

POLITICS IN THE AGE OF AUSTERITY

To the memory of Peter Mair, friend and model scholar, who passed
away on 15 August 2011, while this book with his contribution was
being prepared for publication

POLITICS IN THE AGE OF AUSTERITY

Edited by Armin Schäfer
and Wolfgang Streeck

polity

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Tax Competition and Fiscal Democracy

Philipp Genschel and Peter Schwarz



1 Fiscal democracy constrained

What is ‘fiscal democracy’? The term was coined by Eugene Steuerle but never properly defined. The meaning is quite intuitive, however. Democracy, according to Steuerle (2008), is fundamentally ‘about equal rights to vote – and have your representatives vote – on the nation’s current priorities’. Since a nation’s current priorities usually have financial implications – they require the allocation of public money – democracy is at its core a fiscal affair. It concerns equal rights to vote on tax and expenditure policies. Yet voting confers democratic control only to the extent that votes can make a difference in policy terms. If ‘there is no alternative’ (what Margaret Thatcher dubbed TINA), voting is redundant. Fiscal democracy has not only formal prerequisites – equal voting rights – but also substantive prerequisites – policy choice and autonomy. True fiscal democracy occurs when voters have the power to change the government and the government has the power to change fiscal policies in light of voter preferences.

In his own work, Steuerle has focused on the substantive prerequisites of fiscal democracy and, more specifically, on the constraints that the policy obligations entered by ‘yesterday’s legislators’ (Steuerle 2010: 876) impose on the fiscal choices of today’s legislators. To measure these constraints he has developed the Fiscal Democracy Index, which measures the percentage of public revenue that remains available after expenditures on mandatory programmes (including interest payments on the public debt). Applied to the federal budget of the United States, the index shows a steady decline beginning in the 1960s (ibid.: 878). In 2010, it turns negative, indicating that, even before Congress voted on any

spending programme for that year, more than the available revenue had already been allocated to mandatory expenditure programmes. Streeck and Mertens (2010) report a similar downward trend in fiscal discretion for Germany. Other empirical studies also point to the long-term accumulation of expenditure-side constraints on fiscal democracy (Pierson 1998). The recent sovereign debt crisis greatly exacerbates the problem.

Fiscal democracy faces threats not only from the expenditure side but also from the revenue side. New or mounting obstacles to raising public revenue can reduce the scope for fiscal policy discretion as well. Our concern in this chapter is with one particular revenue-side constraint: international tax competition. The political economy literature is split on whether such competition undermines fiscal democracy, and, if so, to what extent. Some scholars argue that tax competition harms fiscal democracy by constraining national tax autonomy. Others claim that tax competition fails to constrain national taxation and therefore cannot harm fiscal democracy. The first position became popular in the late 1980s and early 1990s, when radical tax reforms in the US and the UK and rapid advances in global and regional economic integration seemed to herald a new era of international competition (Sinn 1988; Steinmo 1994; Swank 2006). Many authors feared, and some hoped, that this would lock governments into a race to the bottom in taxation that would all but erase national tax autonomy (Edwards and Keen 1996). This concern was particularly widespread in Europe. Economists warned that the completion of the single market would turn the EU into 'a single large tax haven' (Giovannini and Hines 1991: 172) in which fiscal competition would wipe out redistributive taxes on mobile factors and turn the tax system into one of mere benefit taxation (Sinn 1994). The second position rose to prominence in the late 1990s and early 2000s, when scholars began submitting the predictions of the first position to empirical testing and failed to find clear-cut evidence of a dramatic race to the bottom. Some authors concluded that competitive constraints on national taxation were largely irrelevant: governments 'wishing to expand the public economy for political reasons may still do so (including increasing taxes on capital to pay for new spending)' (Garrett 1998: 823). The notable success of Denmark, a small, open, high-tax economy, seemed to vindicate this conclusion (Campbell 2009: 262).

Our findings indicate that both positions are wrong. The latter view, that tax competition is no threat to fiscal democracy because it does not constrain taxation, underrates the stringency of tax competition. As we will show for a sample of twenty-two OECD countries (OECD-22),¹ tax competition does constrain national taxation in important ways. The former view, that tax competition harms fiscal democracy because it constrains national tax autonomy, assumes that competitive constraints

on national taxation translate directly into constraints on national fiscal democracy. This is not the case. Tax competition has ambiguous effects: while it undermines fiscal democracy in most countries, it expands the scope for fiscal democracy in some (mostly small, poor and peripheral) countries.

The rest of the chapter is structured into five sections. Section 2 briefly reviews the concept of tax competition and explains why it affects fiscal democracy differently in different countries. The next three sections investigate the extent of tax competition among OECD-22 countries: section 3 scrutinizes competitive constraints on tax rates, section 4 focuses on competitive effects on tax revenues, and section 5 analyses the redistributive consequences of tax competition, while section 6 summarizes the empirical findings and discusses implications for fiscal democracy.

2 Tax competition: symmetric and asymmetric

Tax competition refers to the process of national governments vying for an internationally mobile tax base by strategically undercutting one another's taxes. In order to analyse its implications for fiscal democracy, we start with a very simple conceptual model. In its starkest form, this baseline model features two identical countries sharing one international mobile tax base ('capital') (Zodrow and Mieszkowski 1986; Wilson 1999). The tax policies of both countries are interdependent: high taxes in country A swell country B's revenues by pushing a larger share of the mobile tax base towards B; low taxes in A depress B's revenues by poaching elements of the tax base from B. This policy interdependency triggers a 'race to the bottom' in taxation as each country tries to appropriate a disproportionate share of the mobile tax base by undercutting the other country's tax rate. In equilibrium, tax rates are lower in both countries than they would otherwise be, resulting in lower tax revenues and/or a shift of the tax burden to immobile tax bases. The effects on fiscal democracy are straightforward. Tax competition constrains the revenue-raising capacity both for competing countries as a group *and* for each country individually. The range of feasible fiscal policies shrinks; fiscal democracy is universally undermined. The obvious antidote is tax harmonization.²

[I]f citizens are to retain the ability to choose the goods and services they would like to provide to themselves collectively through democratically elected institutions, and to use the tax system to achieve a more socially acceptable distribution of income, the forces of globalization . . . will have

to be neutralized. The most obvious way for that to happen is for countries to agree to coordinate and harmonize aspects of their tax systems, particularly as they relate to the taxation of income from capital. (Brooks and Hwong 2010: 819)

