Acknowledgments:

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Since the 1980s, notable corporate tax rate reductions and the elimination of tax allowances have occurred throughout the rich democracies. Scholars agree that tax competition for mobile assets shapes this transformation. Yet, the form of tax competition and the role of domestic institutions in mediating it is unclear. I build on past work and argue that tax competition is heavily influenced by the (Stackelberg) leadership of the United States. As opposed to strategic (Nash) competition among multiple competitors, the U. S. adoption of the neoliberal tax model engendered significant competitive responses from other nations. At the same time, domestic institutions, especially the degree to which the nation is a coordinated versus liberal market economy, should be central to incumbent appraisal of constituency, transactions, and economic costs as well as potential political and economic benefits of reform. I draw on a wealth of new political and economic data and test these propositions with models of 1982-to-2008 tax rate change in 18 capitalist democracies. I find that rising trade openness and capital mobility place general downward pressures on tax rates, that Stackelberg leadership best describes the tax competition that emerges, and that economic coordination slows the pace of neoliberal reforms. Also, high public debt, left-leaning median voters, and institutional veto points significantly constrain neoliberal tax reform.
Neoliberal reforms in taxation have spread extensively across the developed democracies since the 1980s (e.g., Swank and Steinmo 2002; Genschel and Schwartz 2011). Policy makers have altered the magnitude of tax rates, the relative emphasis on equity and efficiency, and the use of tax policy to accomplish collective goals: corporate and personal income tax rates were scaled back, the number of brackets were notably cut and inflation-indexed, and tax-based credits, allowances and exemptions were eliminated or reduced to broaden the tax base. Trends toward market-friendly tax structure have been particularly pronounced in the area of corporate income taxation (Ganghoff 2004).

In the current paper, I extend my past work (Swank and Steinmo 2002; Swank 2006) and address the question of why virtually all developed capitalist democracies shifted to market-conforming corporate tax policy.1 Past research offers some answers to this question. Reflecting the broader literature, my own work has shown that corporate tax reform is, in part, a response to low domestic investment and profitability as well as domestic fiscal and political forces (Swank 1998; Swank and Steinmo 2002). Extant research, especially the “first generation” of studies on the tax impacts of globalization, has also shown that trade openness and capital mobility hasten cuts in statutory and effective corporate tax rates (for a synoptic review see Leibrecht and Hochgatterer 2012).

More recent work, however, has introduced and addressed two sets of important (and yet

1 Given that the analysis focuses on the play of democratic institutions and presupposes relatively high levels of capital mobility, the range of nations is limited to the developed democracies. Data limitations further pare the sample down to 18 nations: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom, and the United States.
unanswered) questions (Basinger and Hallerberg 2004; Devereau et al 2008; Hays 2003; 2009; Plümper, Troeger, and Winner 2009; Swank 2006). First, these studies theorize and test competing, complex models of strategic interdependence between nations. These newer studies ask what form does tax competition for mobile capital take? Most studies allow for some type of spatial policy diffusion as nations respond to policy change in similarly positioned political economies (e.g., Franseze and Hays 2008). Some scholars argue that competitor nations strategically act on the basis of recent political and economic signals and simultaneously set tax rates on mobile assets in a Nash competitive game (e.g., Basinger and Hallerberg 2004); I have argued that both theory and the empirical record since the 1980s point to the predominate role in tax competition of the mid-1980s first move of the United States, the world’s dominant economy, and the subsequent competitive responses of other nations (Swank 2006).

Second, recent studies of corporate taxation raise the issue of how domestic politics and institutions matter to the pace and depth of tax policy change. Democratic political dynamics and political institutions should be important. For instance, Hays (2003; 2009) has stressed that the historically low taxes of capital-poor consensus democracies actually allow policy makers in these polities to respond to capital mobility with increases in taxes on mobile assets. Others have stressed that the degrees to which the median voter has shifted right (or societal fairness norms have weakened) and right-of-center parties have governed in recent years should be consequential for the pace and depth of tax policy change (Basinger and Hallerberg 2004; Plümper, Troeger, and Winner 2009; Swank, 2006). In addition, the extent to which the domestic political economy is composed of coordinated or uncoordinated market institutions should significantly condition the pace of neoliberal reforms (Swank 2006).
I organize the analysis of these questions as follows. First, I comment in more detail on recent trends in taxation and more fully outline and juxtapose theories about tax competition and domestic institutional impacts on policy change. I then develop empirical models of tax rates on corporate income and assess these with 1982-to-2008 data from 18 nations. As most published work rarely extends far into the twenty-first century, an extension of analyses of policy impacts of tax competition and domestic institutions to 2008 is important: continued internationalization, political and institutional change, and significant reforms in taxation from the late 1990s to 2008 in several nations call for new analysis.

**Corporate Tax Policy Change in the Developed Democracies**

As scholars now commonly recognize, incumbent policy makers have significantly reformed national policies on corporate profits and capital income taxation since the early 1980s. The near universal structure of relatively high statutory rates and extensive use of tax instruments to target investment was significantly altered in virtually all nations. Figures 1 and 2 document the secular trends (see Note 1 on included nations). Policy makers reduced statutory corporate tax rates on average from 49 percent in 1982 to 28 percent in 2010. Yet, the cross-national variability of corporate statutory rates (as measured by the coefficient of variation) did not decline. After an initial up-tick in variability in the late 1980s (temporally corresponding to the differential responses to the mid-1980s market-conforming U.S. tax reforms), the early 1980s convergence around a “high-tax equilibrium” is largely recreated for a “low-tax equilibrium” in the 2000s.²

— Figures 1 and 2 about here —

² The rise in the coefficient of variation is modest. In fact, if one deletes Ireland where corporate taxes were dramatically cut in the 1980s and 1990s, the full-sample coefficient of roughly .22 in the 2000s falls to roughly .16.
Policy makers also eliminated or reduced various tax allowances that had significantly lowered effective corporate tax rates on less profitable enterprises and on reinvested profits (e.g., Boskin and McClure 1990; Ganghof 2000; Genschel 1999). Effective average tax rates on profitable corporations – rates that differ only moderately from statutory rates – were reduced from 42 to 30 percent between 1982 and 2005 (see Figure 2). Rates on less profitable enterprises declined from 34 to 25 percent during the same period. In addition, illustrating the cuts in tax allowances, the proportional reduction in the statutory rate through allowances (measured by comparing the statutory rate to the rate paid by less profitable corporations that are eligible for many of these allowances) declined from 31 to 22 percent between 1982 and 2005.3

These tax policy changes reveal, in part, a long-term shift in policy maker thinking about optimal tax structure. The system of high statutory rates and targeted investment incentives was once viewed as a means to foster both equity and growth; by the early 1980s the extant structure of taxation had become associated with unfairness, undue complexity, and inefficiency. By the mid-1980s, significant numbers of OECD governments had come to view the existing tax structure as the source of inefficient allocation of productive investment and lost tax collections; tax rate cuts and base-broadening were commonly seen as mechanisms to promote both economic efficiency and tax revenues (Steinmo 2002; Swank and Steinmo 2002).

3 In addition, two points need to be clarified. First, depreciation for investments in equipment and plant has been everywhere maintained. Moreover, some countries have maintained non-trivial tax-based investment incentives. Second, personal income tax structure, which determines the tax burden on unincorporated enterprise and household capital income, has been similarly changed. For instance, top marginal central government rates declined from 56 to 37 percent between 1982 and 2008 in the typical OECD economy (OECD Taxation Database).
At the same time, it is important to point out that the pace and depth of policy reform varies across nations. Some nations (e.g., the Anglo democracies, France, and the Netherlands) cut statutory rates relatively quickly (and concomitantly reduced or eliminated tax-based investment incentives); this generally occurred in the mid- to late 1980s. On the other hand, tax rates remained constant or increased in several other political economies; significant market-oriented tax reforms did not occur until the late 1990s or early 2000's in, for instance, Italy, Germany, and Japan. It is also important to observe that despite notable and widespread cuts in statutory tax rates, governments collected on average roughly 30 percent of capital income in revenue in 1982 and in 2008 (see the Appendix for computation of effective capital income tax and data sources).

Thus, two puzzles emerge from the empirical record. The first entails the question of why the variable yet ineluctable transformation of the structure of corporate taxation occurred. This puzzle is the focus of the present paper. The second conundrum involves the issue of why effective tax rates on all capital income have exhibited such stability. This question has been addressed elsewhere (Swank and Steinmo 2002; Plümper, Troeger, and Winner 2009) and, for practical reasons, is not tackled directly here.\(^4\)

**Theories of Tax Policy Change**

The “globalization thesis” of tax policy change has been a prominent focus of extensive research. The common version of this thesis suggests that the capacity of mobile asset holders to

\(^4\) This tendency toward stability of course reflects, in part, the joint effects of rate cuts and base broadening, moderate to strong general capital income growth from the mid-1980s, and increases in taxes on other forms of capital such as immovable property in some nations.
move investment across national borders forces incumbent governments (regardless of ideology or constituency) to compete for investment. Taxes on capital (and generally mobile, high income earners) are progressively lowered while tax burdens on relatively immobile factors and activities (i.e., most labor and consumption) are raised. The majority of “first generation” studies on tax competition, in fact, report a negative association between general levels of trade openness and capital mobility on the one hand, and statutory and effective corporate tax rates on the other (Leibrecht and Hochgatterer 2012; Genschel and Schwartz 2011).

