

# The Non-Democratic Origins of Income Taxation

Comparative Political Studies

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## Abstract

This article examines the adoption of income taxes in Western economies since the 19th century. We identify two empirical regularities that challenge predictions of existing models of taxation and redistribution: While countries with low levels of electoral enfranchisement and high levels of landholding inequality adopt the income tax first, countries with more extensive electoral rules lag behind in adopting these new forms of taxation. We propose an explanation of income tax adoption that accounts for these empirical regularities. We discuss the most important economic consideration of politicians linked to owners of different factors, namely, the shift of the tax burden between sectors, and examine how preexisting electoral rules affect these political calculations. The article provides both a cross-national test of this argument and a microhistorical test that examines the economic and political determinants of support for the adoption of the income tax in 1842 in Britain.

## Keywords

political economy, state building, nondemocratic regimes, politics of growth/development, fiscal capacity

## Introduction

The 20th century is the era of the Tax State (Schumpeter, 1918/1991). The size of government expanded at an unprecedented pace (Lindert, 2004). The

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development of massive spending and investment programs transformed the state from a mere security provider to a central actor in all aspects of economic life. Importantly, this transformation was only possible after the adoption of the income tax and its unprecedented revenue generating capacity. Such extractive capacity makes the income tax the most advanced fiscal instrument to date (Lieberman, 2002; Tilly, 1990). In the words of Johannes Popitz (1926, p. 402), the income tax is the “queen of taxation.”

The income tax facilitated an increase in the extractive capacity of the state because its adoption went hand in hand with the development of institutions that tapped into and collected previously undetected revenues. In particular, the implementation of an income tax required the creation of a sophisticated tax administration capable of verifying the income of higher earning individuals in a given economy and ensuring the compliance of the latter with their tax obligations. Thus, to understand this fundamental shift in the extractive capacity of the state, we need to characterize the political conditions under which elites agreed to subject their income to public scrutiny, the institutions and mechanisms set in place to verify income, and the allocation of the tax burden across individuals who derive their income from different sources.

Existing explanations of fiscal capacity development share one common overarching theme: War is the driving motor accounting for the expansion of the modern state (Dincecco, 2011; Scheve & Stasavage, 2010; Tilly, 1990). By contrast, domestic economic and political variables that account for the decisions of political elites to invest in the development of institutions of fiscal revenue extraction have received less attention.<sup>1</sup> While acknowledging the importance of war, this article turns to an examination of the latter political factors. While the introduction of income taxes has the potential to generate higher levels of revenue, it also imposes a higher tax burden on individuals with higher levels of earnings. The adoption of this novel form of taxation raised a range of political questions about the allocation of this tax burden across owners that derive their income from different types of assets. Our article seeks to identify economic and institutional factors that facilitate the resolution of these distributional conflicts and the adoption of income taxes.

In examining the variation in the timing at which current advanced economies adopted income taxes, Aidt and Jensen (2009) uncover an empirical regularity that runs counter to the predictions about the temporal sequencing between democratization and taxation derived from canonical redistributive models (Acemoglu & Robinson, 2000; Boix, 2003): namely, nondemocratic countries with restrictive suffrage rules pioneered the permanent adoption of income taxes. Our article seeks to present an explanation to the puzzle posed by the sequence of the income tax adoption in the developed world. That

involves understanding the political and economic motives of elites in non-democratic contexts to adopt a tax that imposed a higher burden on high-income earners. Given that neither the Meltzer & Richard's (1981) model nor the more recent literature on democratization and redistribution provides useful tools to address this puzzling empirical regularity, our article takes the task of formulating an explanation that accounts for the nondemocratic origin of the income tax. Rather than invoking elites' anticipation and fear of potential redistribution under full suffrage, we contend that one needs to clarify to immediate economic and political advantages provided by the income tax to incumbent elites in countries with restricted electoral rules. We argue that, in addition to their capacity to raise new revenue, income taxes provided specific political and economic benefits to political incumbents in limited democracies. Our theoretical explanation specifies these advantages.

Consider first the economic benefits of the new tax. The incidence of the new income tax across different sectors is rarely neutral. The design of income taxes inevitably creates winners and losers between sectors that face a higher or lower tax burden. All nondemocratic countries adopted income taxes in a period of massive economic and political change, at a time when the economic power of incumbent landowning elites was severely threatened by the rise of a new economic elite linked to the emerging manufacturing sector. Anticipating a future decline in economic power, politicians representing the interests of landowning elites regarded the income tax as a tool that could rebalance some of these economic losses by imposing a higher tax burden on the industrial sector. In adopting the new tax, incumbent economic elites placed, thus, a high political priority on the creation of institutions that monitored less visible income and also on the taxation of more mobile assets.

The above discussion implies that politicians whose interests were tied to owners of fixed assets were more willing to support the adoption of the new income tax as compared with politicians representing the interests of mobile asset holders. Although the risk of capital mobility imposed an upper bound to the tax rate levied onto capital gains, it did not prevent landed elites from imposing, when possible, higher tax rates on industry and finance than on land. We test for this logic by examining the consequences of differences in the bargaining power of landed elite in the national Parliaments of 19th-century Western world on the probability of income tax adoption. As common in the literature, we use concentration of land ownership as proxy of the bargaining power of landed elites (Ansell & Samuels, 2015; Boix, 2003; Ziblatt, 2008). Higher levels of landholding inequality were likely to enhance the probability of adoption of the new tax, by giving landowners a higher ability to design a new tax that imposed new fiscal burdens on the manufacturing sector. We test this proposition twofold: cross nationally, using a sample of 17

developed economies; and using microhistorical data, by modeling the economic and political determinants of the vote to adopt the Income Tax Act in the United Kingdom in 1842.

The second set of factors explaining the considerations of incumbent elites in nondemocratic settings to adopt income taxes was political in nature. Early 19th-century electoral rules in the Western world included a variety of provisions that used payment of direct taxes to exclude individuals from political participation. In many early adopters, preexisting electoral laws conditioned voting rights on direct tax payments. These preexisting electoral provisions were an institutional mechanism that reinforced inequality in political participation. In these countries, incumbent elites recognized that the income tax could be layered on preexisting electoral rules and reconfigured at times of elections as a wedge that excluded low-income voters from parliamentary participation.

We explore the consequences of an extended restrictive electoral institution that was in place in 19th-century Europe prior to the adoption of universal suffrage: the *vote-tax link*. This electoral provision considered payment of direct taxes as a necessary criterion to grant electoral rights. We explore how this electoral rule that linked tax payments to political rights modified the calculations of political insiders about the desirability of a new income tax. In countries with a vote-tax link, the new income tax could be reconfigured as a barrier preventing the political participation of poor voters who did not pay this tax. These advantages of this restrictive electoral for political insiders could be shared by all high-income voters, irrespective of their asset ownership. As such, these considerations created opportunities for a political alliance in support of an income tax among owners of fixed and mobile assets whose economic considerations about the adoption of the new income tax could differ. We claim that considerations about these possible political gains prevented the emergence of a frontal opposition of manufacturing elites to a tax which was economically disadvantageous to this sector. To test this argument, we examine empirically the relationship between vote-tax link and the probability of income tax adoption. Consistent with our hypothesis, we find that the vote-tax link increases the probability of income tax adoption under nondemocratic settings.

Our article contributes to the literature that examines the origin and development of fiscal institutions in several important ways. First, to account for the puzzling adoption of the income tax in nondemocratic settings, we formulate a new micro logic that accounts for the motifs of elites in countries with restrictive suffrage to support the development of extractive fiscal institutions (see also Aidt & Jensen, 2009). Our explanation stresses the importance of intersectoral competition among landed and manufacturing elites over the

allocation of the tax burden and considerations about likely gains in terms of political representation associated with the adoption of the new tax. Our sectoral model stressing elite competition dovetails with other recent work on democratization and redistribution, such as work by Ansell and Samuels (2015), but diverges from models by Acemoglu and Robinson (2000) and Boix (2003), which posit the existence of strong opposition of landed elites to new forms of taxation and redistribution. We also show that the political conflict at the time of income tax adoption was primarily a conflict along sectoral lines that differed from later class-based conflicts over the progressivity of the tax system. Although the most divisive political issues at the time of income tax adoption concerned horizontal redistribution across sectors, the most significant political conflict around World War I concerned vertical redistribution between high- and low-income earners as well as issues concerning the fairness in the distribution of the burden of war (Scheve & Stasavage, 2010).

To develop and test these arguments, the remaining part of the article will be organized as follows. We begin with a descriptive exploration of cross-national patterns in the adoption of income taxes in the Western world. We then formulate a number of arguments that seek to identify the economic and political considerations of political elites in countries with restrictive suffrage about the desirability of income tax adoption. We first present a number of hypotheses about the economic considerations of the owners of different assets with respect to the advantages of the new income taxes. Next, we explore how different electoral rules modified these economic calculations. Following the cross-national tests, we turn to the analysis of one case to further test our theoretical hypotheses. We examine the adoption of the Income Tax in Great Britain in 1842, by documenting the parliamentary discussions that preceded the adoption of this legislation and by modeling the determinants of support of the new tax. Our roll-call vote analysis examines the relationship between district-level economic conditions, biographic characteristics and partisanship of members of Parliament (MPs) on parliamentary support for the new legislation. We conclude by offering evidence of the tax incidence of the income tax across sectors. Some final remarks follow.

