



# Is Neoliberalism Still Spreading?

## The Impact of International Cooperation on Capital Taxation

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## Executive Summary

The spread of neoliberal ideas, institutions and policies since the 1980s is one of the key findings of comparative political economy. An important indicator for neoliberal reform has been the downward trend in tax rates imposed on capital. When looking at the most recent data, however, the analyst is surprised by a discrepancy between the trends in tax rates imposed on corporate profits and personal capital income. Why has capital recently been taxed more heavily at the personal than at the corporate level? Conventional theories of tax reform expect a uniform effect of their

respective explanatory variable on the taxation of capital. In contrast, we argue that the observed divergence in tax rates on personal capital income and corporate profits is the result of a parallel divergence in the levels of international cooperation against tax evasion and tax avoidance. To test our hypotheses, we perform a differences-in-differences analysis, comparing the evolution of tax rates before and after the establishment of multilateral automatic exchange of information on the capital income of non-residents. We substantiate our the quantitative results with a case study of the United Kingdom.

## 1. Introduction

The spread of neoliberal ideas, institutions and policies since the 1980s is one of the key findings of comparative political economy (CPE) (Simmons, et al. 2006; Widmaier 2016). An important indicator for neoliberal reform has been the downward trend in tax rates imposed on capital. From a neoliberal perspective, tax rates on portfolio capital income and corporate profits should be reduced to provide incentives for saving and investment. Accordingly, the CPE literature has found that virtually all countries have lowered tax rates on all forms of capital income (Genschel and Schwarz 2011; Swank 2006; Ganghof 2006). Yet, while the downward trend in tax rates continues for corporate profits, it has recently reversed for portfolio capital income. OECD countries have, for instance, raised tax rates on dividends by 4 percent on average between 2009 and 2017, whereas tax rates on corporate profits declined by 1 percent over the same time period (see below). Why have trends in tax rates on different forms of capital income diverged over the last couple of years?

While conventional CPE approaches provide good starting points for our inquiry, they cannot provide a definitive answer, since they generalize the effect of their preferred independent variable over all forms of capital taxation. According to theories of tax competition (Wilson and Wildasin 2004) states compete for internationally mobile tax bases by offering light taxation. The more mobile a tax base, the lower its tax rate. Given the agreement in the literature that the downward trend in capital tax rates is caused by tax competition (Genschel and Schwarz 2011), both portfolio capital and corporate profit taxes should decrease in parallel rather than move in opposing directions, as there is no relevant difference in the mobility of both tax bases. In contrast, theories on institutional constraints and countervailing pressures to tax competition stress the importance of left-of-center governments, veto players or corporatism for persistently high taxes on capital (Basinger and Hallerberg 2004; Swank and Steinmo 2002; Swank 2006; Plümper, et al. 2009). But they also make no distinction between portfolio capital income and corporate profits taxes. In a related vein, tax increases may be caused by budget constraints. For example, high levels of public debt and unsustainable interest burdens after the financial crisis may lead to higher tax rates (cf. Lierse and Seelkopf 2016). Others expect that salient demands of compensatory fairness will lead to higher capital taxes (Scheve and Stasavage 2016): capital owners who profited from deregulated financial markets should be made to share in the costs of crisis cleanup. While such accounts of institutional, political or functional pressures could explain tax increases on mobile capital even under conditions of tax competition, they cannot (on their own) explain the observed pattern of divergence in taxes on portfolio capital and corporate profits. Finally, if we focus on ideational change, we can find evidence for the emergence of a new narrative presenting progressive wealth and capital taxation as a means to reduce income inequality (Atkinson 2015; Piketty 2014) and boost growth (Brys, et al. 2016; International Monetary Fund (IMF) 2014). Yet, this narrative also stresses the need to increase taxes on both corporate profits and portfolio capital income.

Against this background, we argue that the effect of the above factors on corporate and personal tax rates is mediated by the degree of international tax cooperation. The observed divergence in tax rates is the result of a parallel divergence in governments' ability to fight tax evasion and avoidance. Tax evasion occurs when a household conceals financial wealth and related capital income from the tax office. The crucial prerequisite for this concealment is the provision of financial secrecy by tax havens. Tax avoidance refers to legal accounting practices of multinational corporations (MNCs) that inflate profits in low tax countries while deflating them in high tax countries. These practices are enabled by a principle in international tax law that obliges tax authorities to treat subsidiaries of a group as separate entities with separate balance sheets. Both forms of tax arbitrage rely on international capital mobility, and have in the past served as justifications for competitive cuts to taxes imposed on capital. Just as theories of tax competition expect, lowering capital tax rates was considered to be a necessary response to the looming threat of capital fleeing offshore.

In 2009, however, governments in the Group of 20 (G20) and the Organisation for Economic Cooperation and Development (OECD) embarked on a process of incremental reform of information exchange standards that culminated in the multilateral adoption of automatic exchange of information (AEI) in 2014. Although the process has been incremental, AEI represents paradigmatic change, as it provides national tax

administrations with information on their taxpayers' foreign portfolio capital income on a regular, automatic basis for the first time. Through its adoption, the veil of secrecy that formerly enabled (mostly) wealthy individuals to hide their capital income offshore to evade taxation at home is lifted for all types of portfolio investment and almost everywhere. In contrast, efforts to curb tax avoidance by MNCs have not led to similar change so far. Although the G20 and OECD launched an initiative to fight base erosion and profit shifting (BEPS) in 2012, analysts agree that its outcomes are ambiguous and do not depart significantly from the status quo ante (Büttner and Thiemann 2017). Most importantly, OECD governments have not moved away from the separate entity principle. As a result, policymakers associate an increase in taxes on corporate profits with a higher risk of capital flight than an increase in taxes on portfolio capital income. In sum, we argue that, while high debt levels after the financial crisis and considerations of fairness have created a demand for higher tax rates, the ability of governments to supply such tax increases hinges on successful cooperation against tax competition. Such cooperation occurred only in the area of portfolio capital income, but not in corporation tax, hence explaining the divergence in tax rates.

This article contributes to important debates in the international and comparative political economy literature. First, there is a literature on the effectiveness of international cooperation that aims at gauging whether international governance efforts elicit compliance and achieve their substantive policy goals (Downs, et al. 1996; Young 2001). We demonstrate that international cooperation cannot only be effective by directly constraining states' choices to specific policy goals, but also by indirectly opening up opportunities for nation states to make their preferred policy choices – room to manoeuvre that had previously been lost to the structural constraints or functional demands of economic globalization. By doing so, we add to literature concerned with the interaction of different levels of governance and the assignment of different functions to the proper level (e.g. Zürn 2010; Frieden and Martin 2002). Second, we weigh in on the eternal debate about the relative importance of ideational vs. material factors in the explanation of policy change (e.g. Blyth 2001; Goldstein and Keohane 1993). The divergent trajectories of international tax cooperation in the area of portfolio capital and corporate profits provide an ideal test case to gauge the political traction of powerful ideas independent of or in conjunction with a material institutional framework.

To substantiate our argument we proceed as follows. In the second part, we embed our theoretical argument in the relevant literatures on the political economy of capital taxation, tax competition and international tax cooperation and derive a testable conjecture. Section three briefly describes the political processes leading to the adoption of multilateral AEI as a countermeasure to tax evasion and the BEPS project's failure to remove the legal preconditions for tax avoidance. In section four, we present our method and data and report the results of a differences-in-differences (DID) analysis comparing the trends in tax rates on dividends and corporate profits imposed by OECD countries before and after the G20 put tax information exchange on its agenda. To ascertain that the substantial and statistically significant divergence in trends after 2009 is due to a parallel divergence in levels of tax cooperation, section five provides additional qualitative evidence from OECD countries that increased tax rates on dividends. Section six summarizes our main findings and discusses their broader implications. Relating our results to the literature on the effectiveness and democratic legitimacy of international and multilevel cooperation, we stress that a departure from neoliberal principles in national policy is premised on the establishment of countervailing institutional structures at the international level. Hence, ideational change away from neoliberalism will only become politically effective if material (institutional) preconditions are met.

## **2. Tax Competition, Domestic Constraints and International Cooperation**

Neoliberal tax policies are characterized by low tax rates and uniform tax structures. In particular, high performers are to be incentivized by lowering top marginal income tax rates. Likewise, tax rates on capital income and corporate profits should be low to provide incentives for saving and investment. Indirect taxes like consumption or general VAT may be increased to achieve uniformity. The aim is to design general and broad tax bases, and to get rid of loopholes and exemptions. Such neutrality across different tax bases and

economic activities is meant to improve efficiency since it implies less interference with the “natural” working of the market. In consequence, the tax system becomes less progressive (Sandford 1993). Such policies are in sharp contrast to Keynesian ideas of stabilizing demand and promoting social equity through progressive taxation of income and capital combined with tax exemptions and expenditures for specifically targeted investments (Bird 1980; Steinmo 2003).

There is consensus in the literature that neoliberal tax policies diffused globally and that international tax competition was the main driver behind this development. After the USA opened the era of tax competition with the 1986 tax reform act (TRA), other countries joined the competition by also adopting the “tax cut cum base broadening” strategy. Theoretical and empirical insights in economics (Devereux and Griffith 2003; de Mooij and Ederveen 2008; Feld, et al. 2013) point out that tax competition is somewhat different from a simple model of real tax bases being moved abroad in response to tax policy changes. While such *real* competition for direct investment and taxpayer residences exists, to a much larger extent tax competition is *virtual* competition that does not implicate the relocation of real, substantive economic activities like production sites and jobs. Instead it is based on tax evasion and tax avoidance. Nation states compete for the attraction of portfolio capital that evades home state income taxation and reported profits that avoid corporation taxes. As a result, corporate and personal income tax rates have been reduced in virtually all countries (Swank 2016; Genschel and Schwarz 2011). While tax revenues (measured as a percentage of GDP) and effective tax rates (percentage of income) did not plummet (Garrett and Mitchell 2001; Swank and Steinmo 2002), over time governments realized less tax revenue on capital income than increased profitability would have suggested (Clausing 2007; 2016). Likewise, the distributive consequences of lower nominal tax rates and broader tax bases are troubling: the tax burden is shifted from internationally mobile to immobile capital, from capital to labor and consumption and the income tax system is made less progressive (Ganghof 2006; Rixen 2011b).