**Strategic Interdependence and Tax Competition**

As scholars have recently argued, however, there are theoretical and substantive reasons to believe that neoliberal policies also diffused across political economies (e.g., Simmons, Dobbin, and Garrett 2006; Weyland 2005); that is, national policy change is interdependent as one nation’s policy reform conditions policy choices in other nations. While multiple mechanisms for policy diffusion exist, I focus in the present work on the competitive pressures of markets as the most plausible source of the diffusion of corporate tax policy.\(^5\) Indeed, recent work on tax policy makes clear incumbent governments not only respond to commonly experienced economic pressures from international openness (the most rudimentary type of tax competition), they are also likely to take leads from policy change in competitor nations (e.g., Basinger and Hallerberg 2004; Ganghof and Eccleston 2004; Hayes 2003; Swank 2006).

\(^5\) For instance, Simmons, Dobbin, and Garrett (2006) argue that the diffusion of neoliberal policies and institutions may occur through coercion, rational learning, and social emulation as well as competition. In Swank (2006), however, I find little evidence of other forms of diffusion in the case of contemporary tax reform. For some new evidence on policy learning and the diffusion of market-conforming tax policy, see Jensen and Linstäd't 2012.
The United States as Stackelberg Leader. One highly plausible form of strategic tax competition is that of competitive national responses to the first move of a Stackelberg leader; the United States is the primary candidate to play this role. As I argued in earlier work (Swank 2006), the catalyst of contemporary tax policy reform is the U.S. 1986 Tax Reform Act. The law embodied the core principles of the new tax policy paradigm: top statutory corporate rates were cut over multiple years from 46 to 34 percent, the investment tax credit was suspended, and accelerated depreciation and a variety of other allowances were reduced.

The international implications of 1986 Act were clear. Enacted in the context of convergence in policy-maker thinking about tax policy and motivated by common concerns over economic stagnation, the reform “sent shock waves to other countries” (Tanzi 1987, p. 335). Tanzi, in fact, cites a variety of OECD, IMF, and country-specific sources to illustrate that in the wake of the U.S. reforms, policy makers in most advanced industrial democracies became deeply worried that lower marginal rates may result in a “capital drain” of mobile investment to the United States. At the same time, Tanzi does note that the U.S. tax reform did not start the process of diffusion of neoliberal tax policies: common economic challenges and the increasing acceptance of the new market-oriented tax policy paradigm had produced earlier reforms. The U.S. tax policy shift did, however, dramatically accelerate the process.

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6 A Stackelberg leader is formally a large, dominant economy that is a net lender of capital; I use the term more loosely to designate a large, dominant economy whose domestic markets and international flows are so large as to shape economic policy and performance in the pool of similarly situated economies.

7 Britain reduced corporate rates in 1984; Ireland cut corporate tax rates dramatically in 1981. Several other nations had enacted modest reforms in the direction of lower marginal rates and a larger tax base (e.g., Boskin and McClure 1990; Peckman 1988; Tanzi 1987). However, the large majority of nations had yet to act in 1986.
Other tax policy analysts echo Tanzi’s argument about the foundational role of U.S. tax reforms (Boskin and McClure 1990; Ganghof and Eccelston 2004; Pechman 1988). As these observers explain, policy makers in other nations quickly realized that significant reductions in the statutory corporate rate attracts and retains profitable foreign direct investment, retains the income from that investment in the low-tax jurisdiction by reducing the incentive to cross-nationally shift earnings through transfer pricing, and provides the opportunity for multinational enterprises to claim credits for taxes paid in the low tax jurisdictions. As most scholars analysts also note, the international impacts of corporate tax rate reduction should be especially large if initiated by countries such as the U.S. whose domestic markets and supply of foreign investment is very important for a large number of countries.\(^8\) In fact, the United States accounted for roughly 40 percent of all foreign direct investment inflows and 50 percent of all portfolio capital investment inflows in the developed democracies at the beginning of the 21\(^{st}\) century; in terms of bilateral capital flows it was the most important host and source country for capital flows in the vast majority of developed democracies.\(^9\) As Ganghof and Eccelston (2004, p. 523) observe in their synoptic review of the literature on these points: “These ... mechanisms go a long way in explaining the strong downward trend in CT (corporate tax) rates after the U.S. tax reform.

\(^8\) Two other points are in order. As tax allowances also produce a lower effective tax rate on marginally profitable investment, the statutory rate becomes particularly important in attracting and retaining clearly profitable international investment. As governments of source countries do not give tax refunds for taxes paid in relatively high tax jurisdictions, there is a strong incentive to reduce rates below those in source countries that supply ample capital investment (Ganghof and Eccelston 2004).

\(^9\) On shares of developed country inflows, see IMF 1998. For data on bilateral capital flows, see OECD (various years).
Nash Games of Competitive Strategic Interdependence. Basinger and Hallerberg (2004) have offered what is arguably the most plausible alternative to a Stackelberg model of the transformation of corporate taxation. They propose a Nash-type game of strategic interaction where tax reforms of nations are chosen simultaneously. Significant uncertainty exists with regard to other nations’ likely tax reforms (and for the likelihood that reforms will be rewarded by capital investment). Each nation’s effort at tax reform is determined by domestic political and economic costs; these take the form of constituency costs (e.g., citizen backlash over perceived attacks on fairness) and political transactions costs such as those generated by negotiations over policy reform among ideological distinct partners in coalition governments. Economic payoffs for tax cuts are affected by transactions costs on capital such as those created by capital controls.

At the same time, national policy makers must simultaneously weigh tax reform effort in other nations. They monitor competitors with respect to constituency and political transactions costs as well as constraints on capital mobility. Shifts in the ideological position of the incumbent government (or more fundamentally the median voter), declines in ideological distance among government coalition parties, and liberalization of capital controls all signal reduced friction in tax policy reform effort in competitor nations. The game is played and policy makers adapt positions based on payoffs and new conditions. I will assess below the Basinger and Hallerberg model along side the Stackelberg model as well as other types of tax competition.

Democratic Institutions and the Spread of Neoliberal Tax Reform

Domestic political forces and institutional structures should influence the pace and depth of neoliberal tax policy reform. Politics and institutions – for instance, constituency and political transactions costs – should directly shape tax policy change. These factors should also condition
policy-maker responsiveness to international pressures such as changes in competitors’ tax policies and in U.S. taxation. I stress three models of domestic political institutional mediation of international tax competition. First, Hayes (2003; 2009) draws on the literature on policy making within consensus democracies to argue that consensus democratic institutions in relatively small and capital-poor polities – democracies characterized by proportional representation, many effective parliamentary parties, oversized cabinets and related characteristics of Lijphart’s (1999) executives/parties dimension of consensus democracy – have traditionally enacted low levels of capital taxation. This is so because business parties are guaranteed representation by consensus institutions and because dramatic redistributions of income possible in majoritarian systems by a single party government of workers are eschewed in consensus democratic contexts. Hayes theorizes that during the era of international capital mobility, (typically capital rich) majoritarian polities will reduce tax rates in response to capital mobility while consensus democracies may have room to increase capital tax burdens to achieve optimal revenue-raising tax levels.

The second model has been prefigured in earlier discussion. Hallerberg and Basinger (1998) have argued that multiparty legislatures and cabinets and horizontally and vertically fragmented political authority create opportunities for opponents of policy change to slow or block reform. That is, there are significant political transaction costs in presence of partisan and institutional veto points. In addition, as noted above, Basinger and Hallerberg (2004) have also argued that constraints on policy change are created by domestic “constituency costs” such as ideological resistance of electorates to market-oriented reforms. Relatedly, Plümper, Troeger, and Winner (2009) stress that societal fairness norms (for instance, public support for redistribution) will constrain the reduction of tax burdens on corporations and capital income. Thus, in
empirical models developed below, I account for the direct tax policy effects of consensus
democratic institutions as well as constituency costs and other political transactions costs; I also
test whether or not these factors mediate pressures from international tax competition.

*Varieties of Democratic Capitalism.* In my preferred model of tax competition and
democratic institutions, I assume that all policy makers seek to maximize – subject to political
economic and institutional constraints and thus common situational tradeoffs – economic
performance and political support. In the short term, incumbent governments will also strive to
maintain revenue levels to fund preferred programs as well as limit public deficits and debt. Left
and Christian Democratic governments, however, have different intermediate and long-term
targets for the level and distribution of taxes than center and, especially, right parties. Ultimately,
the likelihood of a shift to neoliberal tax policy should be a function of the relative weights
assigned by policy makers to the expected political and economic benefits and costs associated
with neoliberal tax structure. By “relative weights,” I mean the assessment of the benefits and
costs associated with the shift to neoliberal tax structure in light of basic policy priorities (i.e.,
economic performance and political support) and of the probability that the benefits and costs
will materialize. These assessments, and the ultimate decision to adopt or not adopt neoliberal
reforms, should be, in turn, influenced by the foundational institutions of the political economy,
namely, the degree to which markets are coordinated by employers, labor and the state.

