How Employers And Conservatives Shaped The Modern Tax State

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Abstract: Coordinated, left-leaning nations with large public welfare states paradoxically rely on comparatively regressive tax systems, whereas liberal countries with more limited welfare states have historically embraced more progressive tax systems. While scholars agree that large welfare states demand broad and therefore regressive taxation, the origins of these diverse revenue systems remain underexplored. We trace the divergence of modern revenue systems to electoral and industrial relations institutions established in the late 19th and early 20th centuries. In countries with strongly-organized employers' associations and multiparty rule, political elites were able to assemble broad cross-class coalitions that allowed them to build expansive tax regimes that funded generous welfare states. In contrast, countries with majoritarian, two-party competition and associated weak industrial relations systems had a challenging time building cross-class coalitions for revenue initiatives. We support our argument with quantitative data from 1900 to 2000 showing that multiparty governance and strong employer organization led to less progressive and more broad-based tax systems. Qualitative case studies of the United States and Denmark further document the importance of the right at critical junctures. These findings contribute significantly to our understanding of the origins of national tax regimes, and to the early emergence of distinct capitalist economies.

Classic writings in fiscal policy identify a fundamental trade-off between equality and efficiency. A neutral tax code (typically preferred by the right) is thought to spur non-distortive economic growth while perpetuating economic inequalities given a higher relative tax burden on lower income people, whereas progressive taxation (typically preferred by the left) is thought to reduce inequality at the cost of distorting economic incentives to work (Okun 1975). Given this well-accepted political calculus, how can we explain the unusual finding that historically left-leaning nations with generous welfare states rely on broad and relatively more regressive income tax bases, high consumption taxes, and low capital taxes, while liberal countries with limited welfare states embrace progressive taxation (until relatively recently), with high tax rates on upper income people, high taxes on capital, and limited consumption taxes (Steinmo, 1993, Wilensky 2002; Kato 2003, Lindert 2004; Cusack and Beramendi 2006; Ganghof 2006; Beramendi and Rueda 2007; Prasad and Deng 2009)?

The origins of these diverse revenue systems remain murky, and our paper seeks to uncover the political factors that set countries down the profoundly different paths of "mass" versus "class" taxes. It seems particularly puzzling that countries with strong social democratic traditions developed regressive tax initiatives in the early twentieth-century, long before the expansion of modern welfare states, while liberal countries produced very early progressive tax measures, creating path dependencies for subsequent policy reforms. One wonders how political coalitions might produce such a paradoxical combination of regressive taxation and progressive social spending, or its mirror image.

We suggest that revenue systems develop according to radically different logics in countries having or lacking consensual political and industrial relations institutions, as variation in taxing trajectories depends crucially on the political incorporation of employers and the right

more broadly. A *state-building model* of revenue system development transpires in countries with strong political institutions for consensual policymaking (characterized by corporatist industrial relations and multiparty systems), with business and the right largely supportive of revenue expansions. The relative absence of class conflict permits significant reforms to happen under politics as usual, in response to economic transformations and expanded need for social and fiscal policies. Employers in countries with strong business parties and associations feel confident of their political representation and engage in the design of social and revenue policies; consequently, they both consent to a large revenue base, and wield leverage to shift taxes off capital and onto labor. As a result, these countries have adopted relatively broad-based, less progressive tax systems and extensive welfare states. In contrast, a *crisis mobilization model* of revenue system development occurs in countries with few political institutions for consensual policymaking and intense class conflict. Significant reforms are delayed until crises (e.g. war) demand new fiscal instruments; in these instances, business and the right largely oppose social and fiscal policy expansions. This leads to contentious tax politics that aim to "soak the rich" through progressive levies.

We employ comparative qualitative and quantitative evidence to support our claims. Examining the structure of tax systems from 1900 to 2000 in the advanced economies, our quantitative analyses demonstrate that well-organized employers' groups and multiparty systems are both powerful predictors of the distribution of the tax burden. Countries with greater employer coordination and multipartism had lower top income tax rates and relied more on regressive production and sales taxes compared to countries with weak industrial relations organizations and majoritarian electoral rules, even when controlling for the effects of other social, political, and economic factors. Moreover, consistent with our distinction between crisis-

mobilization and state-building politics, our results show that war mobilization results in increases in the top income tax rates in majoritarian systems, but not in multiparty governments.

We use qualitative case studies of the paradigmatic countries of the United States and Denmark to further illustrate the causal mechanisms by which crucial tax initiatives were created at critical junctures and set historical paths for the future evolution of revenue systems. Bolstering our quantitative findings, we find that political coalitions supporting tax reforms were dramatically different in coordinated Denmark and the liberal United States. In Denmark, the strong industrial relations organizations and multipartism nurtured class consensus. In sharp contrast, weak American industrial relations organizations and fierce competition between the two parties encouraged class warfare. Accordingly, the American national tax system was characterized by a relatively progressive income tax bolstered by progressive levies on capital expanded during moments of crisis, especially war mobilization.

These conclusions offer several contributions to comparative political economy. First, we engage with burgeoning research on the long-run determinants of tax systems, offering a new set of explanatory factors – centered on the organization of industrial relations and the structure of party systems – that remain under-explored in previous studies (e.g. Aidt and Jensen 2009; Flores-Macias and Kreps 2013; Scheve and Stasavage 2010, 2012). Although extensive important work has revealed the coalitional bases of the welfare state, less attention has been given in the comparative political economy literature to the prewar origins of comparative revenue states. Moreover, this analysis provides insights about the timing of contemporary variation in tax policies. As we show, by the 1950s cross-national differences in the progressivity of tax systems were already largely established.

Second, we shed light on debates over the "tax-welfare paradox" (Beramendi and Rueda

2007; T. Cusack and P. Beramendi 2006; Ganghof 2006b; Kato 2003) by revealing the similarity between political coalitions undergirding revenue and social spending initiatives. While it is beyond the scope of this paper to address the determinants of the welfare state, we suggest that both tax and welfare systems were shaped by a common set of political coalitions, involving employers and conservatives as the crucial actors. Our work thus contributes to efforts to document the historical evolution of different national political economies (Cusack, Iversen, and Soskice 2007; Iversen and Soskice 2009; Martin and Swank 2012).

Finally, these findings have bearing on practical concerns about equality and redistribution. In the face of rapidly rising inequality, especially at the very top of the income distribution, many politicians, policy experts, and pundits have called for more progressive taxes to facilitate greater redistribution (e.g. Piketty 2014). In contrast to this perspective, our results buttress a growing conclusion that – at least from a historical perspective – significant amounts of redistribution are not possible through the tax code without generating perverse and unintended consequences, especially intense tax backlash from economic elites and conservatives (e.g. Martin 2013; Prasad 2006, 2012). Rather, redistribution must come through significant investment in social spending that is financed through broad-based and relatively more regressive levies that fall disproportionately on labor and consumption.

DETERMINANTS OF TAX REGIMES

In designing tax systems, government actors make design choices about the *form* of revenue collection (i.e. whether the tax will fall on income, capital, consumption, or property), the *progressivity* of tax rates within those instruments of revenue collection, and the overall *level* of revenue. One striking stylized fact about these choices is that tax progressivity and total tax

take as a proportion of GDP (together with welfare state spending) are strongly inversely related. For example, Denmark and Sweden have relatively low tax progressivity but raise the highest levels of revenue, while Australia and the United States have the most progressive tax systems and raise the least revenue. Figure 1 demonstrates this relationship, showing overall tax progressivity in the mid-2000s plotted against total tax take (upper panel) and public social spending as a share of GDP (lower panel) throughout the 2000s.[1]

[Figure 1 about here]

Thus one wonders why some countries developed broad-based, somewhat regressive "mass tax" tax systems relying on the taxation of labor and consumption and with high levels of revenue collection, whereas other countries developed more progressive, "class tax" systems with greater reliance on capital and property taxes and with lower levels of revenue take. To answer that question, we turn now to the literature on the origins of comparative revenue systems.[2]

Five sets of causal factors are commonly offered to explain cross-national variation in tax systems. First, structural characteristics of the economy, such as levels of *industrialization*, *economic development*, and *economic openness*, are thought to influence revenue levels and forms. GDP growth in industrial economies both allows political leaders to collect higher taxes,

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[1] The OECD measure has a number of drawbacks (Huang and Frentz 2014); still, studies using different data point to the same conclusion that the United States and other countries with smaller welfare states tend to have more progressive taxes, see e.g. Kenworthy 2014; Prasad and Deng 2009.