## **The Adoption of the Income Tax**

Beginning with the first two decades of the 19th century, governments began to take on an increased number of obligations, which included investment in the development of infrastructure, the improvement in the provision of public health, and the expansion of the provision for education (Lindert, 2004). To finance these new responsibilities, politicians sought to find ways to diversify

the sources of revenue that could be enlisted for tax purposes. The list of possible sources for fiscal revenue considered at the time was, from a contemporary perspective, heterogeneous. Possible taxes that were under consideration at the time included taxes on windows and buildings, taxes on luxuries, taxes on matches, taxes on business, and so on. Nevertheless, proposals to impose taxes on income were only one among the many alternatives that was regarded as a source of possible tax revenue.

Recommendations to adopt a tax on income met with strong skepticism and opposition (Daunton, 2001). Opponents of the new tax invoked both political and administrative difficulties associated with its implementation. First, considerable difficulties existed about ways in which "income," the new category that was at the basis of the new tax, could be ascertained and what its different components that could be assessed for tax purposes should be. Considerable uncertainty existed as to whether the different sources of income were to be taxed separately, in separate schedules, or whether they were to be taxed jointly. Countries that pioneered income tax adoption chose very different solutions to this question, with Prussia and Britain establishing the two possible extremes with respect to the technology of taxation of the new income tax. In Britain, all different components of income were taxed in different schedules in an effort to strengthen the monitoring capacity of the state (Musgrave, 1969). Prussia, by contrast, adopted what was known as a "synthetic" income tax which required all taxpayers to sum up their disparate sources of revenues for tax purposes (Popitz, 1926). Given the difficulties in defining income, the unit of the new tax, considerable uncertainty existed about the designation of the authority that had the responsibility to verify the tax obligations of different individuals (Daunton, 2001). Finally, critics of the new tax objected that the incentives of individuals to comply with the new tax obligations would be very low.

By invoking a combination of these arguments, in some countries, opponents of the new tax succeeded in blocking its adoption. In other countries, proponents of the new income tax triumphed against considerable political opposition. Examples of the latter are conservative Prime Minister Robert Peel, who succeeded in forging a political coalition in favor of an income tax, or Robert Miquel, the architect of the Prussian income tax who engineered a political coalition in favor of the new tax. Miquel's proposal for an income tax was adopted with a considerable political majority of 322 votes in the Prussian lower house, with only 40 deputies opposing the law. Support for the new tax came from Conservatives, National Liberals, and Free Conservatives, three of the largest political parties on the right. Similarly, Peel built an overarching conservative majority to adopt the new income tax

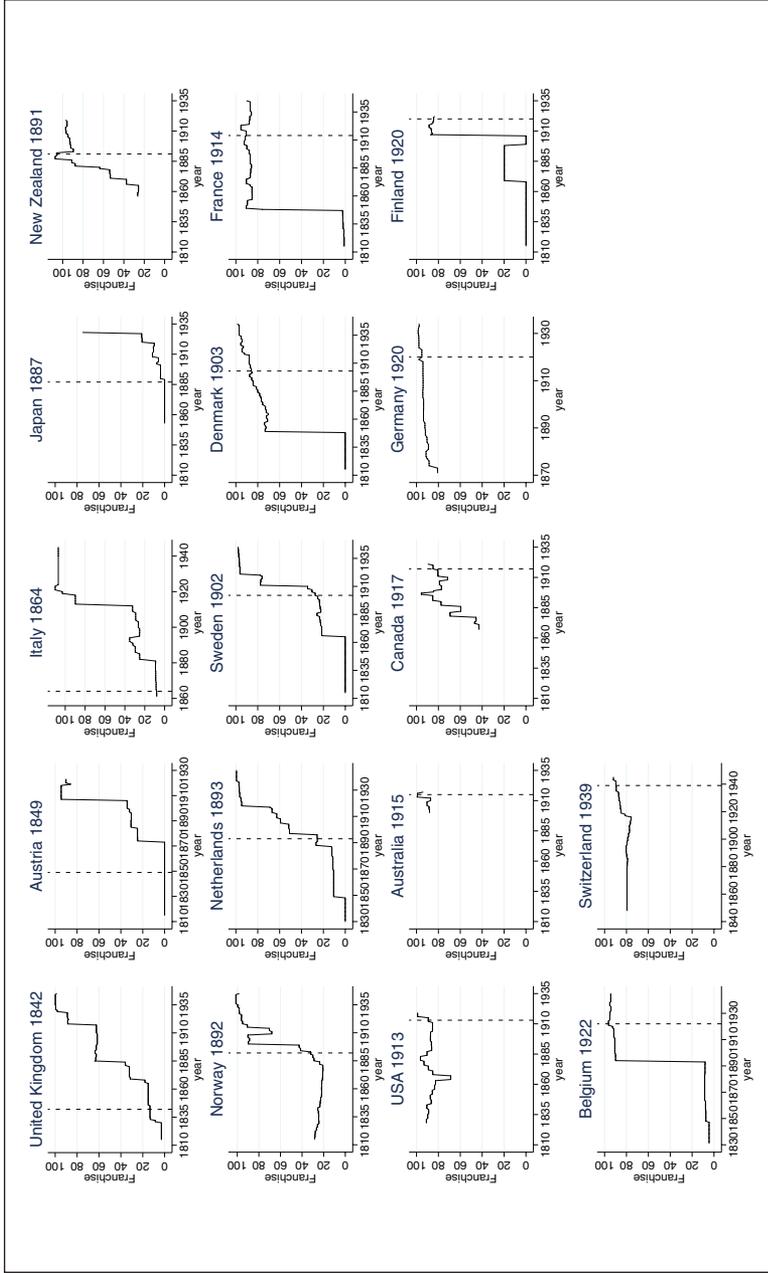
in 1842. Appealing to the “superior goal” of fiscal responsibility, Peel reintroduced the income tax in Britain with 97.5% favorable conservative vote.

The Prussian and British experiences were not exceptional. Figure 1 presents descriptive information about the timing of the adoption of income taxes across 17 Western economies during the period between 1842—the year when Britain introduced the first permanent income tax—and 1939, the year when Switzerland introduced a permanent income tax at the federal level. The horizontal axis in each graph displays time. The vertical axis represents the scope of suffrage. For each country, the solid line presents year-to-year information on the scope of suffrage. The vertical dashed line indicates the year of the permanent adoption date of the income tax.<sup>2</sup>

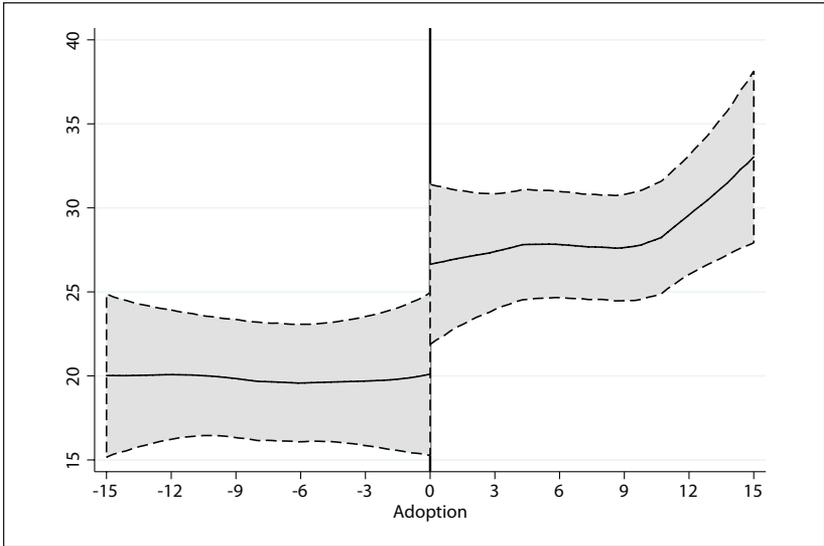
The descriptive information presented in Figure 1 reveals a number of surprising patterns concerning the relationship between the adoption of income taxes and democratization. First and surprisingly, we find that a significant number of countries adopted the income tax at a time of very restrictive suffrage. These countries include Britain, which pioneered the modern income tax in 1842, Austria (1849), Italy (1864), Japan (1887), Norway (1892), the Netherlands (1893), and Sweden (1902). In Britain, the earliest adopter, only 13% of the population was eligible to vote in 1842. In Austria–Hungary, the immediate follower, curia representation, which guaranteed disproportioned political leverage to the landed elites, was still in place. In Italy, only 8% of adult population was titled to vote in 1864, the year when income tax was adopted. By contrast, countries that had established extensive suffrage rules early on during the period of democratization delayed the adoption of income taxes by several decades.<sup>3</sup> In France, proposals to adopt income taxes that were advanced on repeated occasions during the 19th century encountered political opposition, and an income tax was adopted only in 1911. These descriptive patterns suggest that early democratizers faced more difficulty in reaching a political consensus about the new tax.