To explicate the argument, one can use a Samuelson-type rule for optimal policy change:
tax rate reductions will proceed until $MB_{POLECON} = MC_{POLECON}$, where $MB$ and $MC$ refer to
marginal political and economic benefits and costs of reform. In this a highly stylized model of a
complex process of policy choice, $MB_{POLECON}$ and $MC_{POLECON}$ are given by the following:
\[ MB_{POLECON} = b_1(\sum INVEST) + b_2(\sum SUPPORT) \]

\[ MC_{POLECON} = \tau_1(\sum CONSTITUENT) + \tau_2(\sum TRANSACT) + \tau_3(\sum INEFFICIENCY), \]

where, \( \sum INVEST \) is the sum across all households of the income and employment gains from greater capital investment and \( \sum SUPPORT \) is the sum across all households of the increase in vote support and government performance approval (that flow, for instance, from credit-claiming by incumbents). \( \sum CONSTITUENT \) is the sum of negative ideological/normative effects across households of tax reforms, \( \sum TRANSACT \) is the sum across households of political costs of negotiating change, and \( \sum INEFFICIENCY \) is the sum for society of negative economic effects of neoliberal reforms (as explained below). The parameters \( b_1 \) and \( b_2 \) are decreasing functions of coordination of markets and the parameters \( \tau_1 \), \( \tau_2 \), and \( \tau_3 \) are increasing functions of coordination.

To elaborate, according to the familiar framework of Soskice and collaborators (e.g., Hall and Soskice 2001; Kitschelt et al 1999; Soskice 1999), countries may be classified by the extent to which employers (labor and the state) develop institutions of coordination in the face of firms’ control, information, and collective action problems in purely competitive markets. Labor and industrial relations problems (e.g., negotiating the wage share) are addressed through national or sectoral collective bargaining among relatively well-organized employer and labor associations. Labor-management relations within the firm are organized by works councils and other cooperative enterprise arrangements. Collective business goods problems are addressed through trade associations, enterprise consortiums, and other cooperative firm associations that organize research and development and technology transfer, export and marketing strategy, vocational training, some aspects of competition and pricing, and other activities. Close coordination of finance and producers through bank finance and cross-holding (as apposed to equity markets)
foster long-term development (i.e., incremental innovation) of high quality, diversified consumer and industrial goods. Coordination of economic activity by business is supported by stable long-run labor-business relations and by state regulatory frameworks.

Traditionally interventionist tax policy – the “high tax equilibrium” of high rates and extensive investment allowances – has played two key roles in coordinated economies. First, it has generally facilitated state promotion of long-run growth through regional and sector targeting of investment during periods of economic modernization and restructuring. In the Nordic countries, for instance, high statutory rates on uninvested profits coupled with general investment reserves, investment tax credits, and other incentives for saving complement other supply-side policies (credit and active labor market policy) in promoting smooth business cycle adjustment and high employment (Huber and Stephens 1998). Second, tax policies of high statutory capital tax rates (and high employer social insurance contributions) have been instrumental to the maintenance of labor’s acceptance of ownership and managerial prerogatives, general social solidarity, and long-term stability in labor and industrial relations (Swank 2002, Ch. 5).

In terms of the costs of neoliberal tax structure, policy makers in coordinated market economies (hereafter CMEs) face potentially high constituency costs with reform as citizens commonly display more collectivist and pro-redistributive attitudes than those in liberal market economies (hereafter LMEs). For instance, the simple bivariate correlation between support for redistribution by the median voter and coordination across the 18 focal nations in 2008 is .43, p < .05. (See Appendix on measurement details and data sources for all variables.) Political transactions costs are also high; CMEs are characterized by consensus political institutions that foster inclusiveness of societal interests and diffuse power across multiparty legislatures and
cabinets (e.g., Lijphart 1999; Martin and Swank 2012). CMEs are also characterized by extensive national and sectoral delegation of policy making power to employers and labor. As such, national policy makers in CMEs typically face an array of bipartite and tripartite institutional forums that accord opportunities for opponents to block policy change.

Neoliberal policy reform may also create inefficiencies in CMEs. As Hall and Soskice (2001) and Hall and Gingerich (2009) have argued, elements of national economic models are functionally interdependent. Fundamental reforms in one area have significant implications for the performance of other aspects of the model. More concretely, business, labor, and the state have interests in the preservation of the basic elements of the extant model (Soskice 1999). For instance, as Thelen (1999) demonstrates for the case of Germany, employers in sector-coordinated market economies may not embrace (or they may even oppose) significant neoliberal reforms when faced with the uncertainty those reforms generate. In fact, German employer support for maintenance of basic features of the generous welfare state (and its funding arrangements) was arguably rooted in the interests of business in promoting long-term stability in the labor and industrial relations system (Swank 2002, Ch. 5). These interests are grounded in the fact that producers in CMEs rely on stable production to maintain share in highly competitive international markets for high-end industrial and consumer goods (e.g., Martin and Swank 2012, esp. Ch. 11). Generally, the greater the coordination of the economy, the higher the economic uncertainty to policy makers from adoption of market-conforming tax policy reforms.

With respect to benefits of neoliberal tax policy, the potential for economic performance-based gains in votes and incumbent public approval in CMEs is more limited than in LMEs. This is so because, as noted, CMEs have consensus-based institutions as opposed to majoritarian
institutions. And, as extensive research on economic determinants on votes and approval has shown, consensus institutions such as multiparty cabinets blur macroeconomic policy responsibility and, hence, blunt the strength of economic effects on the vote and approval ratings (see the synoptic survey in Lewis-Beck and Stegmaier 2008). With regard to economic benefits of tax policy reform, CMEs (as LMEs) enjoy potential income and employment gains from capital inflows and related economic outcomes of tax competition (e.g., inflows of taxable profits). Yet, while formal capital controls have largely been abolished in the CMEs, several core features of the CME model may be in tension with global market-driven allocation of capital (that is fostered by tax competition). For instance, significant formal and informal impediments to mergers and takeovers, continued reliance on long-term bank finance for incremental innovation, and other persistent features of coordination over the contemporary era certainly mitigate some of potential market efficiency effects of successful tax competition in CMEs (that are expected to materialize in LMEs).\(^{10}\) In sum, I expect the parameters capturing political and economic benefits of neoliberal tax reform to decrease with coordination; those parameters that gauge political (constituency and transactions) and economic costs of reform should increase with coordination.

**Empirical Models of Tax Policy Reform**

\(^{10}\) While both CMEs and LMEs have comparative advantages in global markets (Hall and Soskice 2001), the logic of institutional complementarities suggests tax competition may produce better outcomes in LMEs than mixed cases or CMEs. Research has shown, for instance, reforms that introduce or extend short-term market forces in one area (e.g., capital markets) while coordination persists in another (e.g., labor and industrial relations) may result in lower economic growth (e.g., Hall and Gingerich 2009; Martin and Swank 2012).
To develop tests of these hypotheses on tax competition and domestic institutions, I draw on Swank and Steinmo (2002) and Swank (2006) to establish a basic model. In these papers, tax rates were modeled as a function of internationalization (international capital mobility and trade openness), domestic economic pressures (the rise of long-term unemployment), and domestic budgetary dynamics (public sector debt effects on taxing). The general model also included controls for economic growth, profits, and investment — themselves measures of important aspects of domestic economic performance — as well as partisan control of government and prior levels of tax rates. Swank and Steinmo (2002) estimated the models with 1981-1995 data for 14 developed democracies; Swank (2006) extended the analysis to the 1982-to-1998 period and incorporated policy interdependence by assessing diffusion processes.

In the present paper, I extend the sample a full decade – to 1982-2008 – and use data from 18 advanced nations; the theoretical and substantive scope of the paper is expanded to include new dimensions of tax competition and domestic politics and institutions. I focus here primarily on statutory corporate tax rates and do so for a number of reasons. First, statutory corporate rates are strongly correlated (.90-plus for the current sample) with effective average tax rates on highly profitable enterprises (see Figures 1 and 2); investment from these corporations should be the focus of much international tax competition. In addition, statutory corporate tax rates are a

\[ \text{[11] This paper significantly extends Swank (2006) by adding a whole decade of data (and one to two countries for most analysis). It also considers a more sophisticated model of tax competition in the form of Basinger and Hallerbergs’ Nash game of strategic interdependence, more fully develops the theory for institutional mediation of tax competition, and considers a broader array of political and institutional dynamics. Models of corporate taxes are generally estimated with 1982 to 2008 data for 18 nations (see Note 1). Models of impacts of U.S. reforms necessitate exclusion of the United States for some analyses.} \]
direct indicator of policy and thus are appropriate to tests of hypotheses such as those highlighted here; alternative measures such as “Mendoza-style” estimates of tax burdens on capital, labor, and consumption are derived measures of policy from national account data, are subject to significant change across several alternative sets of assumptions, and are affected by economic dynamics and structures (e.g., Carey and Rabaesona 2002). As a check on the robustness and applicability of the findings, I estimate final models of statutory rates with several measures of effective average corporate tax rates.

