Maximum Capital, Minimum Tax

Enablers and Facilitators of Corporate Tax Minimization

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WWW.CBS.DK

ISSN 0906-6934

Print ISBN: 978-87-7568-095-5
Online ISBN: 978-87-7568-096-2

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PhD Series 21.2022

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Supervisors: Duncan Wigan and Leonard Seabrooke

CBS PhD School - Copenhagen Business School 2022

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1. udgave 2022
Ph.d. Serie 21.2022

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ABSTRACT

This dissertation addresses the issue of corporate tax minimization. In reconceptualizing what tax minimization means, the thesis focuses on effective tax minimization, which includes tax planning by multinational corporations alongside the tax-lowering policies governments undertake. Together, tax planning and lower taxes explain the decrease in effective tax rates. This conceptualization opens up the broader question of how this comes about, and asks: how is corporate tax minimization enabled and facilitated?

Corporate tax minimization is enabled by governments, who, either to please powerful constituencies or to ’win’ in tax competition, offer lower tax rates to multinational corporations. By providing such concessions, governments have not only minimized tax but also opened up a space for further tax minimization. The availability of increasingly numerous legal regimes with progressively favorable tax exemptions provides legal affordances which firms can take advantage of to lower their tax bills.

Corporate tax minimization is facilitated by tax professionals, who act as intermediaries with presence and expertise across the globe. They are able to innovate and construct tax-minimizing legal structures and transactions. The thesis problematizes the current focus on ‘offshore’ and ‘tax havens’ as culprits. Through extensive mapping, it is documented how tax professionals facilitate tax avoidance from large cities in EU and OECD countries. As ‘system brokers’, these professionals are able to influence tax minimization through both firms and states, as they consult with governments and advice on tax systems that provide favorable legal regimes for international investors.

Overall, the dissertation argues for an increased focus on tax competition and tax professionals in the scholarship and regulation of corporate tax.

RESUME

Denne afhandling omhandler selskabsskatteminimering. I en rekonceptualisering af, hvad skatteminimering betyder, fokuserer afhandlingen på *effektiv skatteminimering*, hvilket inkluderer skatteplanlægning af multinationale selskaber sammen med de skattesænkende politikker, som regeringer gennemfører. Skatteplanlægning og lavere skatter er nemlig begge med til at forklare det samlede fald i effektive selskabsskattesatser. Denne konceptualisering åbner op for det bredere spørgsmål om de bagvedliggende faktorer, og spørger: hvordan muliggøres og faciliteres selskabsskatteminimering?

Virksomhedsskatteminimering muliggøres af regeringer, som enten for at imødekomme interessenter eller for at tiltrække investeringer, tilbyder lavere skattesatser til multinationale selskaber. Ved at give sådanne indrømmelser har regeringer ikke kun minimeret skatten, men også åbnet et rum for yderligere skatteminimering. Tilgængeligheden af stadig flere juridiske ordninger med gradvist gunstige skattefritagelser giver øget spillerum for virksomheder som ønsker at minimere deres skat.

Virksomhedsskatteminimering faciliteres af skatteprofessionelle, som opfinder og konstruerer skatteminimerende juridiske strukturer og transaktioner. Afhandlingen problematiserer det aktuelle fokus på ’offshore’ og ’skattely’ frem for et fokus på hvordan samt hvor skatteminimering faktisk foregår. Gennem omfattende kortlægning dokumenteres, hvordan skatteprofessionelle faciliterer skatteunddragelse fra storbyer i EU- og OECD-lande. Som 'systemmæglere' er disse fagfolk i stand til at påvirke skatteminimering gennem både virksomheder og stater, når de rådgiver om skattesystemer, der giver gunstige juridiske ordninger for selvsamme internationale investorer som de arbejder for.

Samlet set argumenterer afhandlingen for et mindre fokus på skattely, og øget fokus på skattekonkurrence og skatteprofessionelle i studiet og reguleringen af selskabsskat.

ACKNOWLEDGEMENTS

Working on this dissertation has been a joy, not least because of the fantastic people I have had the pleasure to work with. I have had the privilege of a fantastically encouraging environment, which treats research as a team sport and places great value on support and collaboration. I owe a huge thanks to absolutely everyone I have encountered at work, courses and conferences for being good colleagues and great people.

My supervisors Duncan Wigan and Leonard Seabrooke have been an immense source of support and inspiration, not only during my PhD studies but all the way since my undergraduate degree. Thank you, Duncan, for your loyalty and thoughtfulness, for finding ways to make me feel extremely supported while challenging my assumptions and raising my ambitions. I have always left your office with a better sense of direction and enthusiasm for the steps ahead. Thank you, Len, for your kindness and creativity, and for showing me ways to have fun with all aspects of academic work. Your generosity with advice on big and small things is extremely appreciated, and the work we have done together has been a pleasure.

A big thanks goes to all my co-authors, both on papers included within this PhD and the ones which are not. Javier Garcia-Bernardo, Petr Janský, Marek Sedivy, Richard Murphy, Alexander Klemm, Shafik Hebous, Leonard Seabrooke, Duncan Wigan, Rasmus Corlin Christensen, Adam Leaver, Andrew Baker, Colin Haslam have all been a pleasure to work with.

The research environment at IOA, and particularly the Political Economy group, have been fundamental to my experience of doing a PhD. The degree of support and collegiality is amazing, and the generosity in sharing and engaging with each other's ideas always makes for fun and rewarding meetings. While everyone in the group has been significant to the environment, particularly Oddný Helgadottir, Cornel Ban, Stine Haakonson, Lasse Folke Henriksen, Christoph Ellersgaard, Eleni Tsingou, Rasmus Corlin Christensen, Jacob Hasselbalch, Christian Hendriksen, Lea Acre Foverskov, Jakob Laage Thomsen, Ole Willers and Tom Lyttelton have provided excellent comments on my work, without which this dissertation would have been poorer. At other departments, Stefano Ponte and Mogens Kamp Justesen have also provided great advice and been a pleasure to work with.

I have also had a second community to feel at home in through the COFFERS project. Thanks to everyone involved in the COFFERS project, for providing synergies and discussions across academic disciplines and places, which broadened my view and helped me find my way, and led to fruitful collaborations.

My experience with the generosity of other academics in engaging with each others work has been very rewarding. Particular thanks goes to Daniel Mügge and Adam Leaver for providing excellent comments on this PhD at a moment when everything was in flux, and I needed help to connect the dots from idea to finished product. You, and everyone at my 'Work in progress' seminar, illuminated the big picture and showed me the gaps, which was instrumental in getting me to this point. Diane Stone and Lena Ajdacic both provided excellent comments on one of my articles, which pushed me to substantially improve what was on the page.

During my PhD, I had the pleasure of working briefly at the IMF and experiencing a different side of research. Thanks to Alexander Klemm and Shafik Hebous for providing me with a space to immerse myself in tax research and for being generous with your ideas and advice. It was a pleasure to work with you both. The collaboration and discussions of specifics and the broader picture taught me a lot, and being a part of the Fiscal Affairs team at IMF have been an extremely rewarding experience. A big thanks goes to everyone participating in the seminars and talks, which was always full of vibrant discussion. A special thanks goes to Alex for being generous with data and advice on my master's thesis in 2016.

I have also had the pleasure to work on the important project on tax base erosion and profit shifting in mining with IGF. Thanks to Alexandra Readhead, Jaqueline Terrel Taquiri and Landry Filiga Ouédraogo for being outstanding partners in an important project.

The institutional support from CBS in both the leadership and administrative support from the IOA department and the PhD school is also owed a big thanks. Signe Vikkelsø, Carsten Greve, Lise Justesen, Marianne Arøe Hansen, Mette Grue Nielsen, Ursula Plesner, Marianne

Benfeldt Kellman, Lonni Faulch, Joan Knudsen, Katja Høegh Tingleff have all been instrumental in creating the best possible conditions for me as a PhD, even in the face of large challenges such as a merging departments and handling a pandemic, but also smaller yet personally important challenges of sickness and loss.

The PhD has been funded by the EU Horizon 2020 project COFFERS and the Fonnesbech Foundation. I have also received funds from IISD, IMF, UNUWIDER and GUE/NGL. A big thanks to all of these organizations for supporting this work in different ways.

I also owe a big thanks to my family and friends, some of which have been by my side from the beginning and others who I have met along the way. You all provided the encouragement and inspiration that made me believe I could do this in the first place, and I am incredibly grateful to have you in my life. A huge thanks particularly goes to my husband Mikkel for being the best partner in the world. Your reassurance, humor and care have been essential and I could not have done this without you. Working side by side in all time zones for a decade has been wonderful and I can't wait to see what's next.

PREFACE

On a grey Tuesday in 2008, I became a legal adult, and skipped class to visit my local bank branch and take on debt. This was both a product of financial illiteracy, a necessity from no longer having a family home to return to, and the result of an economic system which encouraged credit expansion under the promise of continued economic growth. Less than a year later, now equipped with multiple credit lines, I saw this system come tumbling down as panic ran through Wall Street. While it unfortunately took several more years for me to gain the financial literacy and means required to improve my own standing, the crash of Lehman Brothers and the ensuing collapse opened my eyes to the fragilities of the world economy. The investment in education funding I had been campaigning for was suddenly off the agenda, as banks needed bailouts. The fact that private actors could have so much influence over politics sparked my belief that understanding economic foundations is fundamental to understanding politics.

Wanting to understand the origins of the crisis led me to study International Business and Politics at CBS, where I was introduced to International Political Economy. While on exchange at American University, I was introduced to Minsky and the theories of financial instability which provided a framework for understanding why the problem of crises can't just be 'fixed'. My interest in Minsky's ideas about financial dynamics and innovation led me to write about macroprudential regulation for my bachelor thesis. My then-supervisor, Jesper Rangvid, turned my attention to Spain and the early, failed attempts at such regulations. Wanting to understand this in particular, and get a broader understanding of economics in general, I studied International Trade, Finance and Development at Barcelona School of Economics. Here, I became interested in the economics of development, of gender, of capital flows and capital flight and in the policies countries undertake to increase growth.

