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Tax Competition and the Myth of the 'Race to the Bottom'

Why Governments Still Tax Capital

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Summary points

- The majority of OECD countries have only experienced minor effects of capital market integration and capital tax competition since the mid-1980s. There have undoubtedly been some winners, mainly capital owners in larger liberal market economies, and some losers, especially large continental European welfare states.
- Not only have the dire predictions of the early doom theories not materialized; they have failed. Therefore, there is much to be gained in making the key assumptions underlying traditional tax competition models much more realistic, particularly in terms of predicting the impact of globalization on Western democracies.
- Tax competition affects countries differently and does not lead to a 'race to the bottom' since capital remains incompletely mobile. The competitiveness of a country determines fiscal adjustment strategies by others. Cutting capital taxes, therefore, will not necessarily generate more capital inflows.
- Tax competition and taxation have broader implications for the fiscal responses of countries to globalization and their redistribution efforts. Given that tax competition affects countries differently, governments will choose diverse strategies to cope with these international pressures. Competition will more negatively affect income inequality in countries that predominantly redistribute via the tax system than in those that historically set up a welfare state by redistributing via social transfers.

Introduction

In a world where barriers to capital movement are lower than in the past, capital can move where taxes are lowest. In theory, at least, this forces governments to compete for mobile resources by providing business-friendly conditions, such as low taxes on capital gains and corporate profits. Because of this competitive pressure – induced by the international integration of capital markets – taxes on mobile capital will ultimately disappear. This is precisely the kind of prediction contained in many capital tax competition models that have been developed since the early 1960s. Politicians and economists alike expect that international tax competition will impose tough constraints on the ability of policy-makers to tax mobile capital bases, which will eventually erode revenues from taxing capital. As Fritz Scharpf (1997) put it:

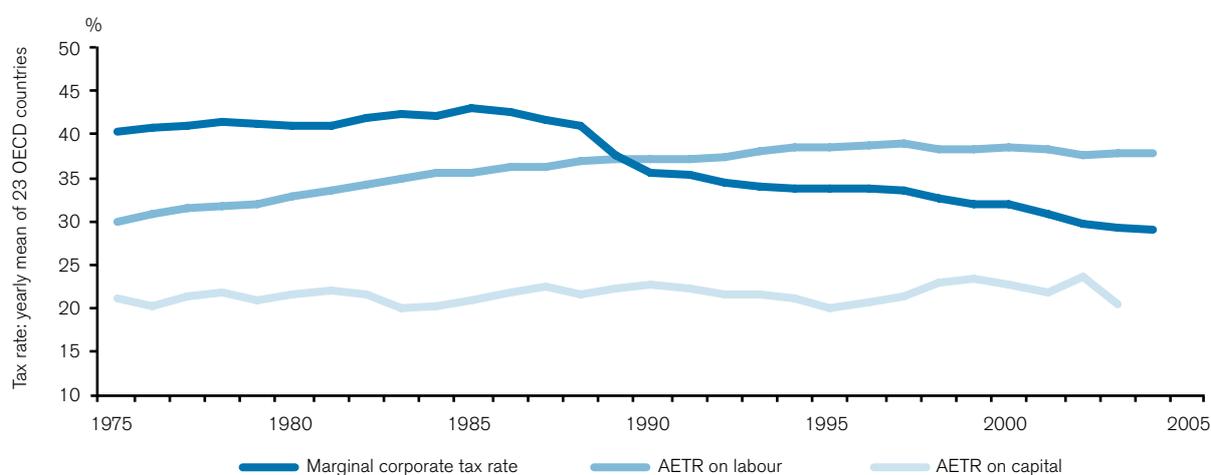
capital is free to move to locations offering the highest rate of return. ... As a consequence, the capacity of national governments ... to tax and to regulate domestic capital and business firms is now limited by the fear of capital flight and the relocation of production. Hence all national governments ... are now forced to compete against each other in order to attract, or retain, mobile capital and firms.

