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Democratic Regimes over the Long-run of History

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Abstract

The introduction of the personal income tax has often coincided with phases of democratization in history. A common explanation is that the demands of the newly enfranchised poor contribute to the rise of progressive taxes. Yet, although the world has, on average, become more democratic since the first permanent introduction of the income tax in Great Britain in 1842, inequality is again on the rise. To what extent do democratic societies really adopt more redistributive policies than their autocratic counterparts? In this paper, we shed light on the link between regime type and redistribution based on a new historical and global dataset of first permanent tax legislations. We compare the introduction of two direct progressive taxes, namely the inheritance tax and the personal income tax, with the introduction of two indirect taxes, the general sales and the value added tax. Whereas regime type has no influence on tax introduction in general, democracies are more likely to adopt progressive taxation.

Keywords

Tax Legislation – Progressive Taxation – Inequality – Redistribution – Democracy – Autocracy

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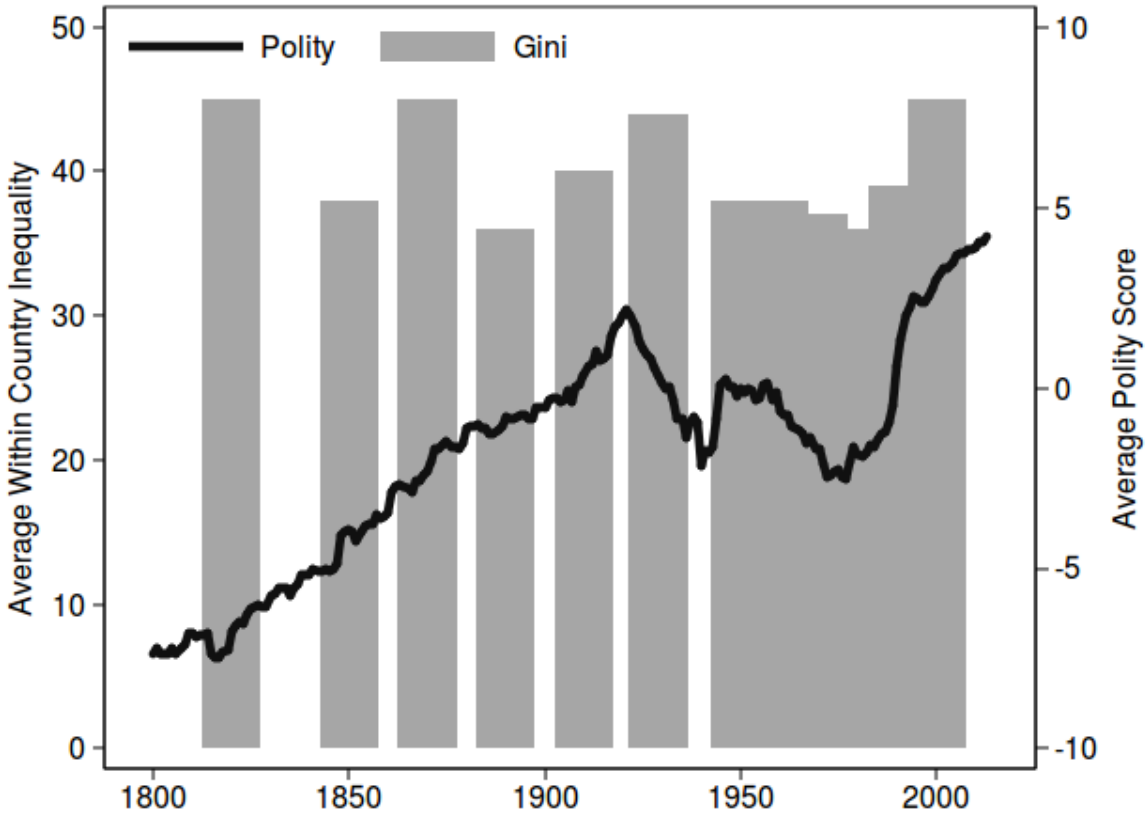
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1. Introduction: Regime Type, Size of Government, and Redistribution

Taxation is one of the core functions of the nation state. Next to being the biggest source of government revenue, taxes are also powerful policy instruments for income redistribution - particularly progressive taxes such as the personal income and the inheritance tax. But under what conditions do governments implement new and redistributive forms of taxation? A common proposition is that institutions matter and that more democratic societies are more likely to raise more taxes overall, as well as more redistributive taxes, because democratic leaders are more responsive to the preferences of the poor than authoritarian regimes (Acemoglu and Robinson 2006; Boix 2003; Meltzer and Richard 1981). However, Figure 1 illustrates a development that scholars are currently puzzling over: the rise of income inequality (e.g. Bartels 2005; Piketty 2014). While nation states have become more democratic over the last two centuries, they have not become more equal. This raises the question of whether democratic regimes are really more likely to raise more revenue and to adopt redistributive policies than their autocratic counterparts.

While the positive link between democracy, government revenue and redistribution seems intuitive, there is in fact no analytical consensus about this. First, there is no agreement on the effect of regime type on tax revenue in general. While some scholars suggest a positive influence of democracy on tax revenue (e.g. Boix 2001), others have claimed that autocracies are more capable of revenue extraction (e.g. Olson 1993). Second, scholars disagree whether more democratic governments are more likely to adopt redistributive policies, such as the personal income and the inheritance tax. While democracies tend to be more responsive to the policy preferences of the (poor) median voter, authoritarian regimes have the incentive to redistribute as an attempt to secure their power without having to democratize (Mares and Queralt 2015).