How effective were these early taxes in raising fiscal revenue? Were these early income taxes just scraps of paper adopted for purely ceremonial purposes alone? To examine these questions, we explore the consequences of the adoption of income taxes on direct tax revenue. If income taxes were purely ceremonial, we should see no relationship between income taxes and the level of fiscal revenue.

Figure 2 plots the evolution of direct taxation as a share of central government revenue for the early adopters in Western Europe: the United Kingdom, Austria–Hungary, Italy, Norway, the Netherlands, and Sweden. All these six countries adopted the income tax under very restrictive conditions of franchise. Certainly, the initial tax rates adopted were low for modern standards. The top rates never exceeded 5% (Kennan, 1910; Popitz, 1926). Yet these



**Figure 1.** Income tax adoption and franchise in the Western world. The vertical line indicates the year of the permanent adoption of the tax.



**Figure 2.** Direct taxation as share of central government revenue for early adopters and a 15-year window frame before and after the permanent adoption of income tax.

Source: Flora, Kraus, and Pfenning (1983).

Local polynomial smoothed line with 90% CI. CI = confidence interval.

taxes were progressive from the very beginning, imposing a higher burden on higher income individuals, who were very remarkably concentrated at the time. To get a better understanding of their fiscal impact, we plot the total evolution of direct taxation 15 years before and 15 years after the adoption of the income tax. Year 0 denotes the year in which the income tax was adopted by each country. Figure 2 suggests the existence of a structural break in direct taxation revenue of approximately seven points precisely at the year of adoption. Certainly, the effect we observe in Figure 2 is not trivial and poses the question of why this tax was adopted in the first place.<sup>4</sup> To solve this question, we need to unravel why a consensus about the adoption in income taxes and investment in the development of fiscal capacity emerged in some countries but not in others. Next, we formulate two complementary hypotheses that account for the adoption of income taxes under conditions of limited political suffrage.

Our first hypothesis is that the adoption of the income tax results from a political bargain in which owners of different assets attempt to minimize their own tax burden, while shifting a higher burden of taxation onto the competing

sector. This is, in essence, an argument of intersectoral redistribution through taxation. Specifically, we conjecture that in economic conditions that increased the bargaining power of landed elites (or *old elites*), owners of fixed assets were more successful in imposing the new tax on owners of mobile assets (urban elites or *new elites*). One such factor that increased the bargaining power of landed elites is the level of landholding inequality. Our second hypothesis is that the calculations of political elites about the desirability of the new tax were influenced by preexisting electoral rules. Some of the electoral provisions that were in place in the countries with limited suffrage conditioned political participation on payment of direct taxes. The adoption of income taxes and its addition to the menu of existing direct taxes had the potential to increase the existing inequalities of political representation, by linking electoral rights to the payment of taxes. Incumbent elites (either landed or urban) elected under these restrictive electoral rules recognized the political advantages of a new tax that could raise the barriers to political participation of low-income voters and, accordingly, supported its adoption.

### *Economic Considerations for Income Tax Adoption: Sectoral Incidence*

Prior to the adoption of the income taxes, governments relied on very heterogeneous taxes to collect the fiscal revenue that was necessary for the financing of public and military expenditures. These taxes included poll taxes, property taxes, and a variety of consumption taxes (Popitz, 1926; Seligman, 1911). The income tax promised to bring two changes to this policy landscape. The first innovation was that of uniformity. The income tax sought to replace a variety of different sources of revenue with one single category: income. The income tax also carried the promise of bringing in higher levels of fiscal revenues, by enlisting resources that had previously evaded tax authorities. These previously untaxed resources were distributed unequally across sectors. Precisely, this unevenness in the location of the source of the new tax revenue became a source of distributional conflict at the time of income tax adoption.

Two questions were at the center of the intersectoral conflict. The first was the desirability of the taxation of income, as compared with the taxation of other sources of revenue. The second question concerned the intersectoral allocation of the tax burden (i.e., the incidence of taxation), which was particularly relevant in a period of major economic change associated with the industrialization of Western economies. We hypothesize that owners of fixed assets considered the taxation of income as a much more attractive fiscal

instrument as compared with owners of mobile assets. First, owners of fixed assets favored the reliance on income as the category that defined the tax liability of the individuals. That allowed fiscal authorities to draw on and enlist new sources of revenue, such as profits, that had previously escaped taxation and that were more likely to be found in the newly rising industrial sector. A brief examination of the provisions of income taxes adopted by these countries lends support to the economic hypothesis. The 1842 income tax adopted in Britain did not tax capital gains, not even from real estate, whose major owners were landowners, but did levy income stemming from trade, thus targeting the new industrial elites (Daunton, 2001). The income tax adopted by Austria in 1849 also exempted land and buildings, but imposed a rather progressive rate of taxation on profits and other professional incomes. The latter tax rate rose to 20% during the first years of existence of the new tax (Kennan, 1910; Seligman, 1911). The Italian income tax adopted in 1864 did not tax incomes derived from the ownership of land, but taxed profits and capital investments.

Second, owners of fixed assets also hoped that the introduction of the new income tax would relief taxation of other assets, such as land. By contrast, owners of mobile assets were more likely to express worries and concerns about the desirability of the introduction of a new tax on income. The income tax would not only target profits (previously untaxed) but also make manufacturing products more expensive in a context of increasing international competition. Accordingly, owners of mobile capital were likely to oppose the new income tax.<sup>5</sup>

Importantly, considerations about capital flight might account the lower tax rates that we find in the initial income taxes. Concerns about capital flight were raised in numerous occasions in the debates that preceded the income tax act in Westminster.

Let them harass the manufacturer by taking and taking by an inquisitorial and offensive process by taking a portion of those profits . . . he would probably transfer to other lands those pursuits which they apparently contemplated with such strong disapprobation . . . The wealthy capitalist the skillful operative might quit their shores. (Sir W. Clay, merchant and Whig MP for Tower Hamlets, HC Debate March 21, 1842)

We interpret the risk of capital flight as an *upper bound* to the tax rates that the landed elites could impose the new sectors. External constraints, however, should not prevent landed elites from levying tax rates on capital above those on land whenever they are powerful enough, as the experience in Imperial Germany suggests (Hallerberg, 1996; Mares & Queralt, 2014).

This first hypothesis postulates the existence of sectoral conflict between landed and industrial elites over the adoption of the new income tax, much in line with the logic of sectoral competition proposed by Ansell and Samuels (2015). Economic conditions are likely to affect the relative bargaining power of owners of different assets and increase the probability of income tax adoption. One such economic condition is the level of land inequality. Higher levels of landholding inequality were more conducive to the selection of wealthier, conservative politicians (usually the landowner of the respective district) who were supportive of the adoption of the new tax with visible economic and political advantages. By contrast, we expect to find delays in the adoption of the income tax in countries with lower levels of income inequality, due to a lower bargaining power of landed elites in these contexts.

Note that our theoretical hypothesis about the effect of rural inequality about the ability of elites to reach compromises about the new income tax is the opposite of the prediction in the existing literature (Sokoloff & Zolt, 2007). In our account, rural inequality, everything else constant, is expected to have a positive effect on the probability of income tax adoption. This hypothesis is consistent with Hallerberg's (1996) analysis of tax competition in the Wilhelmine Germany, 1871-1914. Hallerberg documents how German states with limited suffrage and strong landed elites in Parliament—with Prussia as the paradigmatic case—were successful in shifting the incidence of direct taxation onto mobile capital owners.<sup>6</sup> By contrast, states with more open franchises and a weaker representation of landed elites in Parliament (such as Baden) increased the tax rate on mobile capital and labor *together with the land tax*.<sup>7</sup>

### *Political Considerations for Income Tax Adoption: The Effects of Electoral Institutions*

In many Western countries, political negotiations about the adoption of the income tax took place in an environment characterized by restrictive electoral rules. Many of the electoral systems that were in place in 19th-century Western world used criteria such as the wealth of different individuals or the payment of taxes to allocate electoral rights. An important issue facing politicians who adopted the income tax was whether the new law could enhance the existing electoral rights of incumbent elites, given existing electoral rules. In this section, we consider these additional calculations about the political effects of the income tax. Specifically, we assess the political calculations of incumbent elites in the presence of restrictive electoral rules that were in place at the time: the *vote-tax link*.