The specific puzzle of this dissertation started with the pragmatic questioning of the effectiveness of tax competition. Focusing on developing countries, I was interested in the 'paradox' of uphill capital flows – the lack of capital investments in developing countries and the policies that can be undertaken to attract capital. Lowering the cost of investment through lower taxes is a popular policy, but even if it is effective, it may be harmful if lower public finances limits investments in infrastructure and education – two other market features that are important for international investors and development goals. I was writing my master's thesis at Barcelona School of Economics about tax holidays in Indonesia, when the Panama Papers were leaked and tax avoidance was suddenly on everyone's lips. This puzzled me – here I was looking at a country that offered foreign investors complete tax exemptions, and it was seen purely as a strategy towards development and growth – and not making it into the headlines of international newspapers. How were these tax exemptions so different from the so-called tax haven strategies that were raising headlines? Of course, it is not available to anyone with a briefcase of money and a made-up alias. But to a firm who were investing anyway, it might have the same effect as a tax haven.

It also struck me that the same firms who advise multinationals on how to game the system through tax planning, also advised governments on tax regime design. These firms are omnipresent and particularly concentrated right here in Europe – so how come we keep seeing pictures of palm trees with every article published about the tax payment of multinational firms? It seemed to me that the system of tax minimization was being produced and maintained by these professionals who innovate tax strategies in close cooperation with clients and governments.

When discussing taxation, there are many issues that can come to mind. Personal experiences, political outrage, and the gigantic leaks of tax haven schemes published by ICIJ, and questions of political consumerism aimed at tax-minimizing companies. Particularly, the question of whether a certain company is doing something 'illegal' is something that comes up often, and many a young man with no qualifications in the field of taxation have graciously volunteered their time explaining to me that '*actually*, most of corporate tax avoidance is not even illegal'. *Actually*, I argue, what's illegal, or even what is immoral, is an extremely limiting way to frame an important question about redistribution of wealth. I enjoy reading the fascinating tales of crooks in offshore tax havens as much as the next girl, but the features that make it a good story also limits the political and economic analysis. Good and bad, detectives and gangsters, onshore and offshore, is a limiting framework for understanding the ways markets, politics, economics and law are intertwined. The broader question of tax avoidance, which is legal but has harmful effects, is more interesting – but also imposes the idea of moral and immoral ways for corporations to act. Broadening the question even further into the issue of tax competition is more complex, but opens the issue up to discussions of how states, firms, and professional intermediaries all shape the conditions for international tax.

I hope I have come some way in this thesis towards providing answers to these puzzles – if nothing else, I have learned a lot along the way and hope to contribute to these debates in the future. This is the product of several years of work, but I am not done learning or thinking through these issues, and I look forward to continue that journey with anyone who might share this interest. Thank you for reading along.

CONTENTS

PART I: FRAME

INTRODUCTION

When Amazon announced they were looking for a location for a second headquarters, they launched an open contest between American cities. The tech giant's wish list included fiscal incentives from government, and local policy makers did not hesitate to deliver. Quickly, governors of metropolitan areas leaped into both public and secretive campaigns to attract the development deal, offering tax credits worth billions – in some cases amounting to more than the total sum of investment pledged by Amazon (Dastin 2017). Shortly after work began on building the new headquarters in Arlington, Virginia, the online retailer saw its biggest year yet in terms of revenue. However, their European headquarter in Luxembourg reported a loss for 2020 and paid no tax despite European revenue of $44 billion (Gross and Satariano 2021). Leaked documents show how the structure of Amazon in Luxembourg may have been a sweetheart deal from the Luxembourg government, set up by the Big Four accounting firm PwC (Wayne 2017). This has later led to investigations by the EU Commission, but in the end, Amazon won the legal battle around their tax arrangements (White 2021).

What is so special about the Amazon story? By now, we are all used to hearing about the multinational corporations and their scandalous connections to tax havens. The Amazon story shows how it is not enough to look at firms and so-called tax havens to understand how corporate tax is minimized. Here, a large multinational corporation is able to make states compete for investment through offering tax incentives, and ends up paying very little taxes with the help of Big Four tax professionals, leaving the otherwise powerful EU authorities unable to intervene. This is a story of something that is so deeply entwined in international economic practices that we barely notice it: states seeking to maximize capital by improving their 'investment climate' through lower taxes, while businesses who invest and operate internationally make use of tax planning expertise to make use of these dynamics in the most beneficial way. We need to take a step back and look at how these tax arrangements come about: how are they enabled and facilitated. This thesis will demonstrate how corporate tax minimization is enabled by governments improving competitiveness, and facilitated by professional tax planning experts who shape both policies for governments and strategies for firms.

Conceptually, the terms 'tax avoidance' or 'aggressive tax planning' are often evoked to point to the methods and magnitudes of corporate tax minimization. In many cases, however, it is unclear whether the actions of the firm constitutes tax avoidance, given its legality. In the Amazon example, since the tax savings granted directly by the US and Luxembourg authorities are based on a promise rather than a loophole, avoidance may not be a very accurate term – and using it to refer to cases like this focuses debates on whether firms were acting within their rights. While these widely employed concepts have generated important insights, conceptualizations which exclude major enabling mechanisms restrict analysis and the policy implications which we derive from it in a way that delimits analytical and policy purchase. I advance our understanding of corporate tax by conceptualizing '*effective tax minimization*' as an alternative to the overlapping and contradictory terms that refer only to the actions of firms but not the accommodating governments. Effective tax minimization is the lowering of taxes paid by a corporation, and is what we measure when we calculate effective tax rates. Indeed, the fall in effective tax rates over time is only partially due to firm behavior, and governments lowering taxes constitutes the majority of the decrease in effective tax rates (Garcia-Bernardo, Jansky and Tørsløv 2022).

By taking this step back, we can broaden the view from the mischief of multinationals to the complex and overlapping authority and relationship between states, firms and professionals. Capital mobility enables corporations to shift assets and income across borders, providing business with structural power vis a vis states who compete for investment. This structural power of business is enacted instrumentally by professionals and politicians in the public arena, in shaping the structures and strategies that end up minimizing tax – particularly in co-creating the legal frameworks (Pistor 2019). In the end, it becomes an issue of redistribution of wealth, as tax minimization for mobile capital may shift tax burdens to less mobile sources such as labor income or consumption, or undermine public funds for social investment (Winner 2005, Schwarz 2007, Bretschger and Hettich 2005).

I seek to answer the research question "***How is corporate tax minimization enabled and facilitated?"*** I switch the view from the actions of firms to the structures behind their tax minimization. Governments enable tax minimization through their eagerness to provide a hospitable economic environment, and facilitate it through the recognition and support of domestic and foreign legal affordances. Tax professionals enable tax minimization through their work with governments to create flexible and favorable legal regimes, and facilitate it through their work in innovating, planning and enacting the legal structures and transactions which give rise to lower tax claims.

This thesis provides several contributions to the field of International Political Economy of Tax. *Theoretically,* the thesis develops a new conceptualization of *effective tax minimization* and a model for how this is enabled and facilitated by governments and professionals. Through problematization (Alvesson and Sandberg 2011), this reconceptualization provides a clearer understanding of the various actors and actions behind falling effective tax rates. Building on Global Wealth Chains (Seabrooke and Wigan 2014, 2017, 2022), I focus on how legal regimes and affordances rather than a bounded geography of 'tax havens' are the main instruments in tax minimization. Furthermore, by exploring the role of professionals and their dual role of advisors to firms and government, a position I term 'system brokers', the thesis delivers on the promise of GWCs to identify structure in the international political economy on the basis of its micro-foundations; here, in the professional fields that facilitate tax minimization. In contrast to global wealth chains, which focuses on the information asymmetries between regulators, suppliers and clients, I argue how governments may also act as enablers of tax minimization, in which case limited information is not necessarily at play. I thereby improve and widen the dimension of actors in GWC analysis.

Methodologically, this thesis makes use of mixed methods and a variety of analytical tools. A key contribution is the suggestion and demonstration of geographical analysis of transnational professionals. Through mapping key professions, insights can be gained into the relationship between institutional settings and professional authority. A new method to study transnational professionals through their geography is suggested and showcased along with a method for such data collection through social media. This develops the spatial dimension of prosopography – provisionally labeled prosopogeography – thereby exploring new ways to understand the configuration of the international political economy through these professional groups.

Empirically, the thesis fills several gaps in the literature by providing new data. Particularly, data on the structure and geography of tax professionals provides new insights into these transnational actors. By understanding where they work, we can identify the nodes where tax avoidance is coordinated and where knowledge sharing and innovation occurs (Parnreiter 2014, Sassen 1991). Locating tax professionals in particular means locating where power over tax resides, which is important on par with tracking the flows or institutional regimes which are signs of tax minimization. The geography of professionals may also be important for the trajectory of future modes of tax minimization, as regulations and moral perceptions are changing (Radcliffe et al 2018). Given their role as advisors to governments, their location has implications for the future development of state policies and the configuration of corporate structures. Furthermore, the first research article presents findings from a new database of the fiscal regimes in mining contracts, created in collaboration with the Intergovernmental Forum on Mining, Minerals and Metals. These original datasets can hopefully be used by other scholars to further insights on tax minimization.

Substantially, the thesis provides an important insight to the field of tax as it focuses not just on who and what, but shows that any action on tax avoidance needs to take tax competition into account. By misconstruing the problem as one of corporate behavior and fringe states, earlier conceptualizations have become suggestive of policy approaches which targets these actors rather than the structures and actors that enable and facilitate tax minimization. Reconceptualizing the issue opens up a new space for political action, and provides an alternative origin story of tax minimization which brings states, firms and tax professionals together and brings the IPE literature on tax competition into the conversation about offshore and tax avoidance.

Roadmap

The dissertation continues as follows. Chapter 2 frames the issue of tax in terms of who-gets-what, and outlines the actors and relationships that are fundamental to understanding how authority over international corporate tax is configured. It then outlines the different literatures and findings which provide important insight into the issue of tax minimization and brings them into conversation with each other.

Chapter 3 outlines the concepts used in the literature on tax in IPE problematizes the enduring use of ‘offshore’, ‘tax havens’, ‘tax avoidance’ and ‘aggressive tax planning’ in our approach to discussing IPE of tax. The chapter goes on to develop an alternative conceptualization of ‘effective tax minimization’, which includes both the active movement of productive assets to lower tax areas, the movement of paper profits to low-tax areas, and the discretionary and statutory provision of lower taxes by governments vying for investors interest.