Thus far, our baseline model assumes both countries to be identical: tax competition is symmetric. Obviously, however, real-world countries are not identical but differ across various dimensions, including country size. The introduction of differences in country size (in terms of initial endowments of tax base) changes the results of the baseline model considerably: if countries differ in size, they no longer face similar competitive constraints and no longer suffer equal welfare losses. Instead, the smaller country has stronger incentives to cut tax rates than the larger country and suffers a smaller revenue loss in the competitive equilibrium (Bucovetsky 1991; Kanbur and Keen 1993). Indeed, if the difference in size is large enough, the smaller country generates more revenue under tax competition than in its absence. Intuitively, this is because, for the small country, the revenue loss from a tax cut – i.e., revenue forfeited from the (initially small) domestic tax base – is relatively minor compared with the major revenue gain from the inflow of part of the (initially large) foreign tax base of the other country. Hence the small country faces a more elastic supply of the mobile tax base than its large competitor. In equilibrium, it will undercut the rate of the large country and attract a disproportionately large share of the internationally mobile tax base. There is a clear ‘advantage of “smallness”’ in tax competition (Wilson 1999: 278). Tax competition is asymmetric.³

Asymmetric tax competition has ambiguous effects on fiscal democracy. The overall effect is negative, because the competitive dynamics constrain the taxing capacity of the group of competing countries as a whole. But the effect for the small country is positive: it gains in revenue-raising capacity and therefore has more policy options for democratic choice. What the small country gains, however, the large country more than loses. The effect of tax competition on national fiscal democracy is clearly negative for the larger country. As a consequence, tax harmonization to curb tax competition is likely to be contested between the large country (which would benefit) and the small country (which would lose). Asymmetric tax competition is a matter of common concern for voters and governments in all competing countries but does not lend itself easily to commonly acceptable solutions.

So much for the theory of tax competition; what about its reality? To the extent that tax competition exists, the baseline model leads us to expect three major tax policy trends:

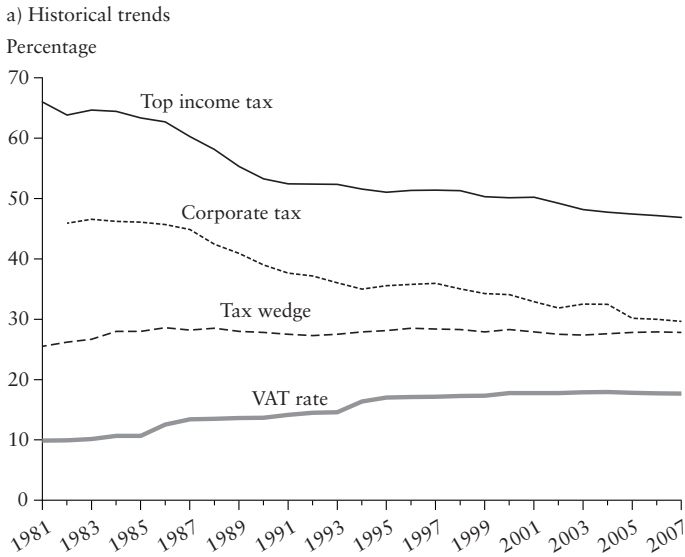
- *race to the bottom*: a downward trend in tax rates and tax revenues as countries engage in competitive tax cutting
- *asymmetry*: a pronounced tendency of small countries to undercut the tax rates of large countries and raise more tax revenue from mobile bases
- *redistribution*: a shift of the mobile tax base from large to small countries (international redistribution) and a shift of the tax burden from mobile to immobile tax bases (domestic redistribution).

A lot of high-powered econometric research has gone into evaluating these predictions, most of this which is narrowly focused on corporate taxation. The findings have been mixed: results vary according to the prediction tested, time frame, sample selection, and measure of the corporate tax burden. In this chapter, we take a different approach. Based on simple indicators on all three predictions, we show that the existence of tax competition is more obvious and straightforward than much of the econometric research makes it appear. Our analysis starts in the 1980s (before the onset of deep economic integration) and ends in 2007 (the last year before the financial crash and for most variables also the last year for which data are available) and covers all major taxes.

3 Tax competition and tax rates

Does tax competition trigger a race to the bottom in tax rates? Does it cause asymmetries in tax-rate levels that correspond to the size of the country? In order to investigate these questions, it is important to distinguish two modes of tax competition: general and targeted (Keen 2001; Kemmerling and Seils 2009). Under *general tax competition*, governments vie for a mobile tax base by cutting *general* tax rates such as the standard corporate tax rate. Under *targeted tax competition*, by contrast, they compete for a mobile tax base by offering *preferential tax treatment* specifically for particularly mobile parts of the base. As an example, think of special corporate tax regimes, which reduce the level of taxation selectively on specific corporate forms and functions, such as foreign-held companies, companies located in special business zones, holding companies or captive insurance.

Figures 3.1a and 3.1b provide evidence on *general tax competition*. Figure 3.1a tracks historical trends in four general tax rates. It shows a dramatic fall in the corporate tax rate (down from an OECD-22 average of 46 per cent in 1985 to less than 30 per cent in 2007). The top personal income tax rate also fell by 16 percentage points, but from a higher initial



Sources for top income tax rates, VAT rate, and corporate tax: Bundesministerium der Finanzen, Die wichtigsten Steuern im internationalen Vergleich, several issues.
Sources for tax wedge figures: OECD, Taxing Wages.

