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Fiscal capacity in non-democratic states: the origins and expansion of the income tax

Per F. Andersson[1,2]

[1]Department of Political Science, University of Copenhagen, Copenhagen, Denmark and [2]Department of Political Science, Stockholm University, Stockholm, Sweden
Corresponding author. Email: per.andersson@statsvet.su.se

Abstract

Fiscal capacity is regularly linked to warfare and democratization. However, the majority of income taxes – a cornerstone of government finance – were introduced by non-democratic states in peacetime. This paper is concerned with how autocratic politics shape the adoption and expansion of income taxes. Political institutions help overcome a commitment problem related to investments in taxation. To avoid being deposed by his or her elite supporters, a ruler needs to guarantee that new taxes will not be used opportunistically (e.g. expropriating the elite). If the elite supporters can effectively monitor the government, any transgressions will be detected and punishable. Institutions such as legislatures solve this commitment problem when they allow oversight and monitoring over the executive branch. The empirical implications are straightforward: in places with strong institutional oversight, which allows the elite to monitor the executive, we should observe higher fiscal capacity. I find support for this by analyzing newly available historical datasets over tax revenues, tax introduction dates, and political institutions.

Key words: Autocratic politics; fiscal capacity; income tax

1. Introduction

The rise of the modern fiscal state is closely tied to the development of the personal income tax (PIT). From modest beginnings in the early 19th century, by the 1950s it generated around half of governments' tax revenues, signifying the transformation from the old fiscal system based on tariffs to the modern fiscal state based on direct taxation.[1] The revenues it generated laid the foundation for a vast increase in the scope of government, for instance by funding the emerging welfare state. Not only has it been a cornerstone of government budgets for almost a century, scholars also routinely use income tax revenue as an indicator of fiscal capacity (Rogers and Weller, 2014). Given the emphasis in the literature on war and democracy, it is surprising that most PITs were introduced by non-democratic states in peacetime. In a sample of 77 countries, only nine introduced a permanent PIT in wartime, and only 24 introduced it while being democratic.[2] In the majority of cases – 53 – the PIT was introduced in the absence of both democracy and war. This fact is not well explained by the dominant theories of state-building and fiscal capacity. In order to explain the rise and spread of the PIT, we need to understand tax reform in non-democratic states.

I propose that in autocracies, the income tax should be analyzed as an investment in fiscal capacity – not as a tool for redistribution or as a way to finance war. This shifts the focus to the ability of autocratic

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[1]Using data from Andersson and Brambor (2019).
[2]Using data from Seelkopf *et al.* (2021) on tax introduction and V-Dem (Coppedge *et al.*, 2020) on democracy.

political systems to solve commitment problems related to investments. I claim that these problems are more readily solved in countries with institutionalized power-sharing arrangements buttressed by executive oversight – for example, through legislatures with the power to monitor the ruler.

The empirical analysis – covering up to 25 autocracies from 1870 to 2012 – reveals that countries with more extensive institutional oversight generate more revenue from income taxes and are also more likely to introduce them in the first place. These results are robust to the inclusion of a number of controls such as war, economic development, and government ideology, as well as to different econometric specifications. A short case study of the adoption of the PIT in Sweden provides evidence on the plausibility of the mechanism.

The paper is related to previous research on institutions, development, and taxation. One of the better-known explanations for tax reform is war. Warfare leads to a sharp increase in government spending that needs to be financed, for example by a tax on income (Tilly, 1990). A related argument is that richer societies build capacity in order to protect themselves from predation (Geloso and Salter, 2020). Interestingly, while war seems to be linked to taxation in Europe, this is not the case in Latin America (Centeno, 1997). There are two additional problems with explaining the adoption of *permanent* income taxes with interstate warfare. First, it takes time to develop a bureaucracy to administer the tax, too much time to be useful in an emergency such as a war. Second, when the war is over there is no longer a need for the tax. Thus, we should be more likely to observe loan finance and temporary taxes in times of war instead of permanent investments in fiscal capacity. Alternatively, states can extract more revenue from existing taxes in times of war (Morgan and Prasad, 2009). However, a permanent increase in the likelihood of armed conflict, or a protracted war, may lead to more comprehensive reforms. In other words, while warfare does not have to lead to a permanent change in tax regime, there are circumstances in which war, or the threat of war, plays a more important role.

Others emphasize the redistributive potential of taxation and link income taxes to inequality and democratization (e.g. Acemoglu and Robinson, 2001; Boix, 2003; Meltzer and Richard, 1981). Democracy grants effective representation to previously excluded poor citizens that demand more progressive taxation. The empirical evidence, however, is mixed: Aidt and Jensen (2009a) find that an extension of the franchise increases the likelihood of PIT introduction, but only when the suffrage is already fairly wide, while Mares and Queralt (2015) present evidence that autocracies in fact pioneered the tax. Others suggest that democracies increase regressive taxes (Timmons, 2010), and that democratization leads to an increase in income tax revenues only in urbanized states (Andersson, 2018).

If the PIT is not only the result of redistributive demands or by the immediate exigency of war, what is missing? A recent explanation is offered by Mares and Queralt (2015), where PIT introductions are still explained by redistribution, but redistribution between different elites. The tax is introduced in order for the old landed elite to check the increasing economic influence of the new industrial elite, or when the franchise is tied to payment of tax.

The notion that political institutions matter, and under some circumstances facilitate taxation, is not new (see e.g. Besley and Persson, 2011; Dincecco, 2009; North and Weingast, 1989) but explaining the *general rise in overall taxation* is not the same as explaining the *origins of specific fiscal capacity investments*. Focusing on one tax allows for a closer study of the mechanisms behind the decision compared to focusing on the overall development of tax revenue over a longer period of time. This strategy also reduces the risks of conflating capacity investments with a general willingness to pay, or taxation in exchange for representation, which is the case with earlier research focusing on the general rise in revenues and more fundamental constitutional changes.

My argument is related to work emphasizing representative and/or constraining institutions as key for the development of the fiscal state (e.g. Karaman and Pamuk, 2013; Ricciuti *et al.*, 2019). Scholars have argued that executive constraints in autocracies allow governments to credibly commit to honor promises (with respect to, e.g. private property rights and loans), thus allowing the state to borrow at a lower interest rate (Cox, 2016; North and Weingast, 1989; Stasavage, 2002) and attract more private investment (Gehlbach and Keefer, 2011). Boix and Svolik (2013) present cross-sectional data from

the 1980s and 1990s suggesting that autocracies with legislatures and at least one party are more capable of collecting statistics and of managing their petroleum sectors.