Similarly, many politicians in the western hemisphere use tax competition arguments to justify tax cuts for corporations and capital owners. For example, UK Chancellor of the Exchequer Gordon Brown (2007) declared in one budget speech that:

because our goal is and will continue to be the most competitive business tax rate of the major economies, I have decided to cut mainstream corporation tax from April 2008 from 30p down to 28p – at 28p a rate lower than the United States, Germany, France, Japan, and all of our other major competitors – Britain's corporate tax rate, the lowest of all the major economies.

Today there can be little doubt that history has proven wrong the prediction of a complete erosion of capital tax revenue. Comparative data on corporate and capital tax rates demonstrate that governments in all economies continue to tax mobile sources of capital, effective capital tax rates have not changed much compared with the mid-1980s, when tax competition was triggered by the 1986 US tax act, and tax systems are as varied as countries and political systems themselves, with no visible sign of converging.

Figure 1: Mean top corporate tax rate, mean efficient labour and capital tax rate of 23 OECD countries



Source: OECD, *National Accounts Statistics*.

Note: Average effective tax rates for labour and capital: own calculations from OECD, *National Accounts Statistics* based on formula provided by Volkerink and de Haan (2001). AETR = Average effective tax rate.

However, as Figure 1 suggests, some effects of the international integration of capital markets and the elimination of legal restrictions on capital flows can be observed.¹ Indeed, the marginal tax rate on corporate profits decreased in 23 countries in the Organisation for Economic Co-operation and Development (OECD)² and tax rates on labour income on average went up, suggesting a possible burden shift from capital to labour.

‘ There is much to gain both in terms of explanatory and predictive power if one adjusts key underlying assumptions closer to reality ’

Marginal corporate tax rates significantly decreased (~14%) between 1986³ and 2004 for the 23 OECD countries under observation, but remain on average close to 30%. In 1975 marginal corporate rates varied from 8% in Portugal to 51% in Germany. This range had not changed much by 1990, with tax rates between 9.8% in Switzerland and 50% in Germany. Some reduction in the highest rates could be observed in the early 2000s with rates ranging from 8.5% in Switzerland and 36% in Canada. By comparison, effective tax rates on labour varied between 17% (1975) and 19% (2004) for Iceland, and 47% (1975) and 55% (2004) for Sweden (OECD *National Accounts Statistics*).

In general, empirical evidence for tax competition is very limited and offers no support for the dire prediction of the early tax competition models. The lack of empirical underpinning for the ‘race to the bottom’ hypothesis may come as a relief to politicians, but perhaps not to social scientists who saw their predictions come to nought.

As a result, more recent work in economics and political economy has focused on explaining non-zero capital taxation by arguing that political, institutional and economic restrictions prevent governments from implementing very low or even zero capital tax rates. These models predict non-zero tax rates on mobile assets and a pattern of tax rates that highly co-varies with the pattern of economic (Swank 2006; Rodrik 1998; Garrett 1998a, 1998b, among others), political (Ganghof 2004; Genschel 2002) or institutional (see, for example, Hays 2003; Basinger and Hallerberg 2004) constraints on governments.

Domestic political and economic constraints limit policymakers in their ability to implement very low tax rates on capital, and including these additional factors leads to more realistic predictions about the level of capital taxation across countries. Yet challenging the underlying assumptions of traditional tax competition models also seems to allow one to paint a more realistic picture of how governments implement national taxes. For example, politicians obviously prefer winning elections to losing them. When they come into office they can implement policies they deem necessary to improve the performance of the domestic economy, but incumbents have to implement policies – tax and fiscal – that generate enough electoral support to stay in office. In addition, if the assumption of perfect capital mobility is made less rigid, equilibrium tax rates will diverge from zero.

Governments have to consider the entire tax system and the fiscal implications, rather than a single tax rate, when they maximize revenues, aggregate welfare or seek political support. This also holds true if the unrealistic assumption of homogeneous countries is abandoned. Countries are not equal in size, political culture or economic background. While competitive pressures arguably hit developed countries in similar ways, the welfare state was set up well before globalization began to have an impact on domestic policy-making. This creates path dependencies and voter expectations that force governments to adopt different strategies to deal with capital tax competition.

1 The data cover 30 years from 1975 until 2004.

2 These countries are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom and the United States.

3 1986 marks the year tax competition is said to have begun – prompted by the US corporate tax reform in that year.