The basic linear model of corporate tax rates is given by:

\[
\text{Tax Rate}_{i,t} = \alpha + \varphi (\text{Tax Rate})_{i,t-1} + \beta_1 (\text{International Capital Mobility})_{i,t-1} + \beta_2 (\text{Trade Openness})_{i,t-1} + \beta_3 (\text{Coordination})_{i,t-1} + \beta_4 (\text{Consensus - Partisan Veto Points})_{i,t-1} + \beta_5 (\text{Institutional Veto Points})_{i,t-1} + \beta_6 (\text{Median Voter})_{i,t-1} + \beta_7 (\text{Right Party Government})_{i,t-1} + \beta_8 (\text{Unemployment})_{i,t-1} + \beta_9 (\text{Public Debt})_{i,t} + \beta_{10} (\text{Growth})_{i,t-1} + \beta_{11} (\text{Profits})_{i,t-1} + \beta_{12} (\text{Investment})_{i,t-1} + \varepsilon_{i,t},
\]

This model includes the basic exogenous factors discussed above; it also accounts for core institutional variables. I use a standard-score index of coordination across four core dimensions, namely, collective bargaining, enterprise-level labor-management relations, finance-producer relations, and firm organization for collective business goods. (See Appendix.) In addition, I include institutional veto points (a standard score index of federalism, bicameralism, separation of powers, and judicial review), and I use two indicators of partisan veto points. The first taps the presence of Lijphart’s (1999) parties-executives dimension of consensus democracy. The second variable measures the maximum ideological distance between governing parties and thereby
follows work on the policy impacts of partisan veto players (e.g., Tsebelis 1999). The latter measure of partisan veto points is particularly appropriate in assessing the tax policy effects of recent changes in a competitor’s transactions costs (Basinger and Hallerberg 2004). For domestic constituency costs (and constituency costs in competitor nations), I use primarily the Kim-Fording (1998; 2003) measure of the ideological position of the median voter.\footnote{I also substitute alternative measures of the left-right orientation of the median voter such as the support for redistribution by the median voter.}

The basic model of EQ 1 assumes independence in national responses, or that the shift to a market-conforming tax model is a function of varying national responses to common domestic and international political economic forces; policy makers may respond to perceived competitive pressures associated with higher trade and capital openness, but they do so independently of specific policy choices in other nations. We want, however, to allow for and assess the role of alternative forms of strategic interdependence among governments. Thus, I test the proposition that policy makers monitored and responded to the first move of the globe’s dominant economy (that is, the Stackelberg leader):

\[
\text{Tax Rate}_{i,t} = \alpha + \varphi (\text{Tax Rate})_{i,t-1} + \varphi_{\text{us}} (\text{U.S. Tax Rate})_{i,t-1} + \\
\beta_1 (\text{International Capital Mobility})_{i,t-1} + \ldots \ldots \ldots \\
\beta_{i,t} (\text{Investment})_{i,t-1} + \epsilon_{i,t},
\]

where $\varphi_{\text{us}}$ is the coefficient for (U.S. Tax Rate)$_{i,t-1}$.

To test Basinger and Hallerberg’s Nash model of strategic interdependence, I estimate the effect of competition-weighted shifts in the ideological position of the median voter (“constituency costs” of tax reform), the degree of ideological distance among governing parties.
Thus, the empirical model for the Nash game of strategic interdependence is:

\[
\text{Tax Rate}_{i,t} = \alpha + \varphi (\text{Tax Rate})_{j,t-1} + \varphi_{c1} (\text{Median Voter competition weighted } j-n)_{i,t-1},
\]

\[
+ \varphi_{c2} (\text{Ideological Distance competition weighted } j-n)_{i,t-1},
\]

\[
+ \varphi_{c3} (\text{Capital Liberalization competition weighted } j-n)_{i,t-1},
\]

\[
\beta_1 (\text{International Capital Mobility})_{i,t-1} + \ldots + \beta_{12} (\text{Investment})_{i,t-1} + \epsilon_{i,t},
\]

where these three signals of tax reform effort in each of \( j-n \) countries are weighted by the correlation at \( t-1 \) between some country \( j \)'s patterns of trade and the focal country's \( i \) pattern of trade. The pattern-of-trade variable for any country at \( t-1 \) is the inflow and outflow of merchandise trade relative to GDP for the nation and each of the other (17) developed capitalist democracies. Thus, if say Sweden and Denmark's pattern of trade at some time point, \( t-1 \), is correlated at .93, the weight for past policy in Sweden, if the point of interest is tax policy in Denmark at time \( t \), is .93. The variable, \( (\text{Tax Reform Effort Signal competition weighted } j-n)_{i,t-1} \), is simply the mean of these weighted lag signals of reform effort for countries \( j-n \).13

I also explore an additional set of tax competition hypotheses. I assess the impact of East European nation states’ tax reforms (for instance, the widespread adoption of the flat tax) on rich European nations’ corporate tax rates. I also test more basic formulations of strategic

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13 It is important to note that the use of bilateral trade data also proxies bilateral capital stock and flow relations between two nations. For instance, trade for country \( i \) with some other country \( j \) is highly correlated with country \( i \)'s capital stock position with \( j \) (i.e., inward direct investment in \( i \) by \( j \) and outward direct investment in \( j \) by \( i \)). For instance, the simple cross-national correlation between trade with the US and capital stock position with the U.S. (1989-1991 means) is .689 \((p<.01)\) for OECD nations. The highly significant correlations for bilateral trade and capital flows for any pair of economies at \( t \) time points range from roughly .5 to .98 for nations in the sample.
interdependence by estimating the effect of competition-weighted tax rates themselves at time $t$ (that is, a conventional spatial lag) in place of signals of tax reform effort suggested by Basinger and Hallerberg. In addition, I shift from a pure strategic interdependence framework (where policy makers assess each others’ likely actions simultaneously) to a policy diffusion framework where policy makers respond to recent, observed policies in competitors. I comment on results from this analysis below.

After tests of these specifications of tax competition, I focus on the possibility that tax competition is mediated by domestic institutions. First, I address Hays’ (2003; 2009) argument by examining whether capital mobility’s impacts are conditioned by the strength of consensus democratic institutions. I then assess whether tax competition (for instance, pressures from prior US rate change) is mediated by coordination as well as domestic political and institutional conditions (the magnitude of transactions costs and so forth). These tests are made through interaction analysis.\(^\text{14}\)

It is also important to mention two specification issues. First, statutory rates (and effective rates that reflect statutory changes) at time $t$ invariably reflect policy decisions at time $t-1$. Even for those instances where rates at time $t$ are the product of earlier, multi-year policy choices, policy makers ratify or modify those rate changes in $t-1$. Thus, when examining forms of Nash

\(^{14}\) Interaction analysis is well suited for examining the conditional effects of external forces on domestic political or policy outcomes. The significance test for the interaction term indicates whether differences in the effect of $X_2$ (say a change in US rates) at different levels of $X_1$ (say coordination) are significantly different from zero. The interaction term itself, when multiplied by a value of $X_1$ and added to the coefficient of $X_2$, becomes the slope for the effect of $X_2$ at that level of $X_1$. Standard errors for computing the significance of the effects of $X_2$ at some level of $X_1$ are easily calculated (Friedrich, 1982; Kam and Franzese 2009).
strategic interdependence, one has to examine other nations’ signals of likely change in tax effort at $t-1$. In the Stackelberg model, the leader moves first (i.e., in $t-1$). Second, for theoretical and substantive reasons it is useful to assess both long-term relationships and short-term departures from equilibrium engendered by tax competition; thus, in the context of the lagged dependent variable formulation, I specify levels and changes of strategic tax competition variables. (Analysis with only levels or changes does not alter the conclusions presented below.)

The models are estimated by OLS regression analysis with panel correct standard errors. A lagged dependent variable is included to explicitly model temporal dynamics, to better assess long- and short-term effects of strategic tax competition, and to minimize serial correlation of errors. Overall, this estimator will typically address common problems of contemporaneously correlated, crossationally heteroskedastic, and serially correlated errors present in pooled time series, cross sectional data (Beck and Katz 1996). To examine robustness of findings, I also estimate fixed effects OLS with panel correct standard errors and full error correction models.¹⁵

Findings

Results of the estimation of Equation 1 for corporate tax rates are presented in the first column of Table 1. The tax effects of common international and domestic forces are as follows. The level of trade openness and liberalization of international capital controls in prior years are associated with reductions in statutory corporate rates. The substantive effects of trade and

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¹⁵ I do not adopt the general error correction method as the principal estimation technique because of the simplicity and ease of presentation of the specified dynamic model; moreover, we can reject the null hypothesis that units roots exist in the panels according to several unit root tests. Error correction models serve as a check on the robustness of the simple dynamic models. See Beck and Katz (1996) and Beck (2001) on this estimator.
capital openness are modest: a 10 point increase in trade openness (exports and imports as percentages of GDP) results in a .2 decrease in statutory rates. A 10 point rise in Quinn’s index of capital liberalization (0.0 to 100 scale) results in a .2 to .5 percent decline in rates (depending on model specification). Changes in trade and capital openness, when added to the column one equation, are not significant (and not reported to simplify presentation). Taken together, however, these findings suggest that rises in economic internationalization engender reductions in corporate tax rates as policy makers sought mobile assets and general efficiency gains.