[2] Due to page constraints, it is beyond the scope of this paper to address the origins of payroll taxes or to systematically analyze the development of value-added taxes.

and motivates state-building to help citizens cope with new social risks (Webber and Wildavsky 1986; Wilensky 2002). This factor has bearing on rising levels of revenue; however, it says less about the composition or progressivity of taxing instruments. But Monica Prasad (2012) suggests that early industrialization in the United States created significant support for progressive taxation by intensifying tensions between agrarian and industrial actors, leading to a coalition between labor and agriculture that sought to tax industry. One might extrapolate this explanation to a cross-national setting, hypothesizing that industrialization increases tax progressivity. Economic openness may also influence revenue collection: greater dependence on world markets may inspire alternatives to tariffs, and may also motivate against the taxation of mobile capital (e.g. Bensel 1984 in the United States). Moreover, openness may either dampen enthusiasm for highly progressive tax rates, or spur the expansion of revenue to fund protection against the greater social risks associated with economic openness (Hays 2003; Katzenstein 1985; Rodrik 1997; Swank and Steinmo 2002). See hypotheses 1, 2 and 3 in Table 1.

[Table 1 about here]

Second, *war mobilization* should precipitate both rising revenue levels and progressivity because politicians can act on broad public support for shared sacrifice. For example, the mass mobilization of troops during the World Wars prompted the expansion of US taxes, especially the income tax (Brownlee 2004; Flores-Macias and Kreps 2013; Martin, Mehrotra, and Prasad 2009; Peters 1982; Tilly 1985; Wilensky 2002). More recent research has confirmed this hypothesis, finding that countries deeply involved in military conflicts were more likely to increase the progressivity of their income and estate taxes (Scheve and Stasavage 2010, 2012). See Hypothesis 3 in Table 1.

Third, *democratization* and an *expanded franchise* ought to produce greater demand for

public benefits, and thus more revenue. Moreover, higher levels of democratization should lead to more progressive taxation to satisfy the redistributive preferences of the enlarged electorate (Acemoglu and Robinson 2009; Peters 1982; but see Aidt and Jensen 2009). See hypothesis 4 in Table 1.

Fourth, power resources theory might suggest that a *strong working class* would produce progressive taxation, in addition to a robust welfare state (Esping-Andersen 1990; Korpi 1983, but see Korpi and Palme 1998). Countries with strongly organized workers and vibrant left parties should have more progressive and redistributive tax systems than nations with a weakly mobilized working class. Yet the odd relationship between large welfare states and regressive tax systems challenges power resources theory, at least on its face (Prasad and Deng 2009; Steinmo 1993). See hypothesis 5 in Table 1.

Whereas classic accounts suffer limitations in explaining the odd nexus of taxing and spending trajectories, recent and important fiscal scholarship highlights the crucial linkages between large welfare states and broad-based, regressive revenue systems. Post-war expansion of social programs required a robust revenue system, and taxation of the rich was unlikely to reap sufficient revenue (T. R. Cusack and P. Beramendi 2006; Ganghof 2006a; Kato 2003; Lindert 2004; Prasad and Deng 2009; Steinmo 1993; Swank 1992; Wilensky 2002). These scholars, however, largely concentrate on postwar reforms (but see Prasad 2012); yet as we will highlight in the subsequent analysis, contemporary cross-national patterns of tax progressivity were already well in place by the 1950s. Moreover, these researchers disagree as to whether generous welfare states were made possible by earlier (and unrelated) decisions to institute regressive consumption levies (Kato 2003), or whether policymakers chose such tax instruments precisely for their revenue-raising capacities (Ganghof 2006a; Lindert 2004). Finally, additional work is

required to understand the political coalitions that gave rise to different types of revenue *and* social policy regimes. If the strength of labor and the left alone cannot predict the model of progressive spending and regressive taxation, then it makes sense to explore the contribution of employers and the right to the evolution of fiscal regimes.

MULTIPARTISM, CORPORATISM, AND BROAD-BASED TAXATION

We argue that key political institutions – *political party systems* and *industrial relations systems* – shape the construction of preferences for, and modes of negotiation over, fiscal policies. Most crucially, in countries with consensual institutions, employers and their political representatives in conservative parties will have stronger incentives to productively participate in the tax policymaking process, and will also have the political leverage to ensure that the tax burden falls more heavily on labor and consumption, rather than on capital. Figure 2 maps out the linkages in our argument, showing the different incentives and access faced by employers and conservative parties in countries with institutions of coordination (top panel) and without such institutions (bottom panel).

[Figure 2 about here]

Employers in countries with encompassing business associations and macro-corporatist bargaining systems are more likely to hold preferences for higher levels of social spending and taxation, and to have the political access necessary to secure a revenue system that falls more heavily on labor relative to capital than employers in weakly-organized pluralist systems. At a basic level, business and labor make a quid pro quo exchange: labor agrees to receive higher levels of social spending in exchange for concessions to employers in the form of lower taxation of capital, assurances of broad-based contributions that lower burdens on upper-income

taxpayers, and a greater use of consumption taxes (Beramendi and Rueda 2007). But on a deeper level, systems of industrial relations also influence how employers construct their preferences for public policies. In contrast to the pluralist organizations found in liberal countries, macrocorporatist organizations enhance support for social policies by bringing employers into repeated contact with government and labor policy experts, increasing trust that members will not be punished by the market for supporting human capital investments (Crouch 1993; Martin and Swank 2004, 2012; Streeck 1992, 265-84; Rothstein 2007).

In addition, macrocorporatist industrial relations allow peak employers' associations and unions to play a more prominent role in social and tax policy formulation (through collective bargaining and tripartite commissions) than in pluralist countries. This heightens employers' sense of ownership over social programs, their tolerance of higher revenue levels, and their political capacity to tailor tax structures to their own needs. Business and labor are more likely, for example, to join experts in acknowledging that taxing labor and consumption has long-run beneficial impacts for economic growth, whereas taxes on capital and property stifle economic growth (Lindert 2004). As a result, macro-corporatism may ease the state's effort to include taxation in productivity pacts in support of capital and social investments, rather than to acquiesce to haphazard interests in their legislation of tax initiatives.

While our focus is on business, we note that unions also hold diverse preferences in corporatist and pluralist countries. Workers are more willing to trust employers in the context of strong industrial relations institutions and are more likely to pay high taxes in exchange for strong social protections. Thus, consensual institutions reinforce cooperation on both sides (Beramendi and Rueda 2007); still we note that employers – and their political representatives – tended to be the decisive actors either impeding or facilitating the development of tax state

trajectories. In sum, macrocorporatist employers' associations are more likely to be associated with both higher and more broad-based taxation.

Multipartism and proportional representation also increase the likelihood that conservative parties (representing employers) will both support higher overall tax levels and will have the political power to secure broader-based taxes with lower levels of capital taxation, compared to their counterparts in majoritarian, two-party systems. Politicians in proportional, multiparty systems represent well-organized economic interests, do not poach voters from other parties, do not chase the median voter, and participate in coalition governments, and these factors together contribute to their greater willingness to collaborate with other parties and consent to a relatively larger tax take. Employers can thus trust their parties to make credible commitments about longer-term fiscal policy goals (Cusack, Iversen, and Soskice 2007).[3] At the same time, the

[3] Scholars have been somewhat divided as to whether proportional representation strengthens or weakens the right. Boix 1999; Rokkan 1970 argue that proportional representation was chosen by a divided right facing insurgent left-wing parties, whereas Cusack, Iversen, and Soskice 2007 believe that employers in countries that depended on specific skills actively sought proportional representation to augment their political influence and to assure the supply and regulation of specific skills (but see Kreuzer 2010). The strategic calculus underpinning the decision to adopt proportional representation debated by these two sets of authors is not directly relevant for our own argument. Instead, we focus on two *consequences* of proportional electoral systems once they were established: the ability of PR parties to better represent their constituent interests (especially employers) and the incorporation of minority parties, especially conservative parties, into the policymaking process (what Cusack, Iversen, and Soskice define as the "inclusive and consensus" aspects of proportional systems, 377). Cusack, Iversen, and Soskice note that their

need for coalition governance in proportional multiparty systems will give conservative parties greater leverage to ensure to that their interests are represented in the tax policymaking process, thus ensuring lower taxes on capital and a relatively greater burden on labor and consumption (see also Hays 2003 on capital taxation, more generally see Austen-Smith and Banks 1988; Persson, Roland, and Tabellini 2000 on the representation of minority parties in multiparty, proportional systems). Finally, proportional multiparty systems are also themselves a significant determinant of strongly organized, macrocorporatist industrial relations systems (Martin and Swank 2008, 2012).