The literature discusses potential countervailing pressures and an intervening factor that could potentially neutralize or dampen the effect of international tax competition on capital tax rates. The countervailing pressures operate on the domestic level. Veto player constellations (Basinger and Hallerberg 2004), the position of the median voter on tax issues (Plümper, et al. 2009) or the strength of coordinated market institutions (Swank 2006) have been found to account for important variation in the timing and form of different domestic tax reforms. Countries with the respective institutional and political features maintain higher capital taxes than others despite the common pressure of tax competition they are all subjected to. In a related vein, tax increases may be caused by budget constraints. For example, interest rates on government bonds directly influence a government’s cost-benefit calculation of debt vs. tax financing of the public budget. Given rigidity on the expenditure side, high bond yields could lead to tax increases (Steinmo and Swank 2002). Others expect demands of compensatory fairness to have a similar effect (Scheve and Stasavage 2016). One may for example think that capital owners profiting from deregulated financial markets before the crisis should be made to share in the costs of crisis cleanup. If such reasoning gains political salience it may lead to higher capital taxes.

The intervening factor is international. Rather than reacting to international capital mobility by competing with other nation states, governments may also engage in international cooperation against harmful tax competition. International tax cooperation is discussed in a number of studies in international political economy (IPE). Earlier work aimed at explaining the lack of success of initiatives like the European Union’s savings tax directive or the OECD’s harmful tax competition project by reference to either rational interests (Dehejia and Genschel 1999; Rixen 2008), the prevalence of neoliberal ideas (Webb 2004) or norms of sovereignty (Sharman 2006). Recent contributions, dealing with more successful episodes of international tax cooperation like FATCA and the emergence of AEI as the global standard for information exchange, point out that progress has been made possible through sanction threats by a great power (Hakelberg 2016; Emmenegger 2015). In the specialized tax literature there is a string of studies that analyze the effectiveness of various measures of tax cooperation. For example Johannesen and Zucman (2014) show that tax information exchange on request does not deter tax evasion effectively. Rixen and Schwarz (2012) analyze the EU’s savings tax directive, an instrument of automatic information exchange, but with severe loopholes

concerning the kinds of income covered. In contrast, Hakelberg and Schaub (forthcoming) show that very recent initiatives like FATCA and AEI are effective in curbing tax evasion. They lead to a reduction in the amount of capital flowing to tax havens. In contrast, there is abundant case study and econometric evidence that profit shifting in response to tax rate differentials is rampant and unhindered by any national or international anti-avoidance measures that governments have implemented (see e.g. Cobham and Janský 2017; Feld, et al. 2013).

We pick up on and link these literatures. We are interested in the effects of international cooperation on national tax policy making and in how far it leads to an end of the diffusion of neoliberal tax policies via tax competition. Accounts of domestic countervailing pressures (institutional, political or functional) are directly relevant to our research question as they are potential explanations for tax increases on mobile capital even under conditions of tax competition. Yet, all of these accounts expect tax increases on all forms of capital income; they cannot explain the observed pattern of divergence in taxes on portfolio capital and corporate profits. Consequently, we derive the following conjecture: Domestic countervailing pressures create demand for tax increases on mobile capital, whether such demand will actually be supplied is conditioned by international tax cooperation. In order to test this conjecture, we first employ DID to establish that portfolio capital tax rates and corporate profit taxes develop in parallel before international cooperation against tax evasion is intensified and significantly diverge from that point onwards. Afterwards we provide illustrative qualitative evidence from a case study of the United Kingdom in which we show that domestic countervailing pressures created demand for tax increases but that such increases could only be supplied in the area of portfolio capital. Before we turn to our empirical test, the next section briefly discusses recent developments in international tax cooperation..

### **3. The Divergent Trajectories of International Tax Cooperation**

We first explain how tax competition in the area of portfolio capital rests on international tax evasion and competition for corporate income and FDI rests on tax avoidance. After that we briefly sketch the recent development of international cooperation against evasion and avoidance. We show that an effective instrument against evasion emerges, whereas this is not the case for corporate tax avoidance.

#### **3.1 The Mechanisms of Tax Competition for Portfolio Capital and Corporate Profits**

According to the rules of international taxation, portfolio capital income may be taxed by both the source country, i.e. the country in which the investment, and the country of residence, where the investor resides. While a source country may apply a (small) withholding tax, the country of residence is free to apply its own income tax rules on the (remaining) income; often it will grant a credit (or exemption) for the taxes paid abroad.<sup>1</sup> Investors are required by law to disclose their home- and foreign-source capital income to the residence state tax authorities. However, given that tax authorities traditionally did not receive information on their taxpayers' foreign-source capital income, taxpayers could abstain from reporting such income. To be sure, such behavior is illegal, but the risk of detection was very low. At best, tax authorities received information on request if there was a suspicion of tax fraud and if there was a double tax agreement in place with the respective country (Rixen 2008, 75 f.). But since a number of countries – so-called tax havens – did not exchange any information and had strict bank and financial secrecy rules (in addition to low or zero source tax rates), investors willing to evade residence country taxes could easily use these countries for their portfolio investment activities. The available evidence suggests that many did. Zucman (2013) estimates that 8 % of global household net financial wealth is held unrecorded in tax havens, which amounts to € 5,800 billion. In Europe, his estimates suggest that 12 % of private wealth is stacked away in tax havens.

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<sup>1</sup> The goal of such credits or exemptions is to achieve either capital export neutrality or capital import neutrality (Arnold and McIntyre 1995).

But not only did countries suffer immediate revenue losses due to such tax evasion. In addition, they were forced into tax competition for portfolio capital. First, there was competition among source countries. Most obviously, small tax haven countries competed among each other by offering very low or zero tax rates plus specialized investment vehicles, trusts and diversified secrecy services (cf. e.g. Palan, et al. 2010, 75-94). Similarly, big developed countries were drawn into competition on source taxes. While they are unlikely to lower their taxes to the same extent as small country tax havens do (and do not enter into the business of offering secrecy to tax evaders), they did lower their source withholding taxes, or abstained from introducing them (Dehejia and Genschel 1999, 415). Second, there is competition among residence countries. Given the possibilities of evasion, it was considered a sensible and feasible second-best policy to lower residence tax rates. The general logic of such moves was summarized by Germany's finance minister Steinbrück upon the decision to introduce a 25% flat rate tax on capital income in 2008 – a significant tax reduction for most taxpayers, as capital income was previously taxed according to the personal income tax schedule (synthetic taxation): “Better 25% of X than 42% of nothing”.<sup>2</sup> If tax rates are lower, the premium on tax evasion decreases and fewer taxpayers would be willing to take the risk to conceal their foreign source capital income. This thinking played out in many countries; residence tax rates on portfolio capital were lowered in almost all developed countries (Dehejia and Genschel 1999, 416).

Active business income (most importantly corporate profits) is taxed at source, i.e. in the country where the respective business is located and irrespective of where investors reside. More precisely, profits are taxed in the country in which the respective subsidiary or branch of an MNC declares its profits. In any case, corporate tax competition is competition among source countries. There are two kinds of corporate tax competition. The first is in effect similar to tax evasion by individuals as no real economic activity changes location. Due to the separate entity approach of international business taxation, corporations can shift their profits out of high tax countries into low tax countries. As opposed to tax evasion, tax avoidance is legal, but many corporations engage in aggressive tax planning that goes against the intention of the various tax codes. The second kind of competition is for real activity; nation states compete to attract foreign direct investment (FDI). As in the case of tax evasion, both kinds of competition are not simply based on undercutting each other's tax rates, but in addition, many states offer preferential tax regimes or specifically designed secret tax rulings for foreign corporations (Rixen 2011a; Genschel and Schwarz 2011).

The first kind of competition is very intense, while the second is far less intense. In addition to book profits being more mobile than FDI, this may be due to the two kinds of competition being to some extent substitutes. Corporations do not have to engage in real relocations if they can avoid taxation by merely shifting profits. However, if virtual competition would be curbed, the elasticity of real investment to tax differentials may rise (de Mooij and Ederveen 2008; Devereux and Loretz 2012; Feld, et al. 2013). Recent estimates show that globally between \$ 500 and 650 billion of yearly tax revenue are lost to MNC's tax avoidance (Crivelli, et al. 2016; Cobham and Janský 2017). Again, however, the direct effect of revenue loss is not the only one. Average statutory corporate tax rates were lowered in the OECD from around 46% in 1983 to 22% in 2017 (Devereux, et al. 2008; OECD 2017).

### 3.2 Success and Failure in International Tax Competition

Traditionally, the only international legal instrument against tax evasion had been bilateral double tax agreements (DTA), which only foresaw exchange of information if national tax laws allowed such exchange, and if a specific request was issued. Given the secrecy supplied by tax havens it is obvious that such an instrument was ineffective. In business taxation, the only counter-measures – first developed by the Kennedy administration in the early 1960s – were national anti-avoidance rules such as Controlled Foreign

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<sup>2</sup> "Besser 25 Prozent von X, als 42 Prozent von nix." (cited in Hulverscheidt 2010). 42 % was the top statutory income tax rate at the time.



Corporation (CFC) and thin capitalization legislation. Given the multilateral nature of corporate tax avoidance, such unilateral instruments proved largely ineffective (Rixen 2008, 120-130).

It took until the mid-1990s for the international community to act collectively against tax evasion and avoidance. Mandated by the G-7, the OECD launched its project against harmful tax competition (HTC) (OECD 1998). This project was initially aimed at both corporate tax avoidance and individual tax evasion. However, in 2000/2001 corporate taxation was taken off the agenda due to an intervention by the US Bush administration (Webb 2004), which was under pressure from domestic business interests (Hakelberg 2016; Rixen 2011a). With respect to tax evasion of portfolio capital, the project resulted in several recommendations to improve transparency in tax havens and implement somewhat stricter bilateral exchange of information agreements. To put pressure on tax havens the OECD drew up blacklists of non-cooperative jurisdictions. However, the credibility and effectiveness of the blacklists was compromised by the fact that OECD members Switzerland and Luxembourg, two notorious tax havens, were not included. Consequently, this first initiative resulted in hardly any tangible progress (cf. e.g. Sharman 2006; Rixen 2008; Palan, et al. 2010).