– Table 1 about here –

With respect to domestic political and economic forces, the ideological position of the median voter (0.0 to 100 point scale where higher scores denote more collectivist orientations) and the extent of institutional veto points directly constrained tax policy change. Where median voters lean left and where power is institutionally dispersed, corporate tax burdens do not fall as quickly as in polities with concentrated authority and with right-leaning voters.\footnote{On the other hand, partisan veto points (as measured by either consensus democracy or ideological distance between governing parties), right government, and coordination did not directly shape tax reform. With respect to domestic fiscal and economic forces, public sector debt constrains neoliberal tax reforms: for each additional 10 points of public debt (percentage points of GDP),}

\footnote{Drawing on data from the International Social Survey Program, we can compute the support for redistribution for the median voter from the mid-1980s to 2008 in a sub-sample of 14 nations. This measure, as a proxy for fairness norms that create constituency costs for neoliberal reforms (Plümper, Troeger, and Winner 2009), was substituted for the Kim-Fording estimate of the ideological position of the median voter. It typically fell just short of significance at the .10 level in a variety of alternative specifications of the basic model.}
tax rates increase by .2. Overall, the findings on domestic constituency and transactions costs as well as fiscal constraints are highly robust across subsequent models of corporate tax policy.

The second through four columns of Table 1 report results of tests of competing models of strategic tax competition. Again, to more precisely assess both long- and short-term effects, I examine the impacts of levels and changes in tax competition variables. First, the Stackelberg leadership model of column two indicates that U.S. corporate tax reforms have been significant sources of subsequent policy changes in other developed democracies: a one point cut in levels of U.S. rates results in a .2 point cut in levels of tax rates in other advanced political economies. The column three model also generates support for the Nash game of strategic competition among competitors. As levels of partisan veto points and left ideology weaken in competitors (that is, as transactions and constituency costs fall), incumbent policy makers cut rates. They also cut rates when capital control liberalization increases in competitor nations. Finally, short-term changes in competitors’ tax reform climate do not generate tax cuts in the focal nation.

I assess a mixed Stackelberg-Nash model in the fourth column of Table 1. As the table indicates, once U.S. tax reforms are accounted, signals of likely tax reform effort in competitor nations are insignificantly related to statutory corporate rates. Re-estimation of this model sequentially with individual signals of competitor tax reform effort produced the same results. I return to a fuller consideration of the impacts of U.S. tax reform and domestic constituency and transactions costs below.

In addition to these models, I consider several alternative forms of tax competition: using the column two equation as a baseline, I assessed effects on rich European nations’ rates of East European tax reforms. I use the proportion of East European countries adopting flat taxes on
corporate and personal income as the core measure; its effect on developed nation corporate rates is significant (that is, dramatic cuts in East European rates seemingly put downward pressure on rich European country rates). I also tested for effects of contemporary and recent tax rate reforms in competitor nations. While the impact of a conventional spatial lag is insignificant (that is, effects of levels or changes in competitors’ rates time \( t \)), the short-term effect of recent, observed changes in competitors’ tax rates (from \( t-2 \) to \( t-1 \)) does have a significant effect on statutory tax rates in the focal country. The coefficient for change in competitor rates – an index of short-term impacts – is roughly .4. The impact of East European tax reform, however, does not hold when moving to models that include interactions between tax competition and domestic institutions; the short-term effect of recent changes in competitors’ rates also proves non-robust when one shifts to alternative measures of effective average tax rates. Thus, to keep presentation of complex findings as simple as possible, I do not add and retain the East European and competitors’ past tax rate change variables in empirical models. These exclusions do not affect any reported findings. That said, one should keep in mind that recent changes in competitors’ rates may have short-term impacts on a focal country’s statutory rates.

17 The actual form of this test is an interaction between long-lived west European democracies and the proportion of east European post-communist regimes that had adopted a flat tax structure by a given year. I also used rich west European countries that bordered Eastern Europe and annual averages of corporate statutory rates in Eastern Europe in alternative versions of this test. All these specifications produced a substantively similar, significant effect of East European tax policy on rich west European statutory rates.

18 This finding is consistent with the simple pattern in statutory rate change. For instance, after Anglo democracies (a few others) reformed rates in the 1980s, Nordic countries generally initiated reforms in the early 1990s and the continental countries (and Japan) acted to reform statutory rates in the late 1990s and 2000s. Thus, in
I present the results of estimation of models of politically and institutionally mediated tax competition effects in Table 2. The column one model assesses whether the general corporate tax rate impact of capital control liberalization is mediated by consensus institutions (as suggested by Hays 2003; 2009). Columns two and three present tests of the hypotheses that domestic political transactions and constituency costs condition the impact of external pressures of tax competition (in the form of Stackelberg leadership effects of U.S. tax policy). As the table reveals, the interaction between capital control liberalization and consensus institutions is insignificant. On the other hand, both consensus democracy (as one indicator of partisan veto points) and the ideological position of the median voter mediate competitive pressures from recent U.S. tax rate changes. In the case of both domestic political factors, changes in U.S. rates have diminishing and, eventually, negative effects on statutory rates; that is, a cut in U.S. rates engenders rate cuts in majoritarian polities and where the median voter leans rights, but these impacts dissipate when we move to consensus democracies and more collectivists electorates.

The fourth column presents tests of my central argument that where the institutions of addition to the central impacts of U.S. tax reform, general trade and capital openness, and domestic constituency, transactions, and fiscal costs, recent past tax reforms in competitors may matter to statutory rate change.

19 I also examined whether domestic institutions – consensus democracy, the median voter’s position, and coordination – mediated the impacts of signals of eminent tax reform in competitor nations. These tests produced null results.

20 Consensus institutions embody general partisan veto points (e.g., number of effective legislative and governing parties). Substitution of the ideological distance between governing parties produced insignificant interactions.
economic coordination are strong, tax effects of international competitive pressures should be weak or non-existent. As the table reveals, there is a significant (but substantively small) positive interaction between levels of U.S. tax rates and coordination (long-term effects), and a significant (and substantively large) negative interaction between changes in U.S. rates and coordination (short-term effects). Recalling the mathematics of interactions (see Note 14), the long-term impact of a one point change in levels of U.S. rates is (a significant) .1153 in LMEs; for CMEs, the long-term effect of U.S. Tax policy is actually higher than in LMEs at .3084. In the short-term, however, an additional cut of one point in U.S. statutory rates is associated with additional cuts of .64 in LMEs and a moderate increase in rates changes of .36 in CMEs. Figure 3 displays the marginal short-term effects of a one point cut in U.S. statutory rates for the prototypical CME and LME (see note 19). Taken together, these results suggest the following: in the long-term, all advanced capitalist democracies move with the U.S. in adoption of the market-conforming tax regime. In the short-term, however, there is substantial resistance to neoliberal tax reforms in CMEs; U.S. rate cuts might even be associated with modest increases in some CMEs. In fact, estimates of corporate tax rate change from these models fit the basic facts well: in the CMEs as a group, adoption of the neoliberal tax structure of lower rates and broader bases occurs five to 15 years after initial moves by U.S. policy makers; LMEs followed the U.S. immediately with tax

21 The equations for the long-term impact in levels in CMEs is: .2341 + .1062 (.70) = .3084; in LMEs: .2341 + .1062 (-1.12), where .70 is the mean 1985-1987 level of coordination in the CME proto-types Denmark, Germany, and Sweden and -1.12 is the 1985-1987 mean coordination in the LME countries of Australia, Canada, and New Zealand. For the short-term impacts of changes in U.S. rates, the equations for CMEs and LMEs are, respectively: .0244 + (-.5497[.70]) = -.3604; and .0244 + (-.5497[-1.12])= .6401.
reforms in the late 1980s. Some CMEs such as Italy actually increased rates in the wake of U.S. tax reforms. By the 2000s, however, all political economies moved to the structure of lower statutory rates and broader bases. (See below for a simple estimate of the composite effect of U.S. market-oriented tax reforms on tax policy in LMEs and CMEs.)

– Figure 3 about here –

The final pair of columns of Table 2 address the question of whether or not consensus institutions and the ideological position of the median voter play mediating roles independent of the ways in which coordination conditions international competitive pressures. That is, as noted above, highly coordinated political economies have high levels of consensus democracy and more collectivist median voters. As such, the findings of the second and third columns may reflect mechanisms subsumed within the operation of coordinated market institutions (such as corporatist labor and industrial relations). I test for this very possibility in the models of columns five and six. As the reported estimates indicate, it is indeed the case that in the presence of coordination, the independent mediation of tax competition by consensus institutions and the median voter disappears. In the end, the weight of the evidence suggests that coordination plays the central role in shaping assessments of the benefits and costs of neoliberal tax reforms by incumbent policy makers. (Left-leaning voters, institutional veto points, and public debt all still directly constrain corporate tax rate cuts.)

– Table 3 about here –

To assess the robustness of findings, I estimate the “final” model of statutory corporate

\[^22\] The correlations between coordination on the one hand and consensus democracy and collectivist median voters on the other are .65 and .36 (p < .0001) across some 500 country years of this study.
tax rates (the Stackelberg model with mediation by domestic institutions) for the effective average tax rate on “high profit” corporations (40 percent rate of return) and “low profit” corporations (10 percent rate of return) as suggested by Devereux, Griffith, and Klemm (2002). I also employ two additional estimators: Prais-Winsten regression (first-order autoregression) with panel-correct standard errors and country fixed effects. This estimator focuses attention of temporal covariation in levels of statutory tax rates and explanatory variables. I also report the results of a full error correction model of statutory tax rate impacts of levels and changes in all causal variables. These four estimations are presented in Table 3.