**Table 1.** Vote–Tax Link for the Election to the National Lower Chamber.

	Years effective
Australia	—
Austria–Hungary	1849-1907
Belgium	1831-1893
Canada	—
Denmark	—
Finland	—
France	1817-1848, 1850-1852
Germany	—
Prussia <sup>a</sup>	1848-1913
Italy <sup>b</sup>	1848-1912
Japan <sup>c</sup>	1890-1925
The Netherlands	1849-1917
New Zealand	—
Norway <sup>d</sup>	1885-1897
Sweden <sup>e</sup>	1866-1907
Switzerland	—
The United States <sup>f</sup>	1788-1859
The United Kingdom <sup>g</sup>	—

Source. Caramani (2000); Flora, Kraus, and Pfenning (1983); and Nohlen (2010).

a. Replaces Germany in the online appendix. b. Male adults under 21 years had to pay a minimum tax from 1912 to 1919. c. Specific source: Mason (1969). d. Paying income taxes was a sufficient condition, not necessary. e. Paying income taxes was a sufficient condition, not necessary. From 1909 to 1945, those who had tax debt were excluded from the right to vote. f. Article 1, Section 2 of the U.S. American Constitution entitles the individual states to design their own election laws for the selection of their representatives in Congress. From 1788 to 1850, most states passed tax-based requirements for enfranchisement (Lindner & Schultze, 2005). g. Prompt tax payment of local taxes, not direct, for national suffrage (Salmon, 2002).

We define the vote–tax link as an electoral provision that used payment of direct taxes to reduce political participation of lower income individuals. Specifically, the vote–tax link is an electoral institution that conditions the right to vote on the prompt payment of *direct* taxes. The vote–tax link was widely used in Europe and also in the United States and Japan as listed in Table 1. All these countries, at one point, conditioned franchise for the national elections on direct tax payments.<sup>8</sup>

The existence of the vote–tax link establishes a convenient political tool for incumbent political elites to restrict political participation. This electoral institution offered a technology that could be easily reconfigured as a tool of

**Table 2.** Summary of Hypotheses Under the Assumption of Future Changes in Economic and Political Positions.

	Economic gains from income taxes	Political gains from income taxes
Owners of fixed assets (old elites)	Yes	Yes
Owners of mobile assets (new elites)	No	Yes

political exclusion once the new tax was in place. The vote–tax link created two distinct opportunities of political exclusion of lower income individuals. On the one hand, as the vote–tax link made the cost of political participation visible, it was also likely to discourage demands of low-income voters for the further expansion of suffrage. On the other hand, the pecuniary cost of political participation was likely to depress the participation rates of the poorer strata among those qualified to vote (i.e., the urban middle classes). With respect to fiscal outcomes, the vote–tax link was seen as a guarantee of fiscal conservatism, which was widely embraced by elites during the second half of the 19th century in the Western world. At the time, it was believed that voters would refrain from demanding high expenditure programs (and thus, high taxes) only if they were to fund these programs out of their own pockets (Aidt, Daunton, & Dutta, 2010; Daunton, 2001). Under that belief, a linkage between voting rights and income taxation was seen as a natural mechanism to prevent overspending.<sup>9</sup> In the words of William Gladstone, “It is desirable in a high degree, when it can be effected, to connect the possession of the franchise with the payment of taxes.”<sup>10</sup> For all these reasons, we expect that the preexistence of electoral rules that link tax payments to electoral participation should create political conditions that facilitate the adoption of the income tax in a protodemocratic setting.

Table 2 summarizes our hypotheses about the desirability of an income tax in countries with restrictive suffrage. These hypotheses present several plausible micro logics that may explain the early adoption of income taxes by nondemocracies. We have identified the economic and political considerations of owners of fixed and mobile assets, respectively. With respect to economic gains, we have hypothesized that owners of fixed assets are more likely to gain from the adoption of an income tax than owners of mobile assets. We have also hypothesized that preexisting electoral rules may offer political advantages to insiders once the new income tax is adopted. By amplifying inequalities in representation, a new income tax is likely to

reinforce and enhance political advantages of incumbent elites. In this regard, we expect that both owners of fixed and mobile assets should benefit from the adoption of income tax in presence of this very particular electoral provision, the vote–tax link.<sup>11</sup> These common political gains might forge an informal alliance among elites from different sectors who otherwise may disagree about the economic consequences of the new tax.<sup>12</sup>

## A Test of the Economic and Political Gains of Income Tax Adoption

Next, we test for the economic and political gains hypotheses in modeling the adoption of permanent income taxes in the Western world.<sup>13</sup> We follow Aidt and Jensen (2009) and establish the defeat of Napoleon in 1815 as the starting point of the analysis. The Napoleonic Wars propelled the adoption of income taxes in various countries of the European continent: not only the United Kingdom and France but also the Austrian Empire, Belgium, Denmark, the Netherlands, and Norway. After Napoleon’s defeat, the income tax was eliminated everywhere, but the precedent (i.e., the technology) and the *risk* of its permanent adoption remained.<sup>14</sup>

The structure of the data is Binary Time-Series Cross-Sectional (BTSCS). Beck, Katz, and Tucker (1998) prove the virtual equivalence between BTSCS and survival models. As such, the adoption of income tax can be fitted with a standard logistic regression. We only need to add a time trend of the years at risk of adopting the new tax to account for the conditional hazard rate. For that purpose, we follow Carter and Signorino (2010) and fit a cubic polynomial approximation to account for duration dependence. The online appendix (see Gutierrez, 2002; HCPP, 1830-1831; Singer, Bremer & Stuckey, 1972) includes a replication of the analysis using frailty models that allow for unit-specific hazard rates, splines instead of flexible polynomials (Beck et al., 1998), and complementary log–log models that do not assume *ex ante* any shape of the hazard rate. The exact model specification is as follows<sup>15</sup>:

$$P(y_{it} = 1 | x_{it}, y_{it-1} = 0) = \left( \frac{1}{1 + e^{-(x_{it}\beta + H(t-t_i))}} \right). \quad (1)$$

Equation 1 models the adoption of permanent income tax  $y$  by country  $i$  at time  $t$  (provided it has not been adopted yet) as a function of time-variant covariates  $x_{it}$  and a smooth function of the number of years a country has been at risk of adopting the income tax:  $H(t-t_i) = t + t^2 + t^3$ , where  $t$  denotes the time elapsed since the observation enters the sample. By Equation 1, once a given unit adopts the income tax, it drops the sample.

We begin the cross-national analysis by replicating Aidt and Jensen's (2009) "surprising" finding: namely, countries with limited franchise and protodemocratic institutions, proxied by the Polity IV (Marshall & Jaggers, 2000), pioneered the adoption of the income tax. The effects are robust to the inclusion of standard socioeconomic covariates, a Europe fixed effect that accounts for unobserved idiosyncrasies of the Old Continent, and, more importantly, the usual suspect of any major innovation, that is, war (Dincecco, 2011; Tilly, 1990).<sup>16</sup>

The remaining models in Tables 3 and 4 shed light on this counterintuitive result by examining the political and economic determinants of the adoption of income taxes. The models reported in columns 2 to 5 in Table 3 assess the economic gain hypotheses, which conjecture that politicians with ties to owners of fixed factors should be more supportive of the adoption of an income tax as compared with politicians representing mobile assets. As the income tax taxed income that was previously undetected, it imposed a higher burden on the owners of mobile assets as compared with owners of fixed assets. Second, we have argued that expectations of future changes in the balance of power among owners of fixed and owners of mobile assets are likely to affect their relative preferences about the desirability of the new income tax. Particularly, we conjecture that in a time of major economic change landed elites in limited democracies favored the adoption of income taxes because the incidence of this tax fell mainly on the new urban elites. The income tax was, in other words, a mechanism of redistribution of the tax incidence across sectors.

The observable implication of the economic gain hypothesis is that economic and political factors that strengthen the relative bargaining power of owners of fixed assets are likely to increase the probability of income tax adoption. We follow the empirical strategy in the literature on democratization and proxy the economic power of landowning elites using a measure of land concentration (Ansell & Samuels, 2015; Boix, 2003; Ziblatt, 2008): Specifically, we use the share of farms owned by families, as constructed by Vanhanen (2003) from the agricultural censuses.<sup>17</sup> We expect to find a positive relationship between this variable and adoption of the income tax. The model reported in column 2 tests and confirms this proposition. We find that countries with high levels of landholding inequality are more likely to adopt the income tax.

One might argue that a broad range of factors proxying economic development, such as the GDP per capita, population, or the level of urbanization, "the forces of development" (Aidt & Jensen, 2009, p. 166), may affect the ability of a given country to adopt the income tax as a permanent tax. Similarly, the prior experience with income taxation (either as a temporary national level tax or as a local level tax) or the availability of other sources of revenue may affect the probability of the adoption of a permanent income tax. Thus, one conjecture is that the previous experience with income taxation at the national or local level may facilitate the permanent adoption of this tax,<sup>18</sup> whereas the presence of

**Table 3.** The Adoption of the Income Tax as a function of Representative Institutions, Land Inequality, War, and Socioeconomic Controls.