I build on this literature but diverge from it in important ways. First, this literature primarily stresses commitment problems between the state and the private sector, but is largely silent on public investments in fiscal capacity and commitment problems within the ruling class.[3] Second, earlier research has mainly been concerned with how constitutions are linked to a general rise of government revenue and economic growth in the early modern period (for an exception, see Gehlbach and Keefer, 2011), while this paper is concerned with the last two centuries, during which the foundation of the current fiscal system was laid. Moreover, instead of focusing on the general increase of tax revenues or the interest rate on government bonds, I am concerned with a specific political investment in fiscal capacity: the income tax. My approach is also different in its focus on oversight rather than constraints on the executive.

While the first permanent PITs were introduced in the 19th century (e.g. the United Kingdom introduced the tax in 1842), others were introduced much later. Thus, a long-term perspective is crucial in order to properly investigate the origins of the PIT. Earlier efforts with a historical perspective (e.g. Mares and Queralt, 2015) have been constrained geographically by focusing heavily on Europe and English-speaking off-shoots (analyzing samples of 15–17 democratic and non-democratic countries). Using newly available data on tax introductions and revenues I am able to analyze a much larger sample of 25 autocracies in Europe, both Americas and Japan.[4]

The next section outlines how institutional oversight can explain PIT adoption in undemocratic states. Section 3 presents the data and the statistical analyses. In section 4 I provide a short case study of the PIT-adoption in Sweden. The final section concludes.

2. Fiscal capacity and the income tax

Rogers and Weller (2014) demonstrate that the income tax is not only theoretically but also empirically a valid indicator of capacity. Income taxes are particularly challenging for a state to collect and require significant investments in administration and bureaucracy (Grabowski, 2008; Lieberman, 2002). For these reasons, the share of revenue from income taxes is frequently used as an indicator of fiscal capacity (e.g. Dincecco and Wang 2022). Hanson and Sigman (2021) go further by interpreting the share of income taxes as an indicator not of extractive capacity but of administrative capacity.

During the time period under consideration – the late 19th and 20th centuries – the income tax was arguably the most important tax reform. In the evolution of the modern tax state, income taxes appeared after taxes on estates and before general sales taxes. Modern inheritance taxes were first introduced already in the 18th century and had spread to many countries by the mid-19th century (Genschel and Seelkopf, 2021). With increasing need for revenue in the second half of the 19th and first half of the 20th century, countries began introducing income taxes. By the time general sales taxes (and modern value-added taxes) were implemented, most countries already had income taxes in place (Ibid.). The rise of the income tax coincides with a shift away from the old fiscal system based on volatile and non-scalable tariffs to a modern tax system based on stable, scalable direct taxes on income.[5]

The PIT is usually explained with reference to redistribution, where poor voters support it due to its progressivity. Thus, the spread of PITs should be linked to the extension of the suffrage (following Meltzer and Richard, 1981). But in non-democratic states redistribution should be less salient as a

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[3]In order to borrow money a state needs the capacity to generate revenue, and to be able to credibly commit to repaying the debt. North and Weingast (1989) assume the first one exists, and focus on the second challenge. I focus on the first.

[4]See section A1 of the appendix for a list of included countries.

[5]Indeed, in some cases the politics of income taxation was tightly linked to the issue of tariffs and trade protection (Magness, 2016). Whether the income tax was introduced as an explicit substitute for tariffs, or if tariffs became less important after the introduction of the much more capable income tax, matters less for my general argument since both mechanisms are consistent with capacity building. Section A6 of the appendix provides evidence suggesting the introduction of the PIT was associated with both an increase in overall revenues, and a decrease in the share of revenue from tariffs.

motivation since the (poor) majority of the population is excluded from power, thus making the PIT less relevant in terms of class-based redistribution (an exception might be regimes where redistribution is part of the ruling ideology).[6] Therefore, an explanation for PIT adoption in non-democratic states requires a different approach. I suggest that in non-democratic states the PIT is less about redistribution and more about fiscal capacity.

2.1. Institutional oversight and investments

Many key reforms to fiscal systems – such as the adoption of PITs – were made in the 19th century, a time in which non-democracy was the norm. Investments in fiscal capacity are often associated with a dilemma. While regime insiders gain from a stronger, more effective state – by increasing the potential monetary rewards, and by increasing the resilience of the regime to challengers – there is a risk involved: after the reform is implemented, how can they be sure that the capacity of the state will not be used against them? There are two features of the PIT that pose a risk to the support coalition (the group of elites whose support is needed for the ruler to stay in power). First, an income tax can be used to effectively redistribute resources by implementing a highly progressive rate while targeting spending away from the support coalition. Second, since a working income tax is based on the assessment of income, it implies a powerful tax administration with the ability to collect information on members of the elite. Not only will an income tax increase what Seligman (1911: 34–35) calls 'bureaucratic inquisition', but also the record-keeping requirements for taxpayers (Penndorf, 1930).

There are two reasons for an autocratic leader not to impose an income tax without the consent of the support coalition even in the absence of institutional oversight. First, the elite might shift their support to a potential challenger, jeopardizing the survival of the regime.[7] Second, without at least the tacit support of the elite, widespread evasion might render the tax ineffective in terms of generating revenue. Put differently, potential resistance constrains the effectiveness of a tax without elite support. Thus, when introducing a tax, the ruler needs to be able to commit to using this new tool in line with the preferences of the support coalition, or they will not support its introduction. In the absence of a commitment device there is nothing stopping the ruler in a future period from reneging on promises made when the income tax was introduced.

This commitment problem can be solved by political institutions. In autocracies, the main role of institutions such as legislatures is not as a constraint on executive policy-making – as in democracies – but rather as a forum for interaction between elites and the dictator, and as a way for regime insiders to get information and to exercise oversight (Myerson, 2008; Svolik, 2012: ch. 4). With legislative oversight, transgressions may be detected and the ruler can be punished if she or he deviates from a previous agreement. It is important to note here that there is a distinction between two different functions of legislatures: constraints and oversight. Since the constraint the support coalition exercises over the ruler emanates from the threat of revolt, the oversight function becomes more important.

The emphasis on institutional oversight sets my argument apart from previous work concerned with constraining executive power directly. For instance, Besley and Persson (2011) focus on the fraction of years a country had the highest score (7) on the Polity IV executive constraints index. A score of 7 means that 'A legislature, ruling party, or council of nobles initiates much or most important legislation' and that 'The executive (president, premier, king, cabinet, council) is chosen by the accountability group and is dependent on its continued support to remain in office (as in most parliamentary systems)' (Marshall *et al.*, 2017: 24–25). In general, Polity emphasizes the ability of a legislature to initiate and block legislation. Similarly, Cox (2016) stresses the importance of *de jure* parliamentary power over budgets. Constraints – such as veto power over budgets or the constitutional

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[6]The models in sections 3.3 and 3.4 control for ideology. Historically, communist states relied on turnover taxes and subsidies to combat inequality, not income taxes (Kornai, 1992).

