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The Political Economy of 'Tax Spillover': A New Multilateral Framework

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Abstract

Tax spillovers are the effects one country's tax rules and practices have on other countries. They have been assessed in aggregate terms by the IMF using econometric models, and were found to have a 'significant and sizable' impact in reducing corporate tax bases and rates in 'developing countries. However, a widely accepted form of country level spillover analysis remains elusive, despite demands from non-governmental organisations (NGOs) and international organisations (IOs). We present the first framework for conducting comprehensive national level spillover analyses using a qualitative evaluation framework in three steps. First we identify the importance of the normative underpinnings of multilateral evaluation frameworks. We make the case for an international moral harm convention that discourages states from doing harm to other states through their tax policies. Second we illustrate some of the difficulties in conducting country level spillover analyses using econometric methods, while advancing a broader conception of spillover, based on the defensive purpose of corporation tax. Third we present a new framework for conducting spillover analysis, that assesses relationships between four direct taxes and a number of administrative and institutional features of tax systems. Finally, we present initial pilot qualitative assessments for the UK and Denmark, involving scores, risk dashboards and visualisations.

Policy Implications

- Systematic country by country tax spillover analysis should be undertaken in a multilateral process overseen by existing international organisations, with the IMF, the OECD, the UN and the World Bank all feeding into the precise design of the exercise.
- Such an exercise should not be exclusively quantitative, but should involve a substantial qualitative process, involving reporting and assessing of a wide range of tax practices and processes.
- Such an exercise should be informed by the aim of reducing the harm states do to their own fiscal autonomy and that of other states as a practical element of an effective international moral harm convention on taxation.
- Spillover assessments should be driven by an understanding that the purpose of corporation and capital gains taxes is to defend and buttress tax systems as a whole.
- To be comprehensive spillover assessment should consider spillovers between and within tax systems covering the following areas: income tax; corporation tax; capital gains tax; social security; tax politics; tax administration; company and trust administration; and international agreements.
- Spillover assessment is therefore domestic as well as international and should revolve around three forms of assessment: domestic spillovers; international risks generated by a jurisdiction; international vulnerabilities of a jurisdiction.
- Professional assessors conducting spillover analysis should collect impressions about current tax practice through wide ranging stakeholder consultations, including interviews and surveys, in a process similar to the corporate governance ROSCs conducted by World Bank Staff. These field notes should translate into a more qualitative style country reports assessing and reporting on tax practices and the spillover risks in the jurisdiction, and should contain targeted policy recommendations.

The Context and Case for Tax Spillover

In a world characterised by complex, multifaceted cross-border socioeconomic phenomenon, conventional measurement systems are under strain (Christophers, 2013; Mügge, 2016). Many traditional numerical indicators and methods of calculation struggle to provide accurate gauges of complex global

economic chains. 'Dodgy' contestable data repeatedly blight international measurement and evaluation processes (Broome and Quirk, 2015b, p. 829). This raises the question of how governments, international organisations, civil society and even social scientists can and should respond.

One way in which processes of global governance can deal with such complexity is to make greater use of qualitative

assessments and evaluations as a means of providing more rounded readings of the complex phenomenon of a globalising world. 'Tax spillover' is an emerging policy field, where there is a case for the adoption of a qualitative multilateral spillover evaluation framework.¹ We propose and present a new multilateral framework, the first for conducting national level tax spillover analyses, with the aim of providing systematic recurrent audits of the spillover risks and vulnerabilities posed and faced by particular tax jurisdictions. We suggest there are two particular advantages to such a qualitative framework. First, it captures many of the things missed by more quantitative approaches reliant on official data and established data sets. Second, it is guided by the objective of identifying, evaluating and discouraging forms of tax competition that potentially harm other states, as part of a new international moral harm convention, rather than simply being an exercise in measurement for measurement's sake.

Concern that a 'race to the bottom' in corporate taxation is eroding national tax bases, motivated G20 governments and the Organisation for Economic Co-operation and Development (OECD) to adopt the Base Erosion and Profit Shifting (BEPS) Action Plan in 2013 (OECD, 2013). Development NGOs, advocacy groups and some economists worry that tax competition between states is harming developing countries (Abbas and Klemm, 2013, Eurodad, 2017, Henry, 2018, Oxfam, 2016; Sachs, 2011; TJN, 2006). Tax competition involves countries, states and cities offering tax cuts, breaks, loopholes or subsidies to encourage the relocation of substantive economic activity to their domain, or simply by attracting office functions for the purpose of booking profits. In a race to the bottom scenario, states compete with one another to attract global capital flows and investment through such measures.

Fears about the harmful effects of tax competition were given added credence in 2014, when the International Monetary Fund (IMF) published a paper on 'tax spillovers'. Tax spillovers were defined as the effects of one country's tax rules and practices on others (IMF, 2014). The paper concluded that tax 'spillovers' have a 'significant and sizable' impact in reducing corporate tax bases and rates in 'developing countries', with the impact two or three times higher than in OECD countries (IMF, 2014.) Spillover effects were also found to go well beyond tax revenues, to include macroeconomic performance and the broader level and distribution of welfare across nations (IMF, 2014). In this respect, tax spillovers can be conceived of as a potential threat to national sovereignty, eroding tax bases and impeding 'fiscal self-determination', or the ability to achieve policy goals through legislative programmes (Dietsch, 2015; Van Apeldoorn, 2018).

Since the IMF paper, many development NGOs and even some parliamentarians have begun calling for systematic country level reporting and assessment of tax spillover costs and risks (Action Aid, 2018, Oxfam, 2015, Christian Aid, 2017a, 2017b, Cobham and Gibson, 2016; APPG Responsible Tax, 2016²). At the same time, international organisations intend to discuss with a range of

stakeholders, including NGOs, the viability of conducting a form of tax spillover analysis, mainly through the platform for collaboration on tax (PCT) – a recurring stakeholder dialogue on tax and sustainable development, launched in April 2016 by the IMF, OECD, the United Nations (UN) and the World Bank Group (WBG). The PCT's first conference in 2018 established a broad aspiration to 'analyze and report on the spillovers and opportunities from changes in the international tax environment on and for developing countries' (PCT, 2018).

Unfortunately, tools for conducting effective tax spillover analysis remain underdeveloped and no settled formula, or method, is agreed upon. Rather methodological problems in quantifying country level spillovers are freely acknowledged (IMF, 2014). At the same time, the IMF's current conception of tax spillovers is a narrow one, centred around a distinction between base (reductions in inward investment) and strategic spillovers (further reductions in corporation tax as a policy response) and potentially misses many spillover risks and vulnerabilities. In this paper, we broaden the definition of spillover, highlighting corporation tax's defensive social purpose, in protecting and reinforcing other parts of the tax base, acting as a form of societal adhesive that holds tax systems and societies together, rather than as merely a revenue raising device. We use this conception and understanding of corporate taxation to generate a new evaluation framework, covering a wide range of spillovers, including within state spillovers between four direct domestic taxes. Our framework has three primary objectives: to comprehensively evaluate and audit future spillover risks and vulnerabilities on a country-by-country basis; to attach reputational disincentives to the pursuit of aggressive 'harmful' tax competition; and to inform and catalyse future policy dialogue about targeted policy reform. The framework would be most suitably deployed by teams of trained professional evaluators with experience in the tax policy field, under the umbrella of an international organisation. Similarly, the framework is a tool kit that could be used by specialist expert NGOs to generate their own analyses and gradings of spillover risks.

In the first section of the paper, we draw on the insight that it is common for current international benchmarks to have normative underpinnings (Broome and Quirk, 2015a, 2015b; Broome et al., 2018). Accordingly, our framework is minimally normative. It starts from a position that an international moral harm convention (Linklater, 2011) discouraging tax competition harming other states, by attaching reputational costs to such behaviour (Sharman, 2007), is desirable. In prioritising such an objective, we have directly responded to approaches from and discussions with key stakeholders – Oxfam, Action Aid, Christian Aid, the Tax Justice Network (TJN), the UK's All Party Parliamentary Group on Inclusive Growth and the Global Initiative for Fiscal Transparency (GIFT – involving the IMF and the World Bank). In the second section of the paper, we consider the methodological difficulties of quantifying country level spillovers, including the shortcomings of existing country level

spillover analyses. We establish the merits of a more qualitative form of spillover evaluation that draws on a broader definition and understanding of tax spillover. In the third and final section of the paper, we outline how our qualitative evaluation framework works, the methods it uses and present initial pilot assessments for the UK and Denmark, including risk dashboards.