In sum, we ought to expect that countries with stronger institutions of political and industrial coordination will have relatively more broad-based and less progressive tax regimes in contrast to countries without such institutions. The differences between these two models of tax politics ought to be especially clear when we focus on the tenor of tax policy debates. In countries with institutions of coordination, we expect that most of the development of the tax state will occur under consensual politics as usual, in efforts aimed at *state-building*. In contrast, we expect that countries without such institutions will need to rely on moments of *crisis* – especially wartime mobilization – to develop and expand their tax systems. Given a lack of cross-class or cross-party coordination, we expect politics to be dominated by intense conflict.

THE QUANTITATIVE ANALYSIS

Our quantitative analysis pools data from fifteen advanced industrial countries for the ten

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logic applies to regulatory, but not budgetary, policy. However, as our case study of Denmark will show, we find evidence that right parties were deeply involved in the construction of revenue systems, even when they were not in power.

decades from 1900 to 2000. These countries include Australia, Canada, Denmark, Finland, France, Ireland, Italy, Netherlands, New Zealand, Norway, Sweden, Switzerland, United Kingdom, United States, and (West) Germany. We examine two outcomes: a country's *Top Income Tax Rate* and *Production and Sales Tax Reliance*. Together, these two variables capture much of the important variation in the design of national tax systems.

Top marginal income rates have been used by other scholars to evaluate the demand for tax progressivity (see e.g. Piketty and Saez 2007; Scheve and Stasavage 2010), and provide a measure of the degree to which income taxes burden upper-income individuals that is relatively comparable across diverse contexts. Our data on these top income tax rates come from a variety of sources, which we detail in our technical appendix.

While top income rates provide a clear picture of the progressivity of a single tax instrument, these rates miss the degree to which countries rely more or less on different types of taxes. To measure variation in the *composition* of tax instruments, we examine countries' reliance on production and sales taxes, such as excise, value-added, and sales taxes. Reliance on production and sales taxes is another important determinant of tax progressivity, since such levies generally fall disproportionally on lower-income households. Our data on production and sales tax reliance comes from Peter Flora's volume of cross-national economic statistics (1983; as compiled by Seebohm 2009 [1983]), with additional calculations based on data from national statistical agencies and the OECD. We operationalize *Production and Sales Tax Reliance* as total tax revenue from production and sales taxes as a share of total central government revenue.

Our main independent variables represent the industrial and political pillars of coordination. *Employer Organization* captures the degree to which firms are mobilized into powerful national peak associations. This variable is a continuous zero to three measure based on

three standardized indices compiled by Martin and Swank (2012), capturing the following aspects of employer organization: whether a country possesses a national and encompassing business organization, the powers held by that peak organization over its members, and the integration of that organization into the policymaking process.

Aside from industrial organization, we examine the extent to which political coordination – as facilitated by the electoral and party system – shapes tax policy by including a measure of *Proportional Representation*. Proportionality is an ordinal variable indicating how votes are translated into seats in the national legislature; 0 indicates a disproportional system; 1 indicates a semi-proportional system, and 2 indicates a proportional representation system (based on classification by Martin and Swank 2012 and Lijphart 1999).[4]

We also control for a variety of competing explanations and confounders that correspond to each of our hypotheses detailed in our theoretical section. We use GDP per capita (in 1990 constant dollars) to examine the role of *Economic Development* (data from Bolt and Zanden 2013). To control for the effect of *Economic Openness*, which may both shape tax policy and the formation of institutions of coordination (e.g. Katzenstein 1985; Rogowski 1987), we calculate imports and exports divided by total GDP (data from Mitchell 2007). To gauge the strength of power resource explanations for variation in tax policy, we include *Left Power,* or the share of votes received by left parties (data from Mackie and Rose 1981; Swank 2013). To test explanations rooted in industrialization, we include the share of the economically active population in the manufacturing sector; *Manufacturing Share of Labor Force* (data from

[4] We also find similar results using the effective number of political parties present in a polity as a continuous variable (computed with data from Mackie and Rose 1981; Swank 2013). See our technical appendix for these and all other analyses referenced but not shown.

Mitchell 2007). We account for *War Mobilization* with the same variable used by Scheve and Stasavage (2010), a dummy indicating if a country was involved in an interstate war with at least two percent of its population mobilized in the military. We indicate the presence of universal *Male Suffrage* with a dummy variable (data from Flora et al. 1983; Mackie and Rose 1981). Lastly, we include a dichotomous measure of the presence of *Federalism* since decentralized polities were less likely to develop national systems of macrocorporatism, and federalism may also shape the demand for redistributive taxes (Beramendi 2012; Obinger, Leibfried, and Castles 2005).

Given limitations on the availability of several of our variables, especially the employer organization index, as well as the long length of our panel and nosy measurement for many of our variables, we examine our data at decadal intervals between 1900 and 2000, using averages of the values of each variable throughout each decade. We employ OLS and compute panel-corrected standard errors, though our results remain similar using other variance estimation methods. We include dummies for each decade to account for time-specific shocks to countries that could simultaneously shape tax, electoral, and industrial relations systems.

Because many of our independent variables are correlated with each other, we begin by presenting results examining only the relationship between our main explanatory factors (employer organization and electoral proportionality) and tax structure without the covariates (though with the decade effects). We find consistent results in both sparse and more saturated models and this helps to address concerns about the effects of multicollinearity.

[Table 2 about here]

Table 2 summarizes the results of these four sparse regression models. All four coefficients are signed as expected. Employer organization and electoral proportionality are both

negatively related to top income tax rates, but positively related to production and sales tax reliance. A move from the minimum to maximum values of employer organization (e.g., from the United States to Denmark) is predicted to reduce a country's top income rate by about seven percentage points (about a third of a standard deviation, p=0.06), while a move from a disproportional to a proportional representation system is predicted to reduce the top rate by about five percentage points (about a fourth of a standard deviation, p=0.05). In contrast, the same shifts are predicted to increase a country's reliance on more broad-based production and sales taxes by 25 percentage points (over one standard deviation; p<0.001) and 14 percentage points (about three-fourths of a standard deviation; p<0.001), respectively.

[Table 3 about here]

With these effects established, we next turn to more saturated models that include the full range of alternative explanations and potential confounders. Table 3 examines variation in top income tax rates, while Table 4 examines reliance on production and sales taxes. In each table, Models 1 and 2 examine the effects of employer organization and electoral proportionality on tax structures in the same decade, while Models 3 and 4 investigate the effects of these variables on tax structures in the subsequent decade (that is, all of the independent variables are effectively lagged by one decade). These two different approaches help us to understand whether the effects of political and industrial coordination on tax structures are concentrated in the short or long term.

[Table 4 about here]

Across all specifications, we find relatively consistent results. Greater employer organization and the presence of electoral proportionality leads to lower top income tax rates and a greater reliance on production and sales taxes, both in the short and long run. The results for

employer organization indicate that a move from the minimum to maximum levels of organization reduces the top income tax rate by about eleven to thirteen percentage points ($p<0.05$), while the presence of proportionality reduces the top income tax rate by about five to seven percentage points ($p<0.10$).[5] The effects on production and sales tax reliance indicate increases of 26 to 29 percentage points ($p<0.01$) and 10 to 12 percentage points ($p<0.01$), respectively.

One prediction from our theory is that countries without institutions of coordination will need to rely on moments of crisis to build their tax systems. We can test this prediction by examining the effect of war mobilization on top income tax rates in countries with strong institutions of political coordination (multiparty, proportional representation systems) and without such institutions (majoritarian, two-party systems). Analyzing a model with such an interaction between electoral proportionality and the wartime mobilization dummy (in results not shown; see technical appendix), we find a statistically significant interaction ($p=0.01$) that is consistent with our predictions: wartime mobilization *only* leads to higher income tax rates in countries without proportional representation systems (an estimated increase of 15 percentage points).

