australian results, and given the online nature of the experiment, two Latin American countries with internet penetration rates at least as high as the US were selected.¹⁷

The US survey was conducted in October 2017 on an online sample of 2,000 US residents on Amazon's Mechanical Turk (MTurk).¹⁸ Evidence that results from convenience samples such as MTurk replicate in national probability samples is by now compelling (Berinsky, Huber and Lenz 2012; Coppock 2019). In section A.5 of the SI, I show that results do not significantly vary when using entropy balancing weights to adjust the sample to match the demographic and geographic margins of the adult population. Nonetheless, all US estimates presented below are weighted to ensure comparability with quota samples in the other countries.

Surveys in Australia, Chile, and Argentina were conducted in February 2020 on online samples of 1,500 respondents in each country, provided by the German market research company Respondi.¹⁹ Quota sampling was used to select participants in proportions representative of their national populations in terms of age, gender, and social class.

Analysis and Results

Outcome data comes from the forced choice made by respondents regarding which profile in each pair should pay a higher tax rate.²⁰ The unit of analysis is thus the individual profile, and

¹⁴A potential concern here is that as a result of the 2008 financial crisis, respondents may be biased into thinking the attribute used in the US and Australia (owning a business that was bailed out by government) is targeted at the rich. Even if this were the case, the level of income attribute is expected to correct this assumption. Moreover, evidence from Chile and Argentina shows that results are robust to other state benefit.

¹⁵See SI figure A.1 for the relative levels of inequality and absolute redistribution in sampled countries.

¹⁶Latin American countries are notoriously undertaxed for their level of development and have highly regressive tax systems. It is the region with the lowest revenues from direct taxes in the world (Huber and Stephens 2012; Kacéf, Weller and Jimenez 2011).

¹⁷According to the International Telecommunication Union, the percentage of individuals using the Internet in the US, Australia, Chile and Argentina in 2017 was 75, 86, 82, and 76 per cent respectively.

¹⁸The design was preregistered in the Political Science Registered Studies Dataverse. All experiments received Institutional Review Board approval.

¹⁹Respondi has ample experience facilitating academic research (see <https://www.respondi.com/EN/academics>). Recent scholarly research relying on Respondi samples include Alesina, Miano, and Stantcheva (2023); Alesina, Stantcheva, and Teso (2018); Munzert et al. (2021); Bechtel and Liesch (2020); Stantcheva (2021); Martinangeli and Windsteiger (2023).

²⁰The question asked of respondents was, 'Which of the two individuals would you personally prefer to charge a higher tax rate to?'

outcomes are measured using an indicator variable. The full dataset comprises 62,572 observations from 6,341 different respondents in four countries.²¹

Since I will be comparing preferences across countries, I privilege Marginal Means (MMs) over the more standard Average Marginal Component Effects (AMCEs) used in conjoint analysis. MMs measure the percentage of times respondents choose a profile with a given attribute level, averaging over all other attributes (Leeper, Hobolt, and Tilley 2020). Since in a forced choice conjoint design respondents choosing between profiles purely at random would result in a MM of 50 per cent; values above 0.5 indicate features that increase the favorability or probability of selecting a profile and values below 0.5 indicate features that decrease profile favorability. MMs, though descriptive, present two important advantages over causal AMCEs. First, they convey information about preferences for all feature levels, including baselines. This means they provide absolute rather than relative favorability information, allowing us to identify attribute levels that increase/decrease the overall probability a profile will be chosen. Second, conditional MMs are preferable when comparing preferences across groups, as comparing conditional AMCEs is problematic whenever baseline values are not the same across groups (which is the case here) (Leeper, Hobolt, and Tilley 2020). On the other hand, by virtue of aggregating individual preferences over both attributes and respondents, AMCEs may be better suited to express the weights individuals assign to different fairness rules in accordance with justice judgment theory. I therefore present both MMs and AMCEs for my main results here and AMCEs for all other results in the SI section A.8. Importantly, all of the main findings hold regardless of whether MMs or AMCEs are used.²²

Figure 1 presents unadjusted MMs and AMCEs by country and confirms the relevance of compensatory arguments for respondents' tax preferences. It shows two things we already knew and four we did not. The level of income attribute extends what Ballard-Rosa, Martin, and Scheve (2017) showed for the US: in line with ability to pay concerns and controlling for potential confounders, average preferences are progressive in all four countries. Not only does the probability of being chosen to pay the higher tax rate increase monotonically with level of income, the magnitude of these effects is substantial. In all countries, the profiles with the highest income have the largest probability of being selected, suggesting regressive tax systems in Latin America are likely not a result of citizen preferences.