This paper shows there is much to gain in terms of both explanatory and predictive power if one adjusts key underlying assumptions closer to reality. Tax competition does not affect all countries in the same way, but it does generate among them winners and losers who, depending on their domestic economic, institutional and cultural constraints, implement different fiscal adjustment strategies.

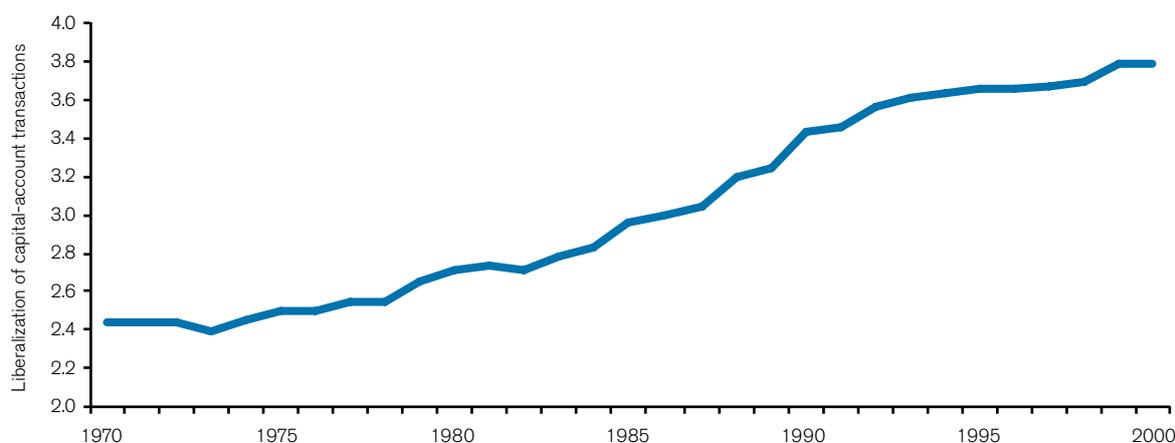
De facto capital mobility and tax competition?

Economic models that predict a 'race to the bottom' in capital taxation assume that capital is fully mobile and can move at no cost to jurisdictions that offer lower tax rates. Indeed, during the last 30 years most OECD countries have abolished legal restrictions to capital-account transactions (see, for example, Janeba 2000; Ganghof 2000). Different measures of legal capital controls provide evidence of a trend towards lower restrictions and higher mobility (see, for example, Quinn 1997; Miniane 2004). International capital flows seem to follow this trend: between the early 1980s and late 1990s the annual flow of outbound foreign direct investment (FDI) increased nominally by more than 1,200% worldwide, rising from less than \$50 billion

to more than \$600 billion (Haufler 2001). Figure 2 shows the almost complete elimination of legal restrictions to capital-account transactions up to 2000 across 23 key OECD countries.

The absence of legal capital controls does not necessarily lead to perfect capital mobility. *De facto* mobility, as opposed to legal restrictions on capital transactions, depicts the actual costs capital owners incur when shifting capital to other locations. In fact, the elasticity with which capital responds to differences in tax rates is limited. Important differences in the institutional environment, such as education and skill levels, wage differences, the wage bargaining and corporate structure, as well as environmental and labour-market regulations, prevent capital from being fully mobile. A large number of companies require a certain skill set in their labour force that is only available in established industrial clusters. Consequently, an individual firm cannot simply leave the country in which it prospers because it may not find a suitable combination of skills elsewhere. Indeed, only a small part of the capital bases in most OECD countries is actually mobile. In addition, the most obvious reason for a lack of mobility is that many corporations produce non-tradable goods and services. The business activities of these corporations thus

Figure 2: Liberalization of inward and outward capital-account transactions



Source: Quinn (1997).

Note: Annual mean of 23 OECD countries. The Quinn (1997) measure ranges from 0 to 4, with 0 representing high restrictions and 4 no restrictions on capital-account transactions. This measure is based on IMF financial reports.

depend on their presence in specific markets. Unless effective tax rates are prohibitively high and reduce demand for their goods and services to virtually zero, corporations normally stay in these particular markets even if the domestic effective tax rate is higher than in other countries.