	(1)	(2)	(3)	(4)	(5)
Franchise	-0.045** (0.021)	-0.043** (0.021)	-0.052 (0.036)	-0.045** (0.022)	-0.058 (0.036)
Polity	-0.414*** (0.140)	-0.489*** (0.163)	-0.516** (0.204)	-0.489*** (0.161)	-0.546*** (0.212)
Landholding inequality		0.047* (0.025)	0.083* (0.043)		
Rural inequality				0.061** (0.027)	0.120** (0.056)
War	1.611 (1.096)	1.683 (1.065)	1.000 (1.072)	1.760* (1.060)	1.080 (1.048)
WWI participant	1.386 (1.053)	1.304 (0.905)	1.421 (1.162)	1.286 (0.950)	1.423 (1.242)
ln (population)	0.728 (0.498)	0.776 (0.482)	0.896* (0.490)	0.770 (0.499)	0.941* (0.534)
ln (GDP/capita)	3.657* (2.103)	5.116** (2.565)	5.557 (3.407)	5.162** (2.520)	6.101* (3.456)
Urbanization	0.163*** (0.060)	0.156** (0.061)	0.240*** (0.062)	0.198*** (0.072)	0.347*** (0.106)
Temporary income tax	-5.310*** (1.584)	-6.729*** (2.456)	-8.464*** (3.028)	-6.860*** (2.410)	-9.147*** (3.248)
Local income tax	0.775 (0.580)	1.668** (0.793)	2.313 (1.537)	1.719** (0.821)	2.227 (1.550)
ln (tariff)			0.626 (0.905)		1.034 (1.079)
Constant	-1.646 (6.003)	-2.881 (4.803)	-10.877 (7.879)	-4.079 (4.747)	-15.905 (9.919)
Observations	849	849	675	849	675
Countries	17	17	15	17	15
Duration dependence	Yes	Yes	Yes	Yes	Yes
Europe FE	Yes	Yes	Yes	Yes	Yes

To model duration dependence, all models include a third-order flexible polynomial of the number of years elapsed without the income tax. Country-clustered robust standard errors in parentheses. WWI = World War I; FE = fixed effect.

\* $p < .1$ . \*\* $p < .05$ . \*\*\* $p < .01$ .

alternatives sources of revenue may slow down the adoption of the income tax. All models control for the former battery of factors, while column 3 specifically evaluates alternative sources of revenue by assessing the relationship between tariffs and the adoption of income taxes. Here, we use Ad-Valorem Equivalent

**Table 4.** The Adoption of the Income Tax as a function of Tax Barriers, Representative Institutions, Land Inequality, War, and Socioeconomic Controls.

	(1)	(2)	(3)
Vote-Tax Link	1.748** (0.683)	1.707** (0.701)	1.871* (1.106)
Polity	-0.494*** (0.176)	-0.482*** (0.171)	-0.494*** (0.175)
Franchise	-0.026 (0.023)	-0.027 (0.025)	-0.027 (0.025)
Landholding Inequality	0.059* (0.034)		0.060* (0.033)
Rural Inequality		0.073** (0.034)	
Secret Ballot			-0.278 (2.606)
War	1.903* (1.090)	1.957* (1.094)	1.920 (1.170)
WWI participant	1.136 (0.873)	1.079 (0.937)	1.148 (0.955)
ln (population)	0.812* (0.477)	0.795 (0.488)	0.799* (0.484)
ln (GDP/cap)	4.578* (2.494)	4.529* (2.497)	4.813 (4.011)
Urbanization	0.175*** (0.064)	0.221*** (0.079)	0.173** (0.074)
Temporary income tax	-6.978*** (2.564)	-6.996*** (2.442)	-7.082*** (2.814)
Local income tax	1.843* (0.967)	1.843** (0.929)	1.835* (0.991)
Constant	-6.464 (5.743)	-7.668 (5.723)	-5.906 (9.954)
Observations	849	849	849
Countries	17	17	17
Duration Dependence	Yes	Yes	Yes
Europe FE	Yes	Yes	Yes

To model duration dependence, all models include a third-order flex-ible polynomial of the number of years elapsed without the income tax. Country-clustered robust standard errors in parentheses. WWI = World War I; FE = fixed effect.

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

(AVE) tariffs (Lampe & Sharp, 2013), which are calculated as the ratio of customs duty revenue to total imports for domestic consumption.<sup>19</sup> We might expect that when AVE tariffs are high enough, there might be no fiscal justification to

adopt an income tax. This variable holds a positive, yet not significant coefficient, contradicting the hypothesis that higher levels of tariffs *substituted* for the need of countries to adopt income taxes. This result is, however, not surprising to someone familiar with fiscal policy development in the early 19th century. At the time, the income tax was not understood as being a substitute, but as a *complement* of trade taxes, as the incidence of both taxes fell on the trading sectors (Daunton, 2001). Importantly for the economic gain hypothesis, landholding inequality keeps a positive sign and remains statistically significant when we control for this alternative source of revenue.

Columns 4 and 5 repeat the same analyses using the measure of land inequality proposed by Ansell and Samuels (2015): rural inequality. These scholars suggest adjusting Vanhanen's "family farms" for the actual density of rural population. "There is a possibility that, even in countries where families own most of the cultivable land, most of the rural population might not live on a family farm" (Ansell & Samuels, 2015). To properly measure overall inequality of agricultural landholding, they recommend to adjust the measure of Family Farms by the size of the rural population, thus calculating "Rural Inequality" as  $(1 - \text{Family Farms})(1 - \text{Urbanization}) / 100$ , where Urbanization, also taken from Vanhanen (2003), is the percentage of urban inhabitants.<sup>20</sup> The relationship between this variable and the probability of income tax adoption is similar to landholding inequality. The coefficient for rural inequality is positive and highly statistically significant in both models reported in columns 4 and 5. The smaller magnitude of this coefficient is just a by-product of the wider range of this variable, which increases by two orders of magnitude.

Altogether, the results in Table 3 advance evidence consistent with the economic gains hypothesis while confirming the surprising pattern identified by Aidt and Jensen. We interpret these findings as suggesting that in conditions of restrictive political suffrage higher rural inequality increased the ability of landholding elites to adopt the income tax to shift the burden of taxation to the rising trading sector.

Next, we evaluate the political gains hypothesis, which conjectured that the calculations of owners of different types of assets about the desirability of the income tax were affected by an electoral institution linking individual voting rights to prompt tax payments, or the *vote-tax link*. Specifically, we expect to find a positive relationship between this electoral provision and the adoption of the income tax. Politicians elected under this type of preexisting electoral rule are likely to regard the new income tax as a policy instrument that maintains and reinforces their political advantage. Table 1 in the previous section reports the countries and years in which the vote-tax link was in place in the countries included in our analysis.

The models in Table 4 build on the specifications presented in Table 3 and include controls for socioeconomic conditions, political institutions, warfare,

and, importantly, landholding inequality. The results reported in column 1 indicate that the existence of institutions linking tax payments to political participation facilitated the adoption of the income tax. The coefficient is positive and statistically significant at 95%. In words, countries with preexisting electoral provisions conditioning the right to vote on the prompt payment of direct taxes were more likely to adopt the income tax. In column 2, we assess how robust the vote–tax link is to the replacement of landholding inequality for rural inequality. Results are virtually identical to those in column 1. That is, the vote–tax link positively predicts the adoption of the income tax.<sup>21</sup>

Finally, we seek to examine whether the vote–tax link is robust to the consideration of an electoral provision that is associated with the old regime (Mares, 2015) *and* is argued to predict the adoption of the income tax: the secret ballot (Aidt & Jensen, 2009): the secret ballot.<sup>22</sup> Column 3 of Table 4 confirms that the positive effect of the vote–tax link is robust to the presence of secret ballot, whereas the relationship between ballot secrecy and the probability of income tax adoption is not statistically different from zero. This result confirms the unique political advantage that the vote–tax link offers to incumbent elites: namely, it can exacerbate inequalities in political representation by conditioning political rights on the prompt payment of direct taxes. We claim that this political gain affected the calculations of both landed and industrial elites in pushing for the adoption of the income tax.

## The British Income Tax Act of 1842

To further test our hypotheses, we examine the adoption of the permanent income tax in Britain in 1842. In Britain, the proposal for the adoption of the new tax originated with and was pushed through the parliamentary deliberations by the conservative government of Robert Peel. The examination of this crucial case provides us with the opportunity to test the microfoundations of our argument. We will begin by examining the most important issues that were contested during the political deliberations over the new tax through a qualitative analysis of the parliamentary deliberations. Next, we will test our argument about the determinants of political support of an income tax through a quantitative analysis of the decisive vote in Westminster that led to the adoption of this tax. We will further probe our argument by examining the incidence of the tax burden on different sectors after the adoption of the new tax.

During the parliamentary debates over the adoption of the income tax, both opponents and supporters of the new income tax noted that the new technology of taxation, which assessed income had the potential to raise higher revenue when compared with existing taxes. Yet, both critics and supporters of the new income tax argued that the close monitoring of

income—which was required by the new tax—was also inquisitorial in nature. The tax was attacked as a “threat to personal liberty, for it would require inquisitions scattered throughout the country to enquire into private affairs” (Daunton, 2001, p. 82). Lord Dalmeny, a liberal politician, considered that the new income tax was “an imposition of the most grievous impost accompanied by the most odious processes of inquisitorial investigation that can be inflicted on a free nation” (HC Debate March 21, 1842). Others noted that the new methods of income assessment violated individual privacy, while several MPs doubted the goodwill and intentions of the tax assessors. As one MP argued, “spies and informers must be set to work, and a pecuniary interest must be given to them in the additional amount they procured to the Exchequer” (HC Debate April 4, 1842).