Figure 1: Co-development of democracy and inequality in the world since 1820



Sources: UNU-WIDER 2015; Marshall, Jaggers, and Gurr 2011.

In this paper, we shed light on the link between regime type and taxation based on a new global and historical sample of first permanent tax introductions. Particularly, we contribute to two main research questions. First, are democracies or autocracies more likely to adopt a new tax? And second, are democracies or autocracies more likely to adopt redistributive policies, particularly progressive taxes? While the former builds on the research that has assessed the influence of regime type on the size of government revenue, the second deals with the influence on redistribution. Studies that have investigated the link between regime type and taxation usually base their results on historical evidence from now advanced democracies (e.g. Aidt and Jensen 2009; Mares and Queralt 2015; Scheve and Stasavage 2012a) or on tax revenue as percentage of GDP (e.g. Acemoglu et al. 2015; Boix 2001; Garcia and von Haldenwang 2015). While especially the latter is a good indicator of government size and also of redistributive potential, data availability tends to be restricted to a short time frame or to Western countries. Hence, we coded up to 92 countries worldwide to explore how the spread of tax legislation has varied between autocratic and democratic countries since the early 19th century. Although tax legislation does not reveal information about how high the tax is in terms of rates or revenues, it is an important signal. It indicates that policymakers are willing to raise revenue through new means and to impose a new financial burden on certain societal groups. Specifically, we compare the adoption of two direct progressive taxes, the personal income and the inheritance tax, and two indirect regressive ones, the general sales and the value added tax, across regime types. As these taxes differ in terms of their redistributive nature, we can test whether regime type matters for the adoption of new forms of taxes overall and progressive ones in particular.

The dataset illustrates that most countries nowadays have adopted at least three of the four taxes under review, yet there are critical differences in the timing of adoption (also see Figure 2). For instance, Britain was a forerunner, introducing the personal income tax in 1842; many western states soon followed suit. Nowadays most countries have adopted the personal income tax with few exceptions. Similarly, most states have adopted a consumption tax, such as VAT. Yet, again, the timing of adoption has differed widely between countries, with France being the early legislator in 1948, whereas a number of other European countries such as Switzerland and Iceland did not adopt the tax until the 1990s (for an overview see Seelkopf et al. 2016). How can we explain such differences in tax legislation? Can variation in domestic decision-making institutions account for it?

The paper is structured as follows: we first review the literature on regime type and taxation. We discuss studies that look at differences between regimes in terms of the overall amount of tax revenue collected and those that have investigated differences as regards the tax structure, particularly between direct and indirect forms of taxation. Following a description of our data and methodology, we provide a historical-descriptive outline of our data in section four, before we systematically analyse whether differences in regime type drive the proliferation of the four taxes around the world. Our evidence suggests that, while democratic institutions have a positive effect on the adoption of progressive (direct) taxes, regime type does not matter for the adoption of taxes per se. Both kinds of institution – the democratic and the autocratic – have different kinds of incentives and abilities to introduce new taxes.

2. Literature Review: Regime Type and Taxation

Can differences in national decision-making institutions explain the likelihood of governments to adopt a new tax? Are democracies or autocracies more likely to introduce progressive taxes? Before we turn to these questions, we need to understand why political institutions should matter at all. Autocracies and democracies differ in the size of popular support needed to govern (Mesquita et al. 2004, see also Genschel et al. 2016). A democracy is characterized by constitutional constraints on the power of the state and by popular control over it. By contrast, in an autocracy one or a few persons have theoretically unrestricted control over policy decisions and they do not rely on majoritarian support but only on the consent of a small elite group. Certainly, reality is more nuanced, depending on the extent of political competition allowed and the restrictions placed on universal suffrage and interest group formation. While we allow for a wider range of cases in our empirical analysis, we focus on the dichotomy to better illustrate the arguments in the literature.

In the following we review the literature on the effect of regime type on taxation and redistribution. Theoretical arguments exist along both directions, namely why democracies are more *or* less likely to maximize revenue extraction and redistribution in comparison to autocratic regimes. We start by, first, discussing the influence of regime type on the amount of taxes raised (the size of government) and, second, we consider the effect on redistributive policies. Although we discuss these two separately, it is worthwhile pointing out that the two are interlinked as greater revenue allows for higher (potentially redistributive) spending.

2.1. Autocracies, Democracies, and the Size of Government

There is no agreement on the effect of democracy on the amount of tax revenue collected (for an overview, see: Cheibub 1998). Despite the above mentioned institutional differences between regime types, their effect on the size of government is disputed. There are diverging arguments about the *incentives* and the *capacities* of democratic and autocratic rulers to extract revenue. In terms of incentives, Olson (1993) is a popular proponent of the hypotheses that an autocratic ruler is more inclined to maximize tax revenue than a democratic one. The dictatorial ruler will not tax all income and will provide some public goods so that people have higher incentives to produce and hence, more for the ruler to tax. Yet, because of monopolistic power the autocrat will extract more than is necessary and keep the extra amount as private wealth (McGuire and Olson 1996). By contrast, a democratic government will not take the residuum for private possession, but will allocate it to the citizens who can maximize their market earnings as the ruler needs to gain the majoritarian support. Hence, an autocrat is likely to raise more revenue in comparison to the democratic counterpart.