The analysis provides only mixed support for our competing hypotheses. Contrary to the expectation that greater trade exposure will constrain progressivity, economic openness is related to *higher* top income tax rates, though only in subsequent years. In some models, trade openness

[5] In results not shown, we find that the relationship is strongest as countries were initially constructing their income tax systems. This is consistent with the rise of neoliberalism during the second half of the twentieth century, which was accompanied by a sharp decline in tax rates on the wealthy and businesses, especially in the English-speaking world (Prasad 2006).

is also positively related to production and taxes reliance, but the effect is not consistent, and is estimated with considerable uncertainty. One should be cautious, too, in interpreting this coefficient since it is a plausible determinant of industrial and political coordination.

Male suffrage is positively correlated with top income tax progressivity in the contemporaneous decade, but negatively correlated in the subsequent period, preventing a straightforward interpretation of its effects. Suffrage is also negatively related to production and sales tax reliance, but the estimates are inconsistent across models.

War mobilization is related to higher top income tax rates, confirming the work of Scheve and Stasavage (2010), though only in the decade following military mobilization. Having mobilized a large proportion of its population for an interstate war, a country can expect to increase its top income tax rate by 13 to 15 percentage points over the subsequent decade. War mobilization has no consistent effects on production and sales tax reliance, however.

Lastly, we find only modest support for power resource explanations of income tax progressivity. In some specifications (Models 3 and 4 of Table 3) there is a positive correlation between the share of votes received by left-wing parties and top income rates, but this finding is not consistent across Models 1 and 2. A standard deviation increase in left parties' votes is predicted to increase top income rates by two to four percentage points. Left party strength has no consistent relationship with production and sales tax reliance, however, and if anything, is predicted to increase reliance on these relatively regressive levies.

As an alternative to our main specifications, we also estimated fixed-effect error correction models, which account for unobserved, time-invariant country characteristics and permit us to estimate the long-run relationships between variables without specifying a particular lag structure (Beck and Katz 2011; Boef and Keele 2008). We focus on the dynamic effects of

employer organization on top income rates and production and sales tax reliance, rather than the effects of electoral systems, since the latter change only rarely over time within countries. In results not shown (see technical appendix), the fixed-effect error correction model results indicate that changes in employer organization have short-run, immediate effects on top income tax rates. Specifically, a one-unit increase in the employer organization index is predicted to cause a one-off decline in top income tax rates of about 10 percentage points (p=0.02). In contrast, an increase in employer organization has no immediate effects on reliance on production and sales taxes, but does have highly persistent, long-run effects: a one-unit increase in business organization is estimated to cause a gradual 18 percentage point increase in a country's reliance on production and sales taxes over time (p<0.01).

Aside from accounting for national characteristics and temporal dynamics, another issue for us to address is the confounding influence of political regimes, apart from the spread of the franchise (see Genschel, Lierse, and Seelkopf 2013). Reassuringly, however, we find substantively identical results restricting our analysis to country-decade observations with Polity2 scores of six or more, or including the Polity2 score itself as an independent variable in our models (see technical appendix).

The irrelevance of regime type for the relationship between economic and political coordination and tax structures may reflect two realities of political life at the turn of the twentieth century. On the one hand, differences between authoritarian and democratic countries were less salient during the period that we examine. Many countries had significantly extended the franchise for parliamentary voting long before their transitions to full democracies (e.g. Anderson 2000), and other countries (such as the United States) were nominal democracies without voting rights for a majority of their citizens (Keyssar 2000). Just as importantly, battles

over taxation largely transpired between economic elites and their partisan representatives, often between industry and agriculture (e.g. Bensel 1984; Prasad 2012), and rarely turned solely on public opinion (for one striking example of the failure of American politicians to respond to public opinion on taxes during the wartime period, see Prasad 2012, 115-6).

A final concern involves the role of labor unions. Given that macro-corporatism involves both strong labor movements and well-organized employers, how can we be sure that employer mobilization – and not merely labor power – is the decisive factor in shaping tax structures? To address this question, we re-run our models including a measure of union density. We find that union strength cannot explain the cross-national distribution of taxes (see appendix). Taken alongside our other quantitative findings, the analysis indicates that the systems of industrial relations and party competition, rather than merely labor union power, explain why countries with more robust welfare states finance that spending through relatively more regressive and broad-based taxes.

TAXATION IN DENMARK AND THE UNITED STATES

Qualitative case studies of Denmark and the United States further illustrate the different logics of revenue politics across countries with diverse levels of political and industrial coordination. The cases reveal strong similarities between the countries: revenue proposals in both were motivated by shifting economic priorities, and the requisites of war mobilization prompted similar significant tax expansions. Labor and left-oriented parties supported progressive taxation in both countries, offering little explanatory leverage for understanding why the countries diverged in their tax structures. Although the United States had a much larger domestic economy than Denmark, American and Danish agricultural and industrial interests held

remarkably similar preferences in strongly seeking alternative sources of revenue to the tariff during this period. Both countries had strong export markets for agriculture and small ones for industry: farmers had always hated tariffs and manufacturers, hoping to expand their industrial exports, joined the cause. Thus, Danish and American employers held similar early preferences for revenue collection: a growing tax burden shared by all social groups, broad-based rates, high reliance on consumption taxes, low corporate rates, and market-supporting tax policies.

Yet the countries parted ways with respect to their class and party coalitions supporting or opposing significant tax reforms. Unlike in the United States, Danish advances were all legislated during peacetime, and the peak employers' association and right parties joined coalitions supporting income, consumption, and corporate tax reforms. In the United States, the right and left (with their corresponding business and labor constituents) were at loggerheads at each milestone of the emerging tax system.

The Evolution of the Danish Revenue System

In 1900, Denmark had a multi-party system, which was strengthened with the development of proportional representation electoral rules in the 1920s. The Right Party (later the Conservative Folk Party, representing industrialists) and Liberal Party (representing wealthy farmers) anchored the right, with the Social Democrats and Radical Liberals on the left. The Right Party feared losing power to a legislative coalition of labor and farmers, and thus helped to form the Federation of Danish Employers (DA) in 1895. Thereafter, private policymaking through industrial relations flourished, and employers played a crucial role in developing the architecture of welfare state programs. Multipartism inspired collaboration to form governments and supra-majority ruling coalitions often negotiated broad political deals (Martin and Swank

2008, 2012).

Legislators created the income tax in 1903 with a top rate of 2.5 percent, and expanded the top marginal rate to 14.5 percent during the First World War. In 1922, a Liberal Party government with Conservative support passed a foundational tax law (Lov om Indkomst- og Formueskat til Staten 1922), which codified progressive marginal rates (25 percent for individuals and 15 percent for corporations) and dominated tax law until the late sixties. The act created a significantly lower rate for undistributed corporate profits placed into a dedicated statutory reserve fund for investment capital (Udfærdiget gennem Finansministeriet. Se Rigsdagstidenden for 1921-22: Folket. Tid. Sp. 2503). The top rate increased to 50 percent by World War II, and soared to 90 percent after the war; however, from the beginning and in crucial distinction to the United States, the income tax was a mass tax covering nearly all wage earners (Johansen 2007, 160-1; see also Martin 2014).[6]

The Danish case lends strong support for our core arguments, but also for several of the alternative explanations. Industrialization provided a crucial backdrop to the creation of the new income tax, as participants hoped to reduce both increasingly unpopular tariffs and revenue collected on land, yield, and buildings (Hyldtoft 1999, 184-5). Indeed, despite its modest beginnings, the broad-based income tax became a crucial source of state revenue for state-building in the early twentieth-century. War mobilization also inspired significant expansions of the income tax, although the crucial acts were passed in peacetime (in 1903 and 1922). Denmark was officially neutral during the First World War, but sought significant military build-up to defend its neutrality. The Domestic Ministry's budget of 14.7 million in 1913-14 increased to

[6] Thus the major difference between Denmark and the United States is in the much larger amounts of taxation collected from lower-income people and the middle class.

246.6 million by 1919-20, and the top rate rose to 14.5 percent (Johansen 2007, 21-37).