Norms, reputation and international benchmarking

Tax has become an increasingly prominent and contested area of multilateral governance over the last decade (Cobham et al., 2015; Dietsch and Rixen, 2017; Eccleston and Gray, 2014; Palan and Wigan, 2014; Rixen, 2008, 2011a,b; Seabrooke and Wigan, 2016; Sharman, 2006). This has been a direct response to the globalisation of financial and corporate networks and practices, meaning that national tax policies now have implications well beyond single jurisdictions, as does corporate activity such as transfer-pricing – the rules and methods through which economic transactions are priced and accounted for within a transnational enterprise under common ownership (Bryan et al., 2017, Palan, Murphy and Chavagneux, 2010; Picciotto, 1992; Zucman, 2014). Since the 2008 financial crisis, rising public debt and public anger sparked by high profile leaks such as the Panama and Paradise Papers, as well as news of the limited amount of tax paid by global companies such as Google, Amazon and Starbucks have meant questions of tax justice have gained political prominence.

To date, the international response to these developments has focused on initiatives such as automatic information exchange (AIE) and country-by-country reporting (CbCR) under the BEPS plan. These initiatives potentially increase available information about the activities of large companies. However, as the IMF's work on tax spillovers demonstrated (IMF, 2014), focusing on corporate activity is only one side of the equation in moving towards a more just and effective international tax system. Just as important are the tax policies and administrative practices relating to the setting and collection of taxes by governments. As others have noted the BEPS initiative falls short of protecting states from threats to their fiscal self-determination that may result from tax competition (Devereux and Vella, 2014; Van Apeldoorn, 2018). For example in 2013, UK Prime Minister, David Cameron hosted the G8 summit, heralding a new OECD focus on AIE and CbCR as the start of a tough new international regime on tax avoidance and evasion. At the same time, he also lauded UK plans to cut corporation tax to 17%, as the lowest in the G20, and other potential beggar thy neighbour policies, including the so called patent box tax break, ostensibly targeted at research and development firms. In this respect, tax competition policies pursued by governments can potentially threaten other states' capacity for fiscal self-determination, by eroding their pool of resources for redistributive purposes. Protection of fiscal self-determination, therefore requires going beyond BEPS, to at least include some regulation of the tax rates set by

states (Van Apeldoorn, 2018), or as we suggest, identifying and disincentivising policies that pose pronounced spillover threats to other countries' tax bases, as the practical element of a new international moral harm convention.

The framework we advance is a response to a context in which NGO and public sentiment, as well as the intellectual climate in IOs such as the IMF, is more sympathetic to the goal of reducing the negative impact tax competition policies pursued by one state, can have on others.³ This context is also the reason why we make both identifying and discouraging potential harmful tax competition the baseline norm of the framework. As Martin Brehm Christensen, primary author of a recent Action Aid report on spillovers noted, 'if we agree on a general set of international tax principles: First principle should be, do no harm to other states' (Action Aid, 2018, Europa Capacity4Dev, 2017). Currently, the notion that tax practices can be harmful is very much present in spillover debates, and goes beyond the concerns of NGOs and developing country governments, to include the work of the European Commission and the IMF (European Commission, 2012; IMF 2014).⁴ International relations scholars have made a case for developing stronger international moral harm conventions, to prevent avoidable harm whether intentional, or unintentional, as part of a world ethic (Linklater 2002, 2011). However, little detailed work to date has considered how such conventions might practically be extended to the economic domain.

Our framework is essentially a form of multilateral surveillance or peer review. These exercises function through a mix of formal recommendations and informal dialogue; public scrutiny, comparisons and even rankings of countries; followed by public reactions to the publication of results by electorates, interest groups, public officials and politicians (Pagani, 2002; Broome and Quirk, 2015a; Schäfer, 2006) Such review and grading processes create the basis for 'symbolic judgements' on countries relative performances that function through shaming processes and unfavourable comparisons with peers (Broome and Quirk, 2015b). These symbolic judgements can in turn unleash a 'politics of bad performance', sparking a review of existing practices, while providing ammunition for critics of the status quo. A politics of bad performance can also create incentives for actors to change behaviours in anticipation of a negative score and associated social reputational costs (Broome and Quirk, 2015b; Sharman, 2007).

The framework we present in the final section of the paper seeks to stimulate such a 'politics of bad performance' by attaching recurrent reputational risk to tax competition that can be shown to be harmful to other states. This is hardly a departure from how many existing international benchmarks function. Normative criteria are often projected into many existing evaluation exercises by specifying appropriate conducts, behaviours and good practices (Broome and Quirk, 2015b). Measurement systems and forms of evaluation are difficult to meaningfully separate from their underpinning political values and preferences, frequently resulting in forms of 'norm evaluation' (Broome et al., 2018; Mügge, 2016). Consequently, choice of norm is usually prior

in the construction of international benchmarks and multi-lateral evaluation frameworks.

NGOs and expert activists have used benchmarks to both gradually change (reformist) and to directly challenge the existing normative order (revolutionary) (Seabrooke and Wigan, 2015). We view our framework as a hybrid combining a mixture of the revolutionary and reformist logics identified by Seabrooke and Wigan. For example, the choice of norm to underpin our framework, is neither clearly reformist nor revolutionary. Average headline corporation tax rates in OECD countries have been cut from 32% in 2000 to 25% in 2015 (Ting, 2016). The average worldwide headline rate has fallen from 27.45% to 20.73% between 2006 and 2016, including 65 states cutting their headline rate during that period.⁵ Our framework seeks to abate this trend by disincentivising tax competition that spills over to harm other countries. Potentially this gives a revolutionary flavour to the framework, by presenting a challenge to the current orientation of the system and to the contributions of particular units, especially leading Anglo-sphere powers who have often led the way in tax competition (Swank, 2016; Rixen, 2011a, 2011b). At the same time, however, the framework represents a more gradual intermediate step than more revolutionary proposals, such as the creation of an international tax authority (Dietsch and Rixen, 2017), unitary taxation (a tax on a corporation's global income followed by apportionment to states following a specified formula) (Picciotto, 2016), or minimum corporation tax rates (Murphy, 2016). It is also a direct response to the concerns of established IOs and NGOs.⁶ Spillover analysis already has issue salience with these actors and our proposal flows in the same direction as many of their existing positions, illustrating the framework's reformist characteristics (Seabrooke and Wigan, 2015). However, as the next section illustrates, the framework is also based on methodological critique of existing spillover analyses, usually associated with more revolutionary approaches (Seabrooke and Wigan, 2015.) Such a hybrid approach broadens the potential political appeal of the framework, while also enabling us to present new methodological departures

Tax spillover as an emerging policy field

Tax spillover was established as a real world phenomenon in an extensive 86-page report produced by the Fiscal Affairs Department of the IMF in 2014 (IMF, 2014). The report claimed that the strength and pervasiveness of tax spillovers were such, that it created a strong case for a more inclusive and less piecemeal approach to international tax co-operation (IMF, 2014, p.1). Methodologically, the Fund paper was based around two equations that estimated two types of spillover – base spillover (reductions in inward investment) and strategic spillover (reductions in corporation tax rates as a policy response to cuts elsewhere.) Both equations were applied to unbalanced panel data for 173 countries over the period 1980–2013 (IMF, 2014, pp. 52–53).

The headline finding was that a one-point reduction in corporation tax in all countries would reduce a typical country's corporate tax base by 3.7%, implying a sizable effect,

given average corporate tax rates had fallen by 5% over the previous decade (IMF, 2014, p. 19). A typical country was shown in the data to respond to a 1% cut by other countries with a 0.5% cut, reducing the average long-term corporate tax base by 2.5%. Using approximations of gross operating surpluses (GOS), actual corporate tax revenues were also compared to calculations of revenue accruing from the GOS method. Revenue loss in the relatively small sample of countries considered was 5% (excluding conduit countries), but 13% in non-OECD countries (IMF, 2014, p. 20). Harmful spillovers were therefore demonstrated to be empirically robust and found to be most pronounced in developing countries.