Those in favor of the opposite story, namely, that democracies have the incentive to extract more tax revenue than autocracies, argue that democratic governments need to succumb to popular demands for consumption and public goods. Accordingly, democratic leaders face demands by interest groups such as workers and organized unions for social transfers and public goods, which increases the size of the public sector. In contrast, in autocracies the ruler is not pressured by the demand for redistributive programs and public goods and hence the size of the public sector remains smaller (de Schweinitz 1959; Huntington 1968; for more details see also: Cheibub 1998; Przeworski 1991). Along similar lines, Boix (2001) claims that following a process of economic modernization, the size of the public sector only grows in democratic systems. Modernization brings about structural changes and new social risks, which gives rise to newly emerging demands. While democratic regimes are forced to respond to such demands by boosting the size of the public sector, authoritarian systems can suppress such calls. In sum, in authoritarian systems, where a substantial part of the electorate is excluded from the decision-making process, the size of the public sector should remain small (Boix 2003).

The arguments discussed so far refer to how political regimes affect governments' *incentives* to tax. In addition, there are arguments about the influence of political regimes on governments' *ability* to collect taxes, regardless of the level of revenue they attempt to raise (see e.g. Genschel, Lieser, and Seelkopf 2016). In terms of ability, the effect of regime type depends on whether scholars highlight the role of force or the necessity of voluntary compliance. Those who emphasize the role of force (Haggard 1990) argue that dictatorships are more capable of enforcing (unpopular) laws than democracies. Because of the monopoly of power they can disregard demands from voters and interest groups on the design and implementation of policies. They are able to repress demands for tax exemptions and favors, they can pass laws that would encounter widespread opposition in a democratic regime and they can use coercion to enforce compliance to these laws (Fauvelle-Aymar 1999). On the other hand, those who emphasize the necessity of societal support and voluntary compliance to laws, regard democracies as being more able to extract revenue (Levi 1989). In democracies the relationship between governments and citizens is characterized by higher levels of trust, as in exchange for tax payments, the government provides public goods that are positively valued by society. The government will act according to societal preferences or the leader will be voted out of office. Hence, democracies can raise more revenue as the population is more willing to comply with existing tax laws, where revenue is raised and spend according to the majoritarian interest.

In sum, the literature does not provide a clear cut answer about the effect of regime type on tax revenue. Similarly, empirical studies provide mixed evidence: While Boix (2003) and Acemoglu et al. (2015) find a positive effect of democracy (following modernization), Mulligan, Gil, and Sala-i-Martin (2004) show that autocracies collect more revenue. Other authors attest a U-shaped relationship (Aidt and Jensen 2009; Garcia and von Haldenwang 2015; Plümper and Martin 2003) or no relationship at all between regime type and tax revenue (Cheibub 1998; Profeta, Puglisi, and Scabrosetti 2013). Current theoretical reasoning and empirical insights into the link between political institutions and their incentives and abilities to collect tax revenue has not yielded a clear-cut answer.

2.2. Autocracies, Democracies, and Redistributive Taxation

What is the state of the art with regards to the link between regime type and redistribution? Although the discussion is less controversial than the debate about democracy and revenue generation, there are, again, arguments on both sides, while the empirical evidence is also mixed. According to a number of authors, democracies redistribute more than autocratic regimes (Acemoglu and Robinson 2006; Boix and Posner 1998; Boix 2003). The main idea is that, in democracies, low-income groups participate in policymaking processes, and hence, it is more likely that governments opt for redistributive policies, which mainly benefit the poor. Similarly, Mesquita et al. (2004) argue that all leaders, whether democratic or not, secure support through a mix of private and public goods. Under restricted franchise, political leaders maintain support by providing predominantly private goods to the elites. As the franchise broadens, the leaders shift toward greater provision of public goods and redistribution increases. The classical predictions of the median voter model apply: progressive forms of taxation are expected to increase under a democratic regime to satisfy the needs of the (poorer than average) median voter (Meltzer and Richard 1981). By contrast under autocratic regimes the amount of redistribution is smaller, since a substantial part of the electorate is excluded from the decision-making process. Policy decisions are not made by the median voter but by elites who do not favor redistributive policies (Boix and Posner 1998: 26).

Only a few authors have claimed that the opposite is the case: namely, autocratic governments provide more redistribution. One such argument is based on the regime concept by Wintrobe (1998), according to which the extensive provision of public goods and redistributive policies is a means to gain the loyalty of the population without having to democratize. Regarding redistributive taxation, Mares and Queralt argue that non-democratic countries with restrictive suffrage pioneered the adoption of personal income taxes (Mares and Queralt 2015; Mares and Queralt 2016). Their main argument is that the introduction of the income tax served as an additional wedge separating lower income voters from parliamentary representation; electoral laws often conditioned voting rights on direct tax payments. Hence, they claim that elites used redistributive taxation as a means to reinforce inequality in political participation.