[7]In North and Weingast (1989) it is the demonstrated ability to remove monarchs through rebellions and civil war that lends credibility to the elite. Without these successful instances of toppling the regime, William III would never have agreed to the constraints on his power set out in the aftermath of the Glorious Revolution.

ability to remove the executive – are different from oversight. The latter help facilitate autocratic power-sharing by making it easier for the support coalition to police bargains. However, I share with these authors the view that institutional mechanisms limiting executive power (either through *de jure* rules or through oversight) are distinct from elements of electoral democracy.[8]

In sum, a political system of regularized interaction wherein compliance and loyalty are exchanged for power over how tax revenue is used is beneficial for both the leader and the support coalition. With institutionalized power-sharing the ruler gains from a high-yielding income tax with lower levels of evasion and low risk of rebellion, while the support coalition, in exchange for paying more in tax, has real influence over the budget. This is not possible without effective monitoring of the executive. In practice, monitoring and oversight can be implemented in a range of different ways, but the most important avenue – and the one I will focus on in the empirical section – is the legislature.[9]

3. Data

3.1. Measuring income taxation

I use two measures: the share of revenues from income tax and the permanent adoption of the PIT. The income tax share is frequently used as a proxy for fiscal capacity, and Rogers and Weller hold that 'In terms of state reach and administrative difficulty, the individual income tax may be the most challenging tax a state collects' (2014: 199). While frequently used as an indicator of fiscal capacity, previous research has been constrained by the lack of comparable historical data. In this paper I significantly push the historical and geographical dimension by using two newly available historical datasets over tax revenues and tax introductions.

First, I use a new dataset over government budgets and their composition from 31 states in Western Europe, the Americas, Australia, New Zealand, and Japan (Andersson and Brambor, 2019).[10] From this dataset I take the first dependent variable: *income tax revenue as a share of total central tax revenues*.[11] Until recently, historical revenue data have not been available beyond a few countries in Western Europe.

Second, I use the Tax Introduction Dataset (TID) (Seelkopf *et al.*, 2021) to obtain tax introduction dates. While earlier contributions covered only small samples of Western states, the TID covers 220 countries that existed at some point between 1750 and 2015. I use the variable indicating a *permanent adoption of a personal income tax* (PIT), which is a 'tax levied on the directly assessed income of a personal taxpayer' (Genschel and Seelkopf, 2019: 5).[12] Focusing on permanent adoptions means temporary taxes implemented during wars or other crises are not included. Also excluded are taxes that were only in place a short time before being abolished (for instance if technological challenges associated with tax collection could not be overcome). Focusing as I do on the central level means that tax adoptions and revenue expansion also imply greater centralization, which in itself strengthens fiscal capacity (in line with Brennan and Buchanan 1980).

Both indicators have weaknesses. Tax revenues combine the will and the capacity to tax. Rising revenues can be the result of factors outside of government control, such as increased tax morale. PIT adoption does not suffer from this weakness and focuses on a discrete decision to expand the fiscal toolbox. An additional tax increases capacity regardless of the extent to which it is actually used,

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[8]I thank Kunal Sen and Antonio Savoia for emphasizing this point.

[9]A different way of putting the argument is that legislative oversight is partly about elite co-optation. Co-opting the elite may, but does not have to be, part of the process of democratization (even controlling for suffrage). I am grateful to an anonymous reviewer for pointing this out.

[10]Described in more detail in the codebook available at http://perfandersson.com/data.

[11]While an improvement compared to existing sources, this dataset does not include communist countries such as China and the USSR. However, it is unlikely that standard political economy models apply to economies with little or no private sector. For example, corporate tax rates were often set by a negotiation between the managers and the state after revenues were realized (Kornai, 1992).

[12]Temporary income taxes existed already in the 18th century (the first one being adopted in Massachusetts in 1706) (Aidt and Jensen, 2009b).

what matters is to have the capacity to generate revenues if needed. For instance, a country with a modern income tax in place when a war breaks out is in a better position to extract much needed revenue than a country without such a tax. However, tax adoption as an indicator is not unproblematic. For example, a tax might exist only on paper without the necessary administrative capacity to collect it. In fact, PIT introductions often preceded administrative improvements in tax collection, such as the automatic payroll deduction. It is reasonable to expect this 'paper tiger' bias to decrease over time as states moved to a more efficient tax collection administration. Finally, the purpose of a PIT may change over time, playing a different role in its early years compared to decades later. The existence of a tax also says nothing about the tax base (which is important for its revenue capacity). By using both indicators I am more confident that the results reveal something meaningful about fiscal capacity.

3.2. Measuring institutional oversight

Previous research on the effects of autocratic institutions (e.g. Meng, 2020; Weeks, 2012; Wright, 2008) focuses on the period after the World War II, but when explaining the origins of fiscal capacity, a longer period of study is crucial. For example, it was already in the 19th century that governments started to expand their capacity to collect and analyze information about their citizens through statistical agencies, population registries, and censuses (Brambor *et al.*, 2020). It was also during the 19th century that states started to provide broad, modern, public services such as police, healthcare, and education (Ansell and Lindvall, 2020). Most crucial for this paper, it was during the 19th century that countries began to tax income.[13]

Previous studies of the impact of autocratic institutions relied on rough proxies such as the mere existence of a legislature (Wright, 2008), whether rulers were 'personalistic' or not (Weeks, 2012), or how the legislature was selected (Svolik, 2012). None of these indicators are able to speak directly to the ability to monitor and exercise oversight. For example, the mere existence of a legislature can mean anything from a strong, democratically elected, parliament with extensive influence over policy, to a 'rubber stamp' legislature lacking the power to constrain or to monitor.

In order to measure the degree of legislative oversight *vis-à-vis* the executive, I use the V-Dem legislative constraints on the executive index (Coppedge *et al.*, 2020). This index presents information on the extent to which the legislature (and other government agencies such as ombudsmen) questions officials, investigates in practice, exercises executive oversight, and the degree to which there are legislative opposition parties. The emphasis is on *de facto* behavior, not *de jure* provisions. It takes values from 0 to 1, where higher values indicate a higher degree of oversight. This measure is not strongly correlated with elements of electoral democracy such as suffrage ($r = -0.13$). The V-Dem dataset is the most comprehensive, and detailed, historical dataset over political institutions available. Unprecedented in its temporal and geographic scope, it covers (at most) 201 countries from 1789 to 2011.[14]

I restrict the sample to closed autocracies and electoral autocracies using the Regimes of the World indicator in V-Dem. Electoral autocracies hold *de jure* elections for the legislature and the executive, but lack one or more important democratic factors, such as elections being free and fair, parties not being banned, or broad rights to participate. Closed autocracies hold no multiparty elections for the executive or the legislature. Electoral and liberal democracies are dropped from the sample.[15] Restricting the sample in this way, combined with the limited data on tax revenues (31 countries)

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[13]Another drawback when using a short time period is that different types of non-democratic states are more common in certain periods. Covering the entire period from the nineteenth century to today means that my sample includes both monarchies and military dictatorships, for example.