Chapter 4 outlines the methods and data employed in the five research articles. It outlines the importance of collaborative and eclectic mixed-methods approaches, and provides detail on the methodological contributions of the thesis in terms of mapping professionals as a form of prosopogeography.

In part II I present five research articles. As these are articles written for different audiences and over a larger span of time, they exist in their own universe to a certain extent. Nevertheless, while they all have research purposes in their own right, they also all speak to parts of the overall research question of the dissertation.

The first paper ‘Gold Chains: Global Wealth Chains in Mining’ surveys contracts from the mining industry to analyze how global wealth chains are configured in this industry. I find that governments provide concessionary incentives to mining investors in the statutory legal regime as well as in discretionary contracts with mining firms. The article speaks to how governments enable corporate tax minimization through the tax incentives they offer.

The second paper ‘Above and beyond tax havens: Mapping the tax professionals facilitating tax avoidance’ argues that tax professionals hold infrastructural power over international corporate tax, and that mapping them enables us to track this power and where facilitation occurs. It shows that contrary to the ‘blacklist’ approach favored in the regulation of international tax, the coordination in fact does not take place in blacklisted offshore financial centers. Rather, tax professionals are located in larger cities close to managerial and financial sector clients. We show this by providing a novel dataset for the locations of professionals and show their geography follows a core-periphery structure.

The third paper ‘Search and Deploy’ studies the Big Four professional service firms, who act as the organizational platform for most tax professionals. Given that these firms serve both tax-minimizing corporations and act as advisors to governments, they are important enablers and facilitators of tax minimization. We show that their structure and geography is at once global and consists of national components. This structure enables them to source knowledge across the globe and use this to the benefit of their clients. But the national division also enables them to avoid association with harmful practices, as well as enables local chapters to make claims to speak in the ‘national interest’ when they advice governments. We suggest studies of organizational field need to incorporate further analysis of the external and structural conditions, which enable field emergence and maintenance.

The fourth paper ‘Seeing like a boss’ discusses how global value and wealth chains are entangled at the level of managerial control and strategy. Global value chains and global wealth chains is usually considered distinct both temporally and spatially. This dichotomy can also be applied to states: When countries provide beneficial legal regimes to corporations and engage in tax competition, it can be seen as attempts to attract ‘real’ investors and improve ther integration into Global Value Chains, as opposed to engaging in ‘virtual’ tax competition which can be seen as configuration into Global Wealth Chains. However, this thesis argues that all states can act as a protection against claims from other states, and can provide legal regimes that make it beneficial for firms to do so. The article doesn’t discuss this overlap in enabling mecahnisms between global wealth chains and global value chains, but focuses on the facilitation. It finds that while the assets and trade relations that make up GVC and GWC are indeed geographically distinct, the facilitators and corporate management share the same geographical pattern.

The fifth paper takes the question of ‘who gets what’ literally by evaluating the revenue effects of a global tax reform. The paper assesses destination-based cash-flow taxation, a potential reform which addresses both tax competition and tax avoidance and therefore fits the reconceptualization. The paper shows that the redistributive effects are significant, particularly for trade surplus countries, but the increased policy autonomy to adjust rates upwards in the absence of tax competition would partially compensate for that. If adopted unilaterally, the ripple effects would be significant depending on who the first adopter is, and could bring about a situation akin to global adoption even in the absence of a multilateral process.

What ties the papers together is the understanding of corporate tax as in a framework of *effective tax minimization* in which the actions of states, firms and professionals all need to be considered as enabling and facilitating the downwards trend in effective tax rates of corporations.

SEEING CORPORATE TAX LIKE A POLITICAL ECONOMIST

The task of the international political economist, therefore, is to try and untangle the complex web of overlapping, symbiotic or conflicting authority in any sector or on any who-gets-what issue.

Susan Strange (1996 p. 99)

Tax has been linked to state-making and can therefore be seen as foundational to any study of international political economy (Scheve & Stasavage, 2016, Tilly 1992). However, I believe what makes tax interesting for international political economists is that it goes to the heart of distributional questions. The role of a political economist is to study how decisions over who-gets-what come about (Strange 1996, p. 99). *Who gets what* is exactly what is at stake when it comes to international corporate tax: what portion is granted to the government, and how much can the company keep? When the company is multinational, what governments will get the taxing right over what? We can re-phrase the old political question of who-gets-what to **who gets taxed, by how much, and where?**

Conflicting authority over international tax

Tax is a critical case for International Political Economy to tackle Stranges's call for who gets what as it is literally about redistribution and the authority over this redistribution. Who gets what and how with respect to tax is not determined in a well-functioning international regime that governs and oversees the division, and nature, of taxing rights between countries, even though this absence imposes costs on governments (Strange 1996). The foundations of the international tax system were established in the 1920's League of Nations efforts to reduce the problem of overlapping taxing rights leading to the double taxation of multinational firms (Rixen 2011a, Picciotto 1992). The guidelines resulted in a fragmented regime of bilateral agreements over taxing rights, where recurrent negotiations reflect power balances between actors and countries (Hearson

2018), and where the ability of firms to allocate taxing rights through profit shifting is not addressed (Picciotto 1992, Rixen 2008). Authority in the global tax regime is therefore fragmented, shared between states and firms.

Where tax is paid is a question of authority over tax base allocation. While the regime is based on sovereignty of national borders, multinational firms can act as a single entity across these borders and exploit differences in legal and economic systems, and thus allocate tax base to their benefit. This shift in authority over who allocates tax base between countries comes on the back of two related seismic shifts in the global economy: the liberalization of capital flows and the rise of multinational corporations. After the 'embedded liberalism' of the Bretton Woods era (Ruggie 1982), capital flows have been liberalized (Helleiner 1994, Abdelal 2007), which opens the potential capital pool and thereby tax base up to all countries. Multinational corporations have since emerged and proliferated, and developed from the vertically integrated global firms studied by Hymer (1972) to much more disintegrated and fluid forms (Desai 2009, Fichtner, Heemskerk and Garcia-Bernardo 2017). This development towards multinational firms as global actors has implications for global production and trade but also for the fiscal conditions of states. Multinational corporations are able to shift production and other parts of their global value chain (Gereffi, Humphrey and Sturgeon 2005) into the economies where the conditions are the most favourable, but they are also able to place non-productive or intangible assets in jurisdictions where conditions are the most favourable (Bryan, Rafferty and Wigan 2022). This includes placing cost-generating parts of their operations in high-tax jurisdictions and income-generating parts in low-cost jurisdictions, thereby minimizing their global effective tax rates (Sikka and Willmott 2010, Clausing 2003, Garcia-Bernardo, Jansky and Tørsløv 2019). This ability to manipulate profit location is exacerbated by the rise of intangible assets and digital business models (Grasten, Seabrooke and Wigan 2021; Schwab 2017, Haskel and Westlake 2017). The authority over tax base allocation has shifted favour of firms.

How much tax is being paid is, as a result of these mechanisms, falling (Garcia-Bernardo, Jansky and Tørsløv 2019, Tørsløv, Wier and Zucman 2018). Authority between states over the shared capital pool and tax base has become contested given the lack of a well-functioning regime. The liberalization of capital flows and the importance of cross-border investment has set states on a path to compete against each other for the maximization of inward investment. States seek to improve the 'investment climate' and have increasingly used tax rates to do so (Rixen 2011a, Genschel and Schwarz 2011), raising debates of a 'race to the bottom' (Abbas and Klemm 2013). A subset of states compete not only for the productive capital of corporations, but also for the 'passive' income-generating capital, by creating institutional regimes in which low taxation can be achieved even without a link to domestic economic activity (Zoromé 2007, Dietsch 2015). This creates a contested space between the small and marginal states who are able to intrude on a large portion of the tax base, vis a vis the countries where the economic activity takes place and who feels entitled to its returns, calling the former states 'pariahs' and 'gangsters' (Hampton and Christensen 2002, Dean and Waris 2021). This scrutiny of smaller countries leads to frustration against the larger and more powerful countries whose role in tax minimization is more rarely called out by the international community. In the words of Samoan head of the International Finance Authority Tuifaasisina: "To fully understand this matter, you have got to appreciate the role of larger economies in offshore structures… the key levers of the offshore industry are located in bigger countries." (Lyons 2021). Finally, the authority over the tax bases is reflected in the relationship between developed and developing countries, in which the developing countries particularly lack authority both in setting the rules of the game, and lose out on capital investment and tax base – leading to very large concessions and parallel sub-zero tax regimes (Abbas and Klemm 2013).

Who gets taxed is, as a result, tied to the differential ability of different sets of tax payers to move assets. That has implications for inequality and redistribution between wage earners and capital owners. Mobile tax payers hold more authority than immobile tax owners over tax base allocation, leading governments to reduce the corporate-labour tax ratio (Schwarz 2007, Winner 2005). Through their ability to move economic activity both in reality and on paper, multinational corporations are able to lower their effective tax rates. Given the immobility of other types of tax sources, the redistributional consequences of this has led scholars to point to the effects on inequality (Alstadsæter, Johannesen and Zucman 2019). The figures of the cost of ineffective global tax governance have also spurred debates on the 'opportunity costs' of missing taxes, where of course the list of what the money could potentially have gone to is endless – but particularly the cost for developing countries and poverty reduction has of course been a focus given the importance of revenue mobilization for development goals (Crivelli, de Mooij and Keen 2016, Swank 2016, UN 2005).

Who-gets-what when it comes to tax is complicated by the fact that there are contradictions in the relationship between economic activity and taxing rights. On the one hand, the location of economic activity is coupled to taxing rights, and therefore tax systems are designed to increase economic activity. On the other hand, legal and financial innovations mean economic activity can be partially (and increasingly) decoupled from taxing rights. States are trying to recouple economic activity to taxing rights while continuously designing their tax regimes to attract economic activity. This fundamental contradiction needs to be brought front and center to debates about tax, in ways that address the actions and authority of states, firms and professionals.