With regards to the empirical evidence on the influence of regime type on redistribution, we find controversial results. Mulligan, Gil, and Sala-i-Martin (2004) show that democracies adopt fewer redistributive policies, such as flatter personal income taxes. Similarly, Mares and Queralt (2015) show that there is an autocratic advantage in introducing the personal income tax in Europe. Undemocratic governments coupled with uneven wealth distribution were early adopters of progressive income taxes. Moreover, Aidt and Jensen (2009) find that the extension of franchise at first reduced the likelihood of income tax adoption across European countries, but moving more and more towards universal suffrage, the likelihood increased. Scheve and Stasavage (2012) on the other hand find no evidence that the extension of suffrage to lower classes significantly influences the taxation of inherited wealth in contemporary advanced capitalist democracies. In sum, the effect of national institutions on the size of government and on redistributive taxation is inconclusive. Not only can we find competing theoretical arguments but the empirical findings are also mixed.

Based on new data, we further examine the relationship between regime type and taxation as outlined above. We aim to test two sets of competing hypotheses, one on the effect of regime type on the '*likelihood of tax legislation*' and one on the '*type of tax legislation*'. As discussed above, democracies have some incentives to extract more resources from society and they rely on citizens' loyalty, which might enable them to collect more taxes than their autocratic counterparts. *Accordingly,*

the more democratic a regime, the more likely it is to adopt a new tax as an additional source of revenue (H1). Yet, autocracies have the incentive to extract more revenue to maximize their private wealth and they have the monopoly of power to enforce (unpopular) tax laws. Hence, the competing hypothesis is that more autocratic regimes are more likely to adopt a new tax than democratic regimes (H2).

The second set of hypotheses deals with the effect of regime type on the kind of tax legislation. After all, it is possible that democratically elected governments and dictators do not generally differ in introducing tax laws but in the kind of tax they choose. Following some authors (Acemoglu et al. 2015; Boix 2003), *democracies are more likely to introduce redistributive policies than more autocratic governments (H3)*, while others suggest that autocratic leaders provide redistribution to maintain popular support without having to democratize (Wintrobe 1998). Hence, *hypothesis 4 suggests that autocratic leaders are more likely to adopt progressive tax policies than democracies (H4)*. In the following section, we explain how we aim to contribute to the state of the art by expanding the temporal and geographical focus and comparing the introduction of two progressive and two regressive tax types. In the following section, we describe the data and the methodology used to test these hypotheses before we discuss our findings in section 4 and 5.

3. Data and Methodology

We systematically analyze the introduction of four major tax types – two direct, two indirect – in up to 91 countries worldwide¹ over two centuries. Before we turn to the results of our models, we first discuss our dependent and independent variables of interest, as well as the control variables.

Our dependent variable is measured by a binary choice variable that is coded 0 when a country has not yet introduced a specific tax and 1 in the year when a country introduced the specific tax, i.e. the personal income, inheritance, general sales, and value added tax. The countries are considered until the event happens. Once a tax is introduced, the country is excluded from the analysis of the respective program. For each program the analysis starts a few years before the first legislation of a tax (e.g. in 1940 for VAT, but it was first introduced in France in 1948). We collected the data relying on a wide number of sources such as historical texts, databases, journal articles, and dissertations. The codebook, as well as the data with detailed source information, is available upon request. We use the year a tax was permanently introduced in a country, thus ignoring previous periods of short-term tax adoption following previous research (Aidt and Jensen 2009).

Independent Variables

We use the polity2 measure (Marshall, Jaggers, and Gurr 2011) to account for the political regime type. The variable ranges from -10 (fully autocratic) to +10 (fully democratic). Different to the earlier polity variable, polity2 treats cases of foreign interruption (-66) as missings, interregnum periods as neutral (0) and interpolates transition periods. In addition to the continuous polity2 measure, we also run a model with dummy variables to account for a possible non-linear relationship. We constructed three variables for full autocracies (-10 to -6), hybrid regimes or anocracies (-5 to 5) and full democracies (6 to 10). Furthermore, we calculated a polity-ratio, namely the degree of democracy in a country compared to the world average in any given year². Rerunning our model with this variable allows us to account for the worldwide trend of democratization. We thus have a relative measure of democracy depending on the state of the world.

Controls

In addition to the regime type and the time trends, we also include several control variables, which are thought to influence tax adoption.

¹ The number of observations drops compared to Table 1 for two reasons. First, many of the earlier taxes were introduced under colonial rule. Given that we look only at independent states, these drop out of the dataset, as they already have the respective tax in place upon interdependence. Second, there are missing observations in the independent variables.

² To calculate meaningful averages, we added 10 to the original measure.

First, to measure the *economic development* of a country, we include the logged GDP per capita with a one-year lag (Gapminder 2013). Modernization fuels the demand for public goods and interventions. To finance these public good and services, governments introduce new taxes for revenue mobilization (Boix 2003). In addition, more economically advanced countries have a more capable bureaucracy, which is able to implement new taxes (Baunsgaard and Keen 2010).

Second, we look at the *number of wars* a country experienced before the introduction date of a particular tax, since the costs of warfare often drive the adoption of new taxes. War is a well-known driver of tax innovation and redistribution, at least in European history (Kiser and Linton 2001; Scheve and Stasavage 2012b; Tilly 1992).