The paper also contained methodological health warnings, cautioning that estimations of aggregate revenue effects remained elusive (IMF, 2014, p.15), and that country level estimates were highly problematic. In particular, the existence of conduit countries as intermediate destinations in the routing of investments for profit shifting purposes, made country level spillover estimates potentially highly misleading (IMF, 2014, p.21). Intra-firm transactions (accounting for 42% of goods trade in the US) and the rise of intangible assets – intellectual property, patents, – which are easily relocated, also complicate identifying which countries are the source of corporate income (IMF, 2014, p. 10). Many jurisdictions are also attractive for tax purposes not because their statutory rate is especially low, but because of special regimes not captured in headline data (IMF, 2014, p.19). Patchy data on allowances, especially in developing countries, also means that average effective rates of corporate tax are often much lower than statutory rates (IMF, 2014 p.52). If we are to obtain a better sense of the spillover risks associated with these practices and processes, qualitative reporting and assessment would be a useful first step.

One result of the IMF's methodological and data health warnings, is that the international community is no closer to having a framework for conducting country level spillover evaluations. IMF staff have noted that spillovers warrant further consideration in Article IV discussions and have urged G20 countries to consider spillover effects on developing countries, before embarking on any tax reforms (IMF, 2014, p. 24; IMF, OECD, UN and World Bank, 2010). However, IMF staff have shown little ambition, or intent to conduct their own country level spillover analyses, given their methodological concerns. Identifying who generates what level of spillovers quantitatively, remains problematic on a country-by-country basis. Current IMF econometric estimations are also better suited to measuring spillovers that have already occurred across a range of countries, rather than providing more forward-looking assessments of the source of potential future risks, or in pin pointing policy reform priorities. Our qualitative reporting and assessment framework seeks to identify potential threats to a country's tax base, both from their own policies and practices, but also those pursued in other countries, as well as the potential level of risk a regime poses for other countries.

The difficulties of conducting quantitative country level spillover analysis, crystallized further, when the Netherlands

and Republic of Ireland governments undertook spillover analyses in 2015 (IBFD, 2015; Kosters, 2015). The Dutch analysis took a narrow form, using secondary econometric research to put numbers on foregone dividend and interest withholding tax revenues in developing countries, as a consequence of Dutch tax treaties, at a range €150–550 million per year (IOB, 2013, p. 14). The Irish study asserted that low levels of direct trade and investment between Ireland and developing countries, meant the Irish corporation tax regime could only have a minimal impact on developing countries (IBFD, 2015), but made the report even less use of country level data than the Dutch study (Weyzig, 2015).⁷ It is ironic of course, that given the IMF study highlighted profit shifting as a major cause of spillover, the two states most heavily implicated in Europe's most notorious profit shifting scheme, the 'double Irish with a Dutch sandwich', are the two countries to have undertaken their own spillover analyses. While the latter scheme was shut down in 2014, the 'single malt' involving Malta, with whom Ireland has a bilateral tax treaty, has since become operational (Christian Aid, 2017b). However, the Irish report claimed it no longer facilitated conduit structures that caused revenue loss for developing countries (IBFD, 2015, p. 8) Again qualitative reporting of profit shifting processes, the flows they entail and the factors facilitating them may be a useful first step in giving a fuller reading of spillover risk and in identifying potential policy reforms.

The kinds of country self-assessments, undertaken by Netherlands and Ireland are also problematic for other reasons. As in the Dutch and Irish cases, an idiosyncratic focus and uneven variable methods mean that such analyses will often not be comparable. Self-assessments can also be manipulated for political reasons and placed at the service of the pre-conceived goal of a clean bill of health. For these reasons we favour vesting responsibility for conducting spillover analysis with a multilateral agency, using a common assessment framework.

The framework we propose is a direct response to the data limitations noted above and to the IMF observation that we lack a thorough understanding of what forms of tax competition are particularly harmful for others. Aggressive competition for very mobile parts of the tax base, may for example be preferable to intense competition over a wider base (IMF, 2014, p. 43). Reaching such judgements requires a better sense of the threats and vulnerabilities that arise from the configuration of the wider tax base of a jurisdiction, including its policies and administrative practices.

The wider tax base of a jurisdiction also becomes important when we consider the function corporate taxes perform. Corporation and capital gains taxes do more than merely raise revenue. They also have a defensive social purpose, reinforcing other direct taxes such as income tax, or social security, maintaining the integrity and functioning of tax systems as a whole. Without them, it becomes easier for individuals to present income as a capital gains, or to transfer it to a company structure, leaving it untaxed. In the UK, Chancellor of the Exchequer, James Callaghan's speech to parliament introducing a separate corporation tax in 1965, contained a recognition of this. He noted the new tax would 'not produce double taxation of company profits, because only a

small percentage of profits were distributed to shareholders as dividends', meaning 'company profits and personal income were not the same thing and should be treated differently' (Hansard, 1965, Vol. 710). In this reading, corporation tax makes it more difficult to park untaxed capital in company structures. In the United States, congressional debate around the introduction of corporation tax in 1894, emphasised reaching shareholders who might otherwise escape paying tax on their income (Bank, 2001). The US legal literature refers to this as the 'aggregate defence' of corporation tax (Avi-Yonah, 2004) Our conception, is subtly different to this legal interpretation, because it places less emphasis on reaching individual shareholders through indirect taxation, and more emphasis on the buttressing function of corporation and capital gains taxes, limiting potential leakages in tax systems.⁸ Such a conception, also has implications for how we conceive of tax spillovers. In particular, the relationship corporate taxes have to other direct taxes, becomes all important. Any balanced spillover assessment consequently needs to ask whether a particular aspect of a tax system reinforces, or undermines both other aspects of the same system, and aspects of other countries' tax systems. Spillovers can therefore take both domestic and international forms and can occur between different taxes. Our framework is informed by three observations: tax spillovers occur both within and between jurisdictions; tax spillovers exist between different taxes; tax spillovers can be created by administrative disorder and regulatory arrangements.

Our qualitative evaluation framework consequently seeks to assess the relationship between four direct taxes within and between tax jurisdictions to a get broader sense of the risks and vulnerabilities particular regimes generate and face in their entirety. These are personal income tax (PIT); corporate income tax (CIT); capital gains tax (CGT); and social security contributions (national insurance) (SCR). Value added tax (VAT) and excise duties are both indirect taxes and not the subject of overt tax competition, so are not considered here. We also assess four endogenous features of tax systems: tax politics; tax administration; company and trust administration; and international agreements.

The IMF established the spillover concept, but its experience of conducting qualitative forms of assessment is limited. One fruitful potential example for future spillover analysis, is provided by OECD and World Bank collaboration on assessments of good corporate governance principles. Authoring corporate governance Reports on the Observation of Standard's Codes (ROSCs), a World Bank team adopted both a diagnostic and developmental rationale. This involved identifying policy weaknesses and tailored remedial policy recommendations through a triangulated pluralistic multi-stakeholder dialogue in an iterative process. These were published in a discursive report on current governance practices that collated a series of 'impressions' garnered from the administration of questionnaires, interviews with stakeholders (regulators, CEOs, corporate lawyers, accountants and labour groups) and through a systematic examination of legal documents and their application (Baker, 2012). This mode of qualitative evaluation and information

collection, based on widespread stakeholder consultation can act as a model for a more comprehensive and systematic form of qualitative tax spillover analysis that we set out in more detail in the next section (also see Action Aid, 2018).

A qualitative spillover evaluation framework

The qualitative evaluation framework we present is a toolkit for conducting spillover assessments and requires assessors to fill out three grids: (1) domestic; (2) international risks generated; (3) vulnerability to international risks. Assessors do this by answering a series of questions about how tax policies and practices in the jurisdiction concerned have implications for other areas. To help in this exercise we have created an extensive online appendix questionnaire for each grid, which indicates the areas and issues that should be considered in informing the allocation of scores on a 1–5 scale (Data S1). In reaching judgements, professional assessors can cross-reference a range of information sources – interviews with stakeholders, the administration of questionnaires, analysis of legal documentation and legislation, to create a picture of behaviours and processes. Written notes talking back to the questionnaire can detail the information used to answer questions and inform scores, creating the basis for a longer discursive qualitative report within a common structured framework, that sets out spillover risks and vulnerabilities in each jurisdiction (Data S2).