In parallel to this development, the European Union was somewhat more successful in its efforts to reign in harmful tax competition. In 2003 it passed the savings tax directive (STD) (Holzinger 2005). While the STD had significant weaknesses and loopholes (Rixen and Schwarz 2012), its passage was an important milestone, as it was the first international agreement that foresaw the automatic exchange of information on foreign capital income. Likewise, in the area of business taxation, the Commission succeeded in implementing a so-called Code of Conduct against preferential tax regimes in EU member states (European Community 1998). While it was non-binding, the Commission was able to give real bite to the Code by making the abolition of preferential tax regimes a precondition for EU accession of Central and Eastern European countries and interpreting preferential tax regimes as state aid that was illegal under Articles 87–89 of the EC Treaty (Genschel, et al. 2011, 12-13).

After the financial crisis, with governments starved off cash and shadow banking in offshore financial centers playing an important role in the crisis (Rixen 2013), the G-20 significantly intensified its efforts to fight tax evasion. At their summit in London in April 2009 G20 leaders agreed “to take action against non-cooperative jurisdictions, including tax havens. We stand ready to deploy sanctions to protect our public finances and financial systems. The era of banking secrecy is over” (G 20 2009a). In another document, the G20 outlined specific sanctions that would be taken against non-cooperative institutions (G 20 2009b). On the same day the OECD published new blacklists (OECD 2009). This time the conditions for being removed were stricter, and the list included Switzerland and Luxembourg. The initiative had been pushed behind the scenes by France and Germany since 2008 (Kubosova 2008). It was supported by the US Obama administration. In the OECD process, the organization once again recommended bilateral agreements. These so-called Tax Information Exchange Agreements (TIEAs) promised a stricter standard. Most importantly, the new TIEAs would override any domestic laws that prevented the exchange of information. But the agreements still foresaw information exchange upon request, while tax havens successfully pursued a strategy of “mock compliance” (Woodward 2016). For example, in order to meet the requirement of having at least 16 TIEAs, they concluded agreements among each other.

While TIEAs remained largely ineffective (Johannesen and Zucman 2014), the pressure was upheld. Since 2009, the issue has also become more politically salient as the public became increasingly aware of international tax evasion. High-profile tax scandals ensued after tax authorities in a number of countries were offered confidential bank data from Swiss and Liechtenstein banks and began to recoup some of the tax revenues lost. Switzerland and other tax havens came under public scrutiny and were subjected to immense political pressure. In 2008/09 the European Union also began to reform the STD with the aim of making it more effective (Hakelberg 2014).

The decisive breakthrough was initiated by unilateral action by the US. Since 2008 and throughout 2009 the incoming Obama administration used the UBS scandal to pressure Switzerland to share information on US resident clients of Swiss Banks. In 2010, it passed the Foreign Account Tax Payer Compliance Act (FATCA)

that required foreign banks to automatically report information on their US clients. Banks that did not comply faced a 25% withholding tax on payments received from the US. In reaction to this law, and since many governments did not want their banks to exchange information directly with the US government, countries around the world started to conclude FATCA agreements with the US in 2011. In these intergovernmental agreements (FATCA IGAs) treaty partners agree to the automatic exchange of taxpayer information. Using this momentum, the OECD and its member states endorsed the automatic exchange of taxpayer information and developed the so-called common reporting standard (CRS). In October 2014 the new standard was initially signed and is now being accepted by 90 jurisdictions worldwide, including all major offshore centers (Hakelberg 2016). Likewise, Austria and Luxembourg's acceptance of AEI with the US made it possible for the EU to break their opposition to a modernization of the STD and introduce AEI on all forms of capita income among member states (Hakelberg 2014).

As is clear from this account, the G20 declaration and the political resolve of powerful and important governments to find effective solutions to the problem of tax evasion made it obvious to close observers that significant change was on the way. The year 2009 marks the decisive break point in this respect, as it is the year when decision-makers became convinced that current efforts to rein in tax evasion would most likely culminate in the international adoption of the AEI. A 2009 report from the UK Treasury on the implementation of information exchange standards in British crown dependencies and overseas territories concluded, for instance, that "In the longer term, the trend for greater transparency is likely to result in pressure to move to a system of automatic exchange of information" (Foot 2009, 10). Likewise, Jean-Claude Juncker told one of the authors that as Prime Minister of Luxembourg he had expected the emergence of AEI as a global standard from 2009.<sup>3</sup>

The story on corporate tax avoidance is very different. After corporate avoidance was removed from the agenda of the OECD's HTC project, there were a number of initiatives of countries to strengthen their unilateral anti-avoidance rules. As before, these remained marginally effective at best. But in 2012, amid a string of tax avoidance scandals involving large MNCs, UK chancellor George Osborne and German finance minister Wolfgang Schäuble put the issue on the agenda of the G20. At their meeting in Mexico the same year, the group's heads of state and government mandated the OECD to launch a project on base erosion and profit shifting (BEPS), providing for the participation of non-OECD G20 countries. While governments shared a common interest in curbing tax avoidance, they had conflicting interests as to how the tax base was to be distributed. In addition, governments proved to be responsive to opposition from MNCs to a more radical overhaul of the separate entity approach (Hakelberg 2017). As a result, the final reports' recommendations on 15 action items (OECD 2015) largely preserve the cornerstones of the international corporate tax system, including the arm's length standard, separate entity accounting, and the benefits principle. Still, some scholars suggest that certain elements in the BEPS reports – like country-by-country reporting (CbCR) and additional leeway for tax examiners in correcting transfer prices – represent significant improvements over the status quo ante. Accordingly, the buzzword informing the current academic debate on BEPS has been "creative ambiguity." While individual measures can be interpreted as steps towards cooperation, the system enabling tax-motivated shifts of assets, investment and profits between related entities remains in place (Büttner and Thiemann 2017; Picciotto 2015). Furthermore, the issue of tax competition for real investment is not even raised, as it is considered perfectly legitimate by most experts and policymakers.

In sum, international tax cooperation has made significant progress in lifting the veil of financial secrecy that enables tax evasion. At the same, it has failed to curb corporate tax avoidance. This outcome provides ideal conditions to test the effect of international tax cooperation on national tax policy-making.

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<sup>3</sup> Bilateral conversation in the sidelines of the 2014 State of the Union conference in Florence, Italy.

## 4. Differences-in-Differences Analysis of Tax Rates Imposed on Capital

### 4.1 Analytical Strategy

As a first step to ascertaining a causal effect of increased financial transparency on the taxation of portfolio capital income, we perform a DID analysis comparing tax rates imposed on corporate profits and dividends before and after the G20 leaders put the fight against tax evasion on their agenda in 2009. In general, the DID method allows the researcher to identify a treatment's impact on a treatment group relative to a control group not exposed to the treatment. To this effect, outcome values are observed in both groups before and after the treatment. The average difference in the outcome values of the control group is then subtracted from the average difference in the outcome values of the treatment group. This removes biases in post-treatment comparisons of the groups that may result from factors permanently distinguishing them from each other. It also removes "biases from comparisons over time in the treatment group that could be the result of trends" distinct from the actual treatment (Wooldridge 2007, 2-3). This reasoning relies on the crucial assumption that outcomes in the treatment and control groups would have followed the same trend without the treatment (Taber 2012). In lab experiments, where the method originated, this assumption holds because treatment and control groups are selected at random. In econometrics, where DID is a popular for studying the effect of government policies on agents in different geographic locations, the assumption is confirmed when parallel trends in the outcome variable can be observed before the adoption of the studied policy (Taber 2012).

In applying the DID method to our research question, we will thus compare the tax rate (outcome) on dividends at the personal level (treatment group) and corporate profits (control group) imposed by OECD governments before and after G20 leaders put tax evasion on their agenda in 2009. As increased financial transparency, the outcome of an intensification of information exchange between tax authorities, does not constrain corporations in their ability to avoid taxes, the risk of capital flight associated with higher taxes on corporate profits should be unaffected by this change in the G20's agenda. Accordingly, downward pressure on tax rates should persist. As all conventional explanations for the evolution of taxes on capital over time would expect the tax rates on corporate profits to co-evolve with tax rates on portfolio capital income, they are the perfect control group for our purposes. This is because households evading taxes by hiding portfolio capital income offshore should, indeed, be affected by enhanced information exchange, as increased transparency makes it easier for their local tax authority to obtain information on their offshore accounts. As the risk of detection increases, the risk of capital flight associated with an increase in taxes on portfolio capital decreases. Therefore, downward pressure on tax rates should be reduced as a result of increased financial transparency.

We use the tax rate on personal dividend income as a proxy for the taxation of portfolio capital income for two reasons. First, the large majority of dividend income is received by sophisticated investors we can expect to closely observe market developments. Such investors are more likely to seize opportunities for tax arbitrage than ordinary savers receiving interest income. Tax competition for dividends should therefore be particularly pronounced and tax increases should *prima facie* be less likely. Insofar, by focusing on dividend tax rates we choose a hard test for our conjecture. In studying these different tax rates we rely on data from the OECD's tax database. This database provides the longest available and comparable time series for tax rates on both corporate profits and dividends and has been widely used in comparative tax policy research in the past. Specifically, we obtain data on corporation taxes from the database's table II.1., where we use the indicator "corporate income tax rate", which compiles member states central government statutory tax rates. Data on dividend taxes comes from the database's table II.4., where we use the item "net personal tax", which "shows the net top statutory rate to be paid at the shareholder level, taking account of all types of reliefs and gross-up provisions at the shareholder level" (OECD 2017).