After making their first choice, respondents were asked to justify their decision in an open-ended question. Analyses of these justifications, using word clouds and regressions, confirm that decisions were largely driven by the fairness concerns being tested.²³ When it comes to level of income, responses confirm that choices were guided by ability to pay fairness concerns: respondents claimed taxes would be less of a burden/hardship to that person or that they could better afford them.

The source of income attribute also confirms findings from the deservingness literature: those whose income results from effort have the lowest probability of selection, and this probability is higher for those with income resulting from luck, with those benefiting from their social background somewhere in between (Durante, Putterman, and Weele 2014; Fong and Luttmer 2011; Lefgren, Sims, and Stoddard 2016).²⁴ Moreover, justifications clearly reference the extent to which people 'earned' their income or worked hard for it.

²¹After excluding respondents who completed the survey in less than half the median time – as anticipated in the pre-analysis plan – I was left with 1,946 respondents in the US, 1,450 in Australia, 1,418 in Chile, and 1,527 in Argentina.

²²While my main results use the uniform distribution to weigh profiles, I address potential concerns that this might undermine the external validity of findings (De la Cuesta, Egami, and Imai 2022) by showing in the SI section A.12 that results are robust to using the real-world marginal distributions for levels of income and shares of income paid in sales taxes.

²³See SI section A.9. Not only did respondents overwhelmingly explain their decisions in terms of the fairness concerns hypothesized, the most sparing among them simply said they chose profile *x* because it was fair.

²⁴Australia is the single exception to this trend, with income resulting from social background leading to a higher probability of selection than luck.