All three assessment grids are necessary and essential to give a full and comprehensive reading of spillovers. We recommend starting with the domestic grid to acquaint assessors with the particular jurisdiction. The three grids are also designed to increase the political traction of the framework with different constituencies. To date in our discussions with stakeholders, we have found that the domestic grid is of most interest to domestic opposition groups and think tanks interested in producing a more progressive set of domestic tax policies, as well as revenue collection agencies that could use findings to call for more resources. The international risk grid appeals most to development NGOs and the staff of some IOs, concerned that spillovers are impeding economic performance in developing countries. The international vulnerabilities grid is of most interest to developing country governments seeking to understand how targeted reform of domestic tax policy can best protect their tax base from international threats, as well as IOs and NGOs specialising in dispensing technical policy advice.

One of the biggest potential political obstacles to our proposed evaluation framework is that insufficient numbers of established major powers agree to enter into a spillover evaluation and oppose the framework. This is a particular risk with countries that have pursued aggressive tax competition and could be identified as spillover risk generators, or bad performers. In Europe, countries such as France and Germany may recognise the merits of subjecting the policies of states like Ireland, Luxembourg and a post Brexit, United Kingdom to greater scrutiny. However, such concerns are also why it is essential that the spillover framework

addresses government concerns about how they might better address their own vulnerabilities. Some countries will also perform well on the international risks grid and be good performers, generating few harms for others. Once a number of significant states have entered into the evaluation exercise, pressure for others to follow suit will increase. Major European countries are the obvious place to start, given levels of political appetite and demand for resisting tax competition and for country level spillover assessments (European Commission, 2012; Action Aid, 2018, Europa Capacity4Dev, 2017).

Assessors complete three appraisal grids that each resemble Figure 1, and for each square on the grid the assessor awards a grade on a 1–5 scale. For the domestic grid, they begin in the top left corner, working across horizontally to consider how the tax or policy area listed in the rows, starting with income tax (top of y axis), is impacted upon by the areas listed in the columns (x axis). For example, for the second box on the first row, the assessor asks 'is this country's income tax base undermined by its corporation tax system?' If they think it does then the score is either 5 or 4, depending upon the severity of that threat. Alternatively, if they think that corporation tax reinforces the income tax base, then the appropriate score is 1 or 2. Where there is no impact either way the score is 3. A domestic spillover assessment provides a reading of the degree to which a tax system is balanced, asking whether different elements support, or undermine each other.

For the international risk grid, the assessor evaluates the potential risks the issue being considered – (rows on the y axis), generate for the various taxes and policy areas of other countries listed in the columns (on the x axis). This reverses the pattern of asking how the policy area (rows on the y axis) under consideration is affected by areas in the columns, as in the case of the domestic and international vulnerabilities grids. The rows effectively act as the dependent variable in domestic and international vulnerability grids, but become the independent variable on the international risk grid. These different forms of assessment are necessary because states can be both aggressors and generators of risk, but also vulnerable to spillover risk, to varying degrees. The framework provides a comprehensive reading of the diverse elements of spillover as a multifaceted and multidirectional phenomenon.

The following five-point scale is used for both the domestic spillover and international vulnerability grid, with a score of 5 indicating the highest risk/vulnerability and threat of a harmful spillover effect. Risk and threat levels are colour coded accordingly.

5. The tax base or policy area being considered is heavily undermined by and vulnerable to the area it is being compared with.

4. The tax base or policy area being considered is to some extent undermined by and vulnerable to the area it is being compared with

3. The tax base or policy area being considered is neither undermined nor reinforced by the area it is being compared with and has limited vulnerability

Figure 1. Standard spillover assessment grid.

Country X	Issue impacting upon										Sub totals
	Tax spillovers	Income tax	Corporation tax	Capital gain tax	Social security	Tax competition	Tax Politics	Company and trust administration	International agreements	Total	
Issue being considered	Income tax										
	Corporation tax										
	Capital gain tax										
	Social security										
	Tax Politics										
	Tax administration										
	Company and trust administration										
	International agreements										
	Total										

2. The tax base or policy area being considered is to some extent reinforced by the area it is being compared and has little vulnerability

1. The tax base or policy area being considered is significantly reinforced by the area it is being compared with and is secure.

For international risks generated the following scoring system is used.

5. The area being considered undermines this element of the tax system in other countries to a considerable extent.

4. Some features of the area being considered undermine elements of this aspect of the tax system of other countries to some extent.

3. Some features of the area being considered can have detrimental effects on this area of the tax system in other countries, but this is limited.

2. The area being considered has limited impact on this element of the tax system in other countries, with few signs of harm.

1. The area being considered poses no threats or risks to this element of the tax system in other countries.

For all of the grids, higher scores are generally indicative of poor performance, – either high degree of vulnerability to harmful spillover risk, or the aggressive generation of spillover risks for others.

Space prevents a thorough treatment of how the questionnaire can be used to guide assessors in reaching their judgements, but for a domestic assessment of income tax, the judgement needs to consider: the rate of progressivity by percentage bands; by income band; whether the tax base is comprehensive; whether incentives, allowances and reliefs encourage tax planning; whether residency requirements produce exploitable loopholes? These questions essentially enable income tax to be marked against itself in the domestic grid. When assessing how corporation tax

impacts income tax, the following questions are suggested: are there significant differences in income and corporation tax rates that may encourage flows from one to the other; does corporation tax encourage roll up of income at lower rates than income tax; does the corporation tax regime entail additional incentives, allowances and reliefs compared to the income tax system; how do penalties for non-compliance affect incentives to relocate income from the income tax base to the corporation tax base? In effect what is being appraised in the domestic grid in this box, is how the setting and practices of corporation tax may cause leakages in income tax, even unintentional ones.

Taking the case of corporation tax in the international risk grid the assessment begins by asking about perceptions of the overall rate; whether the base is comprehensive; is favour provided to income arising outside of the jurisdiction; are non-resident companies permitted – where a company is incorporated in the jurisdiction but is effectively tax resident elsewhere and exempted from local taxation; are there special rates for dividends, royalties and overseas financial flows; are there effective transfer-pricing rules; are there advance pricing agreements, tax holidays, special tax rates and other arrangements available to induce foreign direct investment into the jurisdiction? Once these general orientation questions have been addressed, the more specific risks corporation tax arrangements pose to the corporation tax base in other jurisdictions can be assessed: whether the jurisdiction has a robust definition of the corporate tax base that limits prospects for base arbitrage; whether the jurisdiction actively participates in automatic information exchange on corporation tax; whether a country collects information to assist other countries in collecting corporation tax owing to them, or whether sources of income accruing from other jurisdictions, are ignored and so on. These questions interrogate whether both rates and practices in a particular area of taxation

threaten to undermine aspects of the tax base of other countries. We highlight them here for the indicative purpose of showing how an assessor can use the questionnaire to work systematically through grids awarding scores and building a picture of spillover risks and vulnerabilities, their sources and consequences from multiple directions, in a structured fashion.

Tax politics in the grid refers to the general climate of local political debate and is admittedly more difficult to assess, but such questions are crucial for the complexion of a tax regime, and cannot be ignored altogether, even if they do require careful handling. For example, is there evidence of political opposition to wealth taxes, such as capital gains tax? Is there an aversion to corporate transparency that might undermine the base for corporation tax? Is there a strong universal belief among political parties that rates have to be set to induce activity and is there a consensus and political pressure for further reductions? With regard to tax administration, the appraiser has to consider whether sufficient resources are provided for a domestic tax authority in all areas of its work to ensure there is a level playing field for the administration of all taxes and taxpayers, so that it is likely that all tax due is paid, and equally no more is collected than should be. In this respect, several existing information sources on tax administration already exist that might be fed into and used to inform the allocation of scores and assessments in this area of review, including, the Tax Administration Diagnostic Assessment Tool (TADAT) used by the IMF, the International Survey on Revenue Administration (ISORA) through the OECD's Forum on Tax Administration (FTA) and the Integrated Assessment Model for Tax Administration used by the World Bank (IAMTAX). Notably the information collected in these exercises is only one source of information that can be fed into this one element of our spillover assessment framework. The question of corporate and trust administration regimes examines whether the arrangements for administering these entities delivers sufficient timely, quality data on their activities that multiple tax administrations can access. International agreements cover how tax treaties are interpreted and implemented and how jurisdictions participate in CbCR and AIE.