[14]Compared to indicators focusing on constraints more broadly (such as the xconst indicator from Polity), my indicator follows more closely the argument made in the autocratic politics literature that constitutions in non-democratic states have a different function, in particular that they facilitate monitoring of the executive.

[15]The index only stretches back to 1900, but by using the sub-indicators on which it is based I am able to extend it back in time.

and some of the covariates (e.g. information on ideology are only available from 1870 to 2012) means that the analyses in the following sections are based on 23–25 non-democratic, sovereign states from 1870 to 2012.[16] While some countries are stable democracies or autocracies throughout the period, others move between categories. For instance, Venezuela is coded as democratic from 1953 until 2003, when it reverted back to autocracy. In some cases, the regime remained stable after the introduction of the PIT, in others not. The sample contains countries that introduced the PIT under democracy and later reverted to autocracy – such as Germany and Spain – but also countries that introduced the tax as non-democratic states and later democratized (such as Italy and the United Kingdom).

3.3. Institutional oversight and tax revenues

In this section I analyze the link between institutional oversight and income tax revenue.

Formally, I estimate the following equation:

$$\text{Taxshare}_{i,t} = \alpha + \text{Taxshare}_{it-1} + \beta_1 \text{Oversight}_{it-1} + \beta_2 X_{it-1} + \delta_i + \zeta_t + \varepsilon_{it} \qquad (1)$$

where i and t represent country and year, respectively. A lagged dependent variable is included in models 2 and 4. The term δ_i represents country fixed effects (present in all model except for model 4), and ζ_t represents year fixed effects. X_{it-1} is a vector of controls.

There are several possible confounders that need to be controlled for. First, it is possible that war causes both institutional change (as predicted by Svolik, 2009), and an expansion of taxation (Tilly, 1990). In the models that follow I therefore control for whether a country was involved in a war using data from V-Dem (Coppedge *et al.*, 2020, based on Brecke, 2001). Another important factor is economic development, affecting taxation (Karceski and Kiser, 2020) as well as political institutions (Lipset, 1959). I control for GDP per capita (logged) using data from Bolt *et al.* (2018). This control also partly alleviates the concern that technological development is driving tax adoptions (I thank a reviewer for pointing this out). Third, in order to account for the potential effect of partisanship, I include a binary variable indicating whether the head of government was left-wing or not using data from Brambor *et al.* (2014). Fourth, the elite competition approach suggests that an influential rural elite should affect tax policy in non-democratic states. For instance, the rural elite might support an income tax in order to shift taxation onto the industrial elite, or elite conflict might affect the extent to which a new income tax is used to replace old taxes on international trade. Using information in V-Dem, I construct a variable indicating whether the most important regime support group in a particular year was either the aristocracy or agrarian elites. Fifth, even though institutional oversight and the extent of voting rights are negatively correlated ($r = -0.13$), there might be a concern that institutional oversight is related to democratization. Therefore, I include a control for the share of population with suffrage (also from V-Dem). Finally, government ideology might not sufficiently pick up on the redistributive tendencies of the government. Using the information in Rasmussen (2016), I add a variable indicating the number of social policies (such as old-age, unemployment, and sickness programs) in place.[17]

I include country fixed effects to control for country-level features that do not change over time and year fixed effects to control for common shocks. Models 2, 4, and 5 also include a lagged dependent variable to mitigate serial correlation. An additional advantage of including this variable is that it controls for the recent composition of tax revenues. All independent variables are lagged one year, and standard errors are clustered by country. To alleviate concerns about including both country

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[16]This sample is not small considering that there were only 50 sovereign states (including democracies) in 1900 (Coppedge *et al.*, 2020).

[17]I thank Antonio Savoia and Kunal Sen for this suggestion.

fixed effects and a lagged dependent variable, models 3 and 4 present results dropping the lagged dependent variable and country fixed effects, respectively.[18]

A final concern is stationarity. If the series are non-stationary, there is a risk of spurious regression. However, both the dependent variable – income tax share – and the independent variable of interest – institutional oversight – are bounded, and thus cannot have an infinite variance. Bounded variables cannot be explosive, and an argument can be made that they therefore cannot be non-stationary (Williams, 1992).[19] An alternative approach is to estimate error correction models, which are appropriate both for stationary and non-stationary data (De Boef and Keele, 2008). The results (presented in section A4 of the appendix) remain unchanged.

3.3.1. Results

In line with the predictions, Table 1 reports a consistent positive and statistically measurable association between institutional oversight and the income tax share.[20] The associations are sizeable even when including a lagged dependent variable, fixed effects, as well as a full battery of controls.

Going from Italy under Mussolini – with very little opportunity for the legislature to monitor the executive – to the Netherlands in 1893 (when PIT was introduced), which had a high degree of oversight over the executive (but with a suffrage rate of 14%, far from democratic), implies an increase in the income tax share of around 15 percentage points (using the estimates in model 3). Model 5 – which is the most demanding in terms of controls – suggests a long-run effect (which is the preferred quantity given the inclusion of a lagged dependent variable) of roughly 26.[21] This implies that going from a level of legislative oversight in the Brazilian Fourth Republic (around 0.6) to the military regime that succeeded it (around 0.1) is associated with a long-run decrease in the share of income tax of around 13 percentage points. After the coup in 1964 the share of income taxes did indeed decrease. A similar pattern is visible in Italy after Mussolini took power (and drastically reduced the level of oversight). These results indicate that autocracies with significant institutional oversight rely more on income taxes.[22]

3.4. Institutional oversight and PIT adoption

The typical PIT was introduced in the decades before World War II, but the variation in introduction year is large (see figure 2 in Seelkopf *et al.*, 2021). The median time from entering the sample to adopting the tax is 95 years, and the majority of countries had introduced it after 150 years.

Standard methods for estimating models with binary dependent variables such as probit and logit regressions are problematic since they ignore the temporal dimension of the data. In particular, the assumption that observations are temporally independent is likely to be violated since the probability of adopting PIT probably increases over time, which could inflate *t*-values.

A common way to solve this problem is to run logit/probit models and introduce polynomials of time to correct for temporal dependence (Carter and Signorino, 2010). This is also the method used in earlier research (e.g. Mares and Queralt, 2015). A problem with this approach is that tax adoptions are

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[18]Following the recommendation in Angrist and Pischke (2008). However, as Beck and Katz (2009) show, concerns of Nickell (1981) bias diminishes as T becomes large.