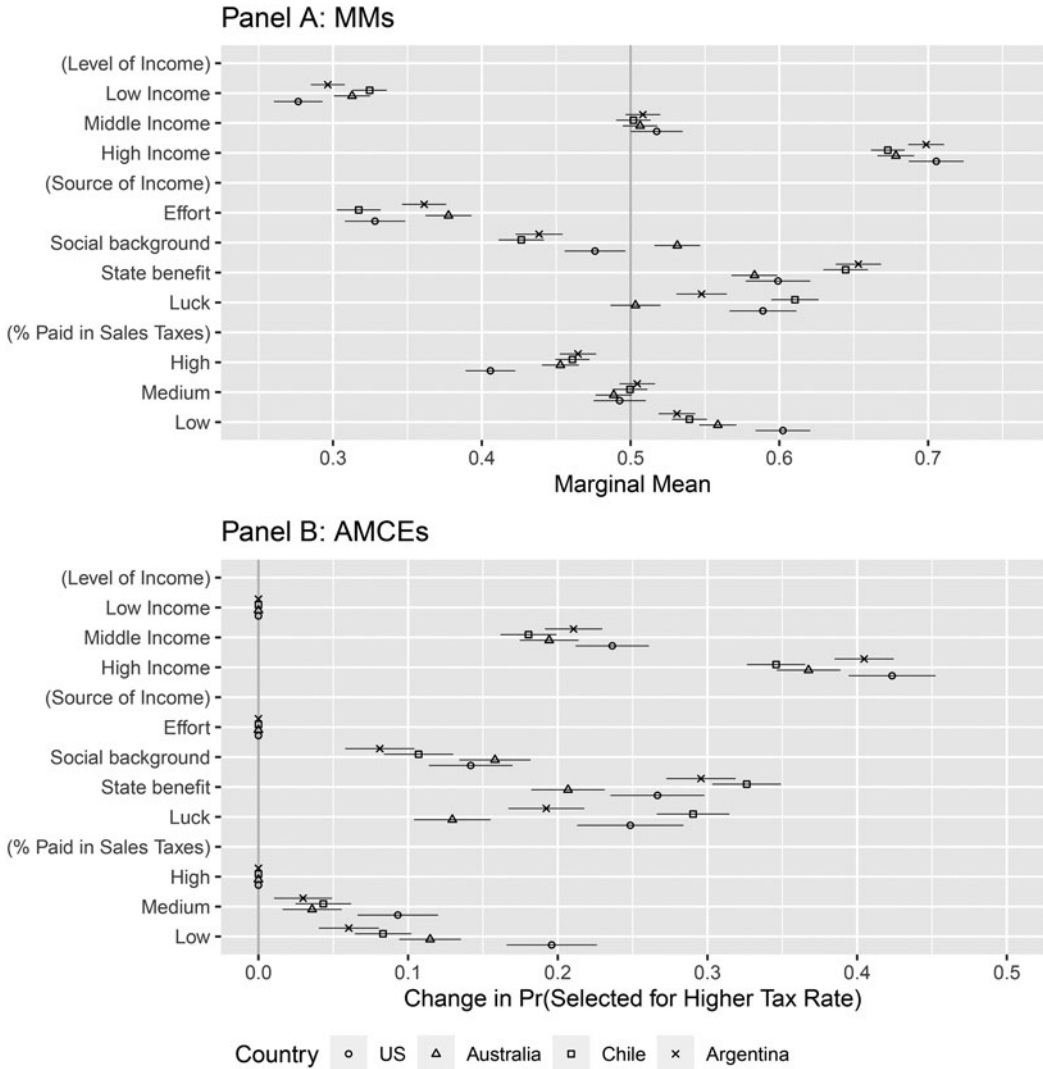


Figure 1. Who should pay the higher tax rate?

Note: Marginal mean outcomes (panel A) and average marginal component effects (panel B) from the same forced-choice conjoint experiments, by country. The points without horizontal bars in panel B denote the attribute level that is the reference category for each attribute. Attribute levels with the lowest probability of selection are chosen as reference categories. All estimates are clustered by respondent. US estimates use entropy balancing weights described in SI section A.5; all other estimates are unweighted. Bars represent 95 per cent confidence intervals.

(1) **General Compensation.** The first novel finding is that people care a lot about compensating for a non-tax state benefit: the effect of state benefit is larger than that of luck in all countries. Indeed, despite the fact that source of income is the only attribute presenting substantive differences in its effect across countries, the two sources of income with similar effects throughout are effort and state benefit, which reduce/increase (respectively) the probability of selection everywhere. In terms of causal AMCEs, changing the source of income in a given profile from effort to a state benefit increases the probability it will be selected by between 21 and 33 percentage points on average, depending on the country. This suggests that regardless of levels of inequality, tax progressivity, or redistributive

countries.²⁹ Finally, the effect of the share of income paid in sales taxes, while smaller, is still larger than that of luck in half the countries. Nonetheless, while effects are measured on the same outcome, attributes are not measured on the same scale, which may limit their comparability. These results should be taken as indicative of the relative importance of the specific attribute levels used here; their validity beyond this specific experiment should be explored in future research.

- (4) **Cross-Country Similarities.** The fourth novel finding is the striking similarity in trends across all four countries. Given large differences in culture, institutions, and socio-economic characteristics, the fact that both magnitudes and relative ordering of MMs and AMCEs are so similar across countries (with the exception of sources of income in Australia) is notable.³⁰ It is, however, in line with Aarøe and Petersen's (2014) argument that cross-national differences in welfare state preferences hide micro-level similarities in psychological predispositions. These results thus highlight the importance of institutions in explaining differences in political outcomes across countries.

What if They Are Rich?

Conjoint designs also allow the examination of interactive relationships between different attributes. I have argued above that the effects of compensatory arguments can be expected to be even larger when they are targeted at the rich. One way of evaluating this is to look at how the effect of receiving a state benefit varies with the level of income in the profile.

Figure 4 shows that being paired with a higher income level monotonically increases the favorability of all other attributes across countries. Thus, and in line with the progressivity hypothesis, state benefits have a larger probability of selection when paired with a high-income level. The same is true for all other attributes – to a similar extent. Nonetheless, it is worth noting that, when combined with the highest level of income, the union of compensatory and ability to pay concerns results in non-tax state benefits having the largest probability of selection (in the US and Australia, they are tied with tax benefits for this higher probability).