Third, we include the *number of social security programs* a country has implemented (Schmitt et al. 2015). While wars were the major spending requirement until the Second World War, since then the welfare state has taken over. The variable is lagged by one year.

Fourth, we control for the effect of *regional diffusion* processes. Earlier scholarship (Aidt and Jensen 2009; Berry and Berry 1992; Keen and Lockwood 2010) has illustrated the importance of spatial dependence in fiscal policy innovation. Hence, we include the number of countries that have introduced a tax in a particular region so far. While our diffusion variable does not fully capture the feedback effects, it allows us to take a large part of the spatial effect into account.

We estimate probit equations using a maximum likelihood procedure. Given that the probability of introducing a specific tax is not equal at any point in time but increases over time, ordinary probit would be misleading and the standard errors underestimated. We follow the procedure suggested by (Beck, Katz, and Tucker 1998) in order to deal with this time dependence. The authors show that binary time series cross section data is identical to grouped duration data. They suggest estimating the models, including cubic splines, as natural cubic splines capture the time dependence. The estimated coefficients of the cubic splines can be used to trace out the path of duration dependence. In comparison to time dummies, cubic splines have the advantage of providing a more parsimonious strategy. We included t , t^2 , and t^3 as a cubic polynomial approximation in the estimations (Carter and Signorino 2010).

Based on our new global data over two centuries, we aim to contribute to the question of whether institutional differences can explain the timing of tax legislation. Are democratic governments more likely to adopt new taxes per se or are they more likely to adopt progressive taxes than their autocratic counterparts? In the following section, we first provide some descriptive evidence before we discuss our findings in section 5.

4. Tax Legislation in Democratic and Autocratic Regimes

Despite the large body of conceptual studies and a growing body of empirical analyses, we still do not have convincing evidence on the influence of regime type on the size of government and on redistributive taxation. For the most part, existing studies base their empirical analysis on tax revenue as percentage of GDP (Acemoglu et al. 2015; Boix 2001; Garcia and von Haldenwang 2015), or on the introduction of personal income taxes in 19th century Europe (Aidt and Jensen 2009; Mares and Queralt 2015). While this can be a good indicator for government size and even for redistribution, data availability tends to be restricted to either a short time frame, to one tax type or to a few, mostly Western countries. In this paper we draw on a new self-compiled dataset, which captures the introduction of four taxes in a worldwide sample of up to 92 countries from the early 19th century on. Certainly, the introduction of a tax does not reveal the significance of the tax in terms of revenue per se³. Yet, legislation sets an important signal about the willingness of a government to collect revenue

³ Although most countries have adopted these taxes, there are certainly broad differences with respect to the financial amount contributed to overall tax revenue across the world (see e.g. Genschel and Seelkopf 2016). Yet, tax adoption is a first necessary step to tax revenue generation – one which also, in early adopters, started at rather low levels. For instance, in Britain the personal income tax contributed to about ten percent of total tax in the first decade following its introduction, while nowadays it contributes around 40 percent (OECD 2016; Seebohm 1983). In other words, often the tax amount raised significantly increases after its legal introduction. As such, the adoption of a tax sets a first signal that the government will use the tax as a new financial instrument.

through such means and is therefore a milestone in the development towards a new source of public finance. Moreover, the dataset covers a long time span and is global in nature and therefore does not discriminate between certain time periods or types of countries. In the following, we first introduce our data and then present the hypotheses we deduce from the literature on the role of regime type on the likelihood to introduce a new tax and to adopt progressive tax policies in the world.

We draw on two sets of taxes: first, the personal income and the inheritance⁴ tax, which are progressive taxes. The former is a tax levied on the regular flow of income or profits of individuals, and the latter is raised based on the transfer of the accumulated stock of income of a deceased person. While they differ in their nature, they both tend to be progressive, that is they imply a heavier financial burden on the rich than on the poor⁵. Accordingly, the tax rate of the personal income and the inheritance tax usually increase as the amount of income and bequest increases. Progressive taxes are imposed in an attempt to reduce the financial burden of people with a lower ability-to-pay and shift the incidence to those with higher incomes, thereby reducing income inequality. Second, we use two sets of consumption taxes, both the introduction of the general sales tax and the subsequent innovation, VAT. While they differ in terms of the stages at which services and products are taxed, they are both indirect taxes, which tend to be regressive in nature. In other words, the tax burden decreases as the ability-to-pay increases. Although rich and poor people pay the same consumption tax rates, the poor tend to have a higher marginal propensity to consume and hence, pay a larger share of their income in such indirect taxes.