[19]Moreover, it is unclear why institutional oversight and the tax share would vary randomly over time. Institutional oversight, for instance, is likely slow-moving due to changes in this variable being related to constitutional changes, which in turn are rare. Unfortunately, standard unit root tests have low power, and are bad at distinguishing between slow-moving variables and unit roots, especially in small sample sizes (Podivinsky and King, 2000). Moreover, short series make generalizations from unit root tests difficult, especially when variables are bounded (Williams, 1992). The results of unit root tests are available in section A3 of the appendix. Since the data are unbalanced, I use the Phillips–Perron and augmented Dickey–Fuller tests. As expected given the nature of the data (i.e. bounded, slow moving, and short series), the results are inconclusive.

[20]The summary statistics of all relevant variables are available in section A2 of the appendix.

[21]The long-run multiplier is given by $X_{t-1}/(1-Y_{t-1})$ (De Boef and Keele, 2008).

[22]The long-term relationship estimated with the error correction model (section A4 in the appendix) is also statistically significant ($p < 0.01$) (using the Bewley transformation to calculate standard errors, as recommended by De Boef and Keele (2008)).

Table 1. Results: Income tax share

	1	2	3	4	5
Institutional oversight$_{t-1}$	19.6***	2.3**	14.7**	1.2***	2.6**
	(5.6)	(1.0)	(5.6)	(0.4)	(1.1)
Income tax share$_{t-1}$		0.9***		1.0***	0.9***
		(0.02)		(0.01)	(0.02)
Left HoG$_{t-1}$		−1.0**	−0.2	−1.2***	−0.8
		(0.4)	(2.2)	(0.4)	(0.5)
Rural elite$_{t-1}$		−0.8	−4.0*	−0.7	−0.6
		(0.6)	(2.1)	(0.5)	(0.5)
ln(per capita GDP)$_{t-1}$		2.1*	13.0***	0.08	2.3*
		(1.1)	(4.4)	(0.2)	(1.2)
War$_{t-1}$		−0.002	2.7	−0.2	−0.07
		(0.4)	(2.9)	(0.3)	(0.4)
Suffrage$_{t-1}$					0.5
					(1.5)
Social policy legislation$_{t-1}$					0.3
					(0.3)
Country FE	YES	YES	YES	NO	YES
Time FE	YES	YES	YES	YES	YES
Observations	1,090	839	867	839	839
R^2	0.486	0.935	0.275	0.943	0.927
Number of countries	25	25	25	25	25

Note: *$p < 0.10$; **$p < 0.05$; ***$p < 0.01$. Country-clustered robust standard errors in parentheses.
Source: author's compilation.

rare events. It has been shown that logit estimates are biased and inefficient in these situations (King and Zeng, 2001). This problem – and others such as separation (Anderson *et al.*, 2020; Zorn, 2005) – can be addressed by using the penalized maximum-likelihood (PMLE) estimator suggested by Firth (1993). I present results using both approaches.

A country is defined as being at risk of introducing an income tax if it does not currently have one, and if it is independent according to V-Dem (Coppedge *et al.*, 2020, based on Gleditsch and Ward, 1999).[23]

The models in Table 2 include the same controls as previously: economic development, warfare, left-wing head of government, rural elite, suffrage, and social policy laws. While the models in Table 1 included country fixed effects, this is inappropriate for binary dependent variables (Beck and Katz, 2001). In order to account for unobserved characteristics of the Old World, the models below all include Europe fixed effects.

Finally, a concern might be that states with many modern taxes in place are more likely to introduce reforms increasing institutional oversight, and at the same time be less likely to introduce new taxes (since the capacity is already high). Moreover, existing taxes might make the introduction of a PIT more likely (e.g. through already existing administrative capacity in the tax authority), while at the same time create demand for more transparency. Therefore, I have included controls for the

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[23]This is important since many income taxes were introduced under colonial rule.

Table 2. Results: PIT introduction

	1	2	3	4	5
Institutional oversight	2.9**	4.8**	8.9**	4.2**	7.7***
	(1.3)	(2.0)	(3.8)	(1.8)	(2.5)
Left HoG		0.9	1.3	0.8	1.3
		(0.6)	(0.9)	(0.7)	(0.9)
Rural elite		−0.7	−1.9*	−0.6	−1.7**
		(0.6)	(1.0)	(0.6)	(0.7)
ln(per capita GDP)		−0.6	−1.9	−0.5	−1.7*
		(1.0)	(1.8)	(0.7)	(1.0)
War		−1.1	−4.4*	−0.4	−3.9
		(1.1)	(2.3)	(1.5)	(2.8)
Suffrage		−0.6	−0.1	−0.6	0.04
		(2.1)	(2.4)	(1.9)	(1.9)
Social policy legislation		0.3	0.4	0.3	0.4
		(0.2)	(0.3)	(0.2)	(0.2)
INH			−0.2		−0.2
			(0.8)		(0.7)
SSC			1.1		1.0
			(1.4)		(0.8)
CIT			3.1***		2.8***
			(0.9)		(0.8)
GST			1.7*		1.5*
			(1.0)		(0.8)
Constant	−6.3	−1.9	6.0	1.7	8.5
	(4.4)	(7.4)	(13.0)	(5.9)	(6.8)
Observations	926	926	926	926	926
Number of countries	23	23	23	23	23
Duration dependence	Yes	Yes	Yes	Yes	Yes
Europe FE	Yes	Yes	Yes	Yes	Yes

Note: $*p < 0.10$; $**p < 0.05$; $***p < 0.01$. Models 1–3: logit with country-clustered robust standard errors. Models 4–5: logit with PMLE function. Source: author's compilation.

previous introduction of inheritance taxes (INH), corporate income taxes (CIT), social security contributions (SSC), and general sales taxes (GST).[24] However, since including other taxes as controls might introduce post-treatment bias, I also report results without them.

3.4.1. Results
Models 1–3 of Table 2 present results using logistic regression with duration dependence, with model 2 adding controls for ideology, rural elite, economic development, war, suffrage, and social policy

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[24]I do not include value-added tax (VAT) since it was generally introduced much later than PIT. In the sample it is only Uruguay that had VAT in place before PIT.

legislation, and model 3 adding controls for existing taxes. Models 4 and 5 use the PMLE approach, with model 5 including controls for existing taxes.

Across specifications there is a clear positive association between institutional oversight and the likelihood of PIT introduction. The magnitude remains similar regardless of which estimator is used. In section A5 of the appendix I include a range of robustness checks including several controls (population, elite cohesion, legal tradition, democratic history), different samples, and interaction effects (e.g. ethnic fractionalization). The conclusions remain unchanged.

3.5. Summary of results

The results present a robust association between institutional oversight and the introduction and expansion of income taxes. However, one should be careful about drawing causal conclusions from this. Future research using in-depth case studies with more detailed data will be crucial in order to investigate this relationship further. The next section takes a first step in that direction by looking closer at the adoption of the PIT in Sweden.