Our concept of spillover recognises the interconnectivity between these areas and that the identification of laws, or formal headline taxation rates alone are an insufficient basis on which to appraise spillover effects. What really matters are the practices that characterise a tax system, how widespread they are and how they can pose threats to tax bases, both within the jurisdiction under consideration and elsewhere. The framework appraises such questions on a systematic basis, by collecting impressions and accounts of the processes at work, in ways that can be replicated across countries.

Example pilot appraisals

We now present pilot evaluations for the United Kingdom and Denmark. The literature expects tax competition and downward pressures on rates to be highest in liberal market

economies with higher degrees of openness to international capital mobility, and lower in co-ordinated market economies (Swank, 2016). The UK is a relatively large open liberal market economy where there has been political support for lower corporate taxes and has recently pursued what might be construed as aggressive international tax competition. For contrast, we compare the UK with Denmark, as a Scandinavian social democracy, where support for higher taxes and redistribution has traditionally been higher.

In both cases, we have used the questionnaire to guide our allocation of scores. We have used our knowledge of these tax systems to inform judgements, but have also consulted widely with other tax experts and stake holders from government, think tanks, NGOs, law and accountancy professions with direct experience of these tax systems in formulating our assessments. We recommend IO staff conducting such evaluations also engage in similar processes of stakeholder consultation collecting impressions, that could be reported in qualitative diagnostic commentary and in informing judgements reached as in the case of the corporate governance ROSC process. That particular instance involved a close collaboration between the OECD and the World Bank, with a World Bank team conducting the actual assessment. A similar division of labour, with IMF staff also involved in the design of the assessment exercise and with access to findings would be desirable here. In undertaking these pilot evaluations, we have simulated the kind of stakeholder dialogue IO staff would need to undertake in the assessment process. Our cross-referencing with other stakeholders could be more exhaustive, subjected to further processes of triangulation, including greater use of survey and interview data, to refine scores. We emphasise the scores and grids we present here are very much pilots and indicative rather than definitive. They are intended to show how the framework works as an evaluation toolkit and what it can generate in terms of scores, visualisations, including spillover risk/vulnerability dashboards, and how this could inform future policy dialogue (Figure 2, 3).

Extensive red blocks in the columns on the second half of the UK grid, show that administrative laxity in the UK, generate spillovers that undermine other areas of the UK tax system to a considerable degree. In the Danish grid, we see no red with a majority of yellow squares, indicating only moderate domestic spillovers. Notably, in the UK case there are no green or dark yellow squares, indicating that no aspect of the UK tax system acts to reinforce, or support other areas. Indeed, the picture is of most areas being in competition with other areas. In the Danish case we find only moderate threat levels for the income tax base emerging from more recent efforts to reduce corporation tax and some reforms to company and trust administration, but no area of the tax system undermines other areas to a considerable extent. The aggregate Danish score of 194, 75 lower than the UK score of 269, suggests a more balanced Danish regime, with tax politics and policies having a lower impact in undermining the Danish tax base. The overall average UK threat level of 269/64, or 4.203, shows that current practices undermine the overall tax base to some extent (at 4.5 the

Figure 2. UK Grid 1 Domestic Spillovers.

United Kingdom domestic tax spillovers	Issue it has impact on										Sub totals
	Tax spillovers	Income tax	Corporation tax	Capital gain tax	Social security	Tax politics	Tax administration	Company and trust administration	International agreements	Total	
Issue being assessed	Income tax	4	5	5	3	5	5	5	4	36	134
	Corporation tax	3	5	3	3	5	5	5	4	33	
	Capital gain tax	3	4	5	3	5	5	4	4	33	
	Social security	3	5	3	4	4	5	5	3	32	
	Tax politics	3	3	3	3	5	5	5	4	31	135
	Tax administration	4	4	4	3	5	5	5	4	34	
	Company and trust administration	4	4	4	4	5	4	5	4	34	
	International agreements	5	5	5	3	4	5	5	4	36	
	Total	29	35	32	26	38	39	39	31	269	

Figure 3. Denmark Grid 1 Domestic Spillovers.

Denmark domestic tax spillovers	Issue it has impact on										Sub totals
	Tax spillovers	Income tax	Corporation tax	Capital gain tax	Social security	Tax politics	Tax administration	Company and trust administration	International agreements	Total	
Issue being assessed	Income tax	3	4	4	3	4	4	4	3	29	103
	Corporation tax	2	3	3	3	4	4	4	4	27	
	Capital gain tax	2	3	3	3	3	4	3	2	23	
	Social security	3	2	3	4	3	3	3	3	24	
	Tax politics	3	3	2	3	3	3	2	2	21	91
	Tax administration	3	4	4	3	2	3	4	4	27	
	Company and trust administration	4	4	4	3	2	3	3	2	25	
	International agreements	2	2	2	3	2	2	2	3	18	
	Total	22	25	25	25	23	26	25	23	194	

UK would tip over into red). This contrasts with an average overall threat level of 3 in Denmark, indicating a more benign environment, albeit one that is becoming less so.

Fully appreciating how the scores are arrived at and their justifications, requires reading the much longer accompanying qualitative reports that explain how the questionnaire has been answered and documents practices uncovered during the course of the assessment. The main pattern in the UK case is that tax politics, tax administration, company and trust administration have combined to undermine other elements of the tax system. Three areas emerged as doing particular harm to the income tax base: (1) UK domicile rules that favour non-domiciles over residents, allowing them to claim all income arises outside of the UK; (2) limited 'close company' provisions allowing income to be shifted into corporation tax at lower rates; (3) the weak administration of capital gains with minimal reporting requirements allowing income to be disguised as capital gains. Corporation and social security tax bases were both notably undermined by: (1) weak company and trust administration resulting in 400,000 companies annually failing to file reports on their management and beneficial ownership; (2) the Registrar of Companies not requiring automatic disclosure of ownership at point of registration, unless an agent is engaged for registration purposes; and (3) relative ease of incorporation, facilitating false company creation to avoid social security payments. The under-resourced and under staffed nature of the UK tax authority may also impede

active pursuit of investigations and monitoring across a whole range of areas, while UK implementation of AIE to date has been uneven creating a number of blind spots that potentially undermine UK revenue collection capacity (Figure 2).

The headline number of 232 for international risk generated in the UK case, against 92 in the Danish case, captures the more aggressive pursuit of tax competition in the UK, particularly through recent reductions in corporation tax to the lowest level in the G20 and a political discourse that lauds tax competition and low corporation tax (Figure 4 and 5). To provide some context we should also note that we have also completed an international risk grid for the Cayman Islands – a well-known tax haven, which produced a score of 304. The 232 score for the UK therefore represents a middle/upper level of aggression towards other states (Figure 4).

The more aggressive imprint of the UK regime on the rest of the world is revealed in the footprint diagram, with the Danish footprint revealing a more contained and compressed shape, in which moderate aggressive competitive intent is largely confined to creeping laxity in company and trust administration, shown in the pale blue line (Figure 6). The UK footprint shows greater and more invasive and aggressive outreach across numerous areas. Denmark emerges from the exercise as a relatively good performer, as indicated in the high number of green risk scores that poses no threats to other states (Figure 5).

Figure 4. UK Grid 2 international spillover risks generated.

United Kingdom international tax spillovers: risk to other countries from the UK	The issue in other countries											
	Tax spillovers	Income tax	Corporation tax	Capital gain tax	Social security	Tax politics	Tax administration	Company and trust administration	International agreements	Total	Sub totals	
Issue being assessed for the UK	Income tax	4	1	2	2	4	2	2	4	21	94	
	Corporation tax	5	5	4	2	4	5	4	4	33		
	Capital gain tax	3	2	3	2	4	4	2	4	24		
	Social security	2	2	2	2	2	2	2	2	16		
	Tax politics	4	5	4	2	5	4	5	4	33	129	
	Tax administration	4	5	4	2	4	4	4	4	31		
	Company and trust administration	5	5	5	4	5	5	5	5	39		
	International agreements	4	4	3	2	3	3	4	3	26		
	Total	31	29	27	18	31	29	28	30	223		223

Figure 5. Denmark Grid 2 international spillover risks generated.