Despite the role of these factors, consensual institutions were crucial to Danish revenue creation; cross-class and cross-party coalitions were the norm in virtually all tax legislation. In fact, the income tax's creation in 1903 and expansion in 1922 occurred under the right-oriented Liberal Party leadership with Conservative and Radical Liberal support. The income tax bill's core philosophical justification was a utility principle – users of services should bear the costs – and Conservative political supporters denied that the measure would enable governmental growth or redistribution. Agricultural export interests sought to curb tariffs, lower land taxes, and establish a new tax stream that would be difficult to collect from farmers (Johansen 2007; Hansen 1972, 310). Right Party constituents supported the income tax to offset taxation of property, to pay for government economic development policies, and to build military capacity. The encompassing employers' association, the Federation of Danish Employers (DA), also supported the income tax, balanced with a high reliance on consumption taxes, to avoid military cutbacks (Salomonsens Konversationseleksikon). The 1903 income tax bill was not the first instance of substantial conservative support for revenue expansion; the Right Party nearly passed its own tax in 1898 (Moller 238-249; William Scharling "Den Store Glydendal.")

When faced with enormous revenue needs for reconstruction after the Second World War, government policy makers increased both direct and indirect taxes, and received significant support from employers in those initiatives. Politicians sought a growth-oriented revenue strategy to meet its somewhat contradictory roster of objectives: to build up inventory, spur consumer demand, promote savings, sustain employment, restrain inflation, increase defense spending, and offset balance of payment deficits (Giltner 2001, 501; Gersmann, Therkildsen, and Meyer 1987). Initially, an income-tax surcharge significantly increased the revenue burden of

top-income people. While supporting an increased revenue base, the DA deplored the surtax as a "capricious measure," which threatened economic growth and violated principles of equal treatment (Efter skatteforliget på rigsdagen 12/1/1950; Eengangsskatten 7/26/1946). The DA therefore called on parliament to form a special commission on corporate taxation (En Henvendelse Vedrørende Forslaget til Skatteudskrivningsloven 4/1/1949). These fears about the very high income tax levels on the part of employers thus motivated renewed attention to consumption taxes.

Employers and the right were thus crucial to the reliance on, and periodic expansion of, consumption taxes, a pillar of the Danish tax state throughout the twentieth century. Excise taxes were already about a third of the revenue base in the nineteenth-century; consumption taxes expanded significantly in the early twentieth-century and came to consistently generate a greater share of total central government revenue than income taxes, except for a brief period after World War I (Glydendals n.d.). Conservative Folk Party politicians and industrialists particularly favored consumption taxes because farmers could not easily avoid these taxes. During the 1903 tax debate, Niels Andersen (the founder of DA and Conservative party politician) warned that "It will take generations before farmers will understand that taxable income includes bringing in a basket of eggs in from the henhouse or taking sacks of grain to the miller and later baking bread from the flour" (Johansen 2007, 135-6, trans. by author.)

After the Second World War, employers and others feared that rising taxes on capital and top incomes would distort productive investment and accordingly advocated higher consumption taxes, which reached 63 percent of total tax revenue in 1950/52 (Gersmann, Therkildsen, and Meyer 1987). The DA's periodical, *Arbejdsgiveren*, argued that citizens preferred indirect taxes to direct taxes, although their evidence only applied to upper-income people (Direkte Eller

Indirekte Skatter 7/26/1946).

The business obsession with growth found favor in a 1956 government report, "Cooperation Problems in the Danish Political Economy," that was written by a Finance Ministry-led committee, and included economists and representatives from the major labor market associations. The report viewed Denmark as falling behind in global exports and risking worsening terms of trade, high unemployment, dangerous inflation, and inadequate investment. The committee found that neither income nor consumption taxes could raise the necessary additional revenue without significant economic distortion and, instead, proposed a "turnover tax" on intermediate goods. The report also urged core stakeholders to cultivate a better-shared understanding of collective goals and proposed a research enterprise to disseminate economic wisdom (Samarbejdsproblemer i Danmarks økonomiske politik). Parties across the political spectrum negotiated closely with one another in the wake of the report, agreeing to limit the direct income tax, to reject tariffs, to protect the revenue base for social and economic needs, and to promote savings and investment (Kauffeldt 1966, 115). Early versions of the value-added tax emerged from this committee work (Gersmann, Therkildsen, and Meyer 1987; Fink 1996, 59-60).

The MOMS tax (comprehensive on all wholesale goods) was legislated in 1967 by a left-dominated government with broad cross-class and multi-partisan support (Johansen 1985). Social Democrats also insisted that a measure to withhold income at the source be included in the reform. The Conservative Party and DA successfully demanded employer representation on the agencies to set tax rules in each industrial sector and a permanent tripartite committee to oversee the implementation of the act, thus institutionalizing employer participation in future tax policy decisions (Meroms og skattereform 7/1/65, 14-15; Folketingsårbog (with Arne Marquard) 1966-

7, 77-9).

In sum, Denmark entered the 1970s with the capacity to raise large amounts of revenue through its new system of consumption taxes, which built on a legacy of consensual tax politics and a longstanding tradition of broad-based taxes. The new MOMS (and withholding at the source) expanded total tax revenues (rising from 34 percent of the GDP in 1968 to 41 percent by 1971) and extended tax neutrality across economic activities (Skat Ministeriet n.d.). As we shall see in the following section, lacking both the political and industrial structures for coordination between labor and capital, tax politics in the United States were fraught with class conflict and fragmentation.

The Evolution of the American Revenue System

The United States has had few institutional incentives for cross-party and cross-class compromise, given its sectionally-divided, majoritarian two-party system and pluralist industrial relations organizations. In the late nineteenth-century, severe party competition divided the Democratic Party (dominated by southern agricultural exporters) and the Republicans (representing northern manufacturers). Industrial relations organizations were quite weak, even though employers (inspired by Germany, and with the close collaboration of William McKinley's presidential campaign) sought to form a centralized, peak association to coordinate economy-wide interests, producing the National Association of Manufacturers (NAM). Democratic legislators voted against all of NAM's proposals to gain formal powers of representation and self-regulation, and NAM eventually abandoned its ambitions for cooperative labor relations and managed capitalism. After this experiment fizzled, the social partners became more antagonistic and this class warfare logic, reinforced by intense two party competition, made

tax compromises involving business difficult to achieve. Labor also understandably became more suspicious of organized business after this interlude (Martin 2006).

Permanent national income taxation began in 1913 with a top rate of seven percent, which Congress soon expanded again in 1916 to 15 percent. The income tax became even more steeply progressive with the Revenue Act of 1935 (the "soak the rich" tax), which created income surtax rates of 75 percent in the top bracket (leading to a total rate of 79 percent) and created graduated taxes on corporate income. As in Denmark, the US top tax rate rose to 90 percent after World War II. Policy makers subsequently worried about the tax-distorting impacts of the income tax on productive investment, but responded with reductions in the income tax rates and with investment incentives for business. Thus our puzzle is to understand the coalitions that gave rise to the income tax legislation in 1916 and 1935, and decisions to respond to postwar economic pressures with investment incentives instead of consumption or value-added taxes (we draw heavily from the excellent accounts in Brownlee 1985, 1989, 2004; Morgan and Prasad 2009; Prasad 2012; Thorndike 2009).

The American case offers strong support for our central argument, as well as for some of the alternative explanatory factors. The dual needs of an industrializing economy and war mobilization drove the development of the income tax. In the early twentieth-century, both parties – with their industrial and agricultural supporters – sought revenue alternatives to the tariff, which agriculture had always rejected, and export-oriented industry increasingly disliked. Republicans under President Taft considered an inheritance tax, excise taxes and a small income tax, and subsequently, Congress passed an excise tax on corporate net income and an amendment authorizing the federal government to collect income taxes (thereafter ratified by the states). But the early bipartisan support for an income tax disappeared when progressive tax legislation

passed under President Wilson, as Republicans lobbied instead for a tax on consumption. War mobilization also figured heavily in the American story, as the income tax was expanded in 1916 to meet war-induced revenue needs (Brownlee 1985, 195-8; Robinson 1911, 693-4; B. Baack and E. J. Ray 1985, 609, 614; Morgan and Prasad 2009).

Unlike in Denmark, the income tax was a matter of intense class conflict, which reflected antagonistic relations between the political parties and industrial partners who were poorly represented by these parties. Southern agricultural interests formed an alliance with Progressives to advocate for the income tax bill. Democratic farmers were strong proponents of an income tax for tariff reduction and to reduce the high taxable incomes of manufacturers. The left, for its part, viewed progressive income taxation as less antagonistic to labor interests than the consumption tax proposed by the Republicans (Brownlee 1985, 173-181; *Journal of Political Economy 1915*, 1001; Morgan and Prasad 2009; Mehrotra 2004, 178; B. D. Baack and E. J. Ray 1985, 609, 614).