Territories of tax

The competition for capital among states has long been of interest within IPE, particularly the subset of states who engage in tax competition for 'paper profits'. What we should call these states, and what states belong to this group, is an on-going discussion, though terms like 'offshore', 'secrecy jurisdiction', 'sinks and conduits' and particularly 'tax havens' continues to dominate. Under these names, the subset of countries with policies which encroach on other countries' tax base, has been identified and their role in the global economy debated. The different terms is partially a dispute over emphasis in the definition, as observers concerned with illicit financial flows or money laundering are more prone to use 'offshore' or 'secrecy' to emphasize these characteristics, but these terms are also used interchangeably when referring to opportunities for tax minimization (Murphy 2009). Some observers will use several terms interchangeably, and others to distinguish between different types of jurisdictions. This creates a confusing debate, as there is no generally agreed upon definition for any of the terms (Palan, Murphy and Chavagneux 2010).

The muddled debate over conceptual definitions goes hand in hand with operationalization and geographical identification. Despite warnings against 'territorial traps' of seeing offshore as place-bounded (Agnew 1994, Hudson 1998), defining places as tax havens has generated a growing literature. Distinguishing between what *is* and *isn't* offshore is important to operationalize the concept in broader research agendas (Zoromé 2007, Murphy 2009). Creating maps and lists demarcating *where* offshore is has therefore been a core focus of analysis, innovating ways to 'follow the money' in order to identify tax havens. One approach is to look at the scale of financial flows or assets and identify tax havens as places where this is disproportional to the local economy (Zoromé, 2007; Tørsløv, Wier and Zucman 2018,) or relatively central in the global network of flows or ownerships (Garcia-Bernardo et al., 2017, Fichtner 2015). Other approaches identify the importance of certain institutional features such as high secrecy and low tax (Hines and Rice 1994). The Financial Secrecy Index provides a combination of these approaches by weighting institutional features by the relative importance of the jurisdiction to global capital flows, though avoiding a strict demarcation through relative ranking (Cobham, Janský and Meinzer 2015, Ates et al 2020). Economic geography has similarly focused on the emergence of "offshore financial centres" (Haberly and Wójcik 2015a,b; Cobb 1998, Clark, Lai and Wojcik 2015). This work leads to a wide range of lists of tax havens, on top of which there are the tax haven lists created by organizations such as the OECD and EU (Sharman 2009, Crasnic 2022, Eggenberger 2018 as well as the second research article of this dissertation).

These tax haven lists are useful, not least for studying the relationship between firms and tax havens, in which one must have this geographical distinction to study the relative relationship to tax havens by firms. For example, it can be used to study the extent to which firms place profits in these jurisdictions (Tørsløv, Wier and Zucman 2018) or the effect on effective tax rates of management or board connections to one of these jurisdictions (Jiang et al 2018).

The conception of offshore is originally thought of less as a geography and more as a juridical status (Palan 2006). This includes for example flags of convenience and the Eurodollar market. Yet, the use of offshore and tax havens as geographies is common (Hudson 1998, Palan, Murphy and Chavagneux 2010). The limits of tax haven geographies are recognized, both in terms of scale, as local geographies can also act as 'offshore' (Wainwright, 2013; Tapp and Kay, 2019, Wessel 2021), as well as degree, in which certain accounts point to the existence of ‘midshore’ or ‘conduit’ jurisdictions (Clark, Lai and Wójcik 2015, Coe, Lai and Wojcik 2014; The Economist 2013, Garcia-Bernardo et al 2017), recognizing the futility of the binary view of onshore versus offshore. The Global Wealth Chains approach suggests moving beyond such spatial demarcation between onshore and offshore, as it ‘deflects attention to the pervasive and systemic presence of global wealth chains” (Seabrooke & Wigan, 2014, p. 13)

In the historical analysis of how tax havens have come about, some explanations emphasize the role of states and particularly the British empire (Palan 2002, Ogle 2017, Haberly and Wójcik 2015) while others have noted the work of professionals (Harrington and Seabrooke 2022, Cobb 1999). These accounts are all useful in explaining how the small states at the extreme end of the tax competition spectrum came to hold their position within global financial flows, but doesn’t include the tax minimization provided by states that are not considered offshore. While the origin story of tax minimization is often told through the lens of the 1920’s league of nations compromise and how this created an almost unavoidable structural inconsistency (Rixen 2011, Christensen and Hearson 2019), this does not account for the extent to which states and professionals are actively shaping tax minimization today. The legal regimes which enable tax minimization are created and maintained by active professionals and policy makers, and as such there is room for more agency and policy space.

Recent work has emphasized the multitude of new initiatives aimed at overhauling the international tax regime. The role of IO’s has been highlighted both in terms of their attempts at pressuring tax havens toward reform through tax haven lists (Sharman 2009) and in terms of facilitating broader compromises of rule changes, such as new reporting standards (Murphy 2003, Wójcik 2015) and new tax rules such as a global minimum tax (Johannesen 2022). The importance of corporate lobbying (Meinzer 2017, Christians 2016) as well as activism (Seabrooke and Wigan 2018) in these processes have underlined the multitude of interests at stake, as well as the ways professionals can claim authority over the issue through technical expertise (Christensen 2021), a strategy also employed by activists (Seabrooke and Wigan 2016). The importance of hegemonic power to create regime change has been emphasized (Hakelberg 2020).

Scholarship on tax has also had a substantial focus on the corporate behaviour. Under the umbrella of 'tax avoidance' or 'aggressive tax planning', economists have estimated the scope of tax-motivated profit shifting between US $600 billion to US $1 trillion annually (see e.g. Clausing, 2016; Tørsløv, Wier and Zucman 2018; Janský and Palanský, 2019). Country by country data has provided further evidence of the misalignement in profits relative to employees or customers (Jansky 2020a; Garcia-Bernardo, Janský and Tørsløv 2021). Looking specifically at how firms employ such tax minimizations, case studies such as Finér and Ylönen (2017) of the mining sector, Grasten, Seabrooke and Wigan (2021) of platform firms, Elemes, Blaylock and Spence (2021) of accounting firms, illustrate the specificities and wide spread practices among firms. Most interest in tax research is in the aggressive end of the continuum ie tax evasion or noncompliance (Hanlon and Heitzman 2010).

Tax competition for investment has a distinct place in IPE literature separate from the debates on 'offshore'. Here, debates are usually focused on the relative power of host states to MNE's to explain outcomes in terms of why tax concessions are given (Danzman and Slaski 2021), or how certain practices of tax competition spread and under what political conditions (Li 2006, Genschel and Seelkopf 2016, Genschel, Lierse and Seelkopf 2016). Others write about how tax competition works from a game theory perspective, in which it is hard for states to overcome incentives to compete (Rixen 2011a, Dietsch 2015) and the detrimental effects on state's fiscal autonomy (Genschel and Schwarz 2012).

The relationship between 'real' tax competition and tax havens is disputed. The literature provides plenty of examples of the dynamic interaction between these two types of tax competition, but in different directions. Palan (2006) argues that there is "consensus" that offshore emerged as response to too much regulation and too high taxes, which is indeed what OECD stipulated in 1996 (McCann 2006, Genschel and Schwartz (2011) argue that limiting tax havens puts pressure on states to increase tax competition, as firms may move production if they can no longer save by moving only paper profits. Orlov (2004) states that the liberalization of tax in 1980's and 1990's made use of tax havens less appealing to tax payers in high-tax jurisdictions, slowing down the proliferation of tax havens. Sharman (2012) notes on the other hand that there are indeed still newcomers to the scene that have emerged later than 1990's.

The limited overlap between scholarship on tax competition for investment, and the international political economy of 'offshore', can be explained by how the two are conceptualized quite distinctly. The distinction is made explicit in the taxonomy of 'real' as opposed to 'financial' or 'virtual' tax competition (Clausing 2009, Rixen 2011a), 'legitimate' versus 'illegitimate' (Webb 2004) as well as 'poaching' versus 'luring' (Dietsch 2015). This dichotomy is most prominent in OECD's deployment of the term 'harmful tax competition' (OECD 1998). These conceptualizations are based on the idea that taxes should be paid where value is created (Bryan, Rafferty and Wigan 2022) and on the premise that value creation in a setting with multinational corporations can be identified on a country by country basis. There are two problems with this approach. The first is that it ignores the political and economic legacies such as colonial histories which impact the location of such 'value creating' activities, and therefore risks replicating such patterns where only the states where multinational firms first emerged will get access to their tax base (Quentin and Campling 2017). This is a problem of international political inequality. The second and related problem is that it is hard to draw a sharp line between what is 'harmful' or 'virtual', and what has been defended as positive types of tax competition (Hammer and Owens 2001, Brennan and Buchanan 1980, Edwards and Keen 1996), particularly since there is also disagreement between whether even the most extreme forms of tax competition holds positive economic effects (Friedman et al 2001, Hong and Smart 2010). Here, the line is likely to again be drawn in ways that reflect the political power of states by excluding the types of tax competition which are employed by more powerful countries (Brown 1999).

While the role of states and the 'commercialized sovereignty' (Palan 1998, 2002) is at the center of these debates, contributions have come from the professions literature to shed a light on the micro foundations behind tax minimization. Particularly the work on advanced business services and tax professionals has highlighted the role of accountants, lawyers and other 'financial elites' (Allen 2011, 2018). This includes private wealth managers for the super-rich (Harrington 2017, Wainwright 2011, Beaverstock, Hall and Wainwright 2013), but with respect to corporate tax planning, particularly the big four (Elemes, Blaylock and Spence 2021, Radcliffe et al 2018, Ajdacic, Heemskerk and Garcia-Bernardo 2021, Jones, Temouri and Cobham 2018), transfer pricing specialists (Christensen, Seabrooke and Wigan 2020, Sikka and Willmott 2010 and academic lawyers (Raitasuo and

Ylönen 2021) have been highlighted for their role as facilitators of tax minimization. Conceptually, work on these professionals assumes their role to be to connect 'onshore' with 'offshore' (Wójcik 2013).