Denmark international tax spillovers: risk to other countries from the UK	The issue in other countries										
	Tax spillovers	Income tax	Corporation tax	Capital gain tax	Social security	Tax politics	Tax administration	Company and trust administration	International agreements	Total	Sub totals
Issue being assessed for Denmark	Income tax	1	1	1	1	1	1	1	1	8	36
	Corporation tax	1	3	1	1	3	1	1	1	12	
	Capital gain tax	1	1	1	1	1	1	1	1	8	
	Social security	1	1	1	1	1	1	1	1	8	
	Tax politics	1	3	1	1	2	1	1	1	11	56
	Tax administration	1	1	1	1	1	1	1	1	8	
	Company and trust administration	4	4	3	1	1	3	4	1	21	
	International agreements	3	3	2	1	3	2	1	1	16	
Total		13	17	11	8	13	11	11	8	92	92

Figure 6. UK and Denmark international spillover risk footprints compared.

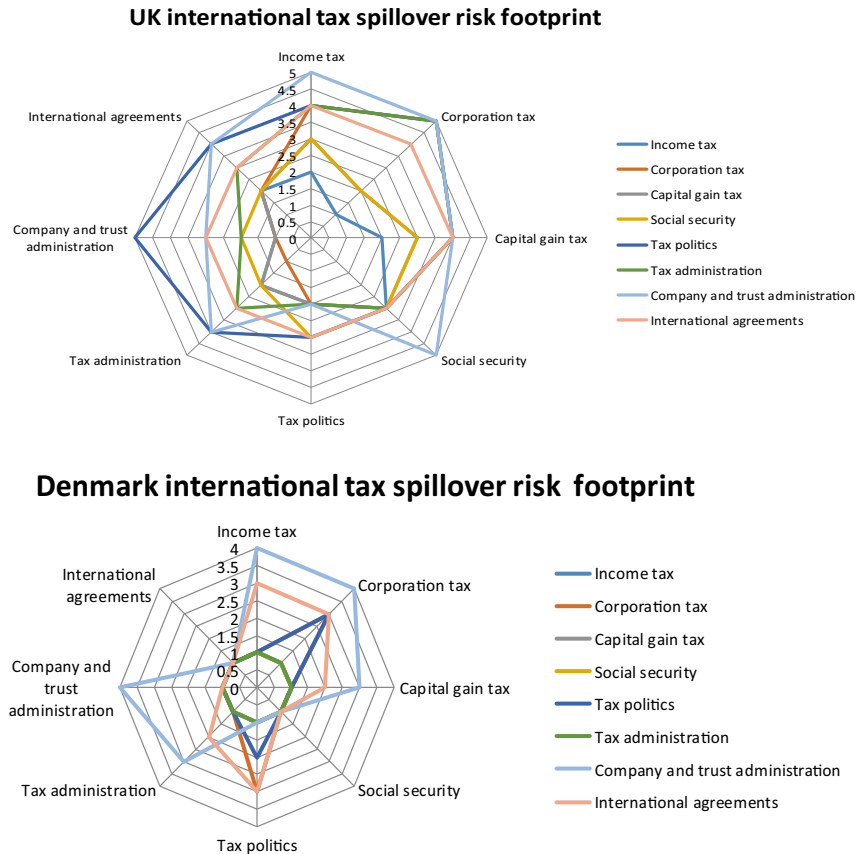


Figure 7. UK Grid 3 vulnerability to international spillovers.

United Kingdom international tax spillovers: the vulnerability of the UK	The issue in other countries										Sub totals
	Tax spillovers	Income tax	Corporation tax	Capital gain tax	Social security	Tax politics	Tax administration	Company and trust administration	International agreements	Total	
Issue being assessed for the UK	Income tax	4	5	4	3	4	4	5	3	32	114
	Corporation tax	2	2	2	4	4	4	5	3	26	
	Capital gain tax	2	4	2	3	5	4	5	4	29	
	Social security	3	5	3	3	3	3	4	3	27	
	Tax politics	4	4	5	3	4	4	4	3	31	118
	Tax administration	4	5	4	3	4	4	5	3	32	
	Company and trust administration	3	3	3	3	5	3	5	3	28	
	International agreements	3	3	3	3	4	4	4	3	27	
Total	25	31	26	25	33	30	37	25	232	232	

The dangers of lax company and trust administration in the UK is again a feature of the international risk spillover grid, with a score of 39 (maximum = 40). Moreover, this potentially undermines less mobile aspects of other countries' tax base – income tax and social security – that the IMF worry maybe the most harmful forms of spillover. Particular threats arise from: (1) the ease of creating a company in the UK and of allocating income earned elsewhere to it; (2) an absence of beneficial ownership checks by the UK Registrar of Companies, and limited beneficial ownership disclosure arrangements, creating barriers to identifying the true owners of companies; (3) the failure to enforce laws on document filing, (400,000 companies on average fail to meet their requirements; and (4) the UK tax authority failing to collect any tax returns from companies claiming to trade solely outside of the UK. The latter is a UK administrative blind spot that creates potential information shortfalls for tax authorities in other countries, as it allows micro entities to incorporate in the UK, without having to provide any information, which could be exchanged with authorities in the trading location and that would allow them to collect revenue. It is precisely these kinds of practices that potentially undermine the tax bases of other countries, in ways that econometric techniques struggle to capture, which our framework is designed to pick up and identify as areas for potential reform (Figure 4).

The third and final grid shows that the UK suffers a surprising degree of vulnerability to international spillovers (Figure 7). Income tax and tax administration have the highest degree of vulnerability, with all areas vulnerable to some extent. The vulnerability of UK income tax is mainly due to the difficulties UK tax authorities face in accessing information on income earned by individuals via companies registered outside of the UK, with AIE's capacity to tackle this remaining unproven. At the same time, zero or negligible rates of corporation tax elsewhere create incentives for companies and individuals to move income outside of the UK.

Conclusions

Three steps have been taken in this paper. First, with many established measurement systems and numerical indicators struggling to capture complex global economic phenomenon, we have suggested that qualitative forms of evaluation can help to provide a better reading of complex global economic issues. Using insights from the literature on international benchmarking, we have highlighted how the approaches used to evaluate national policies, often have underlying normative assumptions and effectively engage in a form of 'norm evaluation'. Consequently, the most important question facing a future form of spillover analysis, is the purpose it should serve, or its overarching objective

based on a 'systemic vision' of a good or better international tax system and its prospective constituent norms Baker (2018). Accepting this we have created a tax spillover framework that is minimally normative, proceeding from the assumption that identifying and discouraging policies and procedures that can cause harm to other states as part of an effective international moral harm convention is desirable. While at first glance this appears to be a challenge to the existing order, it is also a response to the demands from established large scale NGOs and the staff of IOs, for a workable form of country level spillover analysis. We work with the grain and findings of established actors (IMF, NGOs), but also move beyond them in suggesting new methodological departures by creating a framework that combines reformist and revolutionary logics and practices. Central to the framework is the attachment of reputational risk to forms of tax competition that harm other direct taxes and other countries' tax bases, through the grading and reporting of such risks.

In the second step we highlighted some of the methodological difficulties of quantifying spillovers applying econometric techniques and established data sets at a country level. We also re-defined spillover, to cover a more comprehensive range of spillover effects, including within country spillovers between different parts of national tax systems. Most importantly of all our approach to evaluating spillovers is driven by an understanding of the purpose and intent of corporate taxes as primarily defensive – to reinforce or prevent the erosion of other parts of the tax base such as income tax. Drawing on the experience that established IOs such as the World Bank have with qualitative methods of assessment and evaluation we suggest a similar process, or framework could work well in the case of tax spillover.