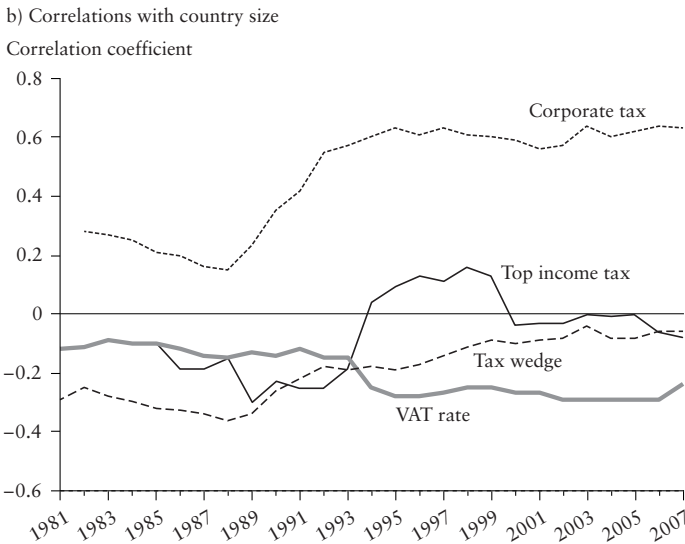


Figure 3.1: Tax rates, OECD-22 averages

Sources for top income tax rates, VAT rate, and corporate tax: Bundesministerium der Finanzen, Die wichtigsten Steuern im internationalen Vergleich, several issues.
Sources for tax wedge figures: OECD, Taxing Wages.

level (63 per cent in 1985 down to 47 per cent in 2007). The VAT rate increased (from roughly 11 per cent in 1985 to roughly 18 per cent in 2007). The tax wedge⁴ of an average wage earner (single, no children) has been more or less stable since the mid-1980s (at around 28 per cent). In short, there is evidence of a pronounced race towards the bottom in general corporate tax rates and a relatively less pronounced downward trend in top personal income tax rates, but not in tax wedges or VAT rates.

Figure 3.1b tracks the correlation of the general tax rates and the size of OECD-22 countries over time.⁵ If tax competition does have asymmetric effects on small and large countries, as the baseline model suggests, we should observe a positive correlation of tax rates and country size. The correlation should gain in strength over time, as the level of market integration, and hence competitive pressure, increases. This is indeed what we find for the corporate tax rate: its correlation with country size increased from 0.21 in 1985 to 0.63 in 2007, indicating a growing tendency of small states to undercut the corporate tax rates of large states. Much of the empirical literature takes this as strong evidence of increasing competitive pressure (Devereux et al. 2002; Ganghof 2006; Plümper et al. 2009; Genschel and Schwarz 2011). All other correlations are negative or show no clear trend. In sum, figure 3.1b suggests that general tax competition affects corporate tax rates but not top personal income rates, tax wedges, or VAT rates.

Table 3.1 presents evidence on *targeted tax competition*. The countries are arranged according to size of population (column 2). Column 3 provides information on targeted competition in corporate taxation. While there is strong anecdotal evidence that special corporate tax regimes have been spreading since the 1980s, systematic internationally comparative time-series data are lacking (Kemmerling and Seils 2009). The best we can do is to list the number of ‘potentially harmful’ corporate tax regimes identified by the OECD among its member states in 2000 (OECD 2006). The list shows that all OECD countries but four have adopted one or more special corporate tax regimes, suggesting that targeted competition is widespread in corporate taxation. The correlation between country size and the number of special corporate tax regimes is negative but small: large states are only slightly less likely to have such regimes than small states. Closer inspection suggests that domestic institutions may have more impact on the probability of special corporate tax regimes being adopted. The number of such regimes tends to be high among continental welfare states (Belgium, France, Germany, Luxembourg, the Netherlands, Switzerland) and Mediterranean states (Greece, Italy, Portugal, but not Spain) but low among Anglo-Saxon economies (Australia, New Zealand, the UK, the US, but not Canada

Table 3.1: Targeted tax rates

	Country size (millions)	Special corporate tax regimes	Top rate on personal interest income			
			Residents		Non-residents	
			1985	2007	1985	2007
Luxembourg	0.5	3	57	10 ^b	0	0
NZ	3.8	0	–	–	–	–
Ireland	3.9	2	65	20 ^b	35	0
Norway	4.5	1	64	0.40	0	–
Finland	5.2	1	–	28 ^b	–	0
Denmark	5.4	0	73	59	0	0
Switzerland	7.3	2	39	40	35	15
Austria	8.1		67	25 ^b	5	0
Sweden	8.9	1	80	30 ^b	0	0
Portugal	10.4	3	60	20 ^b	13.8	20
Belgium	10.3	5	25 ^b	15 ^b	25	15
Greece	10.6	4	63	10 ^b	56.8	10
Netherlands	16.2	7	72	52	0	0
Australia	19.7	1	–	–	–	–
Canada	31.4	3	50	46	25	25
Spain	40.5	1	66	43	18	0
Italy	58.0	2	12.5 ^b	27 ^b	21.6	27
UK	59.2	0	60	40	30	0
France	59.5	2	65	48	25	16
Germany	82.6	2	56	47	0	0
Japan	127.6	0	75	20 ^b	20	15
United States	283.0	1	50	42	30	30
OECD-22		1.95	57.87	33.10	17.91	9.11
Correlation ^a		–0.16	–0.13	0.38	0.25	0.49

Notes:

^a Correlations are with the population logarithm.

^b Scheduling taxation.

Sources: Population: <http://stats.oecd.org/index.aspx?queryid=254>; Special corporate tax regimes; OECD 2006 top rate on personal interest income; Bundesministerium der Finanzen; *Die wichtigsten Steuern im internationalen Vergleich*, several issues.

and Ireland) and Nordic welfare states (Denmark, Finland, Norway, Sweden).

Targeted competition in personal income taxation focuses mainly on high-wage professionals and private investors. There is widespread anecdotal evidence of countries offering special tax regimes to foreign professionals ('expats') who are working temporarily in the domestic economy, so that these countries can attract human capital and the multinational companies employing it (PWC and CEER 2005). For example, Sweden provides tax incentives to foreign experts residing no longer than five years in the country; the Netherlands has tax incentives

for foreign experts, artists and athletes; and Spain, until recently, offered a special rate of only 24 per cent to soccer players (the ‘Lex Beckham’). Unfortunately, a lack of internationally comparative data prevents us from presenting systematic data for all OECD-22 countries. Data are available, by contrast, on targeted competition for private investment income. We focus on interest income. As a rule, interest income is fully taxable in the residence country of the investor, with a tax credit given for any withholding tax charged by the source country of the investment. In practice, however, the investor may evade residence-country taxation by not reporting their foreign interest income. Governments can compete for interest income in two ways. First, they can selectively cut the top personal income tax rate on resident interest income so as to reduce the incentive for domestic investors to engage in outbound tax evasion (columns 4 and 5). Second, they can reduce their withholding taxes on the interest income of foreign investors so as to attract inbound investment of non-residents (columns 6 and 7).