We find strong and systematic evidence of a political conflict between politicians representing rural and industrial interests during the political deliberations over the adoption of the new tax. Robert Peel himself admitted that the new tax affected owners of capital severely. As Peel stated, “I admit that the tax may press with additional severity on account of the uncertain future of profits on that property which is derived from trade” (HC Debate March 18, 1842). Other liberal politicians opposing the new tax expressed similar reservations to the new income tax. The political intentions of the new income tax, these critics argued, were to

seize the profits of trade, and to submit it to the legalized persecution of the tax-gatherer. It is to uphold the monopolies of the agriculturist and planter, that he calls on us to wring the pittance from impoverished industry, and scatters a horde of officials over the land to violate the sanctuaries of private life. (HC Debate March 21, 1842)

Similarly,

it was felt in commercial towns that it was unjust to tax the hard-earned produce of industry on the same footing as the income of realized property, annually received without toil and without risk. *It is felt too that the real burden of the income-tax, a Government inquiry into men’s private affairs, falls exclusively upon the trading classes.* (HC Debate April 13, 1842, emphasis added)

A pervasive criticism of the income tax was that the tax imposed an unfair burden on production and enterprise and that the incidence of the burden on different types of income was unfair (Daunton, 2001). Critics argued that “no tax could be devised which could operate more unequally, more unjustly and more oppressively.” Opponents of the new tax considered that it was unjust to impose the same tax burden on different forms of income, as the latter originated through different processes. As liberal politicians argued, imposing the

same rate on “‘*spontaneous*’ income, on permanent property which could be passed on from father to son and on precarious incomes based on personal exertion where money had to be set aside to support dependents” was unjust (Daunton, 2001, pp. 83-84). It was equally unjust to tax “fluctuating income in the same proportion as permanent income” (HC Debate March 23, 1842). Yet, liberals believed that the reasons for this inequality were political in nature and that they could be attributed to the disproportionate influence of landed elites.

The reason why the man of fluctuating income was severely taxed was, that the man of landed property might escape taxation. The right hon. Baronet Peel did not dare to tax the landowner and he therefore revenged himself upon the unhappy wretch who owned nothing but the faculty of honestly earning high livelihood. (HC Debate March 23, 1842)

In opposing the new income tax, MPs linked to Britain’s rising manufacturing sectors proposed several alternatives to the new tax. One set of proposals involved scrapping the income tax altogether and replacing it with alternative taxes, while others proposed changes to the income tax which lightened the burden of the new tax on the manufacturing sector. Some of the proposals to augment the revenue-raising capacity of existing taxes recommended the remission of duties on corn, the imposition of a legacy duty on landed property or the increase in value of assessed taxes (HC Debate April 8, 1842; HC Debate April 13, 1842). All alternatives to the income tax met, however, with defeat during the deliberations. The remission of duties on corn was rejected because it was believed that such a tax could not generate the same level of income as compared with the income tax (HC Debate April 13, 1842). Proposals to increase the level of assessed taxes were also opposed and eventually defeated on the grounds that these were even more burdensome as compared with the income tax. “A great deal has been said about the inequality of an income-tax, but the assessed taxes pressed with much greater inequality upon commerce and manufactures than the income tax” (HC Debate April 13, 1842).

Alternative proposals made by Whig politicians recommended to lighten the tax burden on the manufacturing sector within the income tax. This could be achieved either through the imposition of different tax rates on funded or unfunded wealth or the exemption of various incomes from the incidence of the new tax. Some of these proposals recommended to exempt manufacturing interests altogether from the payment of the new tax (HC Debate April 29, 1842). Others recommended to exempt income derived from “alum mines, waterworks, streams of water, canals, railways, bridges, and ferries” from the

payment of the new tax. Finally, other proposals that were widely deliberated at the time recommended to impose a lighter tax burden on incomes that were volatile, as compared with fixed assets such as land. Such proposals were, however, defeated (HC Debate April 29, 1842). The argument that eventually prevailed during the deliberations was that returns of land were as volatile as the returns from commercial resources, making the differentiation of taxation for income from volatile versus fixed assets unjust. As a result of the defeat of all these alternatives, Peel's income tax, a policy that was more favorable to the interests of landed elites, was ultimately adopted.

The marked division between politicians representing the interests of different sectors was reflected in the final vote of the income tax in May 31, 1842. Next, we model the votes of the different representatives as a function of partisanship, the background of the MP, and the socioeconomic characteristics of the districts that they represented. The results suggest that, controlling for landholding inequality, district-level income and poverty, and the MPs professions and social class, representatives of industrial districts opposed the income tax while representatives of agricultural districts favored it.

### *A Roll-Call Analysis of the 1842 Income Tax Bill*

The parliamentary debates about the adoption of an income tax took place during a brief period between March and May 1842. The third and the last reading of the Income Tax was held on May 31, 1842. Three hundred eighty-eight MPs participated in this decisive roll-call votes, representing English, Welsh, and Scottish constituencies. We collected biographical, district, and partisan information for these politicians (and were able to find this information for 384 MPs). Our empirical analysis examines the relationship between these variables and the vote for the income tax bill. We proceed stepwise. First, we evaluate the effect of district characteristics, then biographical, and, finally, partisanship.<sup>23</sup>

Table 5 reports the results of logistic models accounting for support or opposition to the new income tax. The models reported in columns 1 to 3 examine the relationship between district levels characteristics and support for income tax, while including fixed effects for different regions (England, Wales, and Scotland). Column 1 presents the simplest specification. Here, we regress the vote of the MP on landholding inequality, controlling for the type of constituency: urban versus rural. Landholding inequality is computed as a Gini index of land size at the county level using the information of the first countrywide agricultural census in the history of Great Britain, dated as of 1896, that we could locate (Board of Agriculture, 1896). Using Vanhanen's (2003) data, we can establish, however, that these values were closely

**Table 5. Roll-Call Vote of the British Income Tax Bill of May 31, 1842.**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Urban district	-2.316*** (0.349)	-1.816*** (0.447)	-2.012*** (0.526)	-2.138*** (0.348)	-2.258*** (0.395)	-2.645*** (1.244)	-0.189 (0.580)
Landholding Gini	5.745*** (2.217)	6.245*** (2.217)	7.005*** (2.328)	4.936** (2.250)	5.440** (2.508)	-1.947 (6.971)	-4.994 (4.564)
Old sector employment		7.779*** (2.919)					
New sector employment		-2.706* (1.471)					
Unemployment rate			-1.863 (1.629)				
Poor homes			0.010 (0.010)				
Population density			0.004 (0.005)				
Business MP's background				-0.886** (0.422)	-1.112** (0.512)	1.417 (1.185)	0.758 (0.754)
Banking MP's background				0.312 (0.438)	0.602 (0.497)	-1.506* (0.900)	-1.292* (0.697)
Aristocrat				0.079 (0.059)	0.109 (0.070)	0.212 (0.233)	0.299** (0.135)
Personal wealth					0.126* (0.074)		
Whig						-9.429*** (1.477)	
Proland voting record							0.686*** (0.100)
Constant	-2.499* (1.317)	-3.050** (1.328)	-2.832 (1.724)	-2.201 (1.375)	-3.072* (1.670)	6.200 (5.515)	-7.997*** (3.022)
Observations	384	310	268	384	321	384	384
Region FE	Yes						

0 = *against*; 1 = *in favor*. County-clustered, robust standard errors in parentheses. MP = member of Parliament; FE = fixed effect.

\* $p < .1$ . \*\* $p < .05$ . \*\*\* $p < .01$ .

correlated to measures of landholding inequality in 1842, the year the income tax was adopted. The national percentage of family farms in 1842 was 5%, and 8% only in 1890, suggesting little change in the distribution of land between 1840s and 1890s (this share would reach 52% in 1975). Consistent with our hypothesis, the sign of this coefficient is positive. We know that Conservatives were likely to be elected in rural districts while liberal MPs were elected primarily in urban constituencies (Aydelotte, 1977, Table 7.1). Consistent with this pattern, representatives of urban districts opposed the adoption of the income tax.

In column 2, we investigate the relationship between different economic characteristics of districts and support for the income tax. Our variables include measures of population shares of labor employed in agriculture, the *old sector*, and in retail, liberal professions (including bankers), and manufacturing industry, the *new sector*.<sup>24</sup> The source for this information is the 1831 UK Census, as coded by Southall, Ell, Gatley, and Gregory (2004). Given that this source covers England and Wales only, the number of observations in this and the next column declines. We find that the higher the share of employment in the *old sector*, the more likely it is that a given representative will vote in favor of the income tax. In contrast, a higher share of workers employed in new sector activities correlate with a lower likelihood that the representatives will support the income tax bill.