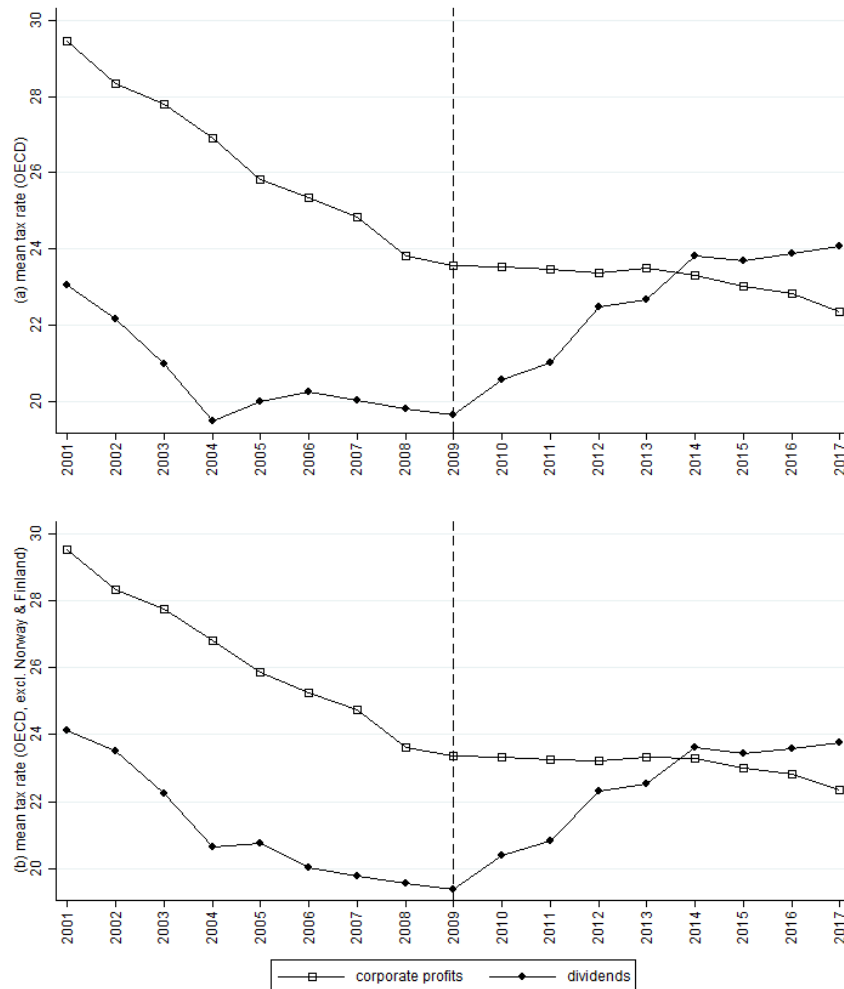
### 4.2 Results from Differences-in-Differences Analysis

As we can see from Figure 1a, the OECD's average tax rates on dividends and corporate profits shared a downward trend between 2001 and 2009, that is, during the eight year period prior to the intensification of

the G20's efforts against tax evasion. Whereas the average corporate tax rate fell from 29.5 to 23.6 percent, the average tax rate on dividends declined from 23 to 19.6 percent. The latter's small and temporary rebound between 2004 and 2006 is almost entirely due to extreme increases in the taxation of dividends at the personal level in two countries: Finland and Norway. In response to capital mobility and international tax competition, both countries had introduced dual income taxation at the beginning of the 1990s, combining high taxes on labor with low taxes on capital income. Part of their respective reforms was the introduction of a full imputation system that effectively exempted dividends from taxation at the shareholder level. At the beginning of the 2000s, however, the Norwegian government realized that active owners of closely held corporations exploited the large difference in taxes on labor and capital income by paying themselves dividends instead of wages. It therefore decided to replace full imputation with a tax on above-normal returns on equity at a rate of 28 percent. At the same time, Finland had to abolish its imputation system, which according to the European Court of Justice violated the principle of non-discrimination in the EU, as it did not apply to foreigners (Ganghof 2006, chap. 6).

As a result of these reforms, the OECD data contain one increase in the net personal tax on dividends from 0 to 16 percent in 2005 (Finland) and another increase from 0 to 28 percent in 2006 (Norway). These are the largest year to year increases across all countries over the entire observation period. Hence, if we drop Finland and Norway from the data set, the downward trend in the average OECD tax rate on dividends smoothens considerably and increases its alignment with the trend for the average tax rate on corporate profits (figure 1b). Since trends are parallel for 6 out of the 8 years prior to 2009 even when Finland and Norway are included (figure 1a), we are thus confident that the common trends assumption holds for the period preceding the intensification of G20 efforts against tax evasion. In fact, this is exactly what established CPE approaches to capital taxation would have expected. After 2009, however, we observe a marked divergence in the trends of the average tax rates. Whereas the rate imposed on corporate profits continues to decline from 23.5 percent in 2010 to 22.3 percent in 2017, the rate on dividends experiences a sharp increase from 20.6 to 24 percent over the same time period. The anti-tax evasion efforts launched in 2009 thus seem to have had a substantial effect on the level of tax imposed on portfolio capital income.

Figure 1: Average Tax Rates Imposed on Dividends and Corporate Profits in OECD Countries (percent of taxable income)



This initial piece of graphical evidence reveals parallel group trends before the intensification of the fight against tax evasion and substantial divergence beginning just after. To substantiate this finding, we provide a more formal analysis by estimating the regression below:

$$taxrate_{ct} = \gamma_c + \lambda_t + \beta dividend_{ct} + \epsilon_{ct}$$

Whereby  $\gamma_c$  are fixed effects for the different countries,  $\lambda_t$  are indicators for the year of observation,  $dividend_{ct}$  captures the effect of a tax rate being imposed on dividends in country  $c$  at time  $t$  and  $\epsilon_{ct}$  is an error term. To correct for potential year-to-year serial correlation in the values of the dependent variable within countries, we bootstrap standard errors in all calculations (1000 repetitions), blocking at the country level. This is the recommended procedure for samples with a relatively large number of clusters like the one under study (there are 35 countries in the dataset, each contributing two time series = 70 clusters) (Bertrand, Duflo, and Mullainathan 2004, 265–266). We report regression results in *Table 1*.

Table 1: Differences in Differences to Reference Year 2009

dividend*year	Model 1		Model 2	
	(arithmetic mean)		(geometric mean)	
	Taxrate		exp. coefficient	
2001	-2.47	(1.85)	0.76	(0.17)
2002	-2.26	(1.95)	0.73	(0.18)
2003	-2.88	(1.80)	0.72	(0.17)
2004	-3.49**	(1.42)	0.66*	(0.14)
2005	-1.87	(1.27)	0.82	(0.10)
2006	-1.16	(0.80)	0.90	(0.06)
2007	-0.90	(0.78)	0.90	(0.06)
2008	-0.08	(0.45)	0.94	(0.06)
2010	0.98**	(0.49)	1.11	(0.08)
2011	1.47*	(0.76)	1.12	(0.08)
2012	3.03***	(0.94)	1.20**	(0.10)
2013	3.10***	(0.96)	1.19**	(0.09)
2014	4.42***	(1.13)	1.35***	(0.15)
2015	4.58***	(1.15)	1.36***	(0.15)
2016	5.00***	(1.22)	1.37***	(0.16)
2017	5.66***	(1.37)	1.48***	(0.19)
Constant	21.60***	(1.02)	18.22***	(1.71)
Observations	1190		1190	
R-squared	0.17		0.08	

Standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

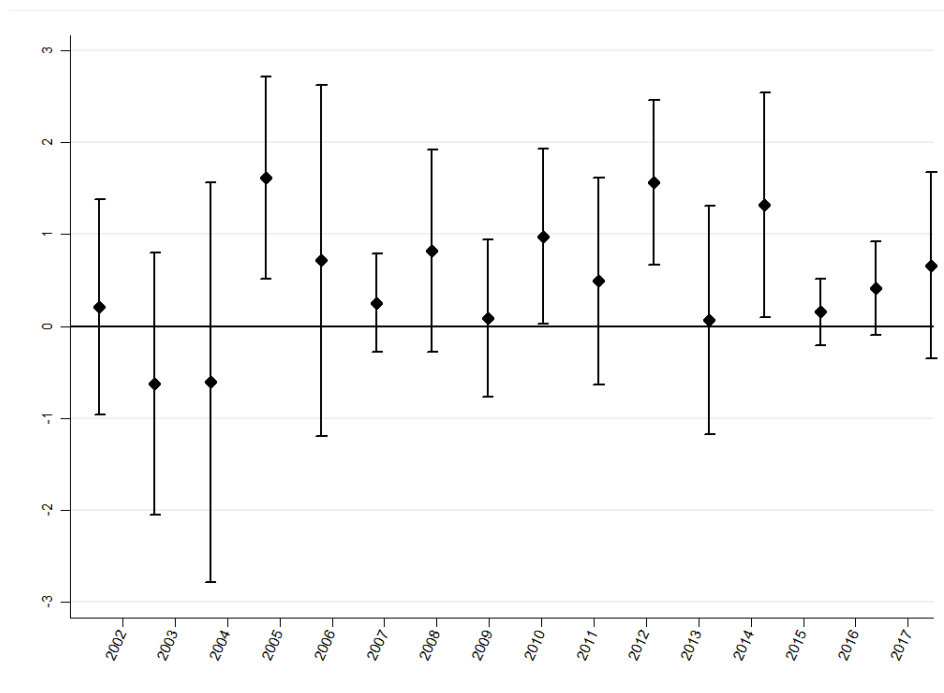
The reported DIDs relate to the reference point  $t = 2009$ , the year G20 leaders put the fight against tax evasion on their agenda. The coefficient  $\beta$  for  $dividend_{ct}$  captures the difference in the evolution of tax rates imposed on dividends relative to tax rates imposed on corporate profits. In model 1 reporting results for the arithmetic means of tax rates imposed by OECD countries, this coefficient is substantially large and statistically significant for all years following 2009. The coefficient for 2010 captures for instance that the gap between the average tax rate on dividends and the average tax rate on corporate profits narrowed by 0.98 percentage points between 2009 and 2010. The coefficients for the remaining years are the leads and lags of

this main DID effect. The leads precede the treatment year and confirm the validity of the common trends assumption. The coefficient for 2008 captures, for instance, that the gap between the two average tax rates was only 0.08 percentage points larger one year before the treatment. In general, the small size of the lead effects when compared to the lag effects as well as their statistical insignificance confirm that time trends traced each other before the treatment period. The only statistically significant effect is reported for 2004, the year before the small rebound in the average tax rate imposed on dividends induced by extreme increases in Finland and Norway. In contrast, the lag effects are testimony to the fact that the process triggered by the G20 in 2009 unfolded its effect over the course of several years. As the coefficient for 2013 shows, tax rates on dividends closed the gap to tax rates on corporate profits by 3.10 percentage points over the course of the first four years of the reform process. In contrast to the four years preceding the reform process, this effect is substantially larger and shows a much higher statistical significance as it results from a divergence in trends rather than a higher intensity in a common trend.