As the table reveals, the institutional mediation of international tax competition (in the form of Stackelberg dynamics mediated by economic coordination) is reproduced for both high and low profit enterprises’ effective average tax rates. So too are the findings that institutional veto points, left-leaning median voters, and fiscal imbalance constrain tax policy change. The only notable difference between statutory and effective average tax rate models is that effective rates on high profit enterprises seems more sensitive than other tax measures to domestic economic conditions, especially, recent trajectories of corporate profits. As to the alternative estimators of statutory rate models, the fixed effects model also largely reproduces core findings.

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23 Effective marginal corporate tax rates as estimated by Devereux, Griffith, and Klemm (2002) follow different crossnational and temporal patterns than statutory and effective average corporate rates. The “final” model of statutory rates presented here does not explain policy change in effective marginal rates very well (with key international and domestic variables often obtaining significance at only the .10 level or attaining t-statistics of roughly 1.0 and, hence, remaining largely insignificant). Devereux, Lockwood, and Redoano (2008) argue that statutory rates are most relevant in competition for profits, effective average rates for investment from new firms, and effective marginal rates for investment from established firms.
The impact of levels of U.S. rates and its interaction with coordination on levels of statutory rates in other countries is instructive. This equation effectively provides an estimate of composite long- and short-term effects of variations in U.S. rates on policy in other countries. Using the logic of interactions (and the prototype CMEs and LMEs from above), we can compute the total effects of a one percent cut in U.S. rates in LMEs and CMEs: in LMEs the aggregate effect of one percent rate cut in the U.S. is .9438 (.6572 + [-.2559 × -1.12]); in CMEs, the effect is .4781 (.6572 + [-.2559 × .70]). In other words, as I argued above, while all capitalist democracies ultimately shift to the market-conforming tax model, policy makers in CMEs face significant political and economic costs and more limited political and economic benefits. As such, they change tax policy more slowly and in ways less directly associated with leads offered by the U.S.\textsuperscript{24} Finally, I present a full error correction model in the fourth column of Table 3. This estimator essentially reproduces all the key findings of the “final” model of statutory tax rate change. Statutory corporate tax rates change in response to Stackelberg leadership dynamics as mediated by levels of coordination and in the face of resistance created by institutional veto points, left-leaning median voters, and fiscal stress.

**Conclusions**

During the past two decades, the tax treatment of corporate income has changed rather

\textsuperscript{24} It is important to note that while statutory corporate rates fell on average to just under 30 percent in the developed democracies by 2008, they remained at 38 percent in the U.S. The theory and empirical models developed here suggest that relatively strong declines outside the U.S. in public debt (until the 2008 global financial crisis) and increases in trade and capital openness since the 1980s contributed to further declines in corporate tax rates. So too did the relatively strong secular right-ward shifts in median voters and declines in coordination outside the U.S.
dramatically across the capitalist democracies. While the pace and depth of change is different across nations and time periods, corporate tax rates have been reduced and the tax bases broadened through reductions in investment credits and allowances in virtually all countries. In fact, not only have instruments and the settings of those instruments been altered, but the basic goals of tax policy have seemingly shifted from redistribution and interventionism toward efficiency (Swank 1998; Swank and Steinmo 2002; Swank 2006).25 How can one explain this significant shift to neoliberal tax policy?

The analyses presented in this paper offers some new insights, and they affirm key results presented in earlier work with new analyses of a larger sample of country years and of more dimensions of political institutions, tax competition, and their interactions. National policy makers responded to common international and domestic pressures. Increases in international integration of markets for goods, services and capital militated toward adoption of market-conforming tax structure; the room for maneuver by policy makers, however, was in all likelihood constrained by domestic constituency, transactions, and economic (e.g., fiscal) costs. I do indeed find substantial evidence that left-leaning voters, institutional dispersion of power, and public debt constrained neoliberal reforms. Yet, the shift to neoliberal tax structure was by no means solely a response by national policy makers to these common forces. Neoliberal tax policy diffused. Past changes in U.S. tax policy (and perhaps recent tax policy change in all competitors) significantly shaped tax policy reform in a particular nation. This was evident in more liberal market economies where the perceived relative political and economic benefits of following the United States offset the (relatively low) costs in LMEs of negotiating change across

\[25\] I use the language of Peter Hall’s (1993) conceptualization of policy paradigm shift.
resistant voters and veto points and of economic uncertainly. These costs were clearly more
pronounced in CMEs (and the benefits to policy makers of neoliberal reforms less certain).

As to other theory on internationalization as well as on the salience of democratic politics
and institutions in shaping taxation, I do not find clear support for the argument that political
signals from a nation’s competitors on future policy change elicit tax policy reform. Nor do I find
clear evidence that consensus democratic institutions allow some increase in taxation on
corporate income in the face of internationalization. In addition, there is little evidence that net of
international, institutional, and constituency factors, right governments embraced neoliberal
reforms more enthusiastically than center-left governments. Overall, in the long term, all nations
moved in the direction of the United States; indeed, neoliberal tax reform ineluctably spread
across the democratic capitalist world. The pace and depth of this reform of corporate taxation,
however, was significantly conditioned by the foundational institutions that differentiate modern
democratic capitalist systems.
APPENDICES

Appendix I: Operationalization of Core Variables (all variables lagged one year unless noted otherwise in text)

Statutory and Affective Average Corporate Tax Rates: See text.

International Capital Mobility: Index of the liberalization of financial and capital controls developed by Quinn (1997) where liberalization is a 0.0 to 100.0 mean scale of the following two scales: the removal of capital controls and the removal of current account transactions.

Trade Openness: exports and imports as percentages of GDP.

Structural Unemployment: the percentage of the civilian labor force unemployed for one year or more.

Profits: Percentage change in real operating surplus.

Investment: Percentage change in gross fixed capital accumulation.

Growth: percentage change in real per capita GDP,

Public Sector Debt: gross public debt as a percent of GDP.

Right Government: percentage of cabinet portfolios held by Right parties (mean of one- to three-year lags).

Coordination. See Appendix III below for the derivation of these two indices.

Median Voter: Ideological position of median voters as developed by HeeMin Kim (see data sources), where median voter position is computed from vote shares for ideologically ranked parties (28-item index of a parties’ positions on traditional left-right continuum) through the application of the formula for the median in grouped data.
Veto Points:

Institutional Veto Points: Standard score index for temporally and cross-nationally varying measures of federalism/decentralization, bicameralism, presidentialism, and judicial review (see Appendix III).

Consensus Democracy/Partisan Veto Points I: standard score index of proportionality of electoral system, number of effective legislative parties; number of governing parties.

Partisan Veto Points II: maximum ideological distance among government parties.

Appendix II: Data Sources

Data for internationalization variables:
Exports and Imports to and from the US: International Monetary Fund (hereafter IMF), Direction of Trade Statistics. Washington, DC: IMF, selected years.

Indexes of restrictions on capital and financial flows: Dennis Quinn, School of Business, Georgetown University. See Quinn 1997.

Exports and Imports of goods and services in national currency units: OECD, National Accounts of OECD Member Countries. Paris: OECD, various years; OECD iLibrary.

Gross domestic product in current US dollars: OECD, National Accounts. Paris: OECD, selected years; iLibrary

Policy/Government/Politics (and see Appendix III for more detail)

Data for statutory and effective average corporate tax rates: Statutory tax rates are from OECD Taxation Database. Effective Average Tax Rates on High and Low Profit Enterprises: Institute for Financial Studies data base. See Devereux, Griffith, and Klemm (2002).
General government debt as a percentage of GDP: OECD, *Economic Outlook, National Accounts*. Both Paris: OECD, selected years; OECD iLibrary.

Right party cabinet portfolios as a percent of all cabinet portfolios. Sources for party portfolios:


Political Economic Institutions/Components of Coordination (see Appendix III below):

from the Hicks-Kenworthy data base for 1995 to 2008 have been added to the
original 1960-1994 time series for those dimensions of the organization of capitalist
economies. Data updates are based on a large variety of sources and are available upon
request.

Political institutions data.

Components of Institutional Veto Points: Lijphart (1999) and electoral data as given in
this Appendix.

Median Voter/Ideological Position of Governing Parties: Kim-Fording measure of voter
and party ideology. 1945-2003 data supplied by HeeMin Kim, Department of Political
Science, Florida State University. See Kim and Fording (1998; 2003). Updates computed
from European Journal of Political Research “Political Data” reports on annual elections
in developed democracies and ideological positions of parties from Party Manifesto Data
Base.

Socioeconomic Data:

years.

Percent of the civilian labor force unemployed, wage and salary employees, civilian labor force,
population, population 65 and older: OECD, Labor Force Statistics. Paris: OECD,
various years; OECD, iLibrary.

Percent of civilian labor force unemployed one year or more (based on percent of unemployed
out of work one year or more): OECD, Employment Outlook. Paris: OECD, various
numbers; OECD, iLibrary.
Gross fixed capital formation, investment deflator, GDP deflator, Gross Domestic Product, net operating surplus of domestic producers (profits) and other macroeconomic data. OECD, National Accounts. Paris: OECD, various years; OECD, iLibrary.