The role of firms, professionals and states are all emphasized in existing tax literature, as well as their interrelationships. How professionals and states interact on international tax is for example studied by Hearson (2018) or Christensen (2021). The importance of professionals in devising tax minimization strategies is also well documented (eg Harrington 2017, Ajdacic, Heemskerk and Garcia-Bernardo 2018, Jones, Temori and Cobham 2017). The importance of certain states for firms' tax strategies is outlined by multiple studies, such as Garcia-Bernardo et al (2017). While there has been ample work in IPE on taxation, there is not much work which connects tax avoidance (firm behaviour), tax advice (professionals) and tax competition (states), which I attempt to include in a shared framework in this thesis.

One approach to theorizing corporate tax minimization is Global Wealth Chains (Seabrooke and Wigan 2014, 2017). This framework distinguishes between relationships and information asymmetries between regulators, clients and suppliers. Thereby the framework recognizes and integrates micro and meso actors and actions into the understanding of how tax minimization occurs, particularly tax professionals (Christensen, Seabrooke and Wigan 2021). Importantly, the framework doesn't distinguish between an 'offshore' or 'onshore' in geographic terms and rather recognizes the fundamental multijurisdictional character of legal affordances leading to tax minimization which transcends the notion of tax havens. However, so far, scholarship in global wealth chains so far tends to reproduce the notions of tax havens and 'illicit' flows, and when broadened out these are seen as 'unusual' cases (Sharman 2017).

In mirroring Global Value Chains, Global Wealth Chains does distinguish between 'value' and 'wealth', describing global wealth chains as the 'yin to the yang of global value chains' (Seabrooke and Wigan 2017:22). This mirroring between real and virtual risks reproducing the terminology applied to tax competition, even though some global wealth chain research points to the importance of discretionary tax exemptions rather than low-tax jurisdictions (Finér and Ylönen 2017). I contribute to the global wealth chains framework and the work on the micro professional-driven underpinnings of tax minimization by extending the focus on the suppliers/facilitators such as tax professionals (article 2, 3 and 4). I also extend the framework by including the role of tax competition and the role of governments engaging in tax competition as enablers of tax minimization. Thereby I speak to the broader literature in trying to overcome the definitional debate through a new conceptualization of corporate tax minimization which can be used in future operationalization and research agendas in global wealth chains and beyond.

CONCEPTUAL FOUNDATIONS

"There is no internationally agreed definition of what constitutes an offshore financial centre (OFC), but there are common perceptions. Generally, there is a tendency to adopt the approach of "you know one when you see one"."

UK Financial Services Authority written comments to Treasury Committee (2008)

"We know Mitt Romney never met a tax haven he didn't like. But his new favourite tax haven is actually not the Cayman Islands—its Paul Ryan's budget,"

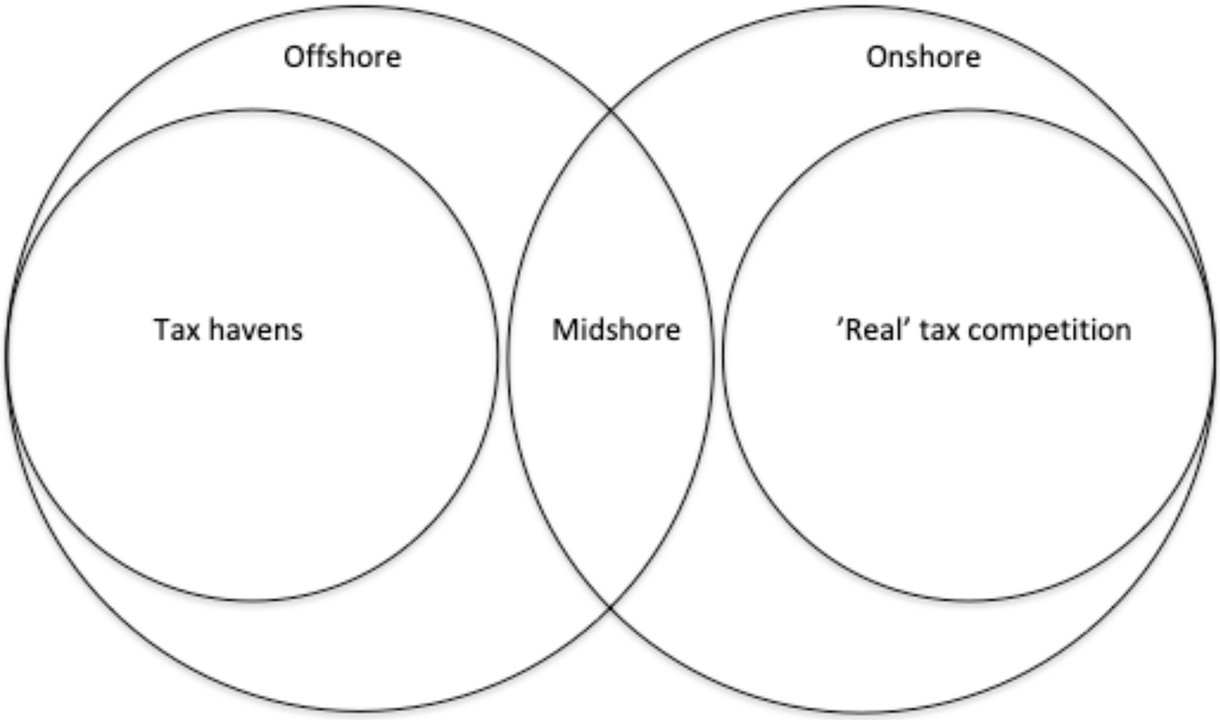
Senator Chuck Schumer (2012)

The first order of business is to make clear what it is I analyse. Given the lack of conceptual clarity previously afforded to the study of tax, I take a problematization of these concepts as a starting point (Alvesson and Sandberg 2011) towards providing a new conceptualization of 'effective tax minimization'. I use this term to refer to the trend of corporate tax being lower as a combined effect of corporate strategies and government policies. I hope this very broad conceptualisation can pivot the debate towards focusing on institutional structures which surround tax behaviour of multinationals, and provide a concept which can speak to both micro, meso and macro levels.

Problematizing 'offshore' and 'tax havens'

The debates on tax suffer from a lack of concept clarity with a wide range of overlapping terms, as well as a widely employed dichotomy between which the borders are both unclear and open to biases and manipulation. Figure 1 provides an illustration of this dichotomy, though simplified, as the overlapping concepts of 'secrecy jurisdictions', 'sinks' and 'conduits' are excluded from the diagram. On the left hand side, we have the offshore world, in which countries provide low taxes and institutional features which enable booking profits there, protecting corporations against taxation elsewhere (Hudson 2000, McCann 2006, Palan, Murphy and Chavagneux 2010). On the right hand side, we have the onshore world, in which countries are seen as engaging only in 'legitimate' tax competition (McCann 2006). In the overlap, we have 'midshore' (Clark, Lai and Wojcik 2015) where some countries are seen not quite as tax havens but still employ some characteristics which are commonly associated with tax havens.

Figure 1: the offshore dichotomy



The worldview summarized in the figure is, in my view, misleading. While the work identifying tax havens and the particular characteristics and geographies which employ particularly aggressive forms of financial services designed to undermine the tax bases of other countries have immense value, the conceptualization of 'offshore' and 'harmful tax competition' suggests there is such a thing as 'beneficial tax competition' and 'onshore'. It skews the debate toward ways to draw the line, and toward studying only the 'harmful' subset of countries, by implying a 'bad' and 'good' part of the economy. It also fails to recognize that *all* legal systems have interfaces, through which financial and legal instruments can be constructed which will be considered differently by different regimes.

What is unclear in the present conceptualization is the boundary between onshore and offshore, not least because many countries may not be targeted as ‘tax havens’ but still provide some degree of financial services to foreigners. We may think of these as a certain type of economy which acts as a link between onshore and offshore as a conduit (Garcia-Bernardo et al 2017), or as a ‘midshore’ economy which has both characteristics, in which case on- to offshore is more a question of a sliding scale than a dichotomy (Lai et al 2020). It is also entirely unclear what countries actually fall into the left part of the chart, as the number of countries that have been called out as tax havens at one point or another is very large, and the roster keeps growing with new schemes being uncovered and called out, most recently South Dakota (Bullough 2019). As a result, more and more places are targeted as belonging to the tax haven category – enough to make the term lose meaning.

The definitional problem of the blurred line between a tax haven and states who offer preferential tax regimes is widely recognized, as pointed out by (Palan, Murphy and Chavagneux 2010 p 40). Palan et al list a table of countries who have been labelled tax havens at some point or another, but such a ‘consensual’ approach leaves out the issue of how political power may keep countries off such lists (Janský, Meinzer and Palanský 2018), as well as the colonial and racial perceptions that may affect which jurisdictions are policed internationally (Dean and Waris 2021).

What is even unclearer is the concept of onshore. While the concept of ‘offshore’ is not very precise, it does have some workable definitions. The problem of the unclarity of the concept comes with its implied mirror image, ‘onshore’, which is rarely defined explicitly. Implicit in a large swathe of tax scholarship is that these are the countries who are losing their tax base to ‘offshore’, the places in which taxes really should have been paid, the places where value is created. This image of innocence however is not easy to operationalize: what are the countries who do not provide any measures of tax minimization for companies, and who are pure losers in the world of tax competition? Binder (2019) illustrates a case of Mexico which is assumed to be onshore but shows domestic financial services provide tax minimization opportunities. Wainwright (2011) studies the case of London which is assumed to be 'onshore' but its domestic financial industry provides ample tax minimization services. Finally, even if we can in principle identify countries who do not take part in tax minimization and who are thereby pure losers in tax competition, designating them as the rightful heirs to the tax base ignores the historical, economic and political reasons for this allocation of value-adding activities in the first place, including core-periphery dynamics and colonial histories.

Beyond fitting countries into the categories, the offshore concept is also too vague to be operationalizable when it comes to the firm level. All countries potentially could be host to tax-minimizing corporate structures as well as 'real' investment. For example, a hotel construction in Bermuda is a real, physical investment, which may be subject to low taxation, but on the other hand it is not 'offshore' since it does not move between jurisdictions to escape regulation or tax. On the other hand, a mining project in Guinea is not seen as offshore, but the tax holiday it is subject to gives it access to a low tax regime. The binary nature of the terms may not catch all grey areas, and certainly doesn't catch all cases where tax is either low or lowered. These concepts are not clear enough to make sense of the complexities that characterize global capital flows and corporate tax policies.