In a final step, we outlined how our framework works as a spillover assessment toolkit and presented some initial pilot simulation evaluations. Observers of international tax affairs may be unsurprised by the scores and the contents of the findings, but our purpose has not been to uncover a new story about the tax practices of particular states, or their consequences. These very preliminary pilot assessments have been generated to show how the framework can generate systematic appraisals of spillover risk and inform policy dialogue about targeted future reforms, contributing to more secure tax bases, by providing initial readings of the weaknesses and vulnerabilities particular countries face. The visualisations and scores can also be used to attach a reputational risk to aggressive tax competition that potentially harms other states. In the UK case, its relatively poor performance in all three grids could help to catalyse a 'politics of bad performance'. The evaluation identified company and trust administration as a particular area, in need of attention that could bring potential domestic and international benefits. Extensive notes justifying the awarded scores also produce a structured in depth report that qualitatively assesses the practices of particular tax systems. In this sense, the framework could be deployed by teams of evaluators from an IO engaging in a country-by-country spillover assessment exercise, or by NGOs who wish

to move the tax spillover agenda along by demonstrating how spillover analyses can be undertaken.

Notes

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1. This could supplement more quantitative efforts at spillover assessment, rather than replace them in their entirety.
2. In the UK, the All Party Parliamentary Group on responsible tax called for HM Treasury to provide an assessment on international spillovers from UK tax policy (APPG, 2016)
3. Of course the biggest obstacle such efforts face is a Trump Whitehouse determined to cut the United States own headline corporation tax rates, but this is a position that is increasingly out of step with expert and wider public sentiment (Beer et al., 2018).
4. Stopping a race to the bottom is not explicitly supported by the mainly UK politicians we have engaged with on the matter, but nor is it explicitly rejected.
5. Headline figures are often not a good guide to the amounts of tax being paid on corporate profits in particular jurisdictions due to assorted tax breaks, holidays and loopholes, making actual rates paid much lower. It is however symbolic of the broader trend and direction of travel.
6. The benchmark IMF paper (IMF, 2014), reveals both IMF and European Commission (2012) support for identifying and reducing harmful tax competition. Private conversations with OECD and World Bank officials also reveals support for this. We developed this proposal following an approach from Oxfam and conversations with Action Aid, Christian Aid, Eurodad and the Tax Justice Network (Baker and Murphy, 2017).
7. The research focused on just 13 countries in only two years, just 4% of Irish overseas investment 2009–2013. Notably, the publication of revenue from royalties and license fees into Ireland from all African, Asian and South American countries bar five, is prohibited, restricting assessments of the tax treatment of this income (Christian Aid, 2017a).
8. Two further rationales for corporation tax are compensation for the benefits accruing to companies from their incorporation by the state as limited liability companies and for limiting the financial resources at the disposal of corporate management as a regulatory device enhancing accountability through increased information on corporate transactions. The second of these is favoured by Avi- Yonah (2004) and we see this as complementary to our defensive conception.

References

- Abbas, S. A. and Klemm, A. (2013) 'A Partial Race to the Bottom: Corporate Tax Developments In Emerging and Developing Economies', *International Tax and Public Finance*, 20 (4), pp. 596–617.
- Action Aid (2018) *Stemming the Spills: Guiding Framework for Undertaking National Tax Spillover Analyses* [online]. Available from:

- http://www.actionaid.org/sites/files/actionaid/stemming_the_spills_online.pdf [Accessed 1 February 2019].
- APPG Responsible Tax (2016). A More Responsible Global Tax System or a Sticking Plaster? An Examination of the OECD's Base Erosion and Profit Shifting (BEPS) process and recommendations [online]. file:///C:/Users/admin/Downloads/Sticking-Plaster-APPG-Responsible-Tax-Report%20(1).pdf [Accessed 1 February 2019].
- Avi-Yonah, R. S. (2004). 'Corporations, Society, and the State: A Defense of The Corporate Tax', *Virginia Law Review*, 90 (5), pp. 1193–1255.
- Baker, A. (2012) 'The 'Public Interest' Agency of International Organizations? The Case of the OECD Principles of Corporate Governance', *Review of International Political Economy*, 19 (3), pp. 389–414.
- Baker, A. (2018) 'Macroprudential Regimes and the Politics of Social Purpose', *Review of International Political Economy*, 25 (3), pp. 293–316.
- Baker, A. and Murphy, R. "Tax Spillover: A New Framework," Paper for the All Party Parliamentary Group on Inclusive Growth [online]. Available from: https://www.inclusivegrowth.co.uk/wp-content/uploads/2017/03/Tax-Spillover_v4.pdf [Accessed 1 February 2019].
- Bank, S. A. (2001) Entity Theory as Myth in the Origins of the Corporate Income Tax', *William & Mary Law Review*, 43 (2), pp. 447–537.
- Beer, S., Klemm, A. and Thornton, M. (2018) Tax Spillovers from US Corporate Income Tax Reform, IMF Working Paper, 13 July [online]. Available from: <https://www.imf.org/en/Publications/WP/Issues/2018/07/13/Tax-Spillovers-from-US-Corporate-Income-Tax-Reform-46055> [Accessed 1 February 2019].
- Broome, A. and Quirk, J. (2015a) 'The Politics of Numbers: The Normative Agendas of Global Benchmarking', *Review of International Studies*, 41 (5), pp. 813–818.
- Broome, A. and Quirk, J. (2015b) 'Governing the World at a Distance: The Practice of Global Benchmarking', *Review of International Studies*, 41 (5), pp. 819–841.
- Broome, A., Homolar, A. and Kranke, M. (2018) 'Bad Science: International Organizations and the Indirect Power of Global Benchmarking', *European Journal of International Relations*, 24 (3), pp. 514–539.
- Bryan, D., Rafferty, M. and Wigan, D. (2017) 'Capital Unchained: Finance, Intangible Assets and the Double Life of Capital in the Offshore World', *Review of International Political Economy*, 24 (1), pp. 56–86.
- Christian Aid (2017a) Global Linkages: Re-examining the empirical basis of the 2015 Tax spillover analysis [online]. Available from: <https://www.christianaid.ie/sites/default/files/2018-02/global-linkages-tax-report.pdf> [Accessed 1 February 2019].
- Christian Aid (2017b) "Impossible" Structures: Tax Outcomes Overlooked by the 2015 Tax Spillover Analysis [online]. Available from: <https://www.christianaid.ie/sites/default/files/2018-02/impossible-structures-tax-report.pdf> [Accessed 1 February 2019].
- Christophers, B. (2013) *Banking across Boundaries: Placing Finance in Capitalism*. Hoboken, NJ: John Wiley & Sons.
- Cobham, A. and Gibson, L. 2016. Ending the Era of Tax Havens. Why the UK Government Must Lead the Way. Oxford [online]. <http://oxfamlibrary.openrepository.com/oxfam/bitstream/10546/601121/4/bp-ending-era-tax-havens-uk-140316-en.pdf> [Accessed 1 February 2019].
- Cobham, A., Janský, P. and Meinzer, M. (2015) 'The Financial Secrecy Index: Shedding New Light on the Geography of Secrecy', *Economic Geography*, 91 (3), pp. 281–303.
- Devereux, M. P. and Vella, J. (2014) 'Are We Heading Towards a Corporate Tax System Fit for the 21st Century?', *Fiscal Studies*, 35 (4), pp. 449–475.
- Dietsch, P. (2015). *Catching Capital: The Ethics of Tax Competition*. Oxford: Oxford University Press.
- Dietsch, P. and Rixen, T. (2017) *Global Tax Governance*. Colchester: EcPr Press.
- Eccleston, R. and Gray, F. (2014) 'Foreign Accounts Tax Compliance Act and American Leadership in the Campaign Against International Tax Evasion: Revolution or False Dawn?', *Global Policy*, 5 (3), pp. 321–333.
- Eurodad (2017) Tax Games: The Race to the Bottom. Europe's Role in Supporting an Unjust Global Tax System [online]. Available from: <http://www.eurodad.org/files/pdf/5a27a1bfc1266.pdf> [Accessed 1 February 2019].
- Europa capacity4dev (2017), Tax Justice for Development: Tackling Spillovers and Incentives [online]. <https://europa.eu/capacity4dev/transboundary-basin-group/articles/tax-justice-development-tackling-spillovers-and-incentives> [Accessed 1 February 2019].
- European Commission (2012) Commission Recommendation of 6.12.2012 on Aggressive Tax Planning (Luxembourg: Publications Office of the European Union) [online]. Available from: http://ec.europa.eu/taxation_customs/resources/documents/taxation/tax_fraud_evasion/c_2012_8806_en.pdf [Accessed 1 February 2019].
- Hansard. (1965) Vol.710 Commons Sitting, Corporation Tax: Domestic Aspects. MAIN OBJECTHC Deb 06 April 1965 vol 710 cc254-6254 Chancellor of the Exchequer Mr James Callaghan [online]. <https://api.parliament.uk/historic-hansard/commons/1965/apr/06/main-object> [Accessed 1 February 2019].
- Henry, J. (2018) "Death and Taxes: Ladies and Gentlemen take your places, the global tax race to the bottom is about to begin," *The American Interest* [online]. Available from: <https://www.the-american-interest.com/2017/12/21/ladies-gentlemen-take-places/> [Accessed 1 February 2019].
- IBFD, (2015) Spillover Analysis: Possible Effects of the Irish Tax System on Developing Economies. Dublin: Irish Department of Finance [online]. Available from: http://www.budget.gov.ie/Budgets/2016/Documents/IBFD_Irish_Spillover_Analysis_Report_pub.pdf [Accessed 1 February 2019].
- IMF (2014) Spillovers in international corporate taxation, IMF Policy Paper, 9 May [online]. Available from: <https://www.imf.org/external/np/pp/eng/2014/050914.pdf> [Accessed 1 February 2019].
- IMF, OECD, UN and World Bank, (2010), 'Supporting the Development of More Effective Tax Systems: A Report to the G-20 Development Working Group' [online]. Available from: www.imf.org/external/np/g20/pdf/110311 [Accessed 1 February 2019].
- IOB, (2013) 'Evaluation Issues in Financing for Development: Analysing Effects of Dutch Corporate Tax Policy on Developing Countries', IOB Study no 386. Ministry of Foreign Affairs.
- Kosters, B. 2015. Spillover analysis: Research for Dutch MoFA [online]. Available from: <http://www.finance.gov.ie/sites/default/files/8%20-%20Bart%20Kosters.pdf> [Accessed 1 February 2019].
- Linklater, A. (2002) 'The Problem of Harm in World Politics: Implications for the Sociology of States-Systems', *International Affairs*, 78 (2), pp. 319–338.
- Linklater, A. (2011) *The Problem of Harm in World Politics: Theoretical Investigations*. Cambridge: Cambridge University Press.
- Mügge, D. (2016) 'Studying Macroeconomic Indicators as Powerful Ideas', *Journal of European Public Policy*, 23 (3), pp. 410–427.
- Murphy, R. (2016) Time for an Alternative Minimum Corporation Tax? London: Bloomberg [online]. Available from: <https://www.bna.com/time-alternative-minimum-n57982077695/> [Accessed 1 February 2019].
- OECD (2013) 'Action Plan on Base Erosion and Profit Shifting' [online]. Available from: <https://www.oecd.org/ctp/BEPSActionPlan.pdf> [Accessed 1 February 2019].
- Oxfam (2015) "What's the UK's role in fixing the broken international tax system?" Oxfam blog by Luke Gibson [online]. Available from: <https://www.oxfam.org.uk/blogs/2015/10/uk-role-in-fixing-broken-international-tax-system> [Accessed 1 February 2019].
- Oxfam (2016) Tax Battles: The dangerous global race to the bottom on corporate tax, Oxfam Policy Paper, 12 December [online]. Available from: <https://www.oxfam.org/sites/www.oxfam.org/files/bp-race-to-bottom-corporate-tax-121216-en.pdf> [Accessed 1 February 2019].
- Pagani, F. (2002) 'Peer Review as a Tool for Co-Operation and Change – an Analysis of An OECD Working Method: Feature', *African Security Review*, 11 (4), pp. 15–24.
- Palan, R., Murphy, R. and Chavagneux, C. (2013) *Tax Havens: How Globalization Really Works*. Ithaca, NY: Cornell University Press.
- Palan, R. and Wigan, D. (2014) 'Herding Cats and Taming Tax Havens: the US Strategy of "Not in My Backyard"', *Global Policy*, 5 (3), pp. 334–343.