The most obvious effect of this partial mobility is that governments in countries that have a predominantly immobile capital base can maintain higher tax rates without losing much capital to other countries. This is true of countries with a highly specialized and skilled labour force, such as Germany and Switzerland, and of countries such as Italy in which services and agriculture dominate.

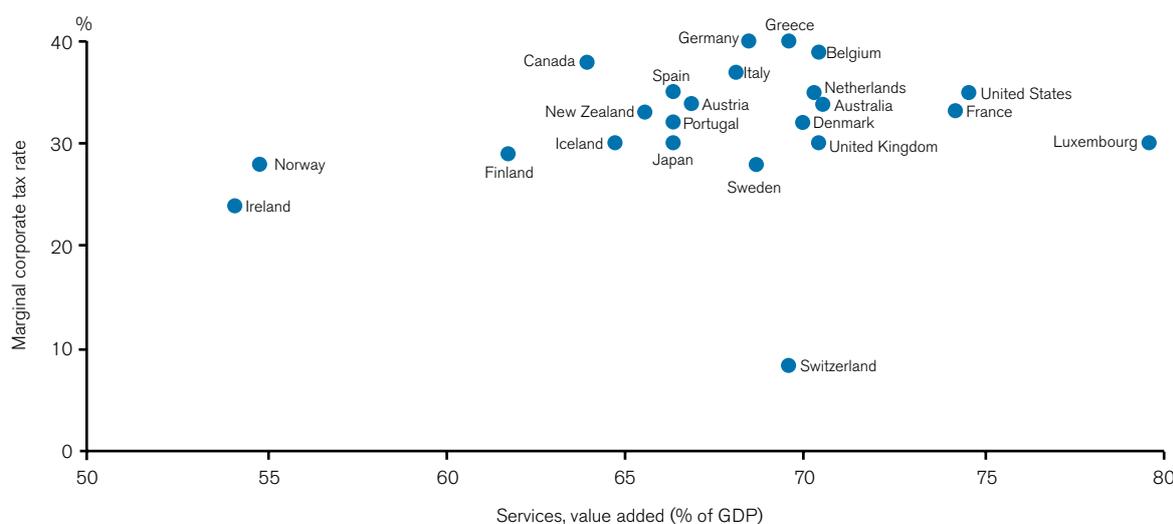
The scatter plot in Figure 3 reveals a positive relationship between the share of the services sector in the overall economy and statutory corporate tax rates. Indeed, it supports the notion that profits in the services sector are usually less mobile because they are dependent on being close to customers and therefore can be taxed at a higher rate. Of course, the world is much more complex than this simple bivariate plot suggests, and many additional factors affect the level of corporate tax rates in a country. Figure 3 also reveals another important dimension, namely country size. Smaller countries, on average,

can implement lower capital tax rates. This is discussed in more detail below.

More empirical evidence backing this view is provided by Pluemper et al. (2009) and Pluemper and Troeger (2012), who show with a more complex empirical model for 23 key OECD countries over a 35-year span that the relative size of the services sector indeed increases both marginal corporate tax rates and average effective tax rates. This finding clearly supports the notion that governments in countries with a larger share of immobile capital implement higher capital and corporate tax rates because capital flight is less of a problem and does not lead to an erosion in tax revenues.

Partial capital immobility can result from different sources. Relocating production sites and plants generates relatively high costs since it involves not only a physical move but also a large amount of administrative and bureaucratic effort: firing and hiring employees, rebuilding connections with local infrastructure, transportation, packaging, establishing ties with the local bureaucracy and administration, and so on. In addition, capital owners have to gather information about tax rates, tax credit structures and exemption rules in other countries before deciding on a new destination.

Figure 3: The relationship between the size of the services sector and corporate tax rates in 2000



Sources: World Bank (2000), *World Development Indicators*; OECD (2000), *National Accounts Statistics*.