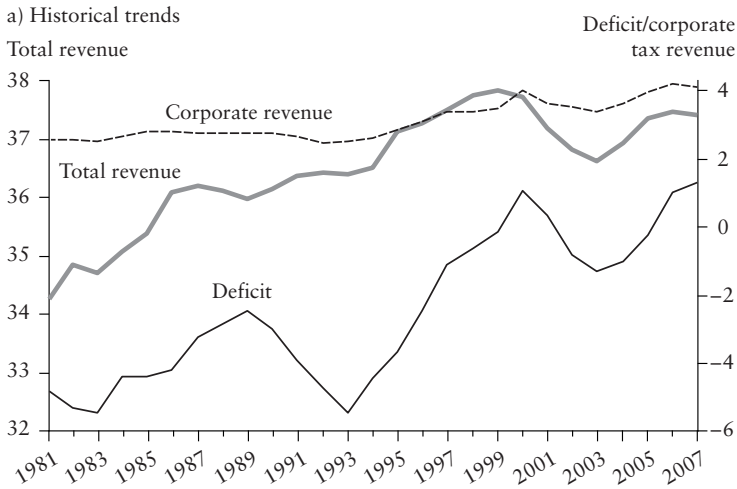
The standard approach to cutting the tax burden on resident investors is to tax interest income outside the framework of the progressive personal income tax at a low proportional rate (known as ‘schedular taxation’). As column 4 shows, only two of the OECD-22 countries applied a schedular approach in 1985. By 2007, however, ten did so (Column 5). The spread of schedular taxation has caused the top rate on resident personal interest income to fall faster than the top personal income tax rate. While between 1985 and 2007 the latter fell by only 16 percentage points on average for the OECD-22 (see figure 3.1a), the former went down by 25 percentage points, from 58 per cent (1985) to 33 per cent (2007). Personal interest income is now often taxed at substantially lower rates than personal income from other sources. In 2007, the rate gap between the (low) tax rate on resident personal interest income and the (high) top personal income tax rate was as wide as 14 percentage points, on OECD-22 average. The rate of interest income taxation is now positively correlated with country size (0.38 in 2007), as the baseline model would predict: small countries are more likely to have low interest income tax rates (and to adopt a schedular approach to interest income taxation) than large countries. At the same time, governments have also cut the withholding tax burden on non-resident interest income. As columns 6 and 7 show, the withholding tax rate dropped from an average of 18 per cent in 1985 to 9 per cent in 2007. There is also a positive association with country size (0.49 in 2007): small states are more likely to charge lower withholding taxes than large states. In conclusion, while governments tried to stem outbound tax evasion of domestic residents by making targeted cuts to resident interest income, they vied for inbound tax evasion of foreign investors by reducing the withholding taxes on non-resident interest income.

The evidence presented in this section suggests that tax rate competition has increased since the 1980s. Corporate taxation is now subject to strong general *and* targeted tax competition. Personal income taxation is subject to strong targeted competition for interest income and arguably some limited competition for highly qualified labour ('expats'). But there is no indication that the drop in top personal income tax rates was caused by general tax competition. There is also no evidence of tax competition based on VAT or the tax wedge affecting the average production worker.

4 Tax competition and tax revenues

Does tax rate competition matter for tax revenues? Looking at figure 3.2a, it is far from obvious that it does. As the figure shows, the trend in total tax revenues is up, not down. On OECD-22 average, revenues increased from roughly 35 per cent of GDP in 1985 to roughly 37 per cent in 2007. The budget balance has also improved. While budget deficits oscillated around 4 per cent of GDP over the 1980s and early 1990s, budgets were close to balance, over the business cycle, for most of the 2000s.⁶ Even if we focus on corporate taxation, arguably the 'most well-supported case' (Devereux and Sørensen 2006: 14) of tax competition, there is no clear-cut evidence of a race to the bottom in tax revenues. A huge empirical literature has tried to estimate the influence of economic openness on capital tax revenues – with mixed results. Some studies find a positive relationship: economic openness is associated with more capital taxation (e.g., Quinn 1997; Garrett and Mitchell 2001). Some find a negative relationship: openness is associated with less capital taxation (Rodrik 1997; Winner 2005; Schwarz 2007; Devereux et al. 2008). And some find essentially no relationship at all (e.g., Swank 2006; Slemrod 2004). On average, corporate tax revenues have increased in OECD-22 countries by almost a quarter, from roughly 3 per cent of GDP in 1981 to close to 4 per cent in 2007 (figure 3.2a).⁷

Yet a closer look at the reasons behind the increase in corporate tax revenues warns against denying the revenue effects of tax competition lightly. First, governments have partly compensated for the negative revenue effects of falling statutory tax rates by broadening the tax base – for example, by curtailing tax credits, depreciation allowances and deductions (Stewart and Webb 2006). As the tax base grows broader and broader, the scope for this compensation strategy shrinks. The probability that future tax cuts will have negative revenue effects increases. This suggests that the revenue effects of corporate tax competition may have a delayed impact. Second, rising corporate tax revenues