In keeping with our assumptions about the absence of consensual political institutions, the American pluralist, highly-fragmented organization of business and labor worked against employers' and the Republican's acceptance of a large welfare and tax state. Because the new income tax fell almost entirely on upper-income individuals – unlike the Danish system at its origins – employers railed against the new tax with great vigor. The NAM's official publication viewed the tax measure as part of a larger assault on industry (Hickey 1916, 11), and the U.S. Chamber of Commerce considered the tax to be a violation of states' rights (Nation's Business 1912, 1).

The Revenue Act of 1935 initiated further class conflict. Many economists and the Treasury Department favored a Danish-style broad-based system, with tax breaks for the very poor. But this "low-end progressivity" was abandoned in favor of "high-end progressivity" that

concentrated the tax burden on the wealthy (Thorndike 2009, 29-38). Organized business opposed the tax acts in 1935 and 1936 as punitive and likely to depress economic growth; thus, Roy Osgood wrote in the *Nation's Business* that instead of the sharply progressive income tax structure instituted by the Roosevelt administration, "Business wants taxes which will not retard business stability and…which are sane and rational viewed from the standpoint of their practical application" (Osgood 1936, 53-4.)

As in Denmark, expanded consumption taxes were on the table after World War I; however, coalitional dynamics produced a very different outcome. Employers preferred consumption taxes and were strong supporters of the national sales tax, proposed first in 1921 to retire war debt. The US Chamber of Commerce visited President Coolidge in October 1923 to request the substitution of war excise taxes with a sales tax (Nation's Business 1923, 46). But Democrats opposed the proposed tax because their agricultural constituents were already exempted from the income tax; in like manner, the AFL feared that the consumption tax would shift the burden from capital to labor. An alliance of Democrats and Midwestern Republicans defeated the 1921 national sales tax proposals, and similar coalitions stifled tax reforms in 1932 and 1942 (Prasad 2012, 107).

By the 1960s, employers and conservative party interests in Denmark and the United States held more dissimilar views about consumption taxes. Danish parties across the political spectrum agreed that the growth of the income tax had reached its limit, and converged in support of a non-price distorting consumption tax to fund the revenue needs of the state and encourage investment. In contrast, Americans veered away from expanded consumption taxes to spur savings and investment, and instead embraced a formula of tax cuts on top incomes and capital that failed to protect the revenue base of the state, spur investment, or encourage future

growth of the public sector.

American policy makers shared with their Danish counterparts postwar concerns about unemployment, slow economic growth, balance of payment deficits and a depleted money supply, which Walter Heller (Chair of the Council of Economic Advisers) described as the "cruel dilemma of economic policy" (Walter Heller to JFK 11/28/1961). But policymakers were divided over the appropriate response. On the one hand, Douglas Dillion and the Treasury Department urged the president to prioritize sound monetary policies over domestic stagnation. On the other, Joseph Heller and the Council of Economic Advisers pushed for an aggressive growth strategy, arguing that tax cuts to stimulate demand would ultimately create sufficient revenue to reverse the gold outflow (Martin 1991).

The Kennedy administration responded to the new demands on public finance with two core strategies. First, the Revenue Act of 1962 created the investment tax credit, liberalized depreciation of assets, and changed the taxation of savings and loans to spur savings and investment (CQ Press 1962, 478). The initial proposal also included many reforms to the corporate tax code, which were abandoned during the legislative process under intense lobbying from business. The Chamber of Commerce and Committee for Economic Development, for example, resisted constraints on the use of the investment tax credit, which they viewed as limiting investment. Thus by the time the House Ways and Means Committee finished marking up the bill, the reform provisions had been greatly scaled back and the revenue measure was no longer in balance. The 1962 act, then, represented the strategy of introducing tax incentives for businesses to spur investment and growth.

The second Kennedy tax bill, the Revenue Act of 1964, was signed into law after the president's death. While the initial proposal featured across-the-board rate cuts to stimulate

economic expansion, as well as measures to close various loopholes, reform measures were largely dropped during the legislative process (CQ Press 1964, 518). Moreover, while the administration initially considered concentrating the cuts in the lower brackets, the business community argued vigorously for tax reduction aimed at the highest rates (Mooney 1962, 1, 47).

The administration sought business support for the tax cuts to shepherd its initiatives through Congress and gain the approval of key southern Democrats. But lacking any encompassing employers' association to organize their broad interests in support of a tax measure, similar to Danish organizations, business managers remained divided and focused on their own narrow concerns. Many manufacturers, for instance, supported tax reduction as a form of deficit-financed economic stimulus, and Heller reported that 80 percent of a group of business economists favored a substantial tax cut, even if accompanied by a large deficit and increased expenditures (Walter Heller to JFK 11/10/1962). Bankers, on the other hand, worried that the cuts would exacerbate balance of payments deficits and demanded that rate cuts be concentrated in the top brackets (so as to be more favorable to investment) and be conditional on spending reductions. The 1964 act represents a second strategy of relying on individual income tax cuts, especially on high earners, to spur growth.

Together, the legislative processes of these two tax measures reveal the pitfalls of trying to build coalitions with employers in the context of business fragmentation and partisan infighting. No encompassing business association existed to negotiate compromises with labor and the state and to exercise self-discipline. No broad support for the welfare state motivated corporate participants to broaden the revenue base in return for measures limiting the growth of progressive taxation. No expert commission advocated a need for loophole-closing and, consequently, most such measures were removed from the bills.

The disparities in the tax burden between capital intensive manufacturing and labor intensive service sectors produced by Kennedy's investment tax credit legislation resulted in an even deeper antagonism of business to public financing, transforming corporate taxation into a significant battleground throughout the postwar period (Martin 1991; Martin 2008; Prasad 2006). In addition, the top end cuts of the income tax paradoxically served the long-term interests of employers and the right in restraining the growth of the public sector. The United States thus entered the crucial 1970s period poorly equipped to raise new revenue and characterized by a highly contentious tax politics.

CONCLUSION

Taxation is at the heart of the modern state, yet political scientists remain divided over explanations for why countries have pursued such different means of raising revenue. Especially puzzling is the fact that the countries that have the largest and most redistributive public welfare states rely much more on relatively regressive taxes that fall disproportionately on workers, while countries with the smallest and least redistributive public benefit systems seem to soak the rich. Do regressive taxes lead to generous welfare states, as Junko Kato and Harold Wilensky have argued, or do canny politicians choose regressive taxes knowing that such levies will bring in substantial amounts of revenue, as have argued Steffen Ganghof and Peter Lindert?

The answer we offer in this paper is that *both* generous welfare states and relatively regressive tax systems reflect the coalitional foundations of macrocorporatism. Countries with highly proportional, multiparty political systems and encompassing employers' organizations tended to implement tax systems dominated by indirect taxes, especially production and sales taxes, as well as relatively less progressive income taxes at the turn of the nineteenth and early

twentieth century. As Figure 3 shows, these patterns have persisted to present day. Countries with a high degree of employer coordination at the turn of the twentieth century to mid-century continue to have relatively less progressive taxes in recent years.

[Figure 3 about here]

Our quantitative analysis of tax system design confirmed that variables measuring political and industrial coordination were strongly related to countries' choices about income tax progressivity and their reliance on different tax instruments – even after accounting for factors that others have offered to explain cross-national variation in tax policy. In addition, our case studies spelled out the mechanisms through which greater industrial and political coordination facilitated a consensus around broad-based taxes in Denmark, while weaker coordination in the United States led to a much more contentious and class-based tax politics.

In all, this investigation suggests that taxation, an understudied policy area in varieties of capitalism, should be viewed as a crucial – and longstanding – institutional pillar of different systems of capitalism in the advanced economies. Scholars often conclude that the politics of revenue collection is qualitatively different from the politics of spending. For example, a truism about the United States is that direct spending programs are less politically viable than the use of tax expenditures to fund social and economic goals (Faricy 2011; Hacker 2002; Howard 2007; Mettler 2011). Our work, however, suggests that coalitions underlying the evolution of taxing policies are quite similar to those undergirding spending choices. Neither tax nor social policies can be viewed in isolation from the political and economic coalitions that characterize different varieties of capitalism. This conclusion has important implications both for how scholars view the tax state, as well as how policymakers and advocates ought to approach the politics of redistribution and taxation.