Since we report average tax rates across OECD countries, there is of course a worry that the regression results may be driven by a few extreme cases only. To control for this, we also use the logarithm of tax rates as dependent variable, and run the DID analysis on the transformed values. Taking the tax rates' logarithm pulls the sample distribution together and gives countries with smaller tax rate changes a stronger weight in the regression. The corresponding results are presented in *Table 1* as model 2. For easier interpretation, we report estimated coefficients in their exponentiated form, which is the ratio of percentage changes in the geometric means of tax rates on dividends and corporate profits between any given year and the reference year 2009. The crucial difference to coefficients based on the arithmetic means is that the DID effect loses statistical significance for the years 2004, 2010 and 2011. The result for 2004 confirms that the subsequent rebound was the result of extreme changes in merely two countries. The result for 2010 and 2011 is testimony to the fact that the average increase in tax rates imposed on dividends during this time period is driven by increases of around 10 percentage points in merely three countries: Iceland, Latvia, and the United Kingdom. These countries faced massive budgetary constraints early after the financial crisis of 2008. It is plausible to assume that the increases in dividend taxation were a response to these difficulties. However, the three countries did not increase taxes on corporate profits at the same time. This suggests that the lower risk of capital flight associated with an increase in dividend taxation made these governments choose this option over an increase in corporate profits. To confirm the role the intervening variable of international cooperation played in their decision-making process, the following section provides additional qualitative evidence on the causal process linking domestic pressures such as budget constraints or fairness concerns, international cooperation and increases in dividend taxation in the UK.

As an additional test confirming the impact of the G20's efforts against tax evasion, *figure 2* displays the year-to-year differences between changes in tax rates on dividends and corporate profits. The figure can be read in terms of mock experiments, taking place every year since 2001. The plotted coefficient for the following year then shows the treatment effect of each of these hypothetical interventions. As the figure reveals, DID's are statistically significant at the 0.05 level for only four years: 2005, 2010, 2012 and 2014. Out of these years only one precedes 2009 (again revealing the impact of Finnish reform), whereas the remaining three follow the reference year. This underlines that the process towards greater financial transparency started in 2009 but went through important stages in the following years. As standards for information exchange gradually became stricter, also the risk of capital flight attached to an increase in taxes on dividends declined. To confirm that also the post 2011 and post 2013 waves of tax increases result from greater financial transparency, we provide additional narrative evidence on the development after 2009 in the following section.

*Figure 2: Year-to-Year DIDs, Change in the Tax Rate on Dividends Relative to the Tax Rate on Corporate Profits (Percentage Points)*

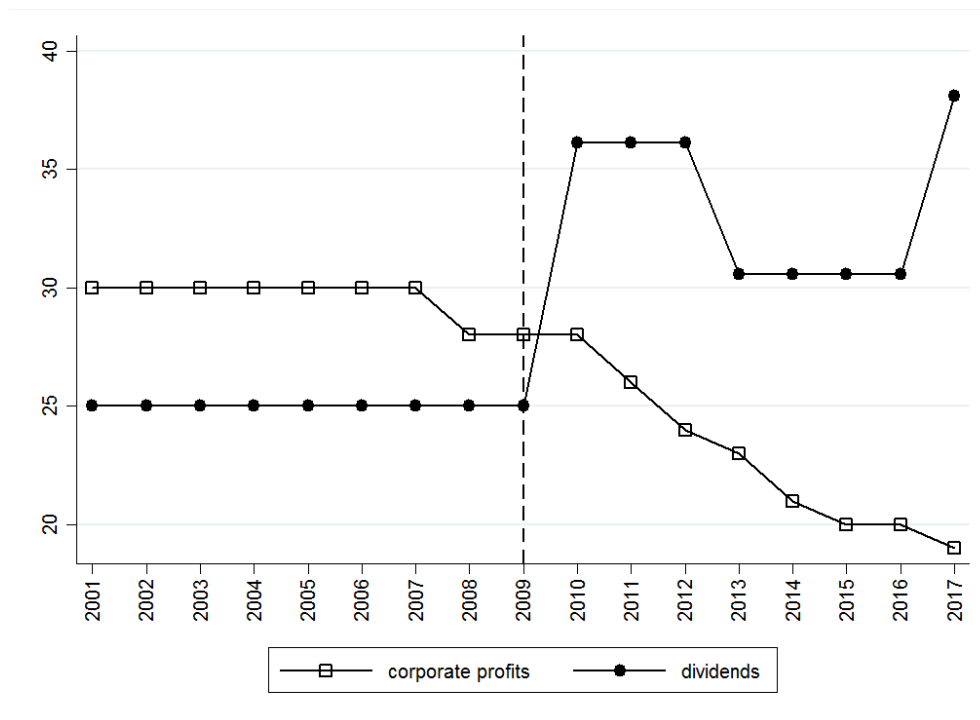


## 5. Tracing Causality – Qualitative Evidence from the United Kingdom

Over the last three decades the UK has pursued a policy of making its tax system internationally competitive. Conservative governments lowered taxes very aggressively – the statutory rate on corporate profits fell from 53 to 35 percent during the first years of Margret Thatcher’s second government. While the Labour government was less aggressive, it lowered the statutory corporate tax rate from 33 to 28 percent between 1997 and 2008. The same trend is visible for individual portfolio capital income. Statutory personal income tax rates were lowered from 30 to 20 percent (basic rate) and more importantly 60 to 40 percent (top rate). In 1993, the government excluded dividend income from the general personal income tax schedule and taxed it at 20 respectively 10 percent since 1999 (basic rate) and 32.5 percent (top rate). An offsetting dividend tax credit meant that the effective tax rates on dividends have been constant at zero (basic rate) and 25 percent (top rate). These trends show that the tax burden on mobile capital has been lowered across all types of income. All British governments have explicitly and repeatedly stated their objective of creating a competitive capital tax system (Adam, et al. 2011; Maffini 2013, 4).



*Figure 3: Tax Rates Imposed by the United Kingdom*



The parallel trajectory for all kinds of capital income ended in 2009 (see Figure 3). After the financial crisis had hit and Britain, in concert with other G20 countries, reacted with anti-cyclic expansionary economic policies, the public budget came under serious stress. Public sector net borrowing was projected to increase from 2.4 percent of GDP in 2007/8 to 12.4 percent in 2009/10 (HM Treasury 2009, 4). In reaction to this development, the Labour government looked for new revenue sources, eager to convey the impression that the winners of the financial sector expansion preceding the bust had to contribute a fair share to the crisis cleanup (The Guardian 2009; Darling 2009). Impressed by recent tax evasion scandals involving Liechtenstein Global Trust (LGT) and United Bank of Switzerland (UBS), the Labour government first joined international attempts at taxing at least some of the capital income households were hiding offshore (Eccleston 2012, 103–104). Ahead of the London G20 summit that ended with the bold conclusion that “the era of banking secrecy [was] over” (see above), prime minister Gordon Brown toured EU capitals to coordinate anti-tax haven measures with his counterparts, insisting that regulatory improvements should apply to all jurisdictions around the world (Watt 2009).

In parallel and partly in response to the G20’s commitment, Her Majesty’s Revenue and Customs (HMRC) also took several unilateral steps towards curbing tax evasion. The Finance Acts of 2008 and 2009 had improved its ability to obtain client information from financial institutions. In August 2009, HMRC used its new powers to request account details from 300 British and foreign banks regulated in the UK (Hulten 2012, 241), adding to information on British accounts in Liechtenstein obtained during the LGT scandal. Concurrently, HMRC set up several tax amnesty programs to reduce the investigative burden and provide tax evaders in the data with an incentive to quickly declare hidden assets and pay back taxes and fines (BBC 2009; Eccleston 2012, 157). Finally, the ministry commissioned an independent review of the regulatory situation in the British crown dependencies and overseas territories. With tacit support from London, these jurisdictions had become important tax havens during the second half of the 20<sup>th</sup> century (Shaxson 2011, chap. 5). Now, the report concluded “the nine jurisdictions must show a commitment not just to the letter but also to the spirit of international standards” (Foot 2009, 36), and “make an early commitment, with a timetable for implementation, to automatic exchange of information” (Foot 2009, 37). Following the review, HMRC began to pressure the nine jurisdictions for the automatic reporting of account data, which they eventually accepted in 2013 (Houlder 2013a).

With the multiplication of international and domestic initiatives against tax evasion and the AEI's introduction on the horizon, tax evasion became a riskier business. Against this background, Alistair Darling, then Chancellor of the Exchequer, used his budget speech in April 2009 to insist that "it cannot be fair that those who should pay tax are allowed to avoid it," stressing his intention to build on past measures against tax evasion and close recently identified loopholes, which "will result in £1bn of extra revenue over the next 3 years" (Darling 2009, 11). Following his reminder that tax evasion would be pursued more vigorously, he announced the introduction of an additional income tax rate of 50% on earnings over £150,000 from April 2010 (Darling 2009, 12), which implied that the top tax rate on dividend income was to be raised from 32.5 to 42.5% (Gray 2010). Accordingly, the April 2009 budget stressed, "The government has been leading international efforts to tackle tax havens and tax evasion through its Presidency at the G20," and announced several deterrence measures, including increases in penalties and the publication of the names of convicted tax evaders (HM Treasury 2009, 108). The increases in tax rates on personal and dividend income were justified with the need for fiscal consolidation, to which "those individuals most able to [should] make more of a contribution" (HM Treasury 2009, 106).