Sources: OECD Stat Extracts, <http://stats.oecd.org/index.aspx?>

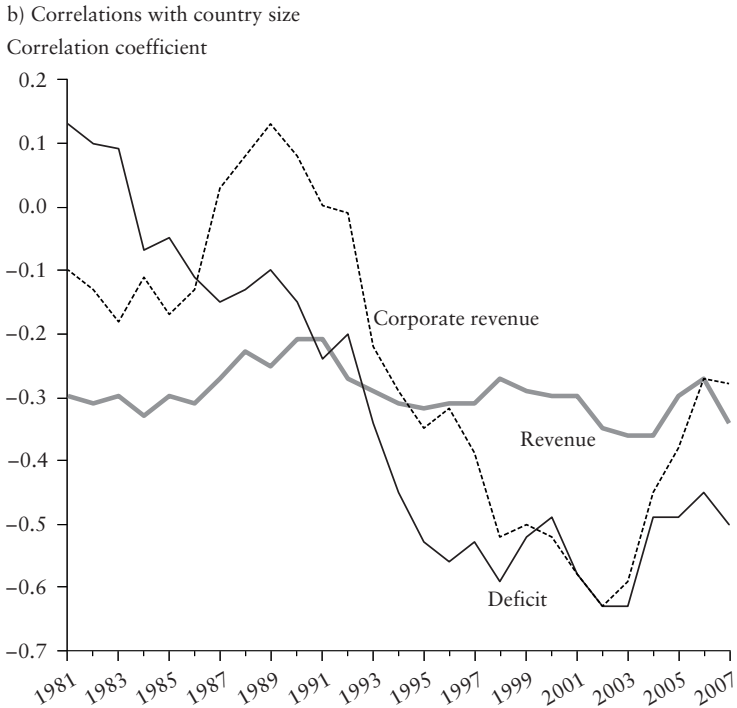


Figure 3.2: Revenues and deficits, OECD-22 averages

Sources: OECD Stat Extracts, <http://stats.oecd.org/index.aspx?>; own calculations.

are driven by a growth in the underlying macro-economic tax base. The share of corporate income (profits and capital gains) in national income has risen continuously since the 1980s (see table 3.3 below). The positive revenue effect of this has partly offset the negative effects of competitive rate cuts (Kramer 1998). Third, the upturn in corporate profitability is partly endogenous to corporate tax competition. To some extent, the endogeneity is purely statistical: tax competition increases foreign direct investment and profit shifting into small countries and thus the share of corporate profits in these countries (table 3.3 below). Since there are more small countries than large countries, this leads to an increase of (unweighted) average profitability. To some extent, the endogeneity is real: the competitive downward pressure on corporate tax rates creates a widening gap (in relative terms and sometimes even in absolute terms) between low corporate and high top personal income tax rates (see table 3.4 below). This gap encourages domestic income shifting from the personal to the corporate sector: corporations turn into onshore tax shelters for rich individuals (Ganghof and Genschel 2008). According to one estimate, a 1 percentage point increase in the gap between the top personal tax rate on interest income and the statutory corporate tax rate induces a 2.6 per cent increase in the share of private savings channelled through the corporate sector (Devereux and Sørensen 2006: 12). Another study suggests that reducing the corporate tax rate by 10 percentage points will raise the percentage of incorporated companies in the business sector as a whole, and hence will increase the corporate tax base by 7 per cent (de Mooij and Ederveen 2008: 682).

What do the correlation data reported in figure 3.2b add to this debate? As the figure shows, the level of total tax revenues is negatively associated with country size (-0.34 in 2007): large countries collect less tax revenue than small countries. While this is in line with the predictions of the baseline model, it is unlikely to be caused by tax competition. First, the negative correlation predates the onset of deep economic integration in the 1990s and does not increase discernibly thereafter. Second, small states have higher spending requirements than large states because the provision of public goods such as defence, monetary, financial and regulatory institutions, technical infrastructure and embassies is often subject to economies of scale. This forces small states to spend more in per capita terms on public goods provision than large states, and hence to tax more, all else being equal (e.g., Alesina and Spolaore 2003: 3).

The picture is different with respect to corporate tax revenues (figure 3.2b). While corporate revenues were essentially unrelated to country size during the 1980s (oscillating between -0.1 in 1981 and 0.13 in 1989), the correlation coefficient drops dramatically over the 1990s,

reaches a low of -0.63 in 2002, and stays negative thereafter (-0.28 in 2007). During the 2000s, large OECD countries collected significantly less in corporate tax revenues than their smaller peers, as the baseline model would predict. To be sure, corporate tax is not a major revenue raiser in OECD countries, such that the absolute revenue effect may be small. Yet even marginal revenue losses (or gains foregone) are politically painful for governments constrained by high levels of mandatory expenditure. Also, the revenue losses (or gains foregone) from corporate taxation may be just the tip of the iceberg of hard-to-measure losses from other mobile capital tax bases, such as personal capital income. This view is supported by the data on budget deficits: while budget deficit tended to be slightly higher in small countries during the 1970s and early 1980s (0.13 in 1981), the correlation coefficient fell dramatically over the 1990s, largely in step with that of corporate tax rates. The correlation reached a low of -0.63 in 2002 and stayed negative for the rest of the 2000s (-0.5 in 2007): large states (France, Germany, Italy, Japan, the UK, the US) ran large budget deficits, while many small states recorded budget surpluses (Denmark, Finland, Ireland, Luxembourg, New Zealand, Norway, Sweden). This is consistent with the idea that tax competition helped small countries to reduce their reliance on debt by increasing revenues from corporate profits and other mobile forms of capital income, as well as through positive knock-on effects on labour taxation. To the extent that the influx of foreign capital drives up labour demand and wages, it tends to improve revenues from labour taxation as well.

To explore this idea further, we performed a simple regression analysis of budget deficits in OECD-22 countries (table 3.2). We expected high corporate tax revenues to be associated with low budget deficits: as tax competition enhances the capacity of small states (and restricts the capacity of large states) to collect revenues from corporate profits and other forms of mobile capital, the budget balance of small states should improve. We therefore expected corporate tax revenues to be positively associated with the budget balance. In order to assess this prediction, we controlled for two other variables which could potentially influence the budget balance. One is economic growth (in terms of GDP): high growth rates reduce deficits by decreasing outlays on unemployment benefits and other counter-cyclical social transfers and by increasing the yield of progressive taxes (Darby and Melitz 2008). The other is country size: as various authors have argued, tax competition is not the only way in which small states benefit from economic openness. They also benefit because their size allows them to specialize in developing a comparative advantage in exclusive niches of global product and services markets (Streeck 2000) and to profit handsomely from this advantage. Their high

Table 3.2: Explaining the size of budget deficits in OECD-21 countries, 1992–2007

	1992	1997	2002	2007
Corporate tax revenue	1.11	0.98	1.05	1.67
(% of GDP)	(1.57)	(2.42)**	(2.49)**	(5.63)***
GDP growth	0.28	0.29	-0.08	-0.43
	(0.82)	(1.14)	(-0.34)	(-0.73)
Population (logged)	-0.31	-0.53	-0.78	-1.10
	(-0.67)	(-1.36)	(-1.53)	(-2.31)**
Number of observations	21	21	21	21
Adjusted R ²	15.7	42.3	47.7	68.2

Notes: t-values are shown in parentheses; three, two or one asterisk represents a corresponding significance of 1%-, 5%-, or 10%-level respectively. Dependent variable is overall government deficit scaled by GDP.

degree of economic openness also enables them to externalize part of the costs of fiscal adjustment onto foreign countries (Laurent and Cacheux 2007). Even at the same given level of corporate tax revenues, therefore, we still expected small open economies to have lower deficits than large countries.