We cannot study what we cannot define. As Sartori 1970 emphasized, "concept formation stands prior to quantification" (Sartori, 1970, p. 1038), and indeed, it should stand prior to any empirical research. Sartori points out the dangers of conceptual 'stretching', in which the meaning of a concept is broadened to include more empirical cases, and the empirical research is then one of degree rather than classification. The blurred boundary between 'offshore' and 'onshore' is an example of such conceptual stretching, in which measuring 'offshoreness' of each country becomes the object of research (eg. Garcia-Bernardo et al 2017, Zoromé 2007, Ates et al 2020, Cobham, Janský and Meinzer 2015). Lists of tax havens are then defined by arbitrary cutoffs rather than clear taxonomies, to the detriment of analytical clarity. As Sartori puts it, "a taxonomic unfolding represents a requisite condition for comparability, and indeed a background which becomes all the more important the less we can rely on a substantive familiarity with what is being compared." (1970:1036).

A concept which has been stretched into a generality can, in contrast to a general concept, not be underpinned out of its indefiniteness by specifics. 'Offshore' has been stretched from referring to the Eurodollar market (Burn 1999) to include London's financial market, as well as places that provide institutions favourable for money laundering, illicit financial flows and terrorist financing (Maurer 2008). The use of 'offshore' has been very broad and goes beyond tax. The term 'tax haven' however is also not ideal, as any country can serve as a tax haven for some. Tax havens are far from the only place where tax minimization is made available to corporations, so by focusing our efforts there, we risk missing a large part of the issue. There are indeed signs that corporations might already be moving away from tax havens as the strategy of choice to lower their tax payments. PwC, one of the Big Four global auditing firms who help corporations set up tax schemes in the offshore world (Sikka and Willmott 2013, Addisson and Mueller 2015, Ajdacic et al 2018, Jones, Temouri, and Cobham 2017) recently put out a report stating that use of tax havens will soon become "unacceptable". (PwC 2017). This indicates that some of the facilitators behind the offshore tax avoidance structures might be directing corporations away from these aspects of their business as moral boundaries change (Radcliffe et al 2018). However in a setting where tax competition is still on the table for governments looking to increase investment in a low-growth environment, new forms of tax schemes might be deployed.

While my largest complaint against these terms is their inherent unclearness, building a consensus around their definition is not the solution, as these concepts are inherently restrictive in ways that does not bring forward the debate. Rather than some countries belonging to 'onshore' engaging in 'real' tax competition, and others being 'offshore' and engaging in 'virtual' tax competition, there is a dynamic relationship between the two types of tax competition. First, the same policy may be used for different purposes. Secondly, constraints in using one type of tax competition – for example anti-avoidance laws – may increase competitive pressure on the taxes applied to real investment. "if companies in high-tax jurisdictions can no longer evacuate profits by tax planning they may increasingly do so by moving out production." (Genschel and Schwarz 2011: 364). It is therefore imperative that these are considered together. Binder (2019) shows how the Mexican economy is not very affected by 'offshore', because of discretionary tax exemptions, which can act as substitutes for a tax haven strategy by corporations. If tax exemptions granted by the state and subsidiaries in foreign low-tax states are substitutes, then this means the relationship between onshore tax competition and offshore tax havens is one of substitutability: more favorable tax exemptions available means fewer tax haven subsidiaries, whereas fewer tax haven opportunities means more demand for discretionary deals and tax competition.

Problematizing 'avoidance'

Addressing the actions of corporations, the concepts of 'aggressive tax planning' and 'tax avoidance' are usually brought up as opposed to 'tax evasion', usually understood as differentiated by "the thickness of a prison wall" (Denis Healy quoted in Dietsch p. 42). The line between avoidance and evasion is blurry because some use the term avoidance to refer to illegal activities as well (Dyreng, Hanlon and Maydew 2008), and because some legal activities may be legal only because they are not on the radar of authorities (PAC 2013). While illegal tax evasion should of course be investigated, prosecuted and made harder, we should not let the legality of other schemes distract from the discussion on what enables them. It is exactly the legal ways in which tax minimization occurs that are the most interesting from the perspective of international political economy, as such legality is occurring to some extent as an outcome of political processes as well as innovation of new (not-illegal-yet) mechanisms of tax minimization. Given the pace of innovation in tax services, its almost always uncertain whether a tax strategy undertaken is legal or not, as this is often determined after the fact (Hanlon and Heitzman 2010).

The line between tax planning and tax avoidance is similarly questionable, though tax planning is usually understood as legal both in terms of the spirit and the letter of the law. This would for example include a company taking advantage of a tax holiday. Previously, the difference between planning and avoidance might have been described as the thickness of a factory wall, but given that economic assets are becoming increasingly intangible and therefore easier to move, making business decisions to minimize taxation is easier. The line between planning and avoidance is therefore incredibly unclear, as both are legal (sometimes contested) tax minimization strategies.

Tax avoidance, as well as planning, emphasizes the actions of taxpayers, but not the opportunity structures that enable tax minimization. This focus risks that the issue becomes a question of corporate social responsibility where corporations are pressured by civil society to become more responsible by paying their taxes. To the extent that this strategy is effective, that would skew tax bases towards countries where civil society is well organized around such issues. The offshore or tax haven concept is restrictive not only in the sense that it is hard to operationalize for research, but also in the way it excludes legal regimes which provide tax minimization outside of tax havens. As I discuss in the second research article, such restrictive concepts have policy implications, as tax haven lists have become a favoured policy tool rather than addressing tax competition head on.

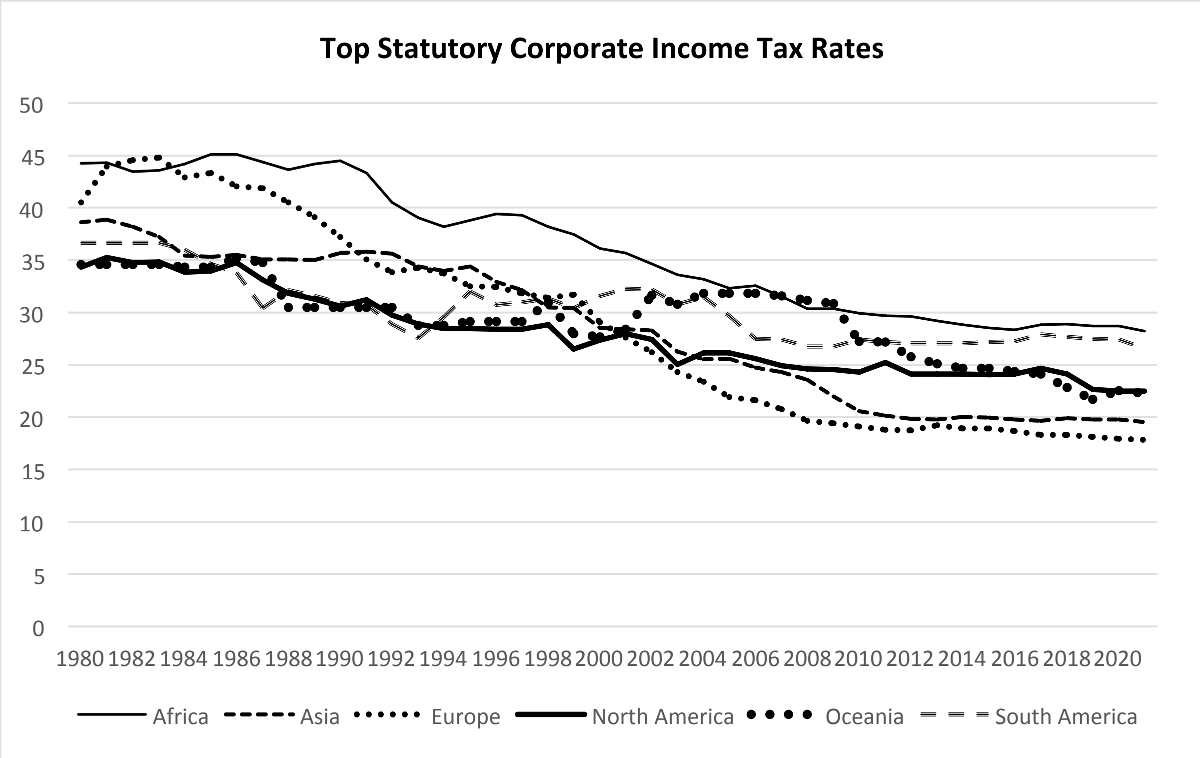
All of these distinctions are meaningful depending on the purpose of what differences and similarities one wants to bring forward. Particularly, the emphasis on secrecy is important for certain types of financial fraud and crime, but less important for other corporate tax issues (Murphy 2009, Lietz 2013). If we view it merely as a zero-sum game of tax base allocation in which states can use tax codes to compete, then it does seem important to identify the states who 'cheat' in this system by poaching firm. But the focus on agency of corporations and the focus on states at the most extreme end of the spectrum risks under examining the underlying, broader structural causes of tax minimization. If what we are interested in is the redistribution between states and corporations, rather than between states, then average corporate tax rates is a more important factor than evidence of profit shifting. The relevant question then is not whether firms strategically allocate their tax base into specific legal regimes, but rather what the overall effect is: effective tax minimization.

Estimates of corporate tax avoidance depends on the assumption of a 'correct' allocation of the corporate tax base, to signify where tax is avoided from. This is done for multinational corporations by imputing measures of where value is added through the allocation of staff or other signifiers, through which it can be assumed that large mis-allocations between activities and profits are due to tax-motivated profit shifting (Murphy 2003). However, the 'correct' allocation is not so straightforward for multinational firms. When operations are global and assets are mobile or even intangible, the geography of the underlying value production becomes just as open to strategic changes as the financial strategy. It therefore makes more sense to think of tax minimization in terms of the global effective tax rate for multinational corporations. There are different ways to calculate such effective tax rates (Hanlon and Heitzman 2010), but there is no global database of firm-level data which allows a comparable global view of all multinationals. For American multinationals, BEA data can be used (Cobham and Janský 2019), while others have used Orbis data for European multinationals (Garcia-Bernardo, Jansky and Tørsløv 2020). Such calculations show significant differences between statutory tax rates and effective tax rates, but this difference cannot necessarily be ascribed to tax avoidance, as discretionary tax regimes may also provide lower taxes.