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Table 1: Hypotheses

Hypothesis #1: Economic development: indeterminate prediction for tax progressivity

Hypothesis #2: Industrialization: greater industrialization will lead to greater tax progressivity

Hypothesis #3: Mass wartime mobilization: greater mass wartime mobilization will lead to greater tax progressivity

Hypothesis #4: Democratization: greater access to the franchise will lead to greater tax progressivity

Hypothesis #5: Power resources: Greater control of government by the left will lead to greater tax progressivity

Hypothesis #6: Institutions of economic and political coordination: Stronger institutions of economic and political coordination will lead to lower tax progressivity

Table 2: Determinants of National Tax Systems (1900-2000), No Covariates

	Top Income Tax Rate	Production and Sales Tax Reliance
Employer Organization	-2.16*	8.31***
	(1.13)	(1.47)
Electoral Proportionality	-2.26*	7.13***
	(1.17)	(1.32)

Panel-corrected standard errors below coefficients.
Significance levels: * p<0.10; ** p<0.05; *** p<0.01.

Notes: Table shows the results of four separate regressions. Top values in each cell are OLS coefficients; values in parentheses are panel-corrected standard errors. All four regressions include decade effects. *N* for top income rate models is 111; *N* for production and sales tax models is 104.

Table 3: Determinants of Top Income Tax Rates (1900-2000)

	Outcome is Top Income Tax Rate			
	Model 1 - Same Decade	Model 2 - Same Decade	Model 3 - Next Decade	Model 4 - Next Decade
Employer Organization	-4.24**		-3.49**	
	(1.76)		(1.65)	
Electoral Proportionality		-3.34**		-2.55*
		(1.54)		(1.36)
GDP per capita	-0.69	-0.80	-0.11	-0.18
	(0.54)	(0.54)	(0.44)	(0.44)
Trade Openness	0.06	0.09	0.08**	0.10**
	(0.05)	(0.06)	(0.04)	(0.04)
Left Strength	0.13	0.02	0.24***	0.15**
	(0.10)	(0.08)	(0.09)	(0.07)
War Mobilization	-6.51	-4.18	13.08***	15.03***
	(5.48)	(5.34)	(4.21)	(4.14)
Manufacturing Share of LF	-7.48	-8.35	11.87	13.01
	(26.89)	(26.32)	(23.70)	(23.88)
Male Suffrage	18.56*	20.49**	-27.43***	-26.02***
	(9.72)	(9.42)	(6.53)	(6.55)
Federalism	1.39	2.50	0.61	1.59
	(2.70)	(2.39)	(2.38)	(2.18)
R Squared	0.71	0.71	0.66	0.67
Country-Decades	108	108	100	100
Decade Effects	YES	YES	YES	YES

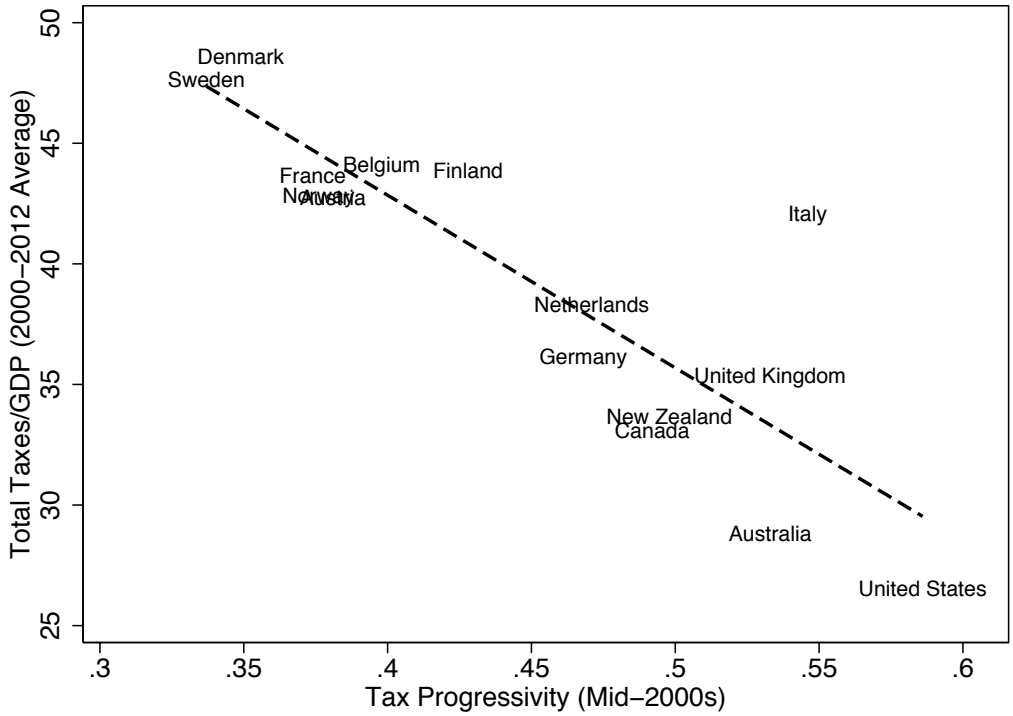
Significance levels: * p<0.10, ** p<0.05, *** p<0.01.
Panel-corrected standard errors below OLS coefficients.

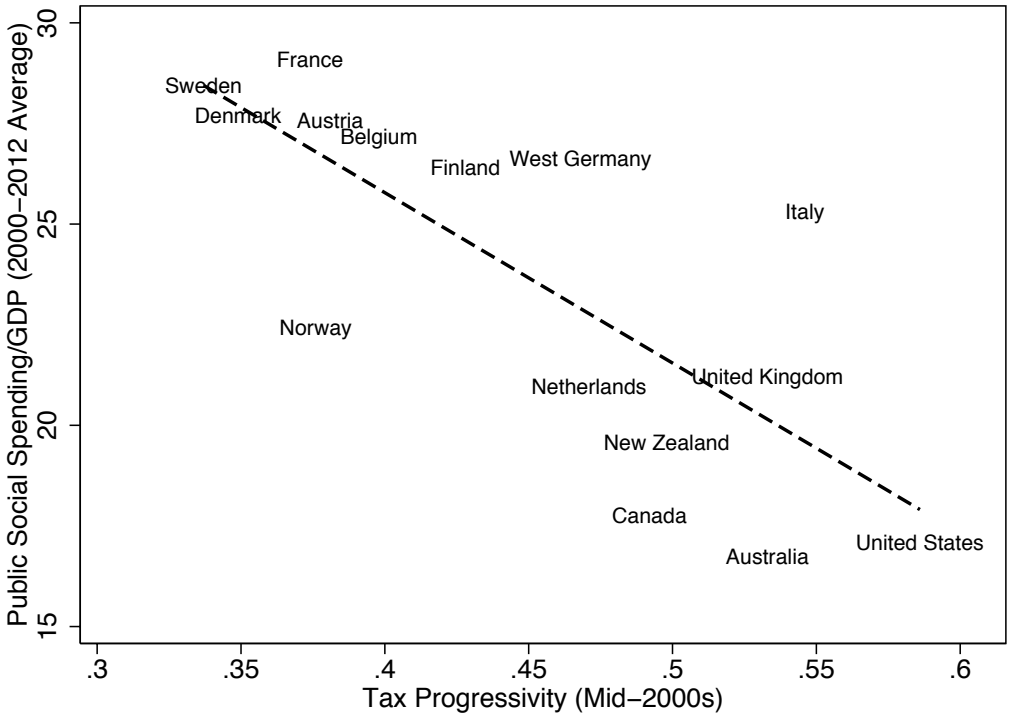
Table 4: Determinants of Reliance on Production and Sales Taxes (1900-2000)

	Outcome is Production and Sales Tax Reliance			
	Model 1 - Same Decade	Model 2 - Same Decade	Model 3 - Next Decade	Model 4 - Next Decade
Employer Organization	8.71***		9.51***	
	(2.13)		(2.11)	
Electoral Proportionality		4.76***		6.16***
		(1.51)		(1.42)
GDP per capita	-0.47	-0.26	-1.07**	-0.98*
	(0.61)	(0.67)	(0.53)	(0.54)
Trade Openness	0.12**	0.10*	0.09*	0.05
	(0.05)	(0.06)	(0.05)	(0.05)
Left Strength	0.01	0.26**	0.07	0.33***
	(0.13)	(0.10)	(0.12)	(0.09)
War Mobilization	-2.03	-6.63	9.43	-1.13
	(8.53)	(8.93)	(13.04)	(16.18)
Manufacturing Share of LF	18.31	32.57	8.95	23.16
	(24.01)	(23.35)	(23.12)	(21.02)
Male Suffrage	-16.68	-19.45*	-26.57***	-29.57***
	(11.28)	(11.44)	(7.62)	(7.58)
Federalism	4.31	1.47	3.96	1.58
	(2.73)	(2.56)	(2.65)	(2.38)
R Squared	0.62	0.59	0.64	0.62
Country-Decades	101	101	105	105
Decade Effects	YES	YES	YES	YES

Significance levels: * p<0.10, ** p<0.05, *** p<0.01.
Panel-corrected standard errors below OLS coefficients.