Alternative Explanations: Equal Treatment

In a recent contribution, Scheve and Stasavage (2021) show that, for some people, equal treatment means everyone should pay the same tax rate. They use this to explain the inelasticity of tax policies to growing inequality: equal treatment supporters reduce the progressivity of average tax preferences, making them less sensitive to changes in inequality than they would otherwise be.

Compensatory arguments can be thought of as the flip side of equal treatment: people prefer the state to treat everyone equally, but when equal treatment is violated, compensatory demands arise in an attempt to restore equality. Is it the case that equal treatment supporters drive compensatory demands? Justice judgment theory suggests this should not be the case, as exclusive state benefits trigger procedural concerns about equal treatment violations and distributive ones. Indeed, this is what we find.

Figure A.8 presents MM outcomes separately for respondents who think everyone should pay the same tax rate and those who believe some should pay a higher rate than others.³¹ In all four

²⁹In the case of the US, the 1 per cent share paid in sales taxes and state benefit are tied for this second largest effect. If we scale estimates by taking into account differences in the probability of co-occurrence across attributes (Leeper, Hobolt, and Tilley 2020), the estimate for 1 per cent is slightly larger than for state benefit (0.68 v. 0.64).

³⁰While puzzling, the singularity of Australian results confirms that the similarity of preferences captured by the survey is meaningful and not an artefact of design choices. A potential explanation for it may lie in the particularities of its welfare state (Castles 1994).

³¹This measure of equal treatment as support for flat taxes is undoubtedly more restrictive and less nuanced than the one used by Scheve and Stasavage (2021). However, it is more relevant to the subject at hand, and high levels of support across all countries suggest it is not too extreme.