The results presented in table 3.2 are in line with these expectations. The coefficients of corporate tax revenues and country size are sizable and have the predicted positive or negative associations: corporate tax revenue is positively associated with the budgetary balance, and country size is negatively associated. The significance of both variables increases over time. The impact of growth, by contrast, is relatively small, has no clear direction, and is insignificant at all times. The model fit improves over time. In 2007, the model explains almost 70 per cent of the variance in budget deficits. With the exception of 2007, a 1 percentage point increase of corporate tax revenues as a share of GDP improves the budget balance by roughly 1 percentage point. The effect is larger in 2007, perhaps due to cyclical overheating in that year.

This section offers three lessons on the revenue effects of tax competition: first, tax competition has not reduced the level of total taxation in OECD-22 countries. Second, tax competition has revenue effects at the level of selected taxes. As we have shown for corporate tax, small states find their revenue-raising capacity enhanced by tax competition; large states find it constrained. Third, the tax competition-induced variance in revenue-raising capacity accounts partly for the significant improvement in the budgetary position of small OECD countries since the 1980s and the persistence of chronic deficits in large countries.

5 Tax competition and redistribution

According to the baseline model, tax competition redistributes the mobile tax base from large to small countries (international redistribution) and the tax burden from mobile to immobile tax bases – i.e., from capital to labour and consumption (domestic redistribution). We investigate both redistributive effects in turn.

5.1 *International redistribution*

According to the baseline model, small countries will attract a disproportionately large share of the mobile tax base under tax competition (the advantage of ‘smallness’). We use two indicators to check this proposition: the share of corporate income (profits and capital gains) in GDP and employment created by inbound foreign direct investment as a share of the domestic labour force (table 3.3).⁸ Both indicators are broadly in line with the baseline model, thus lending further support to the claim that tax competition accounts partly for different trends in the corporate tax revenues and deficits of large and small countries (section 4).

As table 3.3 shows, corporate income as a percentage of national income in OECD-22 countries has increased, on average, from roughly 30 per cent in 1995 to roughly 33 per cent in 2007. The correlation with country size is negative at both points in time (–0.56 and –0.54, respectively): corporate income tends to make up a large percentage of the national income in small countries because of the inflow of tax-sensitive corporate profits and investments (for a recent review of the tax sensitivity of corporate profits, see de Mooij and Ederveen 2008).

The picture is broadly similar if we turn to employment created by inward foreign investment (table 3.3). Manufacturing employment by foreign multinationals accounted for an average of 2.6 per cent of the total labour force of OECD-22 countries in 1995 and an average of 2.7 per cent in 2005. The employment percentage is negatively correlated with country size (–0.62 and –0.64, respectively): small countries attract relatively more job creation by foreign firms than do large countries. Data on services employment are more limited but suggest that the share of services employment in the total labour force has increased significantly. The negative correlation with country size is very strong for 2007 (–0.75). These data, limited as they may be, are in line with survey findings suggesting that the location of service activities is more sensitive to tax than the location of manufacturing activities (Ruding Report 1992: 102). Service establishments such as holding companies, financial

Table 3.3: International distribution of mobile tax base

	Corporate income as percentage of national income		Employment by foreign multinational enterprises as percentage of the national labour force			
	1995	2005	Manufacturing		Services	
			1997	2007	1997	2007
Luxembourg	37	40	5.98	4.08	–	–
NZ	–	–	–	–	–	–
Ireland	–	44	7.47	4.60	–	6.55
Norway	36	48	1.84	2.43	2.38	–
Finland	34	34	2.03	2.75	–	5.01
Denmark	28	28	1.65	2.90	–	–
Switzerland	27	28	–	2.97	–	5.13
Austria	26	33	–	4.25	2.32	7.18
Sweden	32	28	3.05	4.59	3.01	6.68
Portugal	30	28	1.65	1.92	0.96	–
Belgium	29	31	–	–	5.77	4.09
Greece	–	40	–	–	–	–
Netherlands	32	34	2.10	2.03	2.11	–
Australia	30	33	–	–	–	–
Canada	32	35	–	–	–	–
Spain	–	28	2.25	1.74	–	3.34
Italy	37	35	–	1.87	–	3.09
UK	30	28	2.63	2.80	3.25	6.34
France						
Germany	27	32	1.10	2.74	–	–
Japan	–	31	0.14	0.28	0.08	0.42
United States	23	24	1.47	1.29	1.54	2.15
OECD-22	30	33	2.60	2.74	2.38	4.34
Correlation	–0.56	–0.54	–0.62	–0.64	–0.40	–0.75

Sources: Authors' own calculations, from: OECD *Stat Extracts*, <http://stats.oecd.org/index.aspx?>.

services firms, coordination centres and headquarters often serve as receiving ends for profit-shifting operations out of high-tax jurisdictions. Companies are concerned particularly, therefore, with locating these service establishments in low-tax jurisdictions (see also Palan et al. 2010: 52–7).

As the baseline model suggests, small countries do indeed attract a disproportionate share of the mobile corporate tax base. This brings fiscal advantages in terms of improved revenues, as argued in section 4. It also has non-fiscal advantages such as better access to the technology of foreign firms (stimulating innovation and growth) and higher levels of employment, as well as upward pressure on wages. The influx of foreign

investment increases the relative scarcity of labour and pushes up labour demand and the national average wage as a result (with positive knock-on effects on labour taxation). Multinational companies also usually pay wages above the national average: the mark-up is an average of 40 per cent in OECD countries (OECD 2006; authors' calculations). In fact, it was these positive employment effects, rather than narrow fiscal reasons, that motivated Ireland to embrace tax competition as a strategy of national economic development, and that motivated other countries, especially in Eastern Europe, to copy Ireland's apparent success (Laurent and Cacheux 2007).