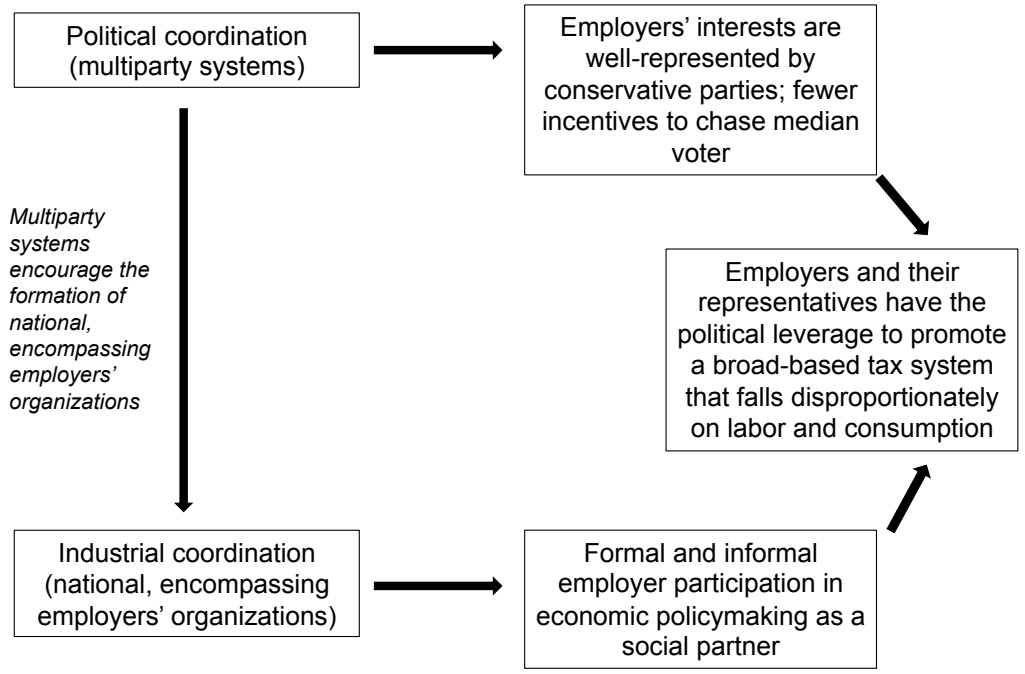
Figure 1: The Puzzle of Tax and Welfare Systems



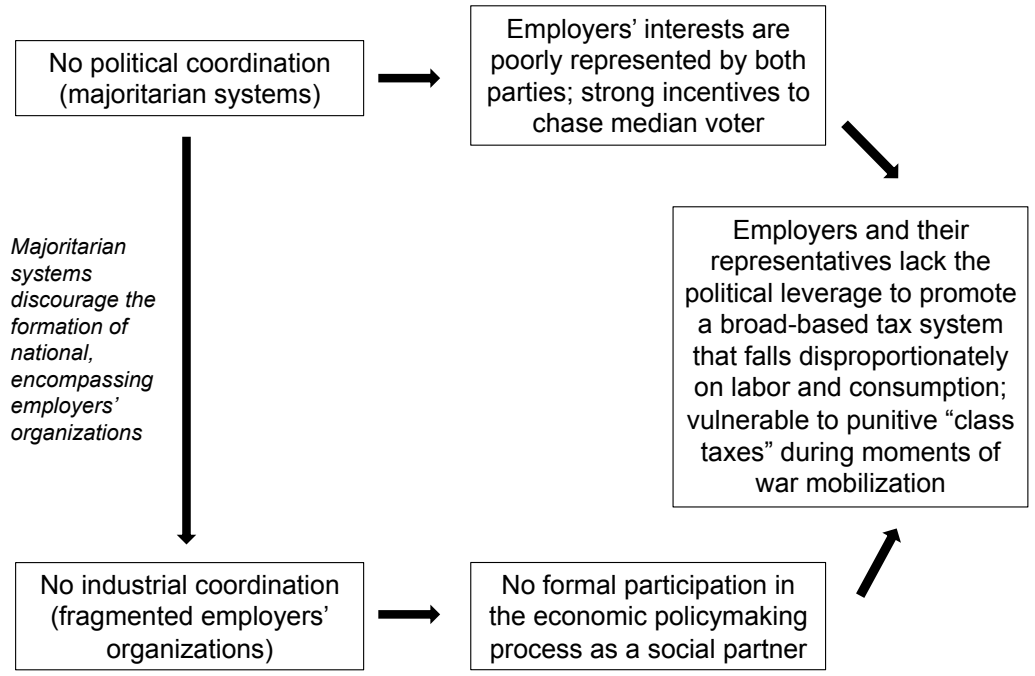


Note: Authors' analysis of OECD data. Tax progressivity refers to the concentration coefficient of household taxes (computed in the same way as the Gini coefficient), so that a value of zero means that all groups pay an equal share of taxes. Tax payments based on household surveys.

Figure 2: Two Models of Tax Politics

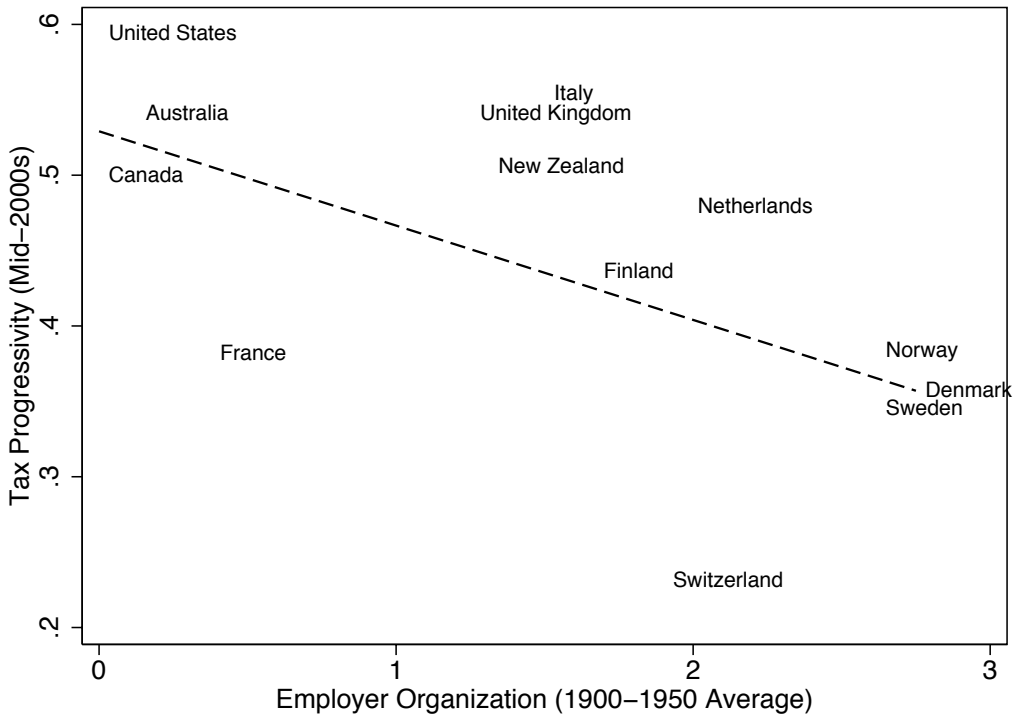


State-building tax politics in countries with industrial and political coordination



Crisis-mobilization tax politics in countries without industrial and political coordination

Figure 3: The Persistent Legacy of Early Employer Organization on Tax Progressivity



Note: Authors' analysis of OECD data and Martin and Swank (2012) data. Tax progressivity refers to the concentration coefficient of household taxes (computed in the same way as the Gini coefficient), so that a value of zero means that all groups pay an equal share of taxes. Tax payments based on household surveys.