The ownership structure of domestic capital determines the costs of moving capital through jurisdictions. The higher the concentration of capital, the lower the transaction costs of shifting profits to low-tax countries because owners of capital can benefit from economies of scale. The costs of moving capital to another location decrease with the degree of concentration since the costs of information-gathering remain stable and do not rise with an additional unit of capital to be shifted to a low-tax country. If capital is rather equally distributed throughout society, then the costs for capital owners to engage in tax arbitrage increases. In extreme cases, where capital is perfectly concentrated, transaction costs approach zero per unit of capital. The ownership structure of domestic capital therefore translates into *de facto* capital mobility.⁴

The actual ability of capital owners to shift profit to low-tax countries can be empirically observed. Multinationals with high capital concentration use preferential tax regimes as a platform for international tax planning. These large companies with subsidiaries all over the world have the capability and means of engaging in large-scale tax arbitrage and avoidance with instruments and strategies such as transfer pricing, thin capitalization and debt reallocation (Zodrow 2006; Stöwhase 2005). They engage in international transfer pricing to minimize their global tax liabilities (Grubert and Mutti 1991; Hines Jr 2001). Thus transfer pricing is used as a tax-saving device (Schjelderup and Sorgard 1997).

Multinational enterprises (MNEs), therefore, have a much higher *de facto* mobility. Transaction costs of shifting mobile assets remain low for MNEs since, on the one hand, they can easily collect and compare information on foreign tax systems. On the other hand, and what is more important, they can engage in tax-efficiency activity without physically moving production sites but by virtually shifting profits and debts to benefit from different tax arrangements. This argument gains support from the finding that abusive transfer pricing is one of the main determinants of international FDI flows (Azémar et al. 2006).

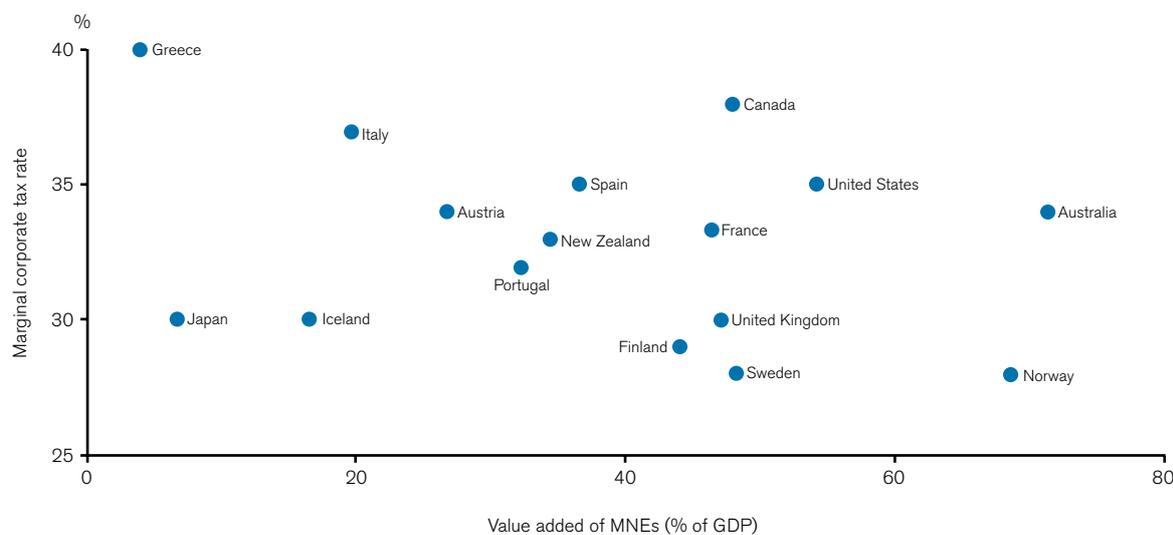
Small and medium-sized firms do not have the same ability to engage in large-scale tax-efficiency strategies. Their transaction costs per unit of capital remain much higher than for MNEs for two main reasons. First, their capacity for collecting and comparing information on different foreign tax systems is more limited. Second, they must shift physical capital such as production plants since they are usually less able to shift profits and debts virtually through transfer pricing and other tax efficiency strategies.