5.2 Domestic redistribution

According to the baseline model, tax competition shifts the (relative) tax burden from mobile to immobile tax bases – i.e., from capital to labour and consumption. The ratio of capital to labour taxes should fall (the race to the bottom), and smaller countries should end up with lower ratios because they face stronger incentives to engage in competitive tax cutting than large countries (asymmetry). Various authors have tested these predictions by regressing different measures of the capital to labour tax ratio on batteries of independent variables, including economic openness and country size for different country samples (Garrett and Mitchell 2001; Schwarz 2007; Winner 2005; Krogstrup 2004; König and Wagener 2008; Garretsen and Peters 2007; Bretschger and Hettich 2002). The results are not completely conclusive. Many studies confirm the negative effect of economic openness on the capital to labour tax ratio: open borders are associated with relatively lower capital relative to labour taxes. Others find no such evidence (e.g., Garrett and Mitchell 2001). Some studies also find that small countries have lower capital to labour tax ratios than large countries (Winner 2005; Schwarz 2007; Garretsen and Peters 2007), while others do not (König and Wagener 2008; Haufler et al. 2009).

We see at least two reasons why a competition-induced shift in the tax burden may not unequivocally show up in lower capital to labour tax ratios. First, many studies use fixed-effects estimators to gauge the effect of country size (operationalized by either population size or GDP) (Garretsen and Peters 2007; Haufler et al. 2009; Devereux et al. 2008). This is problematic because these estimators measure the coefficients of a country's deviations from its mean size only and cancel out cross-national differences in country size: they restrict the effect of country size to changes in one particular country's size over time and fail to capture the effects of differences in size across countries at a given point in time. This makes it very difficult to identify any effect of country size on capital

to labour tax ratios, because cross-country variation is swept out of the data and within-country variation over time is very scarce. Second, those studies not using a fixed-effects estimator (e.g., Bretschger and Hettich 2002; Schwarz 2007) usually measure the average effect of country size on the capital to labour tax ratio over a certain period of time. This would be fine if the time period started in the 1990s – i.e., after the onset of deep market integration. Most studies range back to the 1970s, however, thus lumping together time periods in which country size is unlikely to matter because market integration was shallow (the 1970s and 1980s) and time periods in which country size should matter because markets were deeply integrated (the 1990s and 2000s).

We cope with both problems by comparing different measures of the capital to labour tax ratio at two different points (1985 and 2007) to determine whether the ratios have fallen over time and and/or whether the correlation with country size has increased. The ratios are computed from the nominal tax rates analysed in section 3. Recall that important tax rates on mobile capital (the corporate tax rate and the tax rate on the resident interest income of private investors) have fallen considerably since 1985, while tax rates on immobile labour and consumption have increased (VAT), stagnated (tax wedge) or decreased by relatively less (top personal income tax rate). As a consequence, the ratios of capital tax rates to labour tax rates have generally fallen, indicating a shift in the nominal tax burden from mobile to immobile bases (table 3.4). The fall has been most pronounced in the personal interest income tax-rate to tax-wedge ratio: while in 1985 the rate applied to resident personal interest income was 2.07 times higher than the tax wedge, in 2007 it was only 1.19 times higher.

As table 3.4 also shows, the race to the bottom in nominal tax rate ratios was accompanied by growing asymmetries between large and small countries. The correlations of tax ratios and country size generally increased between 1985 and 2007, except for the corporate tax rate to VAT ratio. All correlations for 2007 are positive, and most of them are quite sizable, indicating that small countries impose relatively lighter nominal tax burdens on mobile capital than do large countries. To be sure, a shift in the nominal tax burden from capital to labour does not translate one-to-one into a shift in the effective tax burden. But, given that nominal tax rates are important determinants of effective burdens, such a shift is likely to have considerable impact. At the very least, therefore, our findings add credence to empirical studies reporting that economic openness and country size significantly reduce the effective capital to labour tax ratio (e.g., Schwarz 2007; Winner 2005).

Table 3.4: Tax rates and ratios, OECD-22 averages

Tax rates	OECD-22 average		Correlation with country size	
	1985	2007	1985	2007
<i>Capital</i>				
CTR ^a	46.1	29.7	0.21	0.63
TRRII ^b	57.6	33.8	-0.12	0.34
<i>Labour</i>				
VAT	10.7	17.7	-0.10	-0.24
Tax wedge	28.0	27.8	-0.32	-0.06
TPITR ^c	63.4	46.9	-0.10	-0.08
<i>Tax ratios</i>				
CTR/VAT	2.53	2.23	0.42	0.37
CTR/Tax wedge	1.65	1.07	0.33	0.50
CTR/TPITR	0.76	0.69	0.34	0.76
TRRII/VAT	3.16	2.30	-0.29	0.36
TRRII/Tax wedge	2.07	1.19	0.18	0.45
TRRII/TPITR	0.92	0.76	-0.08	0.25

Notes:^a CTR = corporate tax rate.^b TRRII = tax rate on resident interest income (private investors).^c TPITR = top personal income tax rate.

Sources: CTR, TRPII, TPITR and VAT rate: Bundesministerium der Finanzen; *Die wichtigsten Steuern im internationalen Vergleich*, several issues; Tax wedge: OECD, *Taxing Wages*.

6 Implications for fiscal democracy

The evidence presented in this chapter offers strong support for the view that tax competition exists. We note three key findings. First, general and targeted tax rates on real, financial and human capital have been racing to the bottom since the 1980s as small countries systematically undercut the tax rates of large countries (section 3). Second, the capital tax base is moving from large to small countries (international redistribution) and the nominal tax burden is shifting from capital to labour and consumption (domestic redistribution; section 5). Third, while the total level of tax revenues remains unaffected, small countries see their capacity to raise revenue from mobile capital increase, while large countries see their capacity decrease (section 4).