Yet, the budget contained no tax increases on corporate profits. In contrast, legislation was passed that exempted dividend payments from (related) foreign companies from corporate profit tax in Britain. In the absence of any cooperative initiative against tax avoidance, "competition from other European jurisdictions and the rulings of the ECJ, together with domestic pressure by business, pushed the Labour government to align the UK system of taxation of foreign profits with that of its European neighbours" (Maffini 2013, 5). In its *Cadbury Schweppes* decision, the ECJ had prohibited HMRC from applying its controlled foreign company rules within the common market. That is, HMRC could no longer consider the profits subsidiaries of British groups declared in low tax countries within the EU passive income of the British headquarters and tax it accordingly (cf. ECJ 2006). Against this background and with the competitiveness of British firms in mind, the UK thus decided to follow the other EU-15 member states, which had already switched to the so-called territorial system by 2006 at the latest (all except Greece and Ireland). The rationale behind the diverging treatment of dividends at the personal and corporate level was made explicit by unnamed sources within HMRC: "It is important that everyone pays their fair share of tax but no country will want to damage the economic competitiveness of major companies" (Watt 2009). Indeed, the Labour government's utmost concern was to lead the UK out of recession. From its perspective, an increase in corporate tax would have been detrimental to this goal (cf. Darling 2009).

The divergence continued also after the Labour government was voted out of office. Under the impression of a large public deficit and fairness concerns voiced by civil society groups, both ministries of conservative Prime Minister David Cameron continued to advocate for increased financial transparency (Eccleston 2012, 104). "Piggybacking" the Obama administration, which was cracking down on Swiss banks helping US clients evade tax, the coalition government of Conservatives and Liberal Democrats upheld the pressure on the crown dependencies and overseas territories to introduce the AEI. To ensure that these associated territories shared a level regulatory playing field with other traditional tax havens, it made the establishment of global AEI a priority of its G7 presidency in 2013 (Houlder 2013a; 2013b). Accordingly, heads of state and government for the first time "commit[ed] to establish the automatic exchange of information between tax authorities as the new global standard" at their summit in Lough Erne (cited in: OECD 2014, 6).

Concomitantly, the government's "Budget 2013 announce[d] further measures that tackle offshore tax evasion by high earners. The revenue raised from these measures will offset many times over [...] the reduction in the additional rate of income tax from 50 per cent to 45 per cent" (HM Treasury 2013, 59). This reduction was accompanied by a cut in the top statutory dividend tax rate from 42.5 to 37.5% (HM Treasury 2012, 59). Yet, the coalition government did not reduce the rate back to its pre-crisis level of 32.5% and justified the cut with additional revenue from the fight against tax evasion instead of an increased risk of capital flight. In any case, it only took the coalition two years to turn this temporary cut into a solid increase. In his summer budget 2015, George Osborne, then Chancellor of the Exchequer, replaced the offsetting dividend tax credit with a tax exemption of the first £5000 of dividends received. At the same time, he

increased the dividend tax from zero to 7.5% (basic rate), 25 to 32.5% (higher rate), and 37.5 to 38.1% (top rate) (HM Treasury 2015, 45). Without the dividend tax credit, these statutory rates were equivalent to the effective rates. Hence, the effective tax burden on the highest dividend incomes rose from 30.6 to 38.1% as a result of this reform (see Figure 3). The coalition government's discretion in setting the dividend tax rate indicates that it was no longer constrained by tax evasion and competition from tax havens. Reductions and increases were both possible.

In contrast, tax competition still governed the Cameron ministries' approach to corporate taxation. In an unusual move the incoming coalition government had published a 'corporate tax roadmap' in which it set out its aim "to create the most competitive corporate tax regime in the G20" (HM Treasury and Gauke 2010, 9). Between 2011 and 2016 the Cameron ministries cut the main statutory rate in several steps from 28 to 20 percent and passed legislation to lower the rate to 19 percent in April 2017 and 18 percent in April 2020 (see Figure 3). In continuation of the tax cut cum base broadening strategy popular among OECD countries since the 1980s, these quite drastic rate cuts went hand-in-hand with cutting capital allowances (Houlder 2015b). Further pursuing this strategy, and in response to high-profile corporate tax scandals from Starbucks to Amazon and Google, the UK government was also one of the main supporters of the G20/OECD project against base erosion and profit shifting (Osborne, et al. 2013, see also above). The government actually is a frontrunner in implementing some of the BEPS recommendations. At the same time, it made two unilateral moves that undermined the initiative's progress.

In 2013, it introduced the patent box, a special tax break for multinationals choosing to commercialize their intellectual property (IP) in the UK. Under the scheme, income derived from IP registered in the UK should be taxed at merely 10%, no matter whether the underlying research & development (R&D) had been carried out inside the country or not. Yet, Germany and a large majority of countries involved in the BEPS project interpreted the patent boxes' introduction as harmful tax competition, and pressured the UK to implement reforms. Eventually, the parties struck a deal on the so-called 'nexus approach,' which allows tax breaks only for IP resulting from domestic R&D activity. The incentive to shift IP to the UK on paper had thus been removed, whereas the incentive to move R&D activities remained in place (Houlder 2014a; 2014b). In 2014, George Osborne introduced the 'diverted profits tax' and important changes to the UK's CFC rules. The first initiative, informally dubbed 'Google tax,' empowered HMRC to withhold 25% of royalties sent from the UK to a tax haven, if it suspected involved group subsidiaries to be part of a "contrived arrangement" (Houlder 2014c). The second initiative created a reduced tax rate of 5% for passive income multinationals generate through the financing of their overseas activities (Pickard and Houlder 2014).

Whereas the diverted profits tax was meant to limit profit shifting out of the UK, the new CFC rules created an incentive to shift profits towards the UK through interest payments. Notwithstanding its claims to crack down on tax avoidance, the Cameron ministries thus intensified both virtual and real tax competition (cf. also The Guardian 2013). Accordingly, a KPMG poll among tax executives showed that the UK's was the second most preferred tax regime in Europe, particularly for its generous treatment of interest payments (Houlder 2016). Likewise, a majority of tax executives interviewed for another industry poll considered that the Cameron ministries had achieved their goal of "creating the most competitive corporate tax regime in the G20" despite the Google tax (Houlder 2015c).

## 6. Conclusion

In this article, we have shown that international tax cooperation makes a difference. In particular, the DID analysis revealed that international cooperation against tax evasion has a causal impact on the tax rates OECD countries impose on personal dividend income. Since the G20 seriously pursues the objective of establishing financial transparency, the downward trend in dividend tax rates has reversed. In contrast, corporate tax rates – still subject to the pressures of tax competition, as initiatives against tax avoidance remain unsuccessful – continue to fall. As our case study of the UK makes clear, international tax cooperation is an intervening variable that moderates the effect of domestic demand for higher taxes on capital on actual tax rates. Where cooperative arrangements are in place, governments regain discretion over

the level of tax. Depending on budgetary needs, voter support, and political ideology both decreases and increases are possible. Where cooperation is absent, however, these factors do not suffice to halt the downward trend in tax rates induced by tax competition. Accordingly, a paradigm shift away from neoliberal tax policy would only be possible, if progress on financial transparency was matched by an equally effective remedy to corporate tax avoidance. Unitary taxation with subsequent formulary apportionment, as currently promoted by the European Commission in its proposal for a common consolidated corporate tax base (CCCTB), seems to be the most promising avenue in this regard.

While we can show that cooperation towards greater financial transparency is causal for the rise in average tax rates on portfolio capital income, our analysis does not explain the variance in country reactions. Why do some countries use the policy space created by international tax cooperation, while others do not? We will address this question in future research. Still, our present findings bear on three important debates in the IPE and CPE literatures. First, they relate to the debate on the effectiveness of international cooperation. Especially in situations marked by public good or common pool resource problems like many issues in environmental protection, scholars often use states' compliance with self-binding agreements as an indicator for effectiveness. Downs et al (1996) argue, however, that compliance does not tell us enough about effectiveness, since agreements may be too "shallow." Against this background, scholars alternatively try to gauge the actual impact of cooperation, e.g. on the natural environment. Our analysis resembles the latter approach in that we assess actual outcomes (tax rate changes) rather than compliance with the AEI. It differs, however, in that effective international cooperation does not directly constrain national policy choices, as is usually the case in environmental protection. Instead, it enlarges the policy space. Rather than being pressured by tax competition to lower portfolio capital tax rates, governments now have real discretion in setting the tax rate. This suggests that the creation of national policy spaces could be a sensible additional measure for the effectiveness of international cooperation.

Second and relatedly, we would like to point out that the AEI in tax matters may be a model for international cooperation that is normatively desirable in a political environment marked by a backlash against globalization. For example, Dani Rodrik (2011) has argued that the current trajectory of "hyperglobalization" is unsustainable because it puts all states into a "golden straitjacket" that makes it impossible to compensate the losers of globalization at the national level. Rodrik and others instead pursue a normative vision of "sensible globalization", in which national governments enjoy sufficient room to manoeuvre for the pursuit of policies matching their citizens' preferences (see also Laborde and Ronzoni 2015). So far, however, specific institutional solutions for such a reformed globalization have hardly been developed (but see Rixen 2016; Dietsch and Rixen 2014 for international taxation). We submit that AEI may be one building block of a "sensible globalization". By showing that AEI is indeed effective, we provide evidence for the real-world feasibility of such a normative vision. However, in contrast to what some passages of Rodrik (2011) seem to suggest, strengthening the capacity of national governments will need more not less international cooperation.

Third, the article weighs in on the debate in the IPE and CPE literatures whether economic ideas or structural forces (e.g. competitive pressure) drive the diffusion of neoliberal policies. In taxation, the respective debate could never be fully resolved, but there seems to be an implicit understanding that both factors played a role (cf. Ganghof 2006; Swank and Steinmo 2002; Swank 2006; Steinmo 2003; Sharman 2008). One of the problems in this debate was that the empirical implication of both the ideational and the material accounts were identical – falling tax rates. The starkly different levels of cooperation against tax competition for portfolio capital and corporate profits provide an ideal test ground to re-evaluate this debate. Against the background of an emerging paradigm emphasizing a more progressive tax policy for inclusive growth that has recently been promoted by the OECD, the IMF and other experts (cf. International Monetary Fund (IMF) 2014; Brys, et al. 2016; Piketty 2014), our findings imply that the tax increases proposed by this new (old)

idea<sup>4</sup> have only been implemented in the area where structural constraints to tax competition were introduced. This leads to the conclusion that there is indeed an interaction. Only where it can be embedded in formal institutions will a new paradigm actually have material consequences.