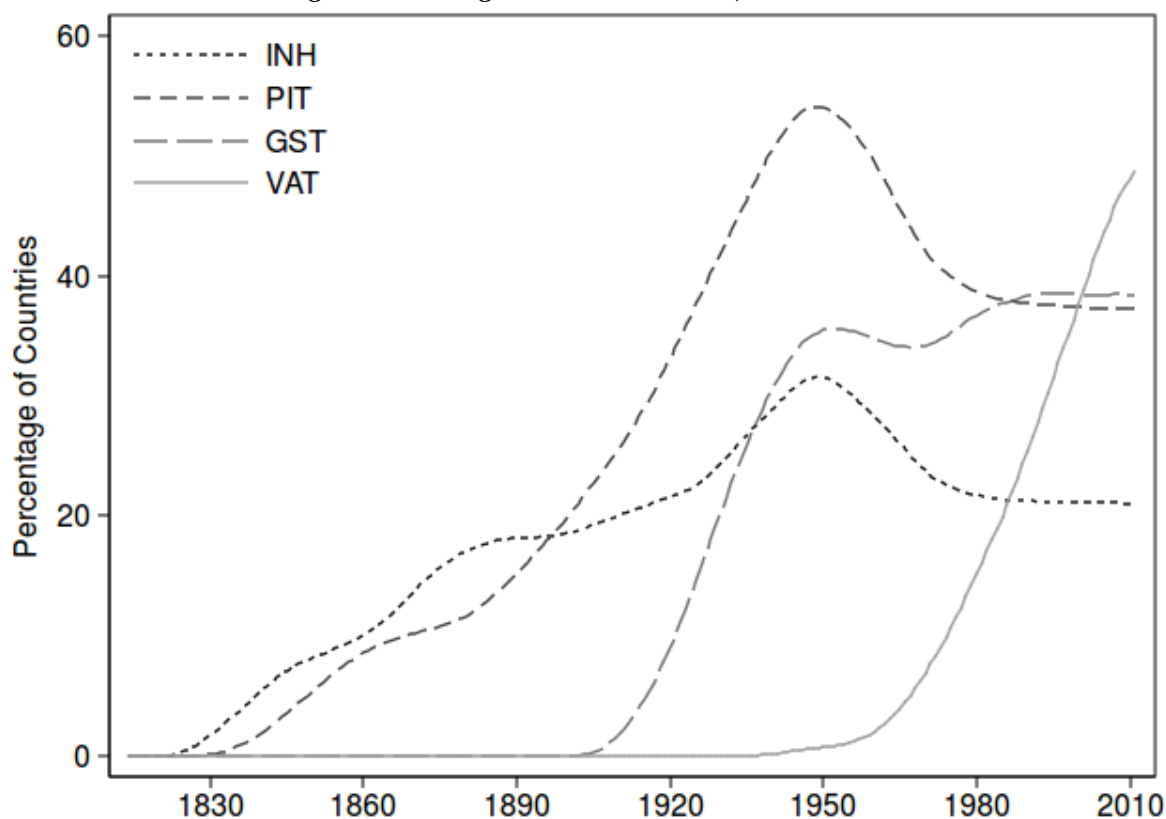
Figure 2 illustrates the rise of the two direct taxes, the personal income tax (PIT) and the inheritance tax (INH), as well as the two consumption taxes, the general sales tax (GST) and the value added tax (VAT) around the world. It shows that at least three of the four taxes have turned into common revenue instruments around the world⁶. The two direct taxes originated in the 19th century and spread during the course of the following century. Although the inheritance tax is the older tax, it has never become a tax instrument as common as the personal income tax. Both indirect taxes originated during the course of the 20th century, with general sales taxes first introduced before the Second World War and value added taxes afterwards. All four taxes spread around the world as more countries were in the need of new revenue instruments. If we look at the world today (see table A1 in the appendix), almost all countries have adopted personal income taxes as well as general sales and value added taxes. Yet, the timing of adoption differed widely around the world. What determines the adoption of a tax as a new source of revenue? And are democracies or autocracies more likely to introduce redistributive forms of taxation?

⁴ This category involves inheritance as well as estate taxes. While estate taxes are calculated based on the net value of wealth owned by a deceased person, the inheritance tax is calculated based on who receives a deceased person's wealth. Yet, as they are both levied on the transfer of wealth after a person dies, they are grouped together in our coding scheme.

⁵ Income taxes are a crucial redistributive instrument despite the argument that a proportional tax suffices, if governments adopt progressive social policies. However, spending programs tend to redistribute from the middle class to the poor. To reach the richest 5-10 percent of a society one needs high top income and wealth taxes.

⁶ Please note that the dip in the 1960s stems from the fact that many countries became independent, for which we do not have any information (e.g. the number of countries at risk of tax introduction increased). Especially for the older taxes and developing countries the data is very hard to collect and hence often missing. Hence, the relatively low number of introducers of PIT, INH and GST compared to VAT stems from the fact that these are older taxes and data is much harder to collect, not that they are more unlikely to be introduced. If we look at the number of countries that had these taxes in 2013 (see Table A1 in the appendix), the numbers are much more equal. Only inheritance taxes are less common; this does not necessarily reflect non-introduction, but rather a relatively large number of repeals in the second half of the 20th century, also in advanced democracies.

Figure 2: Tax legislation in the world, 1820-2013



Source: Own research

Table 1 provides a first descriptive look at the relationship between regime type and tax legislation. However, it does not reveal a clear-cut picture and certainly not one as speculated in the literature review. According to Table 1, autocracies seem to have been most likely to introduce the two direct taxes as well as the general sales taxes, with only one third of the countries being democratic at the time of legislation. The picture for VAT is more mixed: while democratic France invented VAT and many fellow democracies soon followed suit, it has also been adopted by many autocratic regimes. This finding may, however, be driven by the fact that the two direct taxes as well as the GST were generally introduced during earlier periods than the spread of VAT.