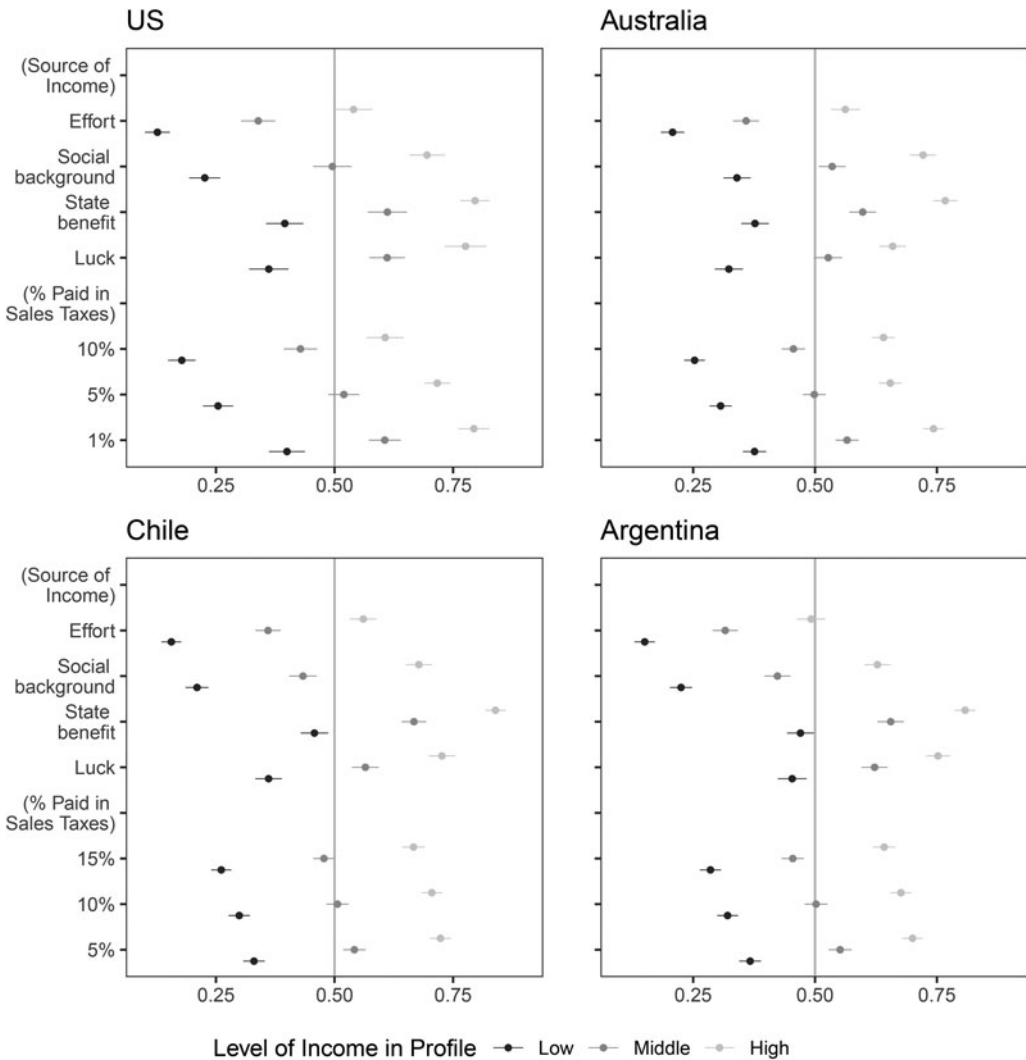


Figure 4. Marginal mean outcomes by level of income in profile.

Note: Marginal mean outcomes from forced choice conjoint experiment, estimated separately for profiles with different income levels. Estimates are clustered by respondent. US estimates use entropy balancing weights described in SI section A.5; all other estimates are unweighted. Bars represent 95 per cent confidence intervals.

countries, compensatory concerns are not limited to people with equal treatment beliefs, suggesting that state benefits included in the survey violate a more basic and widespread expectation of equality before the law. More generally, I found that between 19 and 29 per cent of respondents in each country held equal treatment beliefs. These results add to existing evidence that equal treatment beliefs are widespread – beyond the US and Europe – and correlated with less progressive tax preferences.

Probing Political Viability: Ideological Differences

So far, we have considered only average preferences, but according to social choice theory, political outcomes are the result of the interplay of both preferences and the institutions tasked with aggregating them. Indeed, one would be hard-pressed to explain differences in redistributive