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<sup>4</sup> The idea that more redistributive tax policies may in fact be stimulating and stabilizing economic growth is an old idea that has of course been popular in Keynesian thought and has never fully disappeared from the scene.

## 7. References

- Adam, S., Browne, J., and Heady, C. (2011) 'Taxation in the UK', In I. f. F. S. (IFS) (Ed.), *Dimensions of Tax Design. The Mirrlees Review*, Oxford: Oxford University Press.
- Arel-Bundock, V. (2017) 'The Unintended Consequences of Bilateralism: Treaty Shopping and International Tax Policy', *International Organization*.
- Arnold, B. J., and McIntyre, M. J. (1995) *International Tax Primer*, Den Haag: Kluwer Law International.
- Atkinson, A. B. (2015) *Inequality: What Can Be Done?*, Cambridge: Harvard University Press.
- Basinger, S. J., and Hallerberg, M. (2004) 'Remodeling the Competition for Capital: How Domestic Politics Erases the Race to the Bottom', *American Political Science Review* 98(2): 261-276.
- BBC [British Broadcasting Corporation] (2009) More banks told 'reveal accounts', 13 August, news.bbc.co.uk/1/hi/business/8198260.stm (accessed 31 August 2017).
- Bertrand, M., Duflo, E., and Mullainathan, S. (2004) 'How Much Should We Trust Differences-in-Differences Estimates?', *The Quarterly Journal of Economics* 119: 249-275.
- Bird, R. M. (1980) *Tax Incentives for Investment: The State of the Art*, Toronto: Canadian Tax Foundation.
- Blyth, M. (2001) 'The Transformation of the Swedish Model: Economic Ideas, Distributional Conflict, and Institutional Change', *World Politics* 54(1): 1-26.
- Brys, B., Perret, S., Thomas, A., and O'Reilly, P. (2016) Tax Design for Inclusive Economic Growth, *OECD Taxation Working Papers*, <http://dx.doi.org/10.1787/5jlv74ggk0g7-en>, Paris.
- Büttner, T., and Thiemann, M. (2017) 'Breaking Regime Stability? The Politicization of Expertise in the Oecd/G20 Process on Beps and the Potential Transformation of International Taxation', *Accounting, Economics, and Law: A Convivium*.
- Clausing, K. A. (2007) 'Corporate Tax Revenues in Oecd Countries', *International Tax and Public Finance* 14(2): 115-133.
- (2016) 'The Nature and Practice of Tax Competition', In P. Dietsch, and T. Rixen (Eds.), *Global Tax Governance - What Is Wrong with It and How to Fix It*, 27-53, Colchester: ECPR Press.
- Cobham, A., and Janský, P. (2017) Global Distribution of Revenue Loss from Tax Avoidance: Re-Estimation and Country Results, *WIDER Working Paper 2017/55*. Helsinki: UNU-WIDER.
- Crivelli, E., De Mooij, R., and Keen, M. (2016) 'Base Erosion, Profit Shifting and Developing Countries', *FinanzArchiv: Public Finance Analysis* 72(3): 268-301.
- Darling, A. (2009) Transcript of the Chancellor's Speech, *Financial Times*.
- de Mooij, R. A., and Ederveen, S. (2008) 'Corporate Tax Elasticities: A Reader's Guide to Empirical Findings', *Oxford Review of Economic Policy* 24(4): 680-697.
- Dehejia, V. H., and Genschel, P. (1999) 'Tax Competition in the European Union', *Politics & Society* 27(3): 403-430.
- Devereux, M. P., and Griffith, R. (2003) 'Evaluating Tax Policy for Location Decisions', *International Tax and Public Finance* 10: 107-126.

- Devereux, M. P., Lockwood, B., and Redoano, M. (2008) 'Do Countries Compete over Corporate Tax Rates?', *Journal of Public Economics* 92(5-6 ): 1210-1235.
- Devereux, M. P., and Loretz, S. (2012) 'What Do We Know About Corporate Tax Competition?', *National Tax Journal* 66(3): 745-773.
- Dietsch, P., and Rixen, T. (2014) 'Tax Competition and Global Background Justice', *Journal of Political Philosophy* 22(2): 150-177.
- Downs, G. W., Rocke, D. M., and Barsoom, P. N. (1996) 'Is the Good News About Compliance Good News About Cooperation?', *International Organization* 50(3): 379-406.
- Eccleston, R. (2012) *The Dynamics of Global Economic Governance*, Cheltenham: Edward Elgar.
- ECJ [European Court of Justice] (2006) Judgment of the Court in Case C-196/04, Luxembourg: InfoCuria.
- Emmenegger, P. (2015) 'Swiss Banking Secrecy and the Problem of International Cooperation in Tax Matters: A Nut Too Hard to Crack?', *Regulation & Governance*: doi:10.1111/rego.12106.
- European Community (1998) 'Conclusion of the Ecofin Council Meeting on 1 December 1997 Concerning Taxation Policy - Resolution of the Council and the Representatives of the Governments of the Member States, Meeting within the Council on 1 December 1997 on a Code of Conduct for Business Taxation - Taxation of Savings', *Official Journal* C 2.
- Feld, L. P., Heckemeyer, J. H., and Overesch, M. (2013) 'Capital Structure Choice and Company Taxation: A Meta-Study', *Journal of Banking & Finance* 37(8): 2850-2866.
- Foot, M. (2009) *Final report of the independent Review of British offshore financial centres*, London: HM Treasury, <https://www.gov.uk/media/624053/footreport.pdf> (accessed 21 August 2017).
- Frieden, J. A., and Martin, L. L. (2002) 'International Political Economy: Global and Domestic Interactions', In I. Katznelson, and H. Milner (Eds.), *Political Science. The State of the Discipline*, 118-146, New York: W. W. Norton.
- G 20 (2009a) The Global Plan for Recovery and Reform, 2 April 2009. <http://www.g20.org/Documents/final-communicue.pdf> (last accessed 26 January 2011).
- (2009b) Meeting of Finance Ministers and Central Bank Governors, London, 4-5 September 2009: Declaration on Further Steps to Strengthen the Financial System, [http://www.g20.org/Documents/FM\\_CBG\\_Declaration\\_-\\_Final.pdf](http://www.g20.org/Documents/FM_CBG_Declaration_-_Final.pdf) (last accessed 26 January 2011).
- Ganghof, S. (2006) *The Politics of Income Taxation. A Comparative Analysis of Advanced Industrial Countries*, Colchester: ECPR Press.
- Garrett, G., and Mitchell, D. (2001) 'Globalization, Government Spending and Taxation in the Oecd', *European Journal of Political Research* 39(2): 145-177.
- Genschel, P., Kemmerling, A., and Seils, E. (2011) 'Accelerating Downhill: How the Eu Shapes Corporate Tax Competition in the Single Market', *Journal of Common Market Studies* 49(1): 1-22.
- Genschel, P., and Rixen, T. (2015) 'Settling and Unsettling the Transnational Legal Order of International Taxation', In T. C. Halliday, and G. C. Shaffer (Eds.), *Transnational Legal Orders*, 154-184, Cambridge: Cambridge University Press.

- Genschel, P., and Schwarz, P. (2011) 'Tax Competition: A Literature Review', *Socio-Economic Review* 9(2): 339-370.
- Goldstein, J., and Keohane, R. O., Eds (1993): *Ideas and Foreign Policy. Beliefs, Institutions, and Political Change*, Ithaca: Cornell University Press.
- Gray, A. (2010) Companies Set to Bring Forward Dividends, *Financial Times*.
- Hakelberg, L. (2014) 'The Power Politics of International Tax Cooperation: Luxembourg, Austria and the Automatic Exchange of Information', *Journal of European Public Policy* 22(3): 409-428.
- (2016) 'Coercion in International Tax Cooperation: Identifying the Prerequisites for Sanction Threats by a Great Power', *Review of International Political Economy*.
- (2017) The Power of States and Business: Explaining Transformative Change in the Fight against Tax Evasion and Avoidance, *Paper presented at the International Studies Association Annual Convention, Baltimore, 22-25 February 2017*.
- Hakelberg, L., and Schaub, M. (forthcoming) 'The Redistributive Impact of Hypocrisy in International Taxation', *Regulation & Governance*.
- HM Treasury (2009) Budget 2009 - Building Britain's Future, *Economic and Fiscal Strategy Report and Financial Statement and Budget Report. April 2009*.
- (2012) Budget 2012 - HC 1853, London: HM Treasury, [http://webarchive.nationalarchives.gov.uk/20130129110540/http://www.hm-treasury.gov.uk/budget2012\\_documents.htm](http://webarchive.nationalarchives.gov.uk/20130129110540/http://www.hm-treasury.gov.uk/budget2012_documents.htm) (accessed 21 August 2017).
- (2013) Budget 2013 - HC 1033, London: HM Treasury, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/221885/budget2013\\_complete.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/221885/budget2013_complete.pdf) (accessed 21 August 2017).
- (2015) Summer Budget 2015 - HC 264, London: HM Treasury, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/443232/50325\\_Summer\\_Budget\\_15\\_Web\\_Accessible.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/443232/50325_Summer_Budget_15_Web_Accessible.pdf) (accessed 21 August 2017).
- HM Treasury, and Gauke, D. (2010) The Corporate Tax Road Map, <https://www.gov.uk/government/publications/the-corporation-tax-road-map> (last accessed 8 August 2017).
- Holzinger, K. (2005) 'Tax Competition and Tax Cooperation in the Eu. The Case of Savings Taxation', *Rationality and Society* 17(4): 475-510.
- Houlder, V. (2013a) Tax havens agree to more transparency, *Financial Times*, 2 May, <http://www.ft.com/intl/cms/s/0/723b6e9c-b279-11e2-8540-00144feabdc0.html#axzz48R9oeXEd> (accessed 21 August 2017).
- (2013b) UK's offshore finance centres commit to tackling tax evasion, *Financial Times*, June 15, <http://www.ft.com/intl/cms/s/0/7f1d3e2a-d5e6-11e2-9dbd-00144feab7de.html#axzz48R9oeXEd> (accessed 21 August 2017).
- (2014a) UK agrees deal on 'patent box' tax break, *Financial Times*, 3 December, <https://www.ft.com/content/d2c783dc-7a54-11e4-8958-00144feabdc0> (accessed 21 August 2017).