4. The non-democratic introduction of the income tax in Sweden

When Sweden adopted the PIT in 1902, it was undemocratic but did have extensive institutional oversight.[25] Already in 1809, the office of ombudsman was established for the legislature to exercise oversight over the executive branch. This office, answering exclusively to the parliament, was a key component in upholding shared power between the king and the Diet of the estates. After the constitutional reform of 1866, in which the four-estate Diet was turned into a bicameral parliament, institutional oversight increased even more (the indicator from V-Dem increased from 0.795 to 0.826 on a scale from 0 to 1).

At the time of the tax reform of 1902, the parliament had considerable influence, but it could be dissolved by the king, who could also veto laws unilaterally. Democratic participation was very limited both in terms of who could run for parliament and in terms of who could vote. There were income and property requirements for the franchise, and more than 80% of the adult population lacked voting rights.

An inheritance tax and taxes on land were already in place. Different types of inheritance taxes existed throughout the 19th century, and a modern version of the tax was adopted in 1884 (Seelkopf et al., 2021). These existing sources of revenue were insufficient to cover increasing expenditures, which was an important impetus for tax reform.

The story about the income tax of 1902 starts with a major reform to defense and taxation in 1892. Ancient taxes on farmland were to be removed step by step during a 10-year period, reducing the tax by 10% each year until 1902. At the same time, the old allotment system staffing – and to some degree financing – the armed forces was to be phased out by 1904 (Gårestad, 1987). Thus, new defense financing was needed.[26]

The late 19th century also saw structural economic changes that facilitated income taxation (Rodriguez, 1981). For instance, in 1905 industry surpassed agriculture in economic importance (Dahlgren, 1990). Arguments in favor of the PIT not only stressed the need for more defense spending but also the need for more spending on infrastructure. There was a political consensus that the state needed to become more active in the economy, but to do so it needed stronger finances. The PIT was seen as an attractive tool since it was less volatile and not as dependent on international circumstances as tariffs. Evidence that the income tax could be an effective money raiser came both from the earlier experience of the tax in 1809 and from neighboring states such as Prussia (Ibid.).

However, many were also apprehensive of the tax; in particular, concerns were raised about the privacy of taxpayers. The system of personal tax returns was coupled with wide-ranging bureaucratic

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[25]As in many other countries, Sweden did have temporary income taxes before, the first one in 1712 (Karlsson, 1994), the second one in 1810 (Åkerman, 1967).

[26]However, this was hardly a crisis. The removed taxes generated only around 10% of tax revenue at the turn of the century (Gårestad, 1987).

powers and sanctions for tax fraud. The information on taxpayers which would become available to government bureaucrats made many high-income earners anxious, and efforts were made to alleviate these concerns. For instance, revealing private information was made illegal and tax returns were made confidential (Paradell, 2010).

The fact that some members of parliament were worried about the increased power of authorities, and that there were alternative tax reforms put forth focusing on indirect taxes, suggests that the concerns were real.[27] They were overcome thanks to elements of the reform that increased the benefits to the elite, and reduced the risks. First, the conservatives in parliament favored a stable, and expanded, revenue system in order to be able to invest in infrastructure (from which they would benefit) and in order to modernize the defense (Dahlgren and Stadin, 1990). The price they paid was low since the tax rate was modest and progressivity weak. In addition, since they had many different sources of income, the tax was not a major threat economically (Stenkula, 2015). Second, the tax reform was implemented in a way to ensure that there were constitutional checks protecting the elite from government overreach. The taxes removed from 1892 and onwards were so-called ordinary revenues, controlled by the king. The new income tax was classified as an 'extraordinary' tax, and thus under firmer parliamentary control. In practice, this meant taxes could be changed by the legislature without the king being able to veto them (Dahlgren, 1990). Thus, the reform transferred revenue power from the executive to the legislature. Moreover, the tax did not affect the suffrage (at the time the franchise was linked to tax payments), which protected the elite against potential redistributive demands from lower classes. A final aspect of the 1902 reform that convinced sceptics was that it was supposed to be temporary.

Interestingly, among the main opponents to the new tax we find both landed nobility and business elites (since the old taxes on farmland did not hurt corporations) (Dahlgren and Stadin, 1990). Recent research on the wealth of Swedish parliamentarians might explain why, while also casting doubt on the foundational assumptions of the elite competition approach. Bengtsson and Olsson (2018) present evidence showing that farmer parliamentarians in mid to late 19th-century Sweden were not only wealthy in terms of the amount of land they owned, but that they had diverse sources of income and wealth. Among the richest farmers in their sample (people who would most definitely belong to the 'landed elite'), the largest share of their wealth was not in livestock or land, but in urban real estate and shares in modern-sector businesses such as railway and steamboat companies, and in banks. Moreover, wealthy farmers – as well as landed nobility – established modern factories. Thus, among the elite there were no clear urban–rural or industrial–agricultural divides with respect to assets: the elite were invested in both sectors. This also explains why there was a low level of conflict among the ruling classes in relation to the introduction of the income tax.

The new tax was successful: five years after its introduction, it generated 15% of total tax revenue, and overall revenues increased by almost 40%. The support coalition in Sweden at the time had no qualms about increasing the fiscal capacity of the state since it controlled parliament, through which it was able to effectively monitor the executive branch. They were also able to push through additional legal provisions protecting sensitive information contained in tax returns. It is likely that the behavior of the elite was influenced by the fact that they knew they could use their monitoring power to detect any executive transgressions in the future. This increased their confidence that the tax would not be used against their interests.

5. Conclusion

The rise of the fiscal state cannot be explained by democracy and war alone. Many important tax reforms were made by non-democratic states, a puzzle that has received limited attention thus far. The first point made in this paper is that income taxation is not only about redistribution but also

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[27]There were proposals for tax reform based on an expansion of indirect taxes – which would be preferable for the rich elite – but these were deemed insufficient to finance the new defense bill (Dahlgren, 1990).

about fiscal capacity. The second point is that there are important institutional differences between non-democratic states, differences that matter when explaining tax policy.

The empirical analysis suggests that institutional oversight is positively related to the adoption and expansion of income taxes in non-democratic states. The results indicate that when studying the origins of fiscal capacity, it is important to distinguish not only between democracy and autocracy, but also between different institutional configurations within non-democratic regimes.

The case study illustrated how the support coalition used political institutions to ensure power over the new tax by avoiding the royal veto. This was important since there was serious concern not only about the redistributive potential of the tax, but also about the increased capacity of the state to gather information on its citizens. The Swedish case also provided insights into the interests of elite groups: some members of the old landed elite and the new business class opposed the income tax, and many farmer politicians had a diverse portfolio of wealth and income, blurring the lines between rural and urban elite tax preferences.

The empirical analysis also hints at a different channel through which power-sharing leads to political stability: state capacity. Income taxes strengthen the state, making it easier for the ruler to defeat challengers and to co-opt the opposition.

My findings are also related to more historical literature on the relationship between rulers and elites in medieval Europe, and how this shaped state capacity and institutional constraints in the long run (e.g. Pavlik and Young, 2021; Salter and Young, 2019).