‘ Undercutting foreign capital rates appears to be a logical approach for two reasons: foreign capital can be attracted and highly mobile domestic capital is less likely to leave the economy ’

The possibilities of tax arbitrage for smaller firms have been further reduced by the measures taken by the European Union and the OECD against discriminatory taxation (European Commission 2001; European Council 1998; OECD 1998). These mainly include the abstention from the preferential taxation of non-residents and – more importantly – not granting tax advantages to firms with no real economic activity in the country (the ‘real seat’ doctrine). These strategies aim at preventing the use of mere holdings and letterbox companies in tax havens that are created to reduce the tax burden of a business. Governments in countries with a high share of FDI and multinational corporations are thus more prone to play the tax competition game. Undercutting foreign capital rates in this context appears to be a logical approach for two reasons: foreign capital can be attracted and highly mobile domestic capital is less likely to leave the economy.

⁴ Moreover, large enterprises normally dispose of huge administrative departments that allow for the easy gathering and processing of information. For a more thorough discussion of *de facto* capital mobility as a result of capital concentration and ownership structure, see Troeger (2012).

Figure 4: The relationship between the share of multinational capital and corporate tax rates



Source: OECD (2000), *National Accounts Statistics*.

Note: Switzerland is excluded as it is an outlier with very low corporate tax rates.

Some evidence for the relationship between the concentration of capital and capital tax rates can be found in Figure 4, which displays OECD data on the share of value added generated by MNEs and statutory tax rates on corporate profits. Indeed, countries in which MNEs have a larger share in the economy also seem to implement lower marginal corporate tax rates. Once again, a country's size seems to influence this effect.

How does fairness affect tax competition?

Governments need tax revenues to fulfil public tasks such as the redistribution of income to poorer parts of society and to provide important public services such as education, health and infrastructure. If the competitive pressure generated by globalization and capital market integration limits the ability of policy-makers to tax mobile factors they may want to compensate for this by shifting parts of the tax burden toward more immobile factors such as labour and consumption, as this allows them to keep revenues and public goods provision relatively stable (Sinn 2003; Schulze and Ursprung 1999, among others).

This strategy, while welfare maximizing, implies problematic distributional problems for individual wage earners and also generates political costs for incumbents

(Genschel 2002; Ganghof 2004). The decisive voter in most OECD countries – even capital-rich ones – is a wage earner, rather than a capital owner, and perceives this burden shift as unjust and unfair. It is not in the personal interest of workers to subsidize capital, even though the productivity of the factor labour is higher when supported by additional capital. The impression of inequality and unfairness leads the majority of the electorate to withdraw its political support when the government attempts to shift large parts of the tax burden onto voters. Therefore, preferences for societal equality can constrain governments in their ability to create a large gap between the tax rates imposed on mobile and immobile taxpayers.

How strongly these attitudes towards fairness and equality are rooted in society largely depends on the political culture of a country and the initial set-up of the welfare state. Long-lasting political practice shapes voters' expectations regarding the equity and symmetry of the tax system, and influences the behaviour of governments. For example, the varied development of welfare states may have formed different preferences when it comes to compensation of risks and redistribution of income. Social democratic welfare states institutionalized income redistribution from rich to poor much more extensively

than liberal market democracies. Voters in continental and Scandinavian welfare states, therefore, can be expected to demand more fairness and greater tax symmetry than voters in countries with a greater free market tradition.

The use of redistributive measures differs across countries and policy-makers, depending mainly on persisting institutional settings. Some researchers argue that the degree of unionization (Hibbs and Dennis 1988; Freeman 1980) and corporate wage setting (Esping-Andersen 1996; Korpi 1983; Korpi and Palme 2003) affect a government's willingness to redistribute income. The degree of wage coordination is conventionally regarded as a crucial difference between liberal and coordinated market economies (Hall and Soskice 2001). Redistributive patterns are thus strengthened by long-lasting features and settings in any specific democracy. These patterns shape voter expectations and demands regarding equality, redistribution and tax symmetry. In some societies, therefore, a much more egalitarian legacy prevails and voters demand political intervention in instances when the market produces sharp inequalities. In liberal market economies, by comparison, the ideal of free market activity without governmental interference tends to dominate the preferences of the electorate.