- PCT (2018) Platform for Collaboration on Tax First Global Conference on Taxation and SDGs Platform Partners' Statement at the Closing of the Conference, 16 February [online]. Available from: http://www.un.org/esa/ffd/wp-content/uploads/2018/02/platform-for-collaboration-on-tax-2018_conference-statement.pdf [Accessed 1 February 2019].
- Picciotto, S. (1992) 'International Taxation and Intrafirm Pricing in Transnational Corporate Groups', *Accounting, Organizations and Society*, 17 (8), pp. 759–792.
- Picciotto, S. (2016) 'Unitary Taxation: Combined Reporting and Formulary Apportionment', in T. Pogge, and K. Mehta, (eds.), *Global Tax Fairness*. Oxford: Oxford University Press.
- Rixen, T. (2008). *The Political Economy of International Tax Governance*. Basingstoke: Palgrave.
- Rixen, T. (2011a) 'Tax Competition and Inequality: The Case for Global Tax Governance', *Global Governance*, 17 (4), pp. 447–467.
- Rixen, T. (2011b) 'From Double Tax Avoidance to Tax Competition: Explaining the Institutional Trajectory of International Tax Governance', *Review of International Political Economy*, 18 (2), pp. 197–227.
- Sachs, J. (2011) "Stop this Race to the Bottom on Global Tax," *Financial Times*, 28 March [online]. Available from: <https://www.ft.com/content/8836f284-592a-11e0-b9f6-00144feab49a> [Accessed 1 February 2019].
- Schäfer, A. (2006) 'A New Form of Governance? Comparing the Open Method of Co-ordination to Multilateral Surveillance by the IMF and the OECD', *Journal of European Public Policy*, 13 (1), pp. 70–88.
- Seabrooke, L. and Wigan, D. (2015) 'How Activists Use Benchmarks: Reformist and Revolutionary Benchmarks for Global Economic Justice', *Review of International Studies*, 41 (5), pp. 887–904.
- Seabrooke, L. and Wigan, D. (2016) 'Powering Ideas through Expertise: Professionals in Global Tax Battles', *Journal of European Public Policy*, 23 (3), pp. 357–374.
- Sharman, J. C. (2006) *Havens in a Storm: The Struggle for Global Tax Regulation*. Ithaca, NY: Cornell University Press.
- Sharman, J. C. (2007) 'Rationalist and Constructivist Perspectives on Reputation', *Political Studies*, 55 (1), pp. 20–37.
- Swank, D. (2016) 'Taxing Choices: International Competition, Domestic Institutions and the Transformation of Corporate Tax Policy', *Journal of European Public Policy*, 23 (4), pp. 571–603.
- Ting, A. (2016) Race to the Bottom on Company Tax Cuts won't Stop Tax Avoidance, *Conversation*, 24 November [online]. Available from: <https://theconversation.com/race-to-the-bottom-on-company-tax-cuts-wont-stop-tax-avoidance-69209> [Accessed 1 February 2019].
- TJN (2006) Tax Competition, TJN Briefing [online]. Available from: https://www.taxjustice.net/wp-content/uploads/2013/04/Tax_competition_-_SEP-2006.pdf [Accessed 1 February 2019].
- Van Apeldoorn, L. (2018) 'BEPS, Tax Sovereignty and Global Justice', *Critical Review of International Social and Political Philosophy*, 21 (4), pp. 478–499.
- Weyzig, F. (2015) Spillover Analysis of Irish Tax Policy [online]. Available from: <https://francisweyzig.com/2015/10/14/spillover-analysis-of-irish-tax-policy/> [Accessed 1 February 2019].
- Zucman, G. (2014) 'Taxing across Borders: Tracking Personal Wealth and Corporate Profits', *Journal of Economic Perspectives*, 28 (4), pp. 121–148.

Supporting Information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Data S1: Tax spillover assessment procedure and toolkit

Data S2: UK spillover assessment report

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