Different routes to lower tax

I argue that from the perspective of the firm, different strategies can be seen as substitutable. The goal is not to engage in tax avoidance, but to achieve a lower global effective tax rate, which is composed of multiple aspects. Firstly, the tax rates set by states are subject to structural and instrumental power of firms. Firms who lobby have relatively lower effective tax rates than non-lobbying firms (Richter et al 2009), particularly if they lobby directly on tax issues (Hill et al 2013). The structural power of firms, which is catered to when countries engage in tax competition, is rarely explicit and visible, but in the case of Amazon's headquarter contest, we get a glimpse of what might happen on a broader but less visible scale when states compete for perceived gains of economic growth and jobs. This tendency has been proliferating in the last 40 years where statutory corporate tax rates have been on a downwards trend across the world (figure 2).

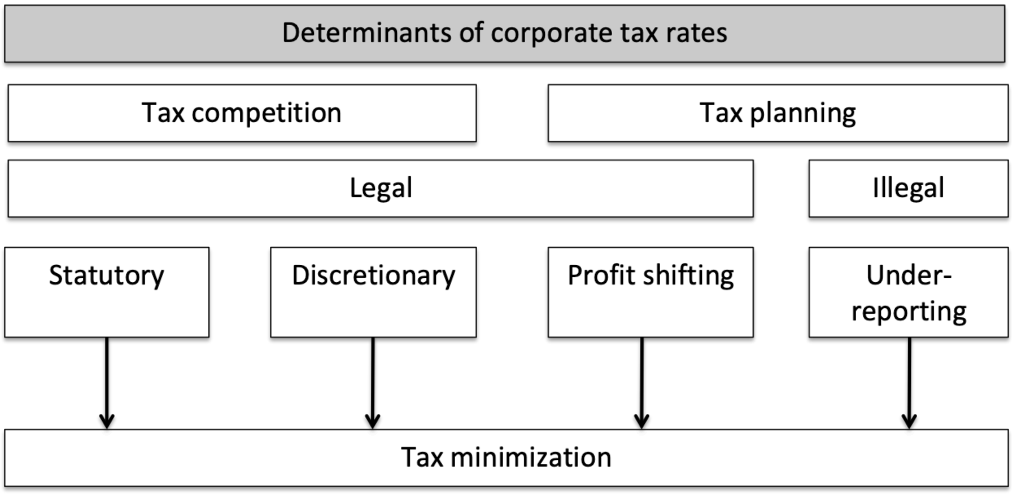
Figure 2: Declining global tax rates



Notes: data from Bray, 2021.

Apart from statutory rates already declining, the corporation can negotiate also directly – either in the open or behind closed doors – with the government for a discretionary deal, as I outline in article 1. These 'sweetheart deals' provide legal ways to achieve substantial benefits. Finally, they can engage in strategic tax planning that enable them to shift profits between corporations (Tørsløv, Wier and Zucman 2017, Frank, Lynch and Rego 2009), and they can underreport income in illegal ways. Figure 3 illustrates the different concepts of tax without splitting them up into dichotomies, but rather seeing them as separate ways to achieve tax minimization.

Figure 3: Corporate tax determinants



The use of effective tax rates to estimate tax avoidance is often undertaken in accounting and economics literature (Hanlon and Heitzman 2010). This means that in practice, studies which talk of 'tax avoidance' are sometimes inadvertently including the effects of tax competition, if the research design does not control for statutory and discretionary tax policy differences. Thereby, these studies risk engaging in what Sartori describes of a tendency to quantify before clarifying the concept (1970). As effective tax minimization includes these policies in its conceptualization, however, effective tax rates are a good measure. Effective tax rates have fallen over time, but only a small portion of this can be attributed to profit shifting by corporations. Garcia-Bernardo, Janský and Tørsløv (2022) find that for US multinationals, the average effective tax rate has declined from 32,3 in 2005 to 25,2 in 2015, while for European multinational the rate went from 31,1 to 22,4. This significant decrease is partially due to profit shifting but it is only a minor explanation, as it only explains 29 percent and 1 percent of the decline respectively (though for the latter case, the differences in data quality to the US data should be noted). Given the importance of lower tax rates rather than profit shifting, it is imminent that we focus on all of these strategies together.

In weighing different aspects of tax strategy towards maximizing after-tax returns, firms may find these strategies to be interchangeable even if they don't employ all of them. For example, they may prefer a sustainable and predictable effective tax rate over a lower but more fluctuating rate (Neuman 2014), and may also consider the reputational risks involved in some minimization strategies (Radcliffe et al 2018, Graham et al. 2014; Hanlon and Slemrod 2009). A political route towards tax minimization, however, presumably has fewer reputational risks as well as is more sustainable, thereby combining the features firms may otherwise have to choose between. In contrast to low effective tax rates obtained solely though accounting techniques, political routes toward tax minimization might come with lower rather than higher risk of audit (Holland and Vann 1998, Mills and Sansing 2000).

The two former strategies are typically considered in the literature on 'real' tax competition (Dietsch 2015, Rixen 2011a, Genschel and Schwarz 2011, 2012, Genschel, Lierse and Seelkopf 2016), whereas the latter strategies are considered under the literature on tax avoidance and the actions of corporations (Sikka and Willmott 2010, Zucman 2015, Janský 2020b, Evertsson 2016). So-called tax havens employ the two former strategies to an extreme extent and are therefore seen as the important base for the latter, but tax exemptions and lower rates are by far not limited to 'tax havens'. All four of these strategies may occur in any territory.

Though the institutional features within territories are important, the institutional features between countries, in which different places provide different benefits, and the fact that these are all recognized by other countries (Pistor 2019 p 7), is driving the opportunities. The magnitude of legal regimes and the ability to use several, or to use the existence of others as a lever against governments to make the regime more beneficial, is what drives tax minimization. When there is wide spread tax competition, tax havens are sufficient but not necessary conditions for tax minimization. Furthermore, the complexity of more regimes with more interfaces between them creates more opportunities for legal affordances through ambiguities, arbitrage or exploiting absenses in the legal code (Grasten, Seabrooke and Wigan 2021).

Conceptualizing 'effective tax minimization'

Sartori (1970) suggests concept building should be done through abstraction rather than extension. The idea is a 'ladder of abstraction' where moving up to more abstract levels of a concept enables it to travel between cases better than to extend the meaning of a lower-level concept. I suggest 'offshore' has originally been a low level concept that specifically made sense for understanding the Eurodollar markets (Palan 2006). By extending the term to other realms, including applying it to jurisdictions with low taxes or with high secrecy, and even applying it to countries that have both onshore and offshore qualities, whatever that means, the concept has lost meaning through extension and has lost its usefulness – at least with respect to the question of tax. What's more, 'offshore' and 'tax havens' does not account for the tax minimizing policies available everywhere.

I propose a new conceptual framework for 'corporate tax minimization'. It incorporates some of the concepts previously used widely in the literature, but move up the ladder of abstraction (Sartori 1970) to increase universality and incorporate the lower-level concepts that refer to policy together with the concepts that are related to business strategy. Effective tax minimization occurs when a firm pays a lower amount of tax based on the same economic activity. This happens when the tax base is minimized or the tax rate is lowered. For multinational corporations, different portions of the tax base may be placed in different jurisdictions and therefore subject to different tax rates. Therefore, tax minimization happens when firms shift the tax base in higher tax jurisdictions to lower tax jurisdictions, or when the tax base definition or tax rate is lowered within the location.

I am not the first to attempt finding a unifying conceptual framework which encompasses all the different strategies firms can undertake, ranging from legal to illegal and everything in between. Hanlon and Heitzman (2010) and especially Lietz (2013) provides a model of all the different tax strategies firms may undertake, emphasizing particularly the differences between legal and illegal strategies as a continuum. The model however does not include lobbying for lower taxes, or discretionary deals with governments. It also does not include the systematic hollowing out of tax rates done by governments which firms benefit from without taking strategic action. My conceptualization is in principle aligned with the Scholes-Wolfson framework (Scholes, Wilson and Wolfson 1992, Dyreng and

Maydew 2017), stating that the goal of tax planning is to maximize after-tax returns, taking all potential factors, actors and costs into account.

Notably, effective tax minimization is less normative than the obvious implications of ‘harmful’ tax competition, or ‘aggressive tax planning’. The concept does not a priori suppose where corporations should pay taxes or by how much, but rather suggests that certain legal regimes provide lower tax rates, and corporations can undertake strategies to allocate tax base into these. In fact, the wording is more akin to how tax professionals describe their practices. The purpose of conceptualization here is not to build an effective campaign but rather to further the debate on assessing different policies. It is better to have a clean concept and leave the political question up to be discussed on its merits.

This new conceptualization is a way to overcome the problem of the gigantic grey zones between different mechanisms and the biases inherent in how they come to be perceived as ‘harmful’. By abstracting away from what type of tax competition we have, we can instead discuss on the basis that when tax minimizations occur, how do they occur? How is it enabled and facilitated?

ENABLERS AND FACILITATORS

The 'whodunit' of tax has become a popular genre within international political economy, economics and investigative journalism. Journalists have provided leaked documents blowing the cover of politicians, corporations and celebrities hiding their wealth from authorities (ICIJ 2019). Offshore financial centers and tax havens have received attention and outrage. As media has portrayed the palm-clad islands which offer secrecy and low taxes (Soderbergh 2019), scholars have systematically identified the jurisdictions that attract inexplicable amounts of financial flows (Zoromé 2017, Garcia-Bernardo et al 2017) or provide the institutional foundations for tax minimization, such as low tax and high secrecy (Hines and Rice 1994, Murphy 2009). This has led to lists and rankings of tax havens, financial secrecy jurisdictions and uncooperative tax jurisdictions by activists (Meinzer, Cobham and Jansky 2015) and international organizations alike (OECD 2002, EC 2021). The actions of individual corporations have also come under scrutiny, with prominent examples including Apple (Barrera and Bustamante 2018), Starbucks (Bird and Davis-Nozemack 2018), Ikea (Evertsson 2016) and Microsoft (Sikka and Willmott 2010). As such, the culprits in terms of both individuals, corporations and countries who benefit have been named and shamed.