An important area for future research is communist states. Not only is this a distinct autocratic institutional configuration, but standard theories of taxation are likely to be less applicable in these cases. For instance, the political coalitions relevant to income taxes are likely to be different if all (or most) corporations are government owned.

References

Acemoglu, D. and J. A. Robinson (2001), 'A Theory of Political Transitions', *American Economic Review*, **91**(4): 938–963.

Aidt, T. S. and P. S. Jensen (2009a), 'Tax Structure, Size of Government, and the Extension of the Voting Franchise in Western Europe, 1860–1938', *International Tax and Public Finance*, **16**: 362–394.

Aidt, T. S. and P. S. Jensen (2009b), 'The Taxman Tools Up: An Event History Study of the Introduction of the Personal Income Tax', *Journal of Public Economics*, **93(1-2)**: 160–175.

Åkerman, S. (1967), *Skattereformen 1810: Ett experiment med progressiv inkomstskatt*, Uppsala: Department of History, Uppsala University.

Anderson, N., B. E. Bagozzi and O. Koren (2020), 'Addressing Monotone Likelihood in Duration Modelling of Political Events', *British Journal of Political Science*, **51**(4): 1654–1671.

Andersson, P. F. (2018), 'Democracy, Urbanization, and Tax Revenue', *Studies in Comparative International Development*, **53**(1): 111–150.

Andersson, P. F. and T. Brambor (2019), 'Financing the State: Government Tax Revenue from 1800 to 2012'. Dataset.

Angrist, J. D. and J.-S. Pischke (2008), *Mostly Harmless Econometrics: An Empiricist's Companion*, Princeton, NJ: Princeton University Press.

Ansell, B. W. and J. Lindvall (2020), *Inward Conquest: The Political Origins of Modern Public Services*, Cambridge: Cambridge University Press.

Beck, N. and J. N. Katz (2001), 'Throwing Out the Baby with the Bath Water: A Comment on Green, Kim, and Yoon', *International Organization*, **55**(2): 487–495.

Beck, N. and J. N. Katz (2009), 'Modeling Dynamics in Time-Series Cross-Section Political Economy Data'. Social Science Working Paper 1304. Pasadena, CA: California Institute of Technology.

Bengtsson, E. and M. Olsson (2018), 'Peasant Aristocrats? Wealth and Social Status of Swedish Farmer Parliamentarians 1769–1895'. *Lund Papers in Economic History. General Issues*, 175.

Besley, T. and T. Persson (2011), *Pillars of Prosperity*, Princeton, NJ: Princeton University Press.

Boix, C. (2003), *Democracy and Redistribution*, New York: Cambridge University Press.

Boix, C. and M. W. Svolik (2013), 'The Foundations of Limited Authoritarian Government: Institutions, Commitment, and Power-Sharing in Dictatorships', *The Journal of Politics*, **75**(2): 300–316.

Bolt, J., R. Inklaar, H. de Jong and J. L. van Zanden (2018), 'Rebasing "Maddison": New Income Comparisons and the Shape of Long-Run Economic Development'. Maddison Project Working Paper 10. Groningen: University of Groningen.

Brambor, T., J. Lindvall and A. Stjernquist (2014), 'The Ideology of Heads of Government (HOG), 1870–2012'. Dataset.

Brambor, T., A. Goenaga, J. Lindvall and J. Teorell (2020), 'The Lay of the Land: Information Capacity and the Modern State', *Comparative Political Studies*, **53**(2): 175–213.

Brecke, P. (2001), 'The Long-Term Patterns of Violent Conflict in Different Regions of the World'. Paper presented at the Uppsala Conflict Data Conference, Uppsala.

Brennan, G. and J. M. Buchanan (1980), *The Power to Tax: Analytical Foundations of a Fiscal Constitution*, Cambridge: Cambridge University Press.

Carter, D. B. and C. S. Signorino (2010), 'Back to the Future: Modeling Time Dependence in Binary Data', *Political Analysis*, **18**(3): 271–292.

Centeno, M. A. (1997), 'Blood and Debt: War and Taxation in Nineteenth-Century Latin America', *American Journal of Sociology*, **102**(6): 1565–1605.

Coppedge, M., J. Gerring, S. I. Lindberg, S.-E. Skaaning, J. Teorell, D. Altman, M. Bernhard, S. M. Fish, A. Glynn, A. Hicken, C. H. Knutsen, J. Krusell, A. Lührmann, K. L. Marquardt, K. McMann, V. Mechkova, M. Olin, P. Paxton, D. Pemstein, J. Pernes, C. Sanhueza Petrarca, J. von Römer, L. Saxer, B. Seim, R. Sigman, J. Staton, N. Stepanova and S. Wilson (2020), 'V-Dem [Country-Year/Country-Date]'. Dataset v10.

Cox, G. W. (2016), *Marketing Sovereign Promises*, Cambridge: Cambridge University Press.

Dahlgren, S. (1990), 'Skattesystemets Omvandling i Den Organiserade Kapitalismens Samhälle'. In Från feodal ism till kapit-alism – Skatternas roll i det svenska samhällets omvandling 1720–1910. Uppsala: Historiska institutionen.

Dahlgren, S. and K. Stadin (1990), Från feodalism till kapitalism. Skatternas roll i det tidiga svenska samhällets omvandling 1720–1910. Uppsala: Historiska institutionen.

De Boef, S. and L. Keele (2008), 'Taking Time Seriously', *American Journal of Political Science*, **52**(1): 184–200.

Dincecco, M. (2009), 'Fiscal Centralization, Limited Government, and Public Revenues in Europe, 1650–1913', *The Journal of Economic History*, **69**(1): 48–103.

Dincecco, M. and Y. Wang (2022), 'State capacity', forthcoming in J. A. Jenkins and J. Rubin (eds), *The Oxford Handbook of Historical Political Economy*, Oxford: Oxford University Press.

Firth, D. (1993), 'Bias Reduction of Maximum Likelihood Estimates', *Biometrika*, **80**(1): 27–38.

Gårestad, P. (1987), *Industrialisering och beskattning i Sverige 1861–1914*, Uppsala: Almqvist & Wiksell International.

Gehlbach, S. and P. Keefer (2011), 'Investment without Democracy: Ruling-Party Institutionalization and Credible Commitment in Autocracies', *Journal of Comparative Economics*, **39**(2): 123–139.

Geloso, V. J. and A. W. Salter (2020), 'State Capacity and Economic Development: Causal Mechanism or Correlative Filter?', *Journal of Economic Behavior & Organization*, **170**: 372–385.

Genschel, P. and L. Seelkopf (2019), Codebook: Tax Introduction Dataset Version May 2019. Florence: European University Institute.