In column 3, we explore an alternative hypothesis, advanced by the literature on taxation and democratization, which suggests that the income tax is adopted as a policy appeasing the poor (Acemoglu & Robinson, 2000; Boix, 2003). To assess some of the implications of these theories, we compute the district-level unemployment rate as well as the share of individuals in houses rated under 10 pounds (Poor Homes) using information from the 1831 census. We also include a measure of population density, which we are using as a district-level proxy of income.<sup>25</sup> One expectation of theories of democratization is that elites in richer districts are more prone to support the adoption the income tax in an effort to offset dramatic threats for expropriation. None of the three variables reach, however, statistical significance at conventional levels. Fears of current or future redistribution do not seem to explain the motives of support for the adoption of the income tax. Our alternative explanation, premised on intrasectoral competition among elites provides a better account of the variation in political support for the new tax.<sup>26</sup>

The models reported in columns 4 and 5 of Table 5 assess the relationship between biographical characteristics of a legislator and their vote on the proposal to adopt the income tax. Biographical information on legislators comes from the Aydelotte (1984) data set, which includes a wealth of political characteristics of all members of the British Parliament during period 1841 to

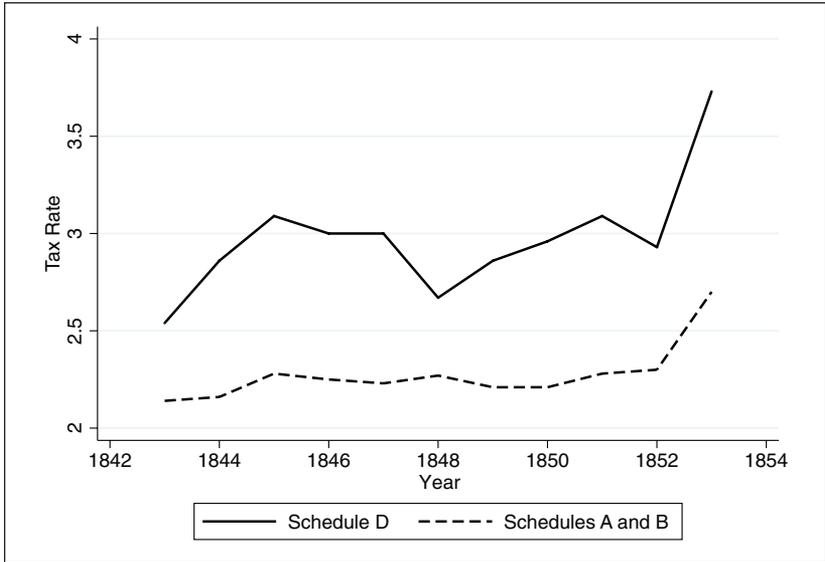
1847. In column 4, we investigate whether MPs with a vested interest in the business and financial sectors tend to oppose the income tax.<sup>27</sup> The first coefficient is negative and statistically significant, whereas the second is not statistically different from zero. However, in subsequent models, these effects reverse. We also test for the relationship between the aristocratic background of the MP and support for the income tax.<sup>28</sup> This variable is positive but its statistical significance is not robust across different specifications.

The specifications reported in column 5 include a measure of the MP's personal wealth. This is a nine-category variable, ranging from £2,000 to £1,000,000. This variable positively predicts the adoption of the income tax. This is consistent with the sectoral redistribution of tax incidence, as landed elites were richest income group in 1842 Britain.

Finally, the results in columns 6 and 7 investigate the role of partisanship in predicting the roll call. We use information reported in Aydelotte to construct this variable. Liberal MPs opposed the income tax adoption (93% of them did). Not surprisingly, this variable is strongly statistically significant in the expected direction. Importantly, inequality loses statistical significance once we control for the partisanship of the MP. Due to the strong alignment between district characteristics and partisanship, we interpret the change in the coefficient of landholding inequality as an attenuation bias caused by controlling for a posttreatment effect.

Political parties in the Peelite era were clearly defined. But the skeptical reader might argue that partisan affiliations suffer from some rationalization of the coder (in this case, Aydelotte, 1984). To address this concern, the model reported in column 7 proxies policy preferences with the voting record of the MP. To perform this test, we use Aydelotte's Guttman scale of the *proland voting record*. This scale is based on the behavior of each MP in nine different roll-call votes affecting landed interests in the 1841-1847 session.<sup>29</sup> This scale tells us how strongly aligned each MP is with the interests of the landed sector. The coefficient for this scale behaves as we would expect. The higher the alignment between the politician and the interests of landed elites, the higher their support for the adoption of the income tax.

To conclude our analysis of the British case, we investigate the incidence of the new tax on different sectors during the years following its adoption. The British *scheduled* income tax records the sources of various revenues collected by tax authorities, and it allows us to calculate the fiscal pressure faced by each sector. Specifically, the 1842 income tax was levied under five different schedules. Two of these schedules (A and B, respectively) collected income from the traditional sectors: income from land, real estate, and agriculture. Schedule D, by contrast, collected income from profit and liberal professions. During the decade of the 1840s, 51.8% of total revenue came



**Figure 3.** United Kingdom 1843-1853: The tax rate of the traditional sector (dashed curve) and modern sector (solid curve).  
 Source: Parliamentary Papers (1857, 1861).

The rates represent the ratio of actual tax collection to total assessed value of assets cataloged on Schedules A and B (traditional sector) and D (modern sector).

from Schedules A and B, as compared with 29.4% from Schedule D (Parliamentary Papers, 1857). At first glance, one would see no harm done by the new law to the industrial elite. However, over time, the incidence of the tax became more unfavorable for industrial elites. Figure 3 presents the average tax rate for each of these two sectors for the first 10 years of the law.

In the first years following the adoption of the new tax, the value of assets in the traditional sectors doubled compared with the value of assets in the modern sector (Parliamentary Papers, 1861). This explains why revenue stemming from land surpassed revenue from the modern sector. However, keeping the value of the assets constant, the effective tax rate for the modern sector was 30% larger than the rate on the traditional sector.<sup>30</sup> Thus, from its very inception, the incidence of the income tax fell more heavily on the modern sector. Eventually, total tax revenue from Schedule D surpassed the total tax revenues from Schedules A and B. By 1907, the weight of income raised from Schedules A and B accounted for 25.8% of the total tax revenues raised by the income tax. By contrast, total tax revenue from Schedule D accounted for 59% of tax revenue (Daunton, 2001, Table 7.2).

Altogether, our roll-call vote analysis of the distributional conflict over the adoption of the income tax and Britain's subsequent experience with revenue collection with the new tax lends support to the economic hypothesis of income tax adoption proposed in this article. Consistent with our expectation, we find that politicians closely aligned with owners of fixed assets supported the adoption of the new income tax, while politicians representing the interests of owners of mobile taxes opposed its introduction. The historical information about the incidence of the tax burden on different sectors suggests that the income tax generated more revenue from industrial sectors. As such, the operation of the new tax conformed with the intended preferences of the owners of fixed assets: The income tax led to fiscal rebalancing, by involving the industrial sector more heavily in the financing of the public sector.

## **Conclusion**

The adoption of the income tax has paved the way for a dramatic increase in the size of government expenditures and represents a decisive turning point in the evolution of the modern state. The political decision to assess taxes on income gave governments the means to tap into a variety of revenues that had been hitherto not assessed. The adoption of the income tax also went hand in hand with the development of additional institutions that sought to assess income that originated from various sources and ensure compliance of citizens with their tax obligations. This article seeks to provide an explanation of this decisive turning point in the development of the modern fiscal state.

Existing explanations stress the importance of war as factor accounting for the evolution of the modern state (Dincecco, 2011; Scheve & Stasavage, 2010; Tilly, 1990). Our article reconfirms this long-standing result of the literature. However, wars and preparations for military conflict are not sufficient in explaining political decisions to adopt the income tax. The calculations of political elites about the desirability of this radically new instrument of revenue extraction were affected by domestic economic conditions, on one hand, and by existing electoral rules, on the other hand. We provide a set of hypotheses about the most decisive economic and political factors that affected the considerations of politicians about the desirability of the income tax adoption. We test these hypotheses by examining the variation in the timing of income tax adoption across the Western world during the period between 1815 and 1939.

Our article identifies two empirical regularities in the timing of income tax adoption across Western countries during this period. We find that countries with high levels of inequality and low levels of suffrage pioneered the adoption of the new income tax. These findings challenge a widely held

proposition which suggests that democratization spurs fiscal redistribution. The theoretical expectations of standard models of taxation and redistribution (Acemoglu & Robinson, 2000; Boix, 2003) do not hold in this important policy domain. To account for these empirical regularities, we examine the calculations of higher income individuals in countries with restrictive electoral rules about the desirability of the new tax. We suggest that owners of fixed and mobile assets will have different expectations about their future tax liability under the new income tax. Although owners of fixed assets supported the income tax because of the ability of the latter to roll off a higher tax burden on owners of mobile assets, mobile asset holders were likely to resist the latter. Our empirical analysis confirms this hypothesis, which posits the existence of a sectoral conflict over the adoption of an income tax. We find that both structural and short-term economic factors that increase the economic bargaining power of landed elites increased the probability of income tax adoption.