Table 1: Regime at Time of Tax Introduction

Regime Type	Direct Taxes				Indirect Taxes			
	IHT		PIT		GST		VAT	
	#	%	#	%	#	%	#	%
Democratic	8	16	15	16	19	28	38	47
Autocratic	24	59	50	54	44	65	38	47
Missing	17	35	27	29	4	6	5	6
Number of Countries	49	100	92	100	67	100	81	100

Source: own research & Marshall, Jagers, and Gurr 2011

In other words, the results of Table 1 may be driven by the fact that a lot more countries were autocratic during the main spread of the IHT, PIT and GST in contrast to VAT. Thus, to get a more reliable understanding of the effect of regime type on tax legislation, we need more than simple bivariate analysis to account for period effects and other factors, which might influence tax introduction. Based on our new global data over two centuries, the following section discusses our findings from the statistical analysis.

5. Discussion of Results

What is the influence of regime type on tax legislation? We have estimated four different models to better gauge the effect of political institutions on taxation (see Table 2 and appendix). First, we include only the regime type with the time and spatial variables to maximize the number of observations. Second, we include all the afore mentioned control variables to our models. We then add two additional ways to measure regime type.

Table 2: Probit Models for the Effects of Regime Type on Tax Introduction

	Direct Taxes				Indirect Taxes			
	INH		PIT		GST		VAT	
Regime Type	0.05***	0.04**	0.04***	0.03*	-0.02	-0.01	0.00	-0.01
	(0.02)	(0.02)	(0.01)	(0.02)	(0.01)	(0.01)	(0.04)	(0.04)
Logged GDPpc		-0.01		0.01		-0.25***		-0.24
		(0.25)		(0.17)		(0.09)		(0.54)
Number of Wars		-0.09		-0.03		0.03		0.04
		(0.07)		(0.04)		(0.03)		(0.15)
Social Security		0.10		0.09		-0.01		1.72***
Programmes		(0.14)		(0.11)		(0.06)		(0.58)
Regional Adoption	0.03	0.02	0.00	-0.01	0.02	0.02	0.17*	0.17**
	(0.05)	(0.06)	(0.02)	(0.03)	(0.02)	(0.02)	(0.09)	(0.08)
Observations	1,296	885	3,186	2,030	3,440	2,774	3,652	3,300
Number of Countries	33	28	63	48	88	77	90	84

*Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$
Constant, Regional Dummies and Splines not reported.*

In model 3, we use our relative measure of regime type, namely the ratio of the polity2 variable compared to the yearly world average to account for the fact that the world overall has become more

democratic over the last two hundred years (table A2 in the appendix). Finally, we include dummy variables for democratic and autocratic regimes to allow for a non-linear effect in comparison to anocracies (see Table A3 in the appendix).

The estimations coherently show that the effect of regime type is not universal across taxes, but that it varies between direct and indirect taxes. As the significant positive effect of the regime variable indicates, more democratic states are more likely to introduce direct taxes (inheritance and personal income taxes). This relationship does not, however, hold when it comes to (regressive) indirect taxation. Here, regime type does not seem to matter. The same findings apply, once we control for the other major factors that can influence the introduction of a new tax. While we lose some observations in model 2, the (non-)effect for regime type stays robust across all tax types. Democracies are more likely to introduce the two direct taxes than autocracies, but the regime type does not affect indirect tax introductions. We also test two other specifications of regime type. After all, the regime effect might be more period specific (Table A2) or less straight forward (Table A3) than we expect.

As the robustness checks show, the effects remain persistent. Countries that are relatively more democratic than the world standard are more likely to introduce direct taxes, whereas the relative regime type plays no role for indirect tax adoption (Table A2). The robustness checks, however, suggest that the regime ratio might be the more appropriate measure for a comparison across long time periods: while we find no u-shaped effect of the regime type on tax introductions as some authors find for tax revenue (Garcia and von Haldenwang 2015), we see that countries in the middle of the regime spectrum are mainly driving the regime effect. This is due to the relative early introduction of direct taxation in many countries in the first half of the 19th century, such as the inheritance tax in Greece or Chile or the personal income tax in Great Britain. These countries were not full democracies at the time, but much more democratic than their contemporary counterparts. Throughout history the more democratic governments in the world were the early adopters of progressive direct taxation.

When it comes to the control variables, we do not find the same effects for all taxes. Interestingly, the level of economic development plays a role only for the general sales tax, and here in the opposite direction one would assume. Richer countries seem less likely to introduce the GST. This is probably driven by the prominence of VAT after the Second World War, starting in the richer countries of Western Europe. Yet, for most modern taxes, the level of economic development does not play a role. The adoption of VAT is, rather, driven by welfare state requirements and a strong process of diffusion.

In sum, we do not find an effect of regime type on the likelihood of introducing a new tax overall. While this does not mean that institutions do not matter, it suggests that both regime types have abilities and incentives to raise tax revenue – although the means differ. While we cannot find an overall effect of regime type on tax legislation, our results indicate that more democratic states are more likely to introduce progressive, direct taxes. This is in line with those theories that argue that regimes in which the (poorer) median voter is more involved in policy decisions redistribute more (e.g. Mesquita, Acemoglu and Robinson 2006).