Real GDP per capita in international prices. Penn World Table Version 7.0, Center for International Comparisons of Production.

Appendix III: Veto Points and National Political Economic Institutions

I measured the degree to which democratic institutions are characterized by partisan and institutional veto points by using an index of cross-nationally and temporally varying indicators of seven dimensions of democratic institutions. An index of these measures is highly correlated with Lijphart’s aggregate index of consensus (versus majoritarian) democracy; the first three and latter four measures cohere as sets and measure precisely partisan and institutional veto points. The seven measures are: an ordinal index of proportionality of electoral systems, the number of effective parliamentary parties, the number of governing parties, and ordinal measures (typically 4 or 5 level scales) of federalism, bicameralism, presidentialism, and degree of judicial review. The first and last four indicators are from Lijphart (1999); the number of effective legislative parties is calculated for each individual election in each nation by the well-known Laakso-Taagepera formula (see Lijphart, 1999, Ch. 5). The number of governing parties is taken from the same source material as Right Government above. To measure domestic and competitors’ ideological distance of governing parties, I used maximum ideological distance between governing parties where ideological position of each party is based on the Party Manifesto Project data and computed according to Kim and Fording (1998; 2003).

To measure the degree to which a nation’s economy is coordinated, I computed a standard
score index of three core components of the labor and industrial relations system:

*Level of Bargaining*: scale of the level of collective bargaining where 1 is plant level, 2 is industry level without constraints, 3 is industry level with constraints, 4 is sectoral level without sanctions, and 5 is sectoral level with sanctions.

*Union Organization*: Index (standard score) of union density (i.e., the percentage of employed wage and salary workers who are members of unions) and centralization of union confederation power, or power of appointment, veto over wage agreements, veto over strikes, and maintenance of strike of funds by the largest union confederation.

*Employer Organization*: Index (standard score) of the presence of a national association of employers and powers of that association (i.e., power of appointment, power over industrial actions and collective bargains, and industrial conflict funds).

This index is combined with standard score measures of the three additional principal dimensions of coordination:

*Labor Management Cooperation*: Hicks-Kenworthy measure of management and labor cooperation on issues of employment security.

*Investor-Productive Enterprise Linkage*: Hicks-Kenworthy measure of the strength of long-term cooperative relations between financial institutions and the enterprises they lend to.

*Cooperative Arrangements-Competitive Firms*: Hicks-Kenworthy measure of cooperation between competitive firms in research and development and technology sharing, export promotion, standard setting, training, and related firm cooperative activities.
REFERENCES


Table 1: The Impact of International Competition on Statutory Tax Rates on Corporate Income, 1982-2008, in 18 Capitalist Democracies

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<td>Δ Capital Controls in Competitors&lt;sub&gt;t-1&lt;/sub&gt;</td>
<td>---</td>
<td>---</td>
<td>.0920</td>
<td>.0976</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(.1368)</td>
<td>(.1292)</td>
</tr>
</tbody>
</table>

International Openness

| Trade Openness<sub>t-1</sub>                                                      | -.0085*                         | -.0133**               | -.0188**                      | -.0133**                      |
|                                                                                   | (.0055)                         | (.0058)                | (.0053)                       | (.0059)                       |
| Liberalization of Capital Markets<sub>t-1</sub>                                 | -.0456**                        | -.0212*                | -.0381**                      | -.0213*                       |
|                                                                                   | (.0121)                         | (.0138)                | (.0120)                       | (.0138)                       |

Institutions and Politics

| Coordination<sub>t-1</sub>                                                        | -.1158                          | .2748                  | -.0192                        | .2748                         |
|                                                                                   | (.3265)                         | (.3678)                | (.3175)                       | (.3678)                       |
| Partisan Veto Points/Consensus Demo<sub>t-1</sub>                               | .0877                           | -.0031                 | .1232                         | -.0031                        |
|                                                                                   | (.2436)                         | (.2570)                | (.2478)                       | (.2570)                       |
| Institutional Veto Points<sub>t-1</sub>                                         | .5646**                         | .8900**                | .6958**                       | .8900**                       |
|                                                                                   | (.1935)                         | (.2464)                | (.2180)                       | (.2464)                       |
| Ideology -Median Voter<sub>t-1</sub>                                            | .0244*                          | .0296**                | .0245**                       | .0296*                        |
|                                                                                   | (.0157)                         | (.0159)                | (.0159)                       | (.0161)                       |
Statutory corporate tax models are estimated with 1982-2008 data by OLS for 18 or 17 nations (full sample with or without U.S.) The table reports OLS unstandardized regression coefficients and panel correct standard errors (Beck and Katz 1996). * indicates significance at the .10 level or below. ** indicates significance at the .05 level or below.
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>US Statutory Corporate Tax Rate_{t-1}</td>
<td>.2121** (.0546)</td>
<td>.2294** (.0534)</td>
<td>.0390 (.1783)</td>
<td>.2341** (.0541)</td>
<td>.2300** (.0539)</td>
<td>.1867 (.1942)</td>
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<td>Δ US Statutory Corporate Tax Rate_{t-1}</td>
<td>-.0315 (.1194)</td>
<td>-.0781 (.1181)</td>
<td>1.2867** (.4871)</td>
<td>.0244 (.1221)</td>
<td>.0197 (.1216)</td>
<td>.5747 (.5697)</td>
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<td>Capital Liberalization × Consensus Democracy_{t-1}</td>
<td>-.0085 (.0117)</td>
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<tr>
<td>US Statutory Rate × Consensus Democracy_{t-1}</td>
<td>---</td>
<td>.0507* (.0309)</td>
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<td>-0.0229 (.0352)</td>
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<tr>
<td>Δ US Statutory Rate × Consensus Democracy_{t-1}</td>
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<td>-.3109** (.0964)</td>
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<td>.0367 (.1015)</td>
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<tr>
<td>US Statutory Rate × Median Voter_{t-1}</td>
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<td>.0035 (.0029)</td>
<td>---</td>
<td>---</td>
<td>.0009 (.0033)</td>
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<td>Δ US Statutory Rate × Median Voter_{t-1}</td>
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<td>-.0239** (.0086)</td>
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<td>-.0104 (.0103)</td>
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<td>US Statutory Rate × Coordination_{t-1}</td>
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<td>.1062** (.0308)</td>
<td>.1226** (.0359)</td>
<td>.1012** (.0345)</td>
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<tr>
<td>Δ US Statutory Rate × Coordination_{t-1}</td>
<td>---</td>
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<td>-.5497** (.1018)</td>
<td>-.5767** (.1095)</td>
<td>-.4897** (.1268)</td>
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<tr>
<td>International Openness</td>
<td>Trade Openness_{t-1}</td>
<td>-.0135** (.0059)</td>
<td>-.0137** (.0060)</td>
<td>-.0147** (.0059)</td>
<td>-.0157** (.0059)</td>
<td>-.0161** (.0060)</td>
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<tr>
<td>---------------------------</td>
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</tr>
<tr>
<td>Liberalization of Capital Markets$_{t-1}$</td>
<td>-.0220* (.0137)</td>
<td>-.0134* (.0141)</td>
<td>-.0149 (.0131)</td>
<td>-.0112 (.0134)</td>
<td>-.0126 (.0139)</td>
<td>-.0098 (.0130)</td>
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<tr>
<td>Institutions and Politics</td>
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<tr>
<td>Coordination$_{t-1}$</td>
<td>.2651 (.3672)</td>
<td>.2149 (.3512)</td>
<td>.2316 (.3447)</td>
<td>-4.5834** (1.4061)</td>
<td>-5.2826** (1.6156)</td>
<td>-4.3535** (1.5678)</td>
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<tr>
<td>Partisan Veto Points/Consensus Democracy$_{t-1}$</td>
<td>.7876 (1.1478)</td>
<td>-2.1449* (1.2654)</td>
<td>-.0219 (.2561)</td>
<td>.0819 (2.4799)</td>
<td>1.0337 (1.4548)</td>
<td>.0701 (1.2498)</td>
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<td>Institutional Veto Points$_{t-1}$</td>
<td>.9181** (.2561)</td>
<td>.8956** (.2463)</td>
<td>.9433** (.2520)</td>
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<td>.9134** (.2516)</td>
<td>.9314** (.2517)</td>
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<tr>
<td>Ideology-Median Voter$_{t-1}$</td>
<td>.0278** (.0159)</td>
<td>.0255** (.0157)</td>
<td>-.1244 (.1249)</td>
<td>.0258** (.0154)</td>
<td>.0266** (.0154)</td>
<td>-.0167 (.1376)</td>
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<tr>
<td>Right Government$_{t-3 \to t-1}$</td>
<td>.0044 (.0034)</td>
<td>.0044 (.0034)</td>
<td>.0052 (.0034)</td>
<td>.0039 (.0034)</td>
<td>.0037 (.0034)</td>
<td>.0044 (.0034)</td>
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<td>General Model</td>
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<tr>
<td>Structural Unemployment$_{t-1}$</td>
<td>-.0023 (.0094)</td>
<td>-.0074 (.0092)</td>
<td>.0027 (.1011)</td>
<td>.0019 (.0092)</td>
<td>-.0032 (.0092)</td>
<td>-.0028 (.0097)</td>
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<td>Public Sector Debt$_{t}$</td>
<td>.0177** (.0048)</td>
<td>.0178** (.0048)</td>
<td>.0178** (.0047)</td>
<td>.0181** (.0048)</td>
<td>.0196** (.0048)</td>
<td>.0194** (.0047)</td>
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<tr>
<td>Percent Change Real Profits$_{t-1}$</td>
<td>-.0076 (.0329)</td>
<td>-.0078 (.0327)</td>
<td>-.0080 (.0327)</td>
<td>.0085 (.0326)</td>
<td>-.0086 (.0325)</td>
<td>-.0085 (.0325)</td>
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<tr>
<td>Domestic Investment$_{t-1}$</td>
<td>-.0269 (.0415)</td>
<td>-.0262 (.0402)</td>
<td>-.0320 (.0408)</td>
<td>-.0298 (.0388)</td>
<td>-.0304 (.0388)</td>
<td>-.0308 (.0388)</td>
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<tr>
<td>% Δ Per Capita Real GDP$_{t-1}$</td>
<td>.1839 (.1499)</td>
<td>.1827 (.1478)</td>
<td>.2154* (.1484)</td>
<td>.1814 (.1456)</td>
<td>.1807 (.1455)</td>
<td>.1929** (.1451)</td>
</tr>
<tr>
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<td>.8480** (.0265)</td>
<td>.8497** (.0262)</td>
<td>.8447** (.0255)</td>
<td>.8413** (.0250)</td>
<td>.8403** (.0251)</td>
<td>.8405** (.0248)</td>
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<td>.9294</td>
<td>.9294</td>
<td>.9326</td>
<td>.9326</td>
<td>.9328</td>
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</tbody>
</table>