Genschel, P. and L. Seelkopf (2021), 'Global Pathways to Modern Taxation', in P. Genschel and L. Seeelkopf (eds), *Global Taxation: How Modern Taxes Conquered the World*, Oxford: Oxford University Press, pp. 1–10.

Gleditsch, K. S. and M. D. Ward (1999), 'A Revised List of Independent States Since the Congress of Vienna', *International Interactions*, **25**(4): 393–413.

Grabowski, R. (2008), 'Modes of Long-run Development: Latin America and East Asia', *Journal of Institutional Economics*, **4**(1): 25–50.

Hanson, J. and R. Sigman (2021), 'Leviathan's Latent Dimensions: Measuring State Capacity for Comparative Political Research', *Journal of Politics*, **83**(4): 1495–1510.

Karaman, K. K. and S. Pamuk (2013), 'Different Paths to the Modern State in Europe: The Interaction between Warfare, Economic Structure, and Political Regime', *American Political Science Review*, **107**(3): 603–626.

Karceski, S. M. and E. Kiser (2020), 'Is There a Limit to the Size of the State? The Scope Conditions of Wagner's Law', *Journal of Institutional Economics*, **16**(2): 217–232.

Karlsson, Å. (1994), *Den jämlike undersåten. Karl XII:s förmögenhetsbeskattning 1713*, Uppsala: Uppsala Universitet.

King, G. and L. Zeng (2001), 'Logistic Regression in Rare Events Data', *Political Analysis*, **9**(2): 137–163.

Kornai, J. (1992), *The Socialist System*, Oxford: Clarendon Press.

Lieberman, E. S. (2002), 'Taxation Data as Indicators of State-Society Relations: Possibilities and Pitfalls in Cross-National Research', *Studies in Comparative International Development*, **36**(4): 89–115.

Lipset, S. M. (1959), 'Some Social Requisites of Democracy: Economic Development and Political Legitimacy', *The American Political Science Review*, **53**(1): 69–105.

Magness, P. (2016), 'A Club to Beat Down the Tariff: The Political Economy of Tax Swaps and the Interest Group Origins of the 16th Amendment.' Available at SSRN 2777217.

Mares, I. and D. Queralt (2015), 'The Non-Democratic Origins of Income Taxation', *Comparative Political Studies*, **48**(14): 1974–2009.

Marshall, M. G., T. R. Gurr and K. Jaggers (2017), *Polity IV Project: Dataset Users' Manual*. Vienna: Center for Systemic Peace.

Meltzer, A. H. and S. F. Richard (1981), 'A Rational Theory of the Size of Government', *Journal of Political Economy*, **89**(5): 914–927.

Meng, A. (2020), *Constraining Dictatorship: From Personalized Rule to Institutionalized Regimes*, Cambridge: Cambridge University Press.

Morgan, K. J. and M. Prasad (2009), 'The Origins of Tax Systems: A French-American Comparison', *American Journal of Sociology*, **114**(5): 1350–1394.

Myerson, R. B. (2008), 'The Autocrat's Credibility Problem and Foundations of the Constitutional State', *American Political Science Review*, **102**(1): 125–139.

Nickell, S. (1981), 'Biases in Dynamic Models with Fixed Effects', *Econometrica*, **49**(6): 1417–1426.

North, D. C. and B. R. Weingast (1989), 'Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England', *The Journal of Economic History*, **49**(4): 803–832.

Paradell, D. (2010), '*Ett svenskt skattesystem under förändring: Århundradets skattereform 1902*'. Thesis. Falun and Borlänge: Dalarna University.

Pavlik, J. B. and A. T. Young (2021), 'The Legacy of Representation in Medieval Europe for Incomes and Institutions Today', *Southern Economic Journal*, **88**(1): 414–448.

Penndorf, B. (1930), 'The Relation of Taxation to the History of the Balance Sheet', *The Accounting Review*, **5**(3): 243–251.

Podivinsky, J. M. and M. L. King (2000), 'The Exact Power Envelope of Tests for a Unit Root'. Discussion Paper in Economics and Econometrics 26. Southampton: University of Southampton.

Rasmussen, M. (2016), 'The Social Policy Around The World (SPAW) database 1870–2010'. Database.

Ricciuti, R., A. Savoia and K. Sen (2019), 'How do Political Institutions Affect Fiscal Capacity? Explaining Taxation in Developing Economies', *Journal of Institutional Economics*, **15**(2): 351–380.

Rodriguez, E. (1981), *Den svenska skattehistorien*, Lund: LiberLäromedel.

Rogers, M. Z. and N. Weller (2014), 'Income Taxation and the Validity of State Capacity Indicators', *Journal of Public Policy*, **34**(2): 183–206.

Salter, A. W. and A. T. Young (2019), 'Polycentric Sovereignty: The Medieval Constitution, Governance Quality, and the Wealth of Nations', *Social Science Quarterly*, **100**(4): 1241–1253.

Seelkopf, L., M. Bubek, E. Eihmanis, J. Ganderson, J. Limberg, Y. Mnaili, P. Zuluaga and P. Genschel (2021), 'The Rise of Modern Taxation: A New Comprehensive Dataset of Tax Introductions Worldwide', *The Review of International Organizations*, **16**(1): 239–263.

Seligman, E. R. A. (1911), *The Income Tax: A Study of the History, Theory, and Practice of Income Taxation at Home and Abroad*, New York: Macmillan.

Stasavage, D. (2002), 'Private Investment and Political Institutions', *Economics & Politics*, **14**(1): 41–63.

Stenkula, M. (2015), 'Taxation of Goods and Services in Sweden (1862–2012)', in M. Henrekson and M. Stenkula (eds), *Swedish Taxation: Developments Since 1862*, Basingstoke: Palgrave Macmillan, pp. 179–222.

Svolik, M. W. (2009), 'Power Sharing and Leadership Dynamics in Authoritarian Regimes', *American Journal of Political Science*, **53**(2): 477–494.

Svolik, M. W. (2012), *The Politics of Authoritarian Rule*, Cambridge: Cambridge University Press.

Tilly, C. (1990), *Coercion, Capital and European States: A.D. 990-1992*, Cambridge, MA: Blackwell.

Timmons, J. F. (2010), 'Taxation and Representation in Recent History', *The Journal of Politics*, **72**(1): 191–208.

Weeks, J. L. (2012), 'Strongmen and Straw Men: Authoritarian Regimes and the Initiation of International Conflict', *The American Political Science Review*, **106**(2): 326–347.

Williams, J. T. (1992), 'What Goes Around Comes Around: Unit Root Tests and Cointegration', *Political Analysis*, **4**: 229–235.

Wright, J. (2008), 'Do Authoritarian Institutions Constrain? How Legislatures Affect Economic Growth and Investment', *American Journal of Political Science*, **52**(2): 322–343.

Zorn, C. (2005), 'A Solution to Separation in Binary Response Models', *Political Analysis*, **13**(2): 157–170.