As a result, the pressure on governments to implement more equal tax rates on capital and labour varies with the strength of egalitarian preferences in a society. The higher the equality expectations of voters, the less likely a government is to play the tax competition game very hard. In such cases, governments can often win higher voter support from not reducing capital taxation too strongly or cutting back wage taxation accordingly than they might gain from attracting foreign capital investors.

Tax competition: who are the winners and losers?

Just as competition in sports produces winners and losers, competition for mobile tax sources increases capital imports in some countries and capital exports in others. As a result, these winners and losers of tax competition are forced to choose different strategies to deal with the consequences of tax competition.

Whether a country wins or loses is largely determined by its size and by the government's ability to finance deficits for a limited time. In tax competition, being small is beautiful. When countries reduce the effective capital tax rate, revenues from taxing the domestic capital stock decline. This is the tax rate effect. At the same time – because of the lower capital tax rate – the country imports capital from nations with higher capital tax rates (or exports less capital to countries with low capital tax rates). The inflowing capital will be taxed at the reduced tax rate. This is the tax base effect. Since small nations can import more capital – relative to their domestic capital stock – from larger countries than the latter can import from smaller ones, the tax base effect is more likely to dominate the tax rate effect when a country is smaller. Hence, if a country is small enough, revenues from taxing capital can increase when the government significantly reduces the effective capital tax rate and thus induces sufficient capital inflow. Countries with a relatively large domestic capital stock also attract capital inflows when they reduce the effective capital tax rates. However, revenues generated from this additional capital are far less likely to compensate for the income losses caused by the reduction in capital tax rates.

Policy-makers in small countries have more leeway in setting out their economic agenda. Small countries can reduce capital tax rates, hold effective labour taxation at the same level and reduce debt simultaneously – as Ireland has done. Luxembourg is a good example of a country that has pursued an alternative adjustment strategy whereby the government reduced effective labour taxation and held effective capital tax rates constant at low levels while at the same time slightly increasing social security transfers. Basically, small countries with low initial debt levels are the winners of tax competition; governments in large countries with high initial levels of debt are most likely to have to respond by increasing capital and labour tax rates.

For countries with a large domestic capital stock, the tax base effect cannot offset the tax rate effect. Therefore, if these countries reduce their capital tax rates, they must deal with a reduction in capital tax revenues. If policy-makers do not counterbalance capital tax cuts with fiscal policy reforms, debt and deficits will surge. Governments,

of course, can implement different sets of fiscal policy reforms. With capital being only imperfectly mobile, their first option is to increase effective capital rates to the extent that higher taxes compensate revenue losses from capital exports. Policy-makers can do so by adopting a strategy that is commonly known as 'tax-cut-cum-base-broadening', which implies not necessarily increasing the statutory tax rates but cutting tax exemptions and opportunities for tax avoidance (see, for example, Swank and Steinmo 2002).

By ignoring a decline in capital tax revenues and simply allowing higher deficits, governments can significantly delay policy adjustments to tax competition. In doing so, an incumbent government can prevent an increase in tax rates and still maintain previous levels of spending and social transfers. This is a viable strategy in large countries or in countries with an extensive and popular welfare state where labour taxes are already relatively high. Welfare states are very unlikely to win international tax competition, which makes radically cutting capital taxes rather unappealing. However, governments do need relatively low initial levels of public debt to make a deficit strategy both successful and sustainable.

Which strategy governments choose in order to deal with the effects of capital tax competition depends largely on how the welfare state was set up. More precisely, the policy response hinges on the established mechanism of income redistribution. Without over-simplifying, one can assume that governments generally have two instruments at their disposal in order to redistribute income: the tax system and social transfers. While most countries have implemented a combination of these options, a general trend is observable. Continental European welfare states redistribute predominantly with the help of social security transfers, while Anglo-Saxon and Scandinavian countries tend to redistribute more via the tax system. Moreover, the overall level of redistribution in Anglo-Saxon countries tends to be lower. As a result, Anglo-Saxon countries enjoy greater flexibility when it comes to adjustment strategies.