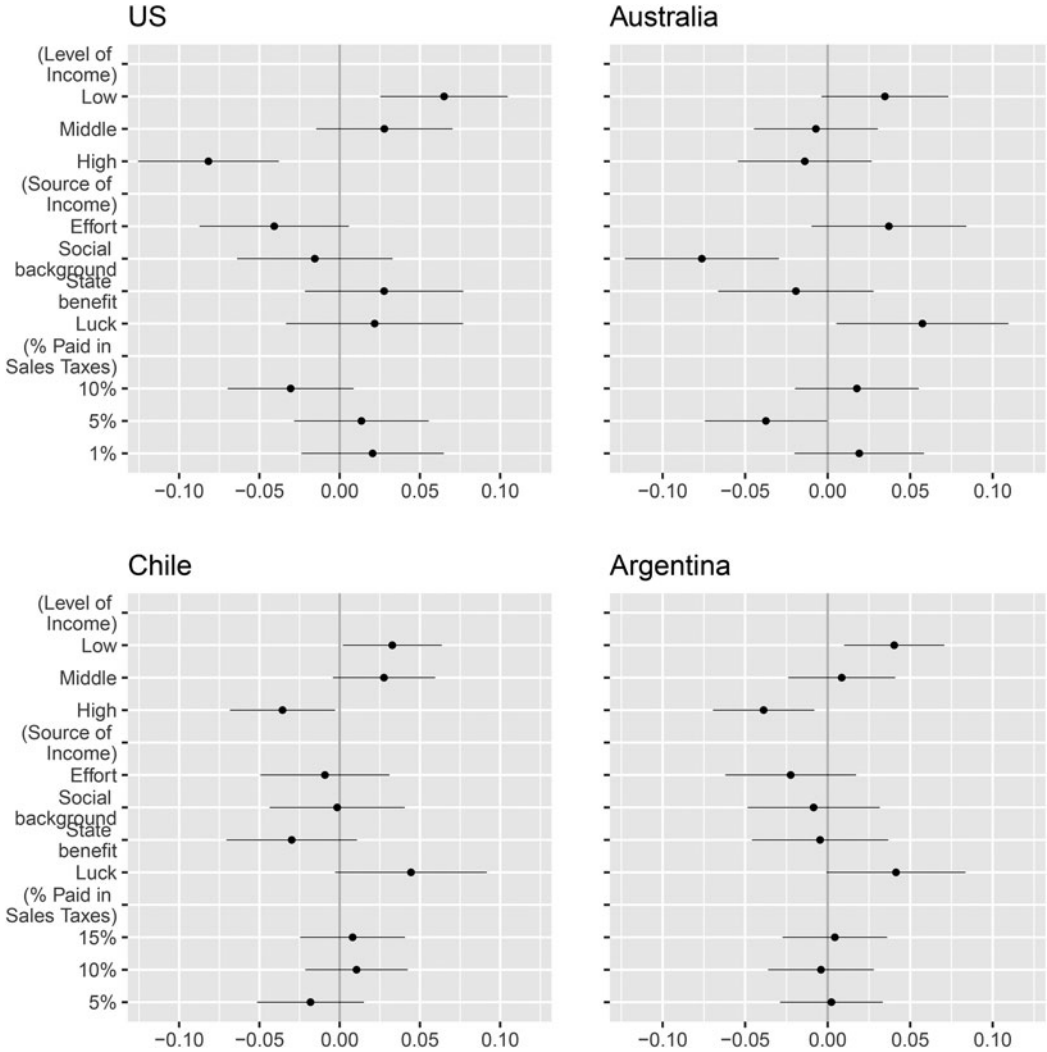


Figure 5. Differences in marginal means by respondent ideological self-placement.
Note: Estimated differences in conditional marginal mean outcomes by respondent ideological self-placement (left and center-left v. right and center-right). Estimated differences are right-left wing. Estimates are clustered by respondent. US estimates use entropy balancing weights described in SI section A.5; all other estimates are unweighted. Bars represent 95 per cent confidence intervals.

and tax policies across the countries studied only on the basis of individual preferences. One important institutional factor to consider when it comes to tax policy reform is the need to secure the support of multiple parties, making ideological differences between them particularly relevant. To get at this, I examine whether preferences regarding state benefits vary significantly by respondent party identification or self-reported ideology.³²

Figure 5 presents estimated differences in the preferences of left- and right-wing respondents in each country.³³ With the exception of Australia, ability to pay preferences exhibit significant

³²The obvious implicit assumption here is that parties are responsive to the preferences of their partisans, which is common in the context of democratic polities. Nonetheless, recent evidence from Europe does question the strength of this link (Klüver and Spoon 2016).

³³Ideological self-placement was determined using the question, ‘On economic policy matters, where do you see yourself on the left/right spectrum?’ which had a 5-point response. The same pattern of results holds whether using vote choice, party

differences in all countries, with left-wing respondents more likely to choose high-income profiles and less likely to select low-income ones than right-wing respondents. However, when it comes to tax and non-tax state benefits, there are no systematic differences in any of the countries, with respondents across ideological groups equally likely to choose profiles with a state benefit source of income or a lower tax payment. These results suggest building a broad enough consensus for tax reform on the basis of compensatory arguments should be possible. Even further, for the US – the only country where conservatives may be more likely to apply compensatory arguments than liberals judging by the positive coefficient in Fig. 3 – they suggest compensatory arguments may have the potential to significantly expand the basis of support for progressive taxes to a key constituency averse to ability to pay arguments.³⁴

Conclusion

This paper has provided direct, descriptive, and causal evidence that compensatory theory – in its general and special variants – is an important driver of tax fairness preferences. This is true across four different countries with very different institutional, economic, and cultural features. While external validity is always a limitation of experimental research, these findings are encouragingly aligned with observational studies arguing that compensatory demands have successfully driven increases in tax progressivity in the past (Limberg 2020; Scheve and Stasavage 2016).