- (2014b) UK and Germany reach compromise over patent box tax break, *Financial Times*, 12 November, <https://www.ft.com/content/8912f95e-6813-11e4-bcd5-00144feabdc0> (accessed 21 August 2017).
- (2014c) Business leaders attack UK 'Google tax', *Financial Times*, 10 December, <https://www.ft.com/content/12e12e3a-7fd9-11e4-adff-00144feabdc0> (accessed 21 August 2017).
- (2015a) Dividend Rules Change to Hit 700,000 Taxpayers, *Financial Times*.
- (2015b) UK Could Be Branded a Tax Haven after Osborne's Surprise Cut, *Financial Times*.
- (2015c) General election: Preserving generous tax rules is key UK concern, *Financial Times*, 7 May, <https://www.ft.com/content/c9f19a0a-f4a6-11e4-9a58-00144feab7de> (accessed 21 August 2017).
- (2016) Britain narrows gap in league of favourite tax regimes, *Financial Times*, 11 March, <https://www.ft.com/content/16897254-e617-11e5-a09b-1f8b0d268c39> (accessed 21 August 2017).
- (2017) Dividends Bonanza Was Prompted by Tax Reforms, *Financial Times*.
- Hulten, A. van (2012) 'Remapping the Fiscal State After the Global Financial Crisis', *Economic Geography* 88(3): 231-253.
- Hulverscheidt, C. (2010) 25 Prozent Von X, *Süddeutsche Zeitung*, 21. Mai 2010. <http://www.sueddeutsche.de/geld/reizwort-abgeltungssteuer-prozent-von-x-1.880295> (last accessed 17 March 2017).
- International Monetary Fund (IMF) (2014) Fiscal Policy and Income Inequality, *IMF Policy Paper*, 23 January 2014. <https://www.imf.org/external/np/pp/eng/2014/012314.pdf> (last accessed 26 January 2017).
- Johannesen, N., and Zucman, G. (2014) 'The End of Bank Secrecy? An Evaluation of the G20 Tax Haven Crackdown', *American Economic Journal: Economic Policy* 6(1): 65-91.
- Kubosova, L. (2008) 'Eu States Crack Down on Tax Evasion.', *EUobserver.com* 22 October (<http://euobserver.com/9/26976> (last accessed 145 July 2017)).
- Laborde, C., and Ronzoni, M. (2015) 'What Is a Free State? Republican Internationalism and Globalisation', *Political Studies* 64(2).
- Lierse, H., and Seelkopf, L. (2016) 'Room to Manoeuvre? International Financial Markets and the National Tax State', *New Political Economy* 21(1): 145-165.
- Maffini, G. (2013) Corporate Tax Policy under the Labour Government 1997-2010, *Oxford University Centre for Business Taxation, Working Paper 13/02*.
- OECD [Organisation for Economic Cooperation and Development ] (1998) *Harmful Tax Competition. An Emerging Global Issue*, Paris: OECD.
- (2009) A Progress Report on the Jurisdictions Surveyed by the Oecd Global Forum in Implementing the Internationally Agreed Tax Standard, <http://www.oecd.org/dataoecd/38/14/42497950.pdf> (zuletzt aufgerufen am 20. Mai 2009).
- (2014) *Standard for Automatic Exchange of Financial Account Information in Tax Matters*, Paris: OECD Publishing.

- (2015) Oecd/G20 Base Erosion and Profit Shifting Project. 2015 Final Reports <http://www.oecd.org/ctp/beps-explanatory-statement-2015.pdf> (last accessed 22 December 2016), Paris.
- (2017) *Oecd.Stats*, <http://www.oecd-ilibrary.org/statistics> (last accessed 10 July 2017).
- Osborne, G., Moscovici, P., and Schäuble, W. (2013) We Are Determined That Multinationals Will Not Avoid Tax, *Financial Times*.
- Palan, R., Murphy, R., and Chavagneux, C. (2010) *Tax Havens. How Globalization Really Works*, Ithaca: Cornell University Press.
- Picciotto, S. (2015) Overall Evaluation of the G20/Oecd Base Erosion and Profit Shifting (Beps) Project, *BEPS Monitoring Group*. <https://bepsmonitoringgroup.files.wordpress.com/2015/10/general-evaluation.pdf> (last accessed 4 July 2017).
- Pickard, J., and Houlder, V. (2014) Margaret Hodge Attacks Uk Coalition's Failure to Tackle Tax Reform, *Financial Times*.
- Piketty, T. (2014) *Capital in the 21st Century*, Cambridge: Harvard University Press.
- Plümper, T., Troeger, V. E., and Winner, H. (2009) 'Why Is There No Race to the Bottom in Capital Taxation?', *International Studies Quarterly* 53(3): 761-786.
- Rixen, T. (2008) *The Political Economy of International Tax Governance*, Basingstoke: Palgrave/Macmillan.
- (2011a) 'From Double Tax Avoidance to Tax Competition: Explaining the Institutional Trajectory of International Tax Governance', *Review of International Political Economy* 18(2): 197-227.
- (2011b) 'Tax Competition and Inequality: The Case for Global Tax Governance', *Global Governance: A Review of Multilateralism and International Organizations* 17(4): 447-467.
- (2013) 'Why Reregulation after the Crisis Is Feeble: Offshore Financial Centers, Shadow Banking and Jurisdictional Competition', *Regulation & Governance* 7(4): 435-459.
- (2016) 'Institutional Reform of Global Tax Governance: A Proposal', In P. Dietsch, and T. Rixen (Eds.), *Global Tax Governance. What's Wrong with It and How to Fix It*, 325-349, Colchester: ECPR Press.
- Rixen, T., and Schwarz, P. (2012) 'How Effective Is the European Union's Savings Tax Directive? Evidence from Four Eu Member States', *Journal of Common Market Studies* 50(1): 151-168.
- Rodrik, D. (2011) *The Globalization Paradox* New York: W.W. Norton.
- Sandford, C. (1993) *Successful Tax Reform: Lessons from an Analysis of Tax Reform in Six Countries*, Bath: Fiscal Publications.
- Scheve, K., and Stasavage, D. (2016) *Taxing the Rich. A History of Fiscal Fairness in the United States and Europe*, Princeton and Oxford: Princeton University Press.
- Sharman, J. C. (2006) *Havens in a Storm: The Struggle for Global Tax Regulation*, Ithaca: Cornell University Press.
- (2008) 'Regional Deals and the Global Imperative: The External Dimension of the European Union Savings Tax Directive', *Journal of Common Market Studies* 46(5): 1049-1069.

- Shaxson, N. (2011) *Treasure Islands: Uncovering the Damage of Offshore Banking and Tax Havens*, New York: Palgrave MacMillan.
- Simmons, B. A., Dobbin, F., and Garrett, G. (2006) 'Introduction: The International Diffusion of Liberalism', *International Organization* 60(3): 781-810.
- Steinmo, S. (2003) 'The Evolution of Policy Ideas: Tax Policy in the 20th Century', *British Journal of Politics and International Relations* 5(2): 206-236.
- Swank, D. (2006) 'Tax Policy in an Era of Internationalization: Explaining the Spread of Neoliberalism', *International Organization* 60(3): 847-882.
- (2016) 'Taxing Choices: International Competition, Domestic Institutions and the Transformation of Corporate Tax Policy', *Journal of European Public Policy* 23(4): 571-603.
- Swank, D., and Steinmo, S. (2002) 'The New Political Economy of Taxation in Advanced Capitalist Democracies', *American Journal of Political Science* 46(3): 642-655.
- Taber, C. (2012) Differences in Differences, University of Wisconsin-Madison, <http://www.ssc.wisc.edu/~ctaber/742/diffdiff.pdf> (accessed 24 March 2016).
- The Guardian (2009) Gordon Brown: 50p Rate Is Not Taxation for Its Own Sake, *23 April 2009*.
- (2013) Watch the Coalition Lead the Battle against Tax Havens ... Such as Britain, *8 September 2013*.
- Watt, N. (2009) Brown targets Switzerland in global tax haven crackdown, *The Guardian*, 19 February.
- Webb, M. C. (2004) 'Defining the Boundaries of Legitimate State Practice. Norms, Transnational Actors and the Oecd's Project on Harmful Tax Competition', *Review of International Political Economy* 11(4): 787-827.
- Weichenrieder, A. J. (2005) (Why) Do We Need Corporate Taxation?, *CESifo Working Paper No. 1495*, [www.CESifo.de](http://www.CESifo.de) (accessed 5 July 2006).
- Widmaier, W. (2016) *Economic Ideas in Political Time: The Construction, Conversion and Crisis of Economic Orders from the Progressive Era to the Global Financial Crisis*, Cambridge: Cambridge University Press.
- Wilson, J. D., and Wildasin, D. E. (2004) 'Capital Tax Competition: Bane or Boon', *Journal of Public Economics* 88(6): 1065-1091.
- Woodward, R. (2016) 'A Strange Revolution: Mock Compliance and the Failure of the Oecd's International Tax Transparency Regime', In P. Dietsch, and T. Rixen (Eds.), *Global Tax Governance - What Is Wrong with It and How to Fix It*, 103-121, Colchester: ECPR Press.
- Wooldridge, J. (2007) What's New in Econometrics? Lecture 10 Differences-in-Differences, NBER Summer Institute, [http://www.nber.org/WNE/Slides7-31-07/slides\\_10\\_diffindiffs.pdf](http://www.nber.org/WNE/Slides7-31-07/slides_10_diffindiffs.pdf) (accessed 24 March 2016).
- Young, O. R. (2001) 'Inferences and Indices: Evaluating the Effectiveness of International Environmental Regimes', *Global Environmental Politics* 1(1): 99-121.
- Zucman, G. (2013) 'The Missing Wealth of Nations: Are Europe and the U.S. Net Creditors or Net Debtors', *Quarterly Journal of Economics* 128(3): 1321-1364.

Zürn, M. (2010) 'Global Governance as Multi-Level Governance', In H. W. Enderlein, Sonja; Zürn, Michael (Ed.), *Handbook of Multi-Level Governance*, 80-99, Cheltenham Edward Elgar Publishing.