The implications for fiscal democracy are ambiguous. First, tax competition has a negative effect on national tax autonomy: all competing countries – large and small – see their ability to tax mobile capital

constrained. Governments have to tax immobile labour and consumption comparatively more in order to meet mandatory spending requirements. The shift of the tax burden away from capital is borne out not only by the evidence presented here in section 4 but also by tax policy reactions to the recent financial crisis. Given the role of the financial sector in causing the crisis, policy-makers throughout the political spectrum called for additional taxes on this sector to pay for part of the fiscal damage. While the G-20 initially endorsed this position, and many governments introduced some new levies at the national level, competitive pressure prevented the coordinated introduction of financial transaction taxes (Brast 2011). Instead, policy-makers have addressed their fiscal woes mostly through spending cuts and tax increases on labour and consumption. As a close inspection of tax policy changes in EU member states for 2008–10 reveals, tax increases have been focused on excises, social security contributions and VAT (Lierse and Seelkopf 2011). Even if governments manage to maintain total tax levels, their ability to make rich capital owners contribute erodes. Tax competition may thus contribute to increased income inequality between the very rich and the rest of society.

Second, tax competition has positive effects on fiscal democracy in small, peripheral low-tax countries. Countries such as Ireland or Luxembourg have profited from the competition-induced inflow of mobile capital, both directly in terms of tax revenues and indirectly in terms of new jobs, upward pressure on wages and, as a consequence, higher labour tax revenues. As Hannes Winner has shown for a panel of OECD countries, small countries have lower corporate *and* labour taxes than large ones, all else being equal (Winner 2005). This explains why left-wing parties in small countries often support aggressive tax competition strategies. For example, take the insistence of the new Irish Fine Gael–Labour government on defending the low Irish corporate tax rate: in effect, the government is betting on international redistribution from other large countries rather than on domestic redistribution from capital to reach its economic and distributive goals. This may not be a bad bet; while Ireland was particularly hard hit by the financial crisis, it is recovering faster than other small victims of the crisis such as Greece, which never seized upon tax competition as a strategy of national economic development.

Third, even if we accept that tax competition expands the scope for fiscal democracy in small countries, it achieves this expansion by constraining fiscal democracy in large countries. According to the baseline model, large countries will accept exploitation by small countries because the fiscal costs of fighting back are too high. This cannot be relied upon in the real world, because the governments of large countries may wish

Table 3.5: Corporate tax rate changes

	Corporate tax rate		Change
	2007	2011	2007–2011
Luxembourg	29.6	28.8	-0.8
NZ	–	–	
Ireland	12.5	12.5	0
Norway	28	28	0
Finland	26	26	0
Denmark	25	25	0
Switzerland	21.3	21.3	0
Austria	25	25	0
Sweden	28	26.3	-1.7
Portugal	26.5	29	2.5
Belgium	34	34	0
Greece	25	20	-5
Netherlands	25.5	25	-0.5
Australia	30	30	0
Canada	36.1	32.5	-3.6
Spain	32.5	30	-2.5
Italy	37.3	31.4	-5.9
UK	30	27	-3
France	34.4	34.4	0
Germany	38.7	29.8	-8.9
Japan	39.5	42	2.5
United States	39	39	0
OECD-22	29.7	28.4	-1.3
Correlation	0.69	0.61	-0.26

Source: Eurostat 2011; authors' own calculations.

to cut their taxes for purely domestic reasons. Thus, as table 3.5 shows, many large countries, including Canada, Germany, Italy, Spain and the UK, have recently cut their corporate tax rate to reinvigorate their crisis-stricken economies. France and the US are also considering cuts.

The recent wave of corporate tax rate cuts in large countries increases the competitive pressure on all countries. While large countries suffer relatively more from tax competition than small countries, they also have more power to bring about tax competition. Intuitively, if a large country cuts its taxes, this will put much more pressure on other countries to do the same than if a small country were to enforce a similar cut. As various authors have argued, the United States tax reform of 1986 was what triggered the global downward competition in corporate taxation (Hallerberg and Basinger 1998; Swank 2006). An equally dramatic tax cut in, say, Norway would never have had such a dramatic effect. It follows that large countries also have more power to mitigate

tax competition. It is not the likes of Luxembourg, Estonia and Ireland which hold the key to preventing a meltdown of capital taxation; it is the United States, Japan, Germany, France and other large countries. If the scope for democratic choice in capital taxation is to be retained – or enlarged – under conditions of tax competition, large countries have to take the lead. They have to keep their tax rates up in order to allow smaller states to cut their taxes less drastically. Such consideration would preserve more options for fiscal policy choice for all countries, but there would be significant cost for the large countries. Benevolent hegemony is not for free.

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- 16 To control for policy demand, one may divide ALMP spending as a percentage of GDP by a country's unemployment rate. This reveals a flat and low spending curve in the US throughout the observed period, whereas German spending had upswings in the late 1980s and late 1990s but eventually returned to the modest levels of the mid-1980s. Sweden's adjusted spending dropped dramatically in the early 1990s from very high levels and moved closer to the German level.
- 17 The clearest results come from the Swedish case, where the four investment variables are correlated at coefficients between 0.29 (education and R&D) and 0.54 (R&D and family support). Germany and the US show a more mixed picture, with highly positive but also a few negative correlations.
- 18 GFCF is technically defined according to the nature of the assets in question (OECD 2009: 44), whereas our data on social investment are defined functionally with respect to policy areas.
- 19 As a result of reduced public support for education, together with the rising costs of tuition in the private college market, the total college loan debt of American households is now equal to the total American debt on credit cards (Lewin 2011).

Chapter 3 Tax Competition and Fiscal Democracy

- 1 The OECD-22 countries are Austria, Australia, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom and the United States of America.
- 2 We use tax harmonization here as a catch-all term for cooperative measures to curb tax competition.
- 3 Cross-national differences in wealth, location and domestic institutions can also create asymmetric effects under tax competition (see Baldwin and Krugman 2002; Basinger and Hallerberg 2004; Plümper et al. 2009; Hays 2009).
- 4 The tax wedge refers to the sum of personal income tax and employee social security contributions together with any payroll tax, expressed as a percentage of labour costs.
- 5 Following standard practice, we operationalize country size as the logarithm of population size in order to dampen the impact of very small and very large countries on the correlation.
- 6 What happened to public deficits after 2007 is, of course, a different story entirely.
- 7 Not shown in figure 3.2a is the rapid decline in corporate tax revenues following the financial crisis in 2008.
- 8 Unfortunately, data on the share of non-resident capital income in total domestic capital income are not easily available. Thus we present no evidence of the international distribution of the mobile personal capital income tax base.