Results are consistent with prior work arguing that compensatory arguments can be expected to be most compelling when state benefits are expressly granted to the rich – and, presumably, in the context of a crisis. However, while the type of non-tax benefits granted under these circumstances generates the largest effects, the tax benefits that characterize peacetime tax regimes also offer an opportunity to demand compensation in the form of progressive income taxation. The fact that many countries find it difficult to shift away from their reliance on indirect taxation and that the public is generally unaware of its regressive incidence suggests that key conditions for compensatory arguments may be widespread.

In relative terms, the attributes used in this experiment indicate that the overall effect of the compensatory criterion is smaller than that of ability to pay. However, it is at least as large as (and often larger than) well-established deservingness concerns. Furthermore, it exhibits two potentially important advantages when it comes to promoting tax progressivity. First, it appeals more to a broader set of voters than ability to pay, overcoming the partisan and class divisions that typically impede tax reform. Second, compensatory logic is particularly compelling when state benefits target the rich, which seems to be becoming habitual. While increases in the share of income accumulated by the rich may be gradual, making it difficult to mobilize ability to pay concerns, evidence of large and conspicuous benefits to the rich can provide effective focal points for political mobilization around compensatory demands.

However, this will depend to a great extent on the behaviour of the political elites. As the introduction notes, elite discourse plays a key role in shaping individual tax preferences. Indeed, the observational studies mentioned above all note a key link between the adoption of progressive tax reforms and the prevalence of compensatory arguments in public discourse. The political success of compensatory arguments thus ultimately depends on their effective mobilization by political elites. Here again, the limitations of my experimental approach come up. My purpose was to test whether the public is sensitive to the compensatory criterion; its effectiveness will largely depend on the political supply side. While I show that conservatives may, in principle, be open to compensatory arguments that justify taxing the rich, in practice, these positions may change as tax policy discussions become – as they often do – strongly politicized.

identification, or the complete range of ideological self-placement (including centrists) to define subgroups. See SI section A.10 for these results.

³⁴Nonetheless, see SI section A.14 for a discussion of external validity.

At the start of this article, I noted that fairness is key to understanding individual tax preferences because people care about maximizing fairness, not equality, nor, as presumed in standard political economy models, their self-interest. Therefore, understanding the key fairness principles people apply when thinking about a fair distribution of the tax burden is essential. In that sense, my experiment shows that while the distributive aspects captured by ability to pay concerns are important, they are not – as tax theory often assumes – the whole story. Indeed, this paper contributes to this endeavour by introducing compensation as a general tax fairness criterion and showing that achieving (or restoring) equal treatment by the state is a broadly shared goal and a key driver of fairness perceptions.

This brings me to the current situation. As the Covid-19 pandemic unfolds, analogies with mass mobilization wars are ubiquitous. The distribution of burdens can easily be argued to be similar: essential workers who receive disproportionately low income see their lives and livelihoods at risk while the rich grow richer. Reactions are also similar: as these unequal effects gain salience, calls for increasing taxes on the rich are emerging all over the globe. However, compensatory theory suggests that their success will depend on the extent to which political actors are able to show that not just the rich are profiting while the rest suffer³⁵ and that this is the result of deliberate actions (or lack thereof) by the state. The role played by compensation in driving demands for progressivity in the context of the pandemic is an important question for future research.

Supplementary material. The supplementary material for this article can be found at <https://doi.org/10.1017/S0007123423000698>.

Data availability statement. Replication data for this article can be found in Harvard Dataverse at: <https://doi.org/10.7910/DVN/A6115X>.

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Ethical statement. The data used in this paper comes from a set of equivalent survey experiments using online samples from residents in the United States, Australia, Chile, and Argentina. All survey experimental procedures received approval from New York University's Institutional Review Board under protocols IRB-FY2018-1208 and IRB-FY2020-3824. Informed consent was obtained from all participants before proceeding to the survey. All participants were compensated for their participation. No deception was used in the surveys.

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³⁵A point that is increasingly being made by the media and non-profits. See Reuters 'Wall Street ends 2020 with embarrassment of riches', 3 December 2020, <https://www.reuters.com/article/us-usa-banks-breakingviews-idUSKBN28R2U9> (accessed 14 March 2021) and the Fight Inequality Alliance's 'News Release: Billionaire Pandemic Tax', 12 August 2021, <https://fightinequality.org/news-release-billionaire-pandemic-tax> (accessed 21 August 2021).

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