6. Concluding remarks: regime, revenue and redistribution

The role of democratic and autocratic regimes on the size of government and redistribution is a widely discussed and controversial field of research (e.g. Boix 2003; Mesquita et al. 2004; Olson 1993). There are a number of different theories and causal mechanisms, which suggests that either democracies or autocracies collect more public revenue. Because of their different institutional constraints and (non-) reliance on popular support, each regime type has different incentives and abilities to collect revenue. Although to a lesser extent, the literature also provides opposing arguments about the effect of regime types on redistribution. So, are democratic governments more or less likely to adopt new taxes and to introduce redistributive policies than their autocratic counterparts?

Based on a new dataset, we have contributed to the research on the institutional drivers of revenue collection and redistribution. While existing studies generally base their evidence on a small sample of European states in the 19th century, or on contemporary tax revenues as percentage of GDP, we draw on a new historical and global dataset, which captures the adoption of four taxes. The data

covers a long time span, 1820-2014, is global in nature and, hence, does not discriminate between certain time periods or types of countries. Thus, the data allows us to broaden the study of regime type and taxation. Moreover, we draw on two sets of taxes: first, the personal income and the inheritance tax, which are progressive taxes, and second, we use two sets of consumption taxes, which tend to be regressive in nature, that is, the tax burden decreases as the ability-to-pay increases.

The data allowed testing competing hypotheses about the effect of regime type on the likelihood of tax legislation per se and on the type of taxes. Our findings show that regime type does not necessarily influence the likelihood of adopting taxes as such. Yet, it confirms that democracies are more likely to adopt direct redistributive forms of taxes than autocratic rulers. What implications do our findings have for the existing literature on regime type, revenue collection and redistribution?

First, the large body of conflicting theories on the effect of regime type on revenue collection suggests that there are a number of reasons why both democracies and autocracies may raise more revenue. Rather than viewing them as opposing arguments, the mixed evidence suggests that one should consider them more as complementary. Both regime types have certain different abilities and incentives to raise revenue. This explains why we do not find a significant effect of regime type on the likelihood of tax legislation. It does not imply that institutions do not matter, but simply that each set of institutions has different enforcement mechanisms to collect revenue e.g. popular demand and voluntary compliance in democracies versus personal gains and coercion under autocracies.

Second, our findings confirm the body of literature that suggests the positive influence of democratic regimes on redistribution where the government attempts to satisfy the demands of the poor median voter as opposed to an autocratic regime where less privileged groups tend to be excluded from the policy decisions process (e.g. Boix and Posner 1998, Boix 2002, Mesquita). Although democracies do not raise more revenue than autocratic regimes, they are likely to pursue more redistributive policies, both on the revenue and the spending side. Hence, democracies still seem to carry the best way to tackle income inequality – at least within nation states.

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Appendix

Table A1: Taxes in force around the world by regime type (2010)

	INH	PIT	GST	VAT
In Force in 2013				
Democratic	35	68	66	62
Anocratic	8	35	34	34
Autocratic	5	13	12	8
Not Sovereign / Polity2				
Missing	2	4	2	3
Total Number of Countries	50	120	114	107
Not in Force in 2013				
Democratic	30	0	3	7
Anocratic	16	1	3	2
Autocratic	8	3	4	6
Not Sovereign / Polity2				
Missing	1	0	0	1
Total Number of Countries	55	4	10	16

Note: The three regime categories are based on standard recoding of the polity2 dataset (democracy: 6 to 10, anocracy: -5 to 5, autocracy: -6 to -10)

Table A2: Regime Type and Tax Introduction III

	INH	PTT	GST	VAT
Regime Type Ratio	0.33**	0.30*	-0.05	-0.14
	(0.16)	(0.17)	(0.10)	(0.40)
Logged GDPpc	0.08	0.04	-0.25***	-0.25
	(0.24)	(0.17)	(0.09)	(0.62)
Number of Wars	-0.09	-0.04	0.04	0.05
	(0.07)	(0.04)	(0.03)	(0.17)
Social Security Programmes	0.12	0.11	-0.02	1.92***
	(0.13)	(0.12)	(0.06)	(0.65)
Regional Adoption	0.02	-0.02	0.02	0.19**
	(0.06)	(0.03)	(0.02)	(0.09)
Observations	885	2,030	2,774	3,300
Number of Countries	28	48	77	84

*Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$
Constant, Regional Dummies and Splines not reported.*

Table A3: Regime Type and Tax Introduction with Dummies

	INH	PIT	GST	VAT
Democracy Dummy	0.59 (0.38)	0.39 (0.24)	-0.12 (0.18)	0.17 (0.52)
Anocracy Dummy	0.77*** (0.26)	0.56*** (0.19)	-0.30 (0.19)	-0.26 (0.49)
Logged GDPpc	0.25 (0.28)	0.08 (0.15)	-0.24** (0.09)	-0.25 (0.52)
Number of Wars	-0.04 (0.07)	-0.02 (0.03)	0.04 (0.04)	0.03 (0.14)
Social Security Programmes	0.11 (0.14)	0.04 (0.09)	-0.02 (0.06)	1.59*** (0.57)
Regional Adoption	0.05 (0.07)	-0.01 (0.03)	0.02 (0.02)	0.16* (0.08)
Observations	885	2,030	2,774	3,300
Number of Countries	28	48	77	84

*Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$
Constant, Regional Dummies and Splines not reported.*