Governments in continental European welfare states usually face more severe losses in political support when they cut social security transfers and are therefore more likely to use tax reforms and deficits to adjust to tax

competition. By comparison, liberal market economies such as the United States and Scandinavian welfare states such as Sweden are less likely to use tax reforms as their primary policy tool. This does not imply that continental European welfare states exclusively implement tax reforms and other countries only use fiscal reforms to adjust to tax competition; quite the contrary. All governments use a combination of tax reforms, fiscal reforms and deficits to respond to tax competition. However, continental European welfare states rely comparably more on tax policy adjustments and thus on increasing labour and effective capital taxes. Therefore, it is the initial level of social security transfers that determines the policy response to tax competition.

This has important implications for the forecasts of tax competition models. First, when capital bases are only imperfectly mobile, no country will implement zero capital tax rates. Second, governments will pick different combinations of capital and labour tax rates that are optimal given the size of the country, its fiscal situation and the tax fairness preferences of the electorate.

Because tax competition generates winners and losers, and countries differ in the initial set-up of their welfare state policies and pre-globalization fiscal conditions, fiscal adjustment strategies will inevitably vary. Very small countries are able to implement low capital and labour tax rates because they can widen their capital stock by importing mobile capital from other countries. The strategy of choice in a second group – large liberal market economies where the government is less constrained by voter preferences and demands for tax fairness and tax equity – is to reduce capital tax rates and increase labour tax rates slightly to compensate for revenue losses. A third group – especially large continental European welfare states – will tend to keep capital tax rates constant or even increase effective capital taxation and labour taxes. These countries will lose tax competition, and will export capital to the first group and potentially to the second set of countries too.

Conclusion

It would appear there is much to be gained in making the key assumptions underlying traditional tax competition models much more realistic – not just in terms of *ex post*

explanations of government actions but also in terms of predicting the future impact of globalization on Western democracies and beyond.

The majority of OECD countries have only experienced minor effects of capital market integration and capital tax competition, but there can be no doubt these competitive pressures created some winners – Luxembourg, Ireland and capital owners in larger liberal market economies – and some losers, especially large continental European welfare states. Yet the dire predictions of early doom theories have not materialized; welfare states are still welfare states and are likely to persist in the future.

‘ Policy-makers need to focus on other tools than cutting corporate tax rates in order to prompt firms to relocate or attract investments ’

Tax competition affects countries differently and does not lead to a ‘race to the bottom’ since capital remains incompletely mobile. The competitiveness of a country (size, mobility of capital, initial fiscal conditions, lack of fairness norms) determines countries’ fiscal adjustment strategies. Cutting capital taxes, therefore, will not necessarily have the desired effect of generating more capital inflows, especially not in large countries. And even if countries succeed in attracting FDI by lowering taxes for large corporations, the additional taxes levied will not offset the loss in income caused by this tax cut. Governments that want to be successful in elections need to consider the trade-off between a small gain in capital tax revenue and possible spending cuts. Slashing the provision of public goods will have far-reaching electoral repercussions because of the distributional consequences. Policy-makers need to focus on other tools than cutting corporate tax rates in order to prompt firms to relocate or attract investments. Such strategies can consist of greater investment in higher

education to increase the provision of highly skilled labour, the improvement of infrastructure, and so on.

These findings on tax competition and taxation have much broader implications for the fiscal responses of countries to globalization, their redistribution efforts and their measures to address income inequality. Given that tax competition affects countries differently, governments will choose diverse strategies to cope with these international pressures. Tax competition will have a more adverse effect on income inequality in countries that predominantly redistribute via the tax system than those that historically set up a welfare state by redistributing via social transfers.

Therefore, the initial fiscal conditions and the choice of policy adjustment strategies can explain why disposable income inequality has increased more in liberal market economies than in continental welfare states. While the latter had to maintain a high level of social security transfers in order to avoid political costs, the former would have had to cut back on tax-based redistribution and to increase social security transfers in order to fight higher income inequality. Not all governments in liberal market economies were able or willing to do so, and as a result, disposable income inequality rose most in liberal economies whose governments did not increase social security transfers, or where they did so very modestly, notably in the United States and the United Kingdom.

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