In many of the early adopters of income taxation, political negotiations about the introduction of a new income tax took place in environments characterized by restrictive electoral rules. The electoral rules among these nondemocratic countries varied significantly in their institutional design. Our article examines how a very specific type of electoral rule that was in place in many European countries prior to the adoption of universal suffrage—the vote–tax link—affected the calculations of incumbents about the desirability of the new income tax. Consistent with our expectation, we find that the presence of a vote–tax link increased the probability of income tax adoption.

As an additional test of some of the observable implications of our explanation, we have collected microhistorical evidence analyzing the adoption of the income tax in Great Britain in 1842. Our quantitative analysis of the final roll-call votes leading to the adoption of the new income tax found that the adoption of the new tax was supported by conservative politicians from districts with high level of landholding inequality, but opposed by politicians from more urban interests. The analysis of the parliamentary debates in the British Parliament that led to the adoption of the new tax reveal the existence of a strong intersectoral conflict between representatives of landed and manufacturing elites over the design of the new income tax. Some of the most contested issue during these deliberations concerned the rates of taxation of income from fixed or more mobile sources. We show that the fine print of the final income tax bill conformed to the intentions of conservative politicians to enlist resources from the manufacturing sector for fiscal purposes and that alternative tax proposals advanced by liberal politicians were defeated.

The findings in our article open up interesting avenues of future research for the politics of taxation and redistribution in nondemocratic regimes, while emphasizing inraelite competition as the ultimate cause of major fiscal innovations, much in line with Ansell and Samuels (2015). Our findings suggest that existing models of redistribution operate with assumptions about preferences for taxation that are too simplistic and that overlook important sources of cleavages among political incumbents in countries with limited electoral suffrage. We leave it to future research to examine whether the surprising support of owners of high fixed assets for policies with high redistributive potential such as the income tax can be also found in cases of other policy areas.

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### **Notes**

1. An exception being Levi (1988) and Besley and Persson (2011).
2. Both franchise and the date of adoption of the income tax are drawn from Aidt and Jensen (2009). Franchise refers to the electorate (for parliamentary elections) in percentage of the enfranchised age and sex group, before women's suffrage, male population only. Coded 0, if no elections took place.
3. New Zealand is the only exception to this rule: This country early adopted the income tax while already having extended franchise.

4. We do not have comparable data for Japan and New Zealand, also early adopters. For these countries, we only have postadoption data. However, these suggest that the early income taxes in both countries were also consequential. In 1890 Japan, 5 years after the income tax was adopted, this tax represented 2.3% of direct taxation (Ranis, 1959). This number grew to 10.7% only 10 years later (Ranis, 1959). Actually, if we count the corporate tax as an income tax (as it was in the United Kingdom), these figures are 3% and 22.6%, respectively. In New Zealand, the income tax represented 17.6% of total direct taxation only 2 years after its adoption (Statistics New Zealand, 1893). These figures suggest that the income tax was neither scraps of paper among its early adopters outside Europe.
5. The economic hypothesis is consistent with Bates and Donald Lien's (1985) seminal work, which also discusses economic losses incurred by owners of fixed capital as a result of the increase in the importance of mobile capital owners. Precisely, we claim that the income tax helped fixed-capital owners to rebalance their economic and political power vis-à-vis the new industrialists.
6. See also Hallerberg (2002) for a case-specific analysis.
7. It could be argued that industrial elites could pass on the burden of taxation to consumers by raising intermediate or final good prices. For our argument to hold, we only need that the incidence to fall *even if only partially* on the modern sector, whose rents had gone virtually untapped under the old fiscal system. That is, partial incidence suffices to make the adoption of the income tax in the interest of landed elites. The strong opposition to the income tax of the British members of Parliament (MPs) representing the industrial interest (further details below) suggests that passing the incidence of taxation entirely onto consumers was virtually impossible. We are grateful to an anonymous reviewer for pointing out this necessary condition for our argument to hold.
8. Table A-2 in the online appendix supplements this information by indicating in which countries the vote–tax link was actually effective when the income tax was adopted.
9. This same goal still inspired electoral provisions in many democracies in the late 20th century (Ardanaz & Scartascini, 2013).
10. Quoted in Matthew (1988, p. 127).
11. Notice that industrial elites had to experience some gain from the new tax to secure quasi-voluntary compliance, as it had been procured in 1799 when the income tax was temporarily adopted in the United Kingdom to wage the Napoleonic wars (Levi, 1988). An income tax would have been just too hard to administer with the frontal opposition of the industrial elite.
12. The vote–tax link is conceivably not the only electoral provision that might give a political advantage to the incumbent elites. Electoral provisions that assign voters to different tiers in Parliament based on their tax payments fulfill a similar role. This is the case of Prussia and other German principalities between 1871 and 1913, where tax payments led to huge parliamentary malapportionment and facilitated the early adoption of the income tax. Nevertheless, tax-based parliamentary malapportionment is an electoral provision that is relatively rare

in national Parliaments in the Western world: Austria–Hungary had an estate Parliament that reserved one of the four (later five) curiae to big taxpayers. Yet, the curia system was adopted in 1861, only after the income tax had been adopted in 1849. Finland had a curia system similar to that in Austria–Hungary, but it was in place only during the period when Finland was under Russian control. Based on the income tax adoption years, milder versions of tax-based malapportionment, such as the “plural vote” in Belgium and France, by which high taxpayers receive a few additional votes, might not provide the same clear incentives to the ruling elites.

13. Australia, Austria–Hungary, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, the United States, and the United Kingdom.
14. For those countries that were not independent in 1815, we assume that they only become at risk as soon as they gained independence. Again, we follow Aidt and Jensen’s (2009) approach.
15. We borrow notation from Aidt and Jensen (2009).
16. War data are drawn from Sarkees and Wayman (2010). Refer to the online appendix for further specifications and measures of war-related activity.
17. Vanhanen (2003) offers decennial values of land ownership concentration. To impute in-between years, we pursue flat-steep-flat coding. That is, we assign the last available value in the series to all subsequent observations for which data is missing. Suppose that we have family farm information for 1900, 1910, and 1920. From 1901 to 1909, we set family farm equal to its value in 1900, and from 1911 to 1919, we set family farm equal to the 1910s record. In addition, if the first observation for family farm follows the first observation for franchise, the first available value of family farm is extrapolated toward the past. For instance, if the first records of family farm and franchise for a given country are 1850 and 1820, respectively, family farm between 1820 and 1850 is set to its value in 1850.
18. Population and GDP per capita (Aidt & Jensen, 2009) are linearly interpolated as to maximize the simple size. Urbanization (Vanhanen, 2003) is interpolated following the flat-steep-flat strategy described in ft. 17, as we use it to compute *rural inequality*. Data for local and temporary national income taxes are drawn from Aidt and Jensen (2009).
19. We lack tariff data for Finland, and Austria–Hungary prior to 1849. This explains the smaller  $N$  in column 3. The logarithmic transformation of this variable reported in columns 3 and 5 seek to minimize the influence of extreme values.
20. Notice that rural inequality exhibits higher over time variation as compared with landholding inequality, because rural population changes faster than land ownership. We normalize rural inequality to 100 so that it has the same range than landholding inequality.
21. These and Table 3 results are robust to country-random effects as well as shared frailty (refer to online appendix). Importantly, the likelihood ratio test for significant frailty is negative, suggesting that coefficients are not biased by country-level unobservables.
22. Secret Ballot is a time-varying indicator and it is drawn from Aidt and Jensen (2009).

23. Among the early adopters, Great Britain is the only country that lacked a vote–tax link for its national elections. Such vote–tax link was, however, in place for local elections. Thus, in this section, we only examine the economic gain hypothesis explaining support for the new tax.
24. Self-employed farmers are excluded, although results do not change when we include them.
25. For a similar use of population density as proxy of income, see Acemoglu, Johnson, and Robinson (2002) and Dincecco and Prado (2012).
26. Likewise, proxies to district income such as population or population density always hold positive coefficients but never reach statistical significance.
27. Aydelotte's (1984) data include a battery of items indicating whether MPs had invested in different types of business.
28. This variable has seven ordered categories: it takes value 0 for MPs who are unrelated to aristocracy. It takes value 1 for MPs whose family received a nobility title after 1837; value 2 for those who received a title between 1820 and 1837; and successively until "before 1689," the seventh category.
29. For details, refer to the original Aydelotte's (1984) codebook.
30. The absolute values of the tax rate and their difference might seem marginal for modern standards. However, these rates were considered high by the time and caused heated debates in Parliament precisely because it tapped previously unknown income and had major distributive consequences. Interestingly, all sectors were required by law to pay the same tax rate: 7d in the pound on income of 150 l. and upward (on average, that represented a 2.9% tax rate). In practice, the fine print usually benefited those individuals with an economic interest in the traditional sectors. For instance, when income arose under different schedules, the abatement was allowed preferably from the amounts reported in Schedules D and E, as claimed by Kennan (1910). Landed elites, in essence, were exempted from paying taxes for their activity in the newer sectors.

## Supplemental Material

The online appendices are available at <http://cps.sagepub.com/supplemental>

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