Statutory corporate tax models are estimated with 1982-2008 data by OLS for 18 or 17 nations (full sample with or without U.S.) The table reports OLS unstandardized regression coefficients and panel correct standard errors (Beck and Katz 1996). * indicates significance at the .10 level or below. ** indicates significance at the .05 level or below.
Table 3: Domestic Institutions and International Competition in Corporate Income tax Rates, 1982-2008, in 18 Capitalist Democracies: Alternative Models

<table>
<thead>
<tr>
<th>International Competition and Political Institutions</th>
<th>Effective Average Rate High Profit</th>
<th>Effective Average Rate- Low Profit</th>
<th>Long-term Impacts - Fixed Effects</th>
<th>Full Error Correction Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Statutory Corporate Tax Rate ( t_{-1} )</td>
<td>.4165** (.0959)</td>
<td>.2730** (.0659)</td>
<td>.6572** (.1278)</td>
<td>.2099** (.0555)</td>
</tr>
<tr>
<td>( \Delta ) US Statutory Corporate Tax Rate ( t_{-1} )</td>
<td>-.1919* (.1266)</td>
<td>-.2328** (.1068)</td>
<td>---</td>
<td>-.0437 (.1168)</td>
</tr>
<tr>
<td>US Statutory Rate ( t_{-1} ) Coordination ( t_{-1} )</td>
<td>.1192** (.0450)</td>
<td>.1619** (.0628)</td>
<td>-.2559** (.0969)</td>
<td>.0985** (.0320)</td>
</tr>
<tr>
<td>( \Delta ) US Statutory Rate ( t_{-1} ) Coordination ( t_{-1} )</td>
<td>-.3398** (.0902)</td>
<td>-.3042** (.1215)</td>
<td>---</td>
<td>-.5453** (.1080)</td>
</tr>
<tr>
<td>International Openness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade Openness ( t_{-1} )</td>
<td>-.0227** (.0127)</td>
<td>-.0049 (.0048)</td>
<td>-.1876** (.0425)</td>
<td>-.0123** (.0066)</td>
</tr>
<tr>
<td>( \Delta ) Trade Openness ( t_{-1} )</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>.0129 (.0385)</td>
</tr>
<tr>
<td>Liberalization of Capital Markets ( t_{-1} )</td>
<td>.0139 (.0136)</td>
<td>-.0061 (.0093)</td>
<td>-.1641** (.0391)</td>
<td>-.0023 (.0130)</td>
</tr>
<tr>
<td>( \Delta ) Liberalization of Capital Markets ( t_{-1} )</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>-.0224 (.0328)</td>
</tr>
<tr>
<td>Institutions and Politics</td>
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</tr>
<tr>
<td>Coordination ( t_{-1} )</td>
<td>-3.5269 (1.7460)</td>
<td>-4.5818 (1.8473)</td>
<td>17.3945** (5.1744)</td>
<td>-4.1629** (1.4679)</td>
</tr>
<tr>
<td>( \Delta ) Coordination ( t_{-1} )</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>-.5009 (.16876)</td>
</tr>
<tr>
<td>Institutional Veto Points ( t_{-1} )</td>
<td>1.7274** (.3849)</td>
<td>.7718** (.2076)</td>
<td>2.2345 (.9125)</td>
<td>1.0452** (.2567)</td>
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<tr>
<td>( \Delta ) Institutional Veto Points ( t_{-1} )</td>
<td>---</td>
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<td>---</td>
<td>.5689 (.18423)</td>
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<tr>
<td>Partisan Veto Points/Consensus Democracy ( t_{-1} )</td>
<td>.0488 (.3704)</td>
<td>-.0307 (.2225)</td>
<td>1.1571 (.9698)</td>
<td>-.0336 (.2642)</td>
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<tr>
<td>( \Delta ) Partisan Veto Points/Consensus Democracy ( t_{-1} )</td>
<td>---</td>
<td>---</td>
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<td>.9098 (.8097)</td>
</tr>
<tr>
<td>Ideology -Median Voter ( t_{-1} )</td>
<td>.0501** (.0205)</td>
<td>.0260** (.0114)</td>
<td>.0776** (.0372)</td>
<td>.0299** (.0152)</td>
</tr>
</tbody>
</table>
Effective average corporate tax rate models are estimated with 1982-2005 data by OLS for 18 or 17 nations (full sample with or without U.S.) The table reports OLS unstandardized regression coefficients and panel correct standard errors (Beck and Katz 1996). The model of the third column includes N-1 country dummy variables. * indicates significance at the .10 level or below. ** indicates significance at the .05 level or below.

<table>
<thead>
<tr>
<th></th>
<th>Effective Average Rate High Profit</th>
<th>Effective Average Rate- Low Profit</th>
<th>Long-term Impacts -Fixed Effects</th>
<th>Full Error Correction Model</th>
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<tbody>
<tr>
<td>Δ Ideology-Median Voter_{t-1}</td>
<td>---</td>
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<td>-.0190</td>
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<td>(.0377)</td>
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<tr>
<td>Right Government_{t-3 to t-1}</td>
<td>.0089 (0.0444)</td>
<td>.0068 (0.032)</td>
<td>.0057 (0.0092)</td>
<td>.0015 (0.0034)</td>
</tr>
<tr>
<td>Δ Right Government_{t-3 to t-1}</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>.0109 (0.0095)</td>
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</table>

**General Model**

<table>
<thead>
<tr>
<th></th>
<th>Effective Average Rate High Profit</th>
<th>Effective Average Rate- Low Profit</th>
<th>Long-term Impacts -Fixed Effects</th>
<th>Full Error Correction Model</th>
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<tbody>
<tr>
<td>Structural Unemployment_{t-1}</td>
<td>.0171* (.0127)</td>
<td>.0028 (.0067)</td>
<td>-.0302 (.0381)</td>
<td>.0065 (.0096)</td>
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<tr>
<td>Δ Structural Unemployment_{t-1}</td>
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<td>---</td>
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<td>-.0351 (.0326)</td>
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<td>Public Sector Debt_{t-1}</td>
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<tr>
<td>Δ Public Sector Debt_{t-1}</td>
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<td>.0659** (.0394)</td>
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<td>Percent Change Real Profits_{t-1}</td>
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<td>Δ Percent Change Real Profits_{t-1}</td>
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<td>-.0373 (.0282)</td>
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<td>Domestic Investment_{t-1}</td>
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<td>Δ Domestic Investment_{t-1}</td>
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<td>-.0669 (.0298)</td>
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<tr>
<td>% Δ Per Capita Real GDP_{t-1}</td>
<td>-.0022 (.2086)</td>
<td>.0013 (.0325)</td>
<td>.2384* (.1646)</td>
<td>.7988** (.3520)</td>
</tr>
<tr>
<td>Δ% Δ Per Capita Real GDP_{t-1}</td>
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<td>.0022 (.0012)</td>
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<td>Tax Rate_{t-1}</td>
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<td>R²</td>
<td>.8452 .9301 .7497 .9350</td>
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</table>
Figure 1. The Decline of Corporate Statutory Tax Rates, 1982-2010
Figure 2: Effective Average Corporate Tax Rates and the Decline of Tax Allowances
Figure 3: CME and LME Responsiveness to Change in U.S. Statutory Rates*

*CMEs defined by 1985-1987 average levels of coordination in Denmark, Germany, and Sweden. LMEs defined by 1985-1987 average levels of coordination Australia, Canada, and New Zealand.