I think this debate is ripe for a twist in perspective, based on the problematization of the assumptions of this type of research in the previous section. One way to change the view away from a 'whodunit' and rather focus on the structural opportunities to tax minimization is to think about what *enables* and *facilitates* tax minimization. This change in perspective is akin to the move made by Gusfield (1981) in studying drunk driving. Rather than studying the characteristics of the drivers, Gusfield switched the view away from the culprits and instead focused on the crime scene: what enabled and facilitated drunk driving? Well, it turns out bars were usually in driving distance from people's homes (Abbott 2004, Gusfield 1981). If we improve our understanding of the opportunity structures for corporate tax minimization, we may better be able to think of policies which target it.

Culprits have been named, but how do we distinguish between the firms who are in tax havens and the ones who are tax free due to a sweetheart deal? How do we distinguish between the tax havens with no tax rate and the ones who give out deals selectively? The culprit definition is not super clear, particularly when nothing illegal has occurred. Instead of focusing on who, we need to focus on how. How is corporate tax minimization enabled? We take a step back from what occurs and ask what are they system level causes of corporate tax minimization.

Enabling tax minimization: providing legal regimes and affordances

Our aim is to make tax collecting a declining industry.

Margaret Thatcher (1977)

What is a loophole? If the law does not punish a definite action or does not tax a definite thing, this is not a loophole. It is simply the law.

Ludwig Von Mises (1951)

Corporate tax minimization occurs through legal regimes, in which the tax code provides lower taxes purposefully, as well as legal affordances, in which the unanticipated gaps within or between legal regimes opens up for further minimization. Legal regimes include both statutory and discretionary deals, such as contract-based regimes. An example of corporate tax minimization is the corporate tax minimization which occurs when a government lowers the corporate income tax rate, or when it provides a tax holiday, thus minimizing the taxation within the legal regime it administers. Legal affordances on the other hand occurs when the regime includes ambiguities or has not anticipated certain aspects of how firms may operate, and as such provide 'loopholes' (Seabrooke and Wigan 2022).

The process which we refer to as tax competition (but which may be an outcome of many different political and economic processes, (see eg Jensen, Malesky and Walsh 2015, Danzman and Slaski 2021), the legal regimes have become more lenient. We can observe lower statutory corporate tax rates across regions over time, as is well established in the literature (see eg. Clausing 2007, Abbas and Klemm 2013, Slemrod 2004, Devereux, Lockwood and Redoano 2008). According to Garcia-Bernardo, Jansky and Tørsløv (2022), these concessions explain the bulk of the decline in corporate average effective tax rates. As such, tax competition and the concessions states provide to firms *constitutes* corporate tax minimization. Lowering the tax rates in a statutory or discretionary fashion provides opportunities for tax minimization in its intention. Given the scale of tax lowering, this may be the biggest contribution to corporate tax minimization. Given the overarching question of the authority over 'who gets what', this significant contribution is interesting given that it reflects the actions of governments.

In addition to more lenient regimes, the regimes have also become more fragmented. Essentially, holes within each regimes has been created to carve out a differentiated regime. We can see this for example with the increasing use of tax incentives as a parallel tax system (Abbas and Klemm 2013, Andersen, Kett and von Uexkull 2018) including tax holidays (Stausholm 2017). While not always including differential tax regimes, the rapid proliferation of special economic zones/export processing zones is a part of this same trend (Mösle 2019). So-called sweetheart deals mean the legal regime can even be fragmented down to the company level (Ryding 2018). Opportunity zones and freeports further provide geographical demarcations in which tax treatment is differentiated (Helgadottir 2020, Wessel 2021). The provision of non-tax spaces across different scales (Wainwright 2013) as a type of fiscal jurisdictional fragmentation in effect creates mini-tax havens all around, and provides a clear case of why methodological nationalism is to be avoided in the case of tax (Wimmer and Schiller 2002). From the perspective of the corporation, exploiting these regimes, when available closer to the existing value chain, provide tax minimization as efficiently and potentially with fewer reputational risks, compared to moving paper profits into jurisdictions with no activity (PwC 2017). This fragmentation increases the potential for ambiguities and legal affordances, and therefore enables corporate tax minimization even beyond the intention behind the regimes. The availability of lenient low- or no-tax regimes is an important component in any strategy which re-allocates the tax base of a multinational corporation. In article 1, I provide the example of a tax holiday, which can be used beyond its intention if profits from elsewhere are shifted into the entity benefiting from it.

I do not aim to say that all states equally enable tax minimization, but all or nearly all participate to some extent – though the relative authority states have over the direction of the global tax regime is of course another important consideration. The legal affordances provided by states certainly include extreme cases, such as states with a zero tax rate and legal frameworks making incorporation and profit booking easy. These 'tax haven' cases are well established in the literature, but they are not necessarily to blame for the largest decline in average effective tax rates, given the wide spread practice of providing tax minimization for firms (Garcia-Bernardo, Jansky and Tørsløv 2022). The combination of more lenient and more fragmented regimes have enabled increasing tax minimization. We now see that firms are not able to shop between countries but within jurisdictions internal to each country. Crucially, governments are not merely standing back to global capital markets and losing policy space. They are actively rewriting the rules for the benefit of capital (Evertsson 2016). By providing these legal regimes and implicitly the legal affordances, governments participating in tax competition *enable* corporate tax minimization.

Facilitating tax minimization: tax professionals

"Over the years, a parade of lobbyists has rigged the tax code to benefit particular companies and industries. Those with accountants or lawyers to work the system can end up paying no taxes at all."

U.S. President Barack Obama (2011)

"The lawyers who design new assets or intermediaries (...)also must have mastered the modules of the code, and ideally in more than one legal system. These legal modules comprise the toolkit lawyers use to cloak assets in the attributes of capital; to arbitrage around legal

constraints; and, last but not least, to hand to their clients the powerful defense, "but it is legal." "

Pistor (2019 p. 161)

Minimizing corporate tax requires expertise and is provided by tax professionals, who work actively with and within firms to limit their exposure to taxes. The role of tax professionals acting as 'suppliers' of tax minimization is well established. The role of wealth managers, accountants and other legal and economic experts provide tax advice to individuals and corporations (Ajdacic, Heemskerk and Garcia-Bernardo 2018, Harrington 2017, Radcliffe et al 2018, Jones, Temouri and Cobham 2018, Christensen, Seabrooke and Wigan 2020). Their technical expertise and their perceived objectivity enable them to innovate and customize tax planning, as well as provide a stamp of legitimacy to tax practices, thus enabling them to justify them, acting as a type of 'reputational intermediaries' (Gourevitch and Shinn 2010).

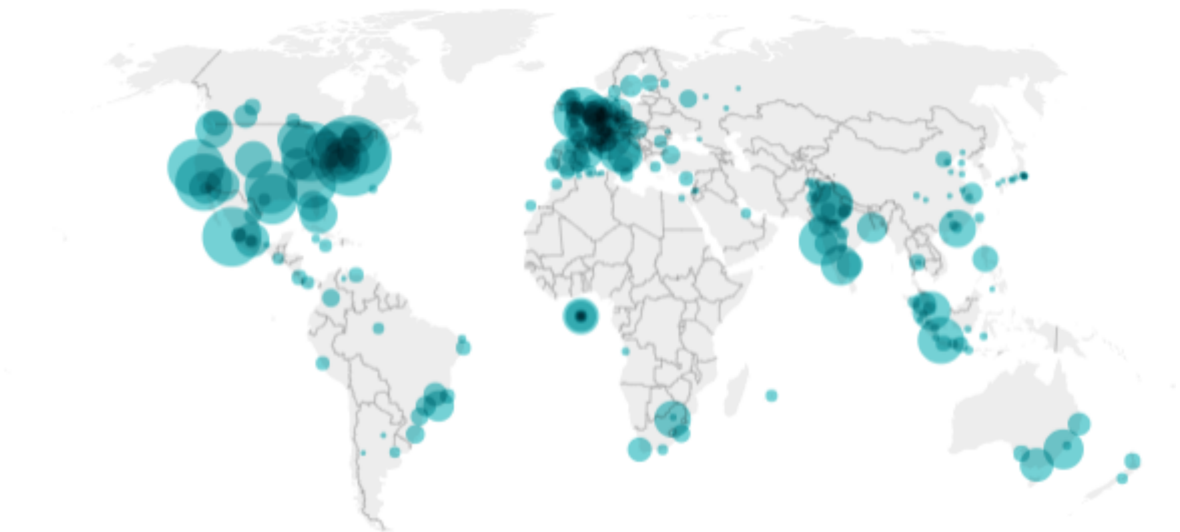
The importance of tax professionals lies just as much in their ability to innovate within the system on a continuous basis as in the day to day work of setting up the mechanics of tax minimization. Financial innovation continuously must occur to protect and increase wealth in the face of competition, shareholder demands, and regulation. Tax planning is not something that is merely facilitated, but ideas that have to be cultivated and developed based on extensive knowledge of international tax developments, adapting to new legal developments and new financial instruments (Donohue 2015).

Secondly, their active engagement with regulators provides them with insight and further their expertise in ways that are invaluable for their work with clients. After the adoption of the rules, the firms hold expertise in how clients can get the maximum benefit out of the schemes.

They are part and parcel to tax minimization by innovating, facilitating and maintaining legal affordances. The facilitation of corporate tax minimization by tax professionals goes beyond suggesting certain jurisdictions or setting up the paperwork for a corporate structure or transaction. As legal regimes change and proliferate, expertise needs to be continuously updated such that new mechanisms for tax minimization can be innovated.

This dynamic interaction between regulation and financial innovation is not unique to tax (Miller 1991, Bryan, Rafferty and Wigan 2016), but is an important feature of tax. This is affirmed in the archival data of Big Four web pages I parsed through for article 3, where for instance EY (in their 2019 web page) boasts of their ability to "create processes and innovative tools to stay in front of the curve" and help businesses "respond to trends".

Figure 4. A world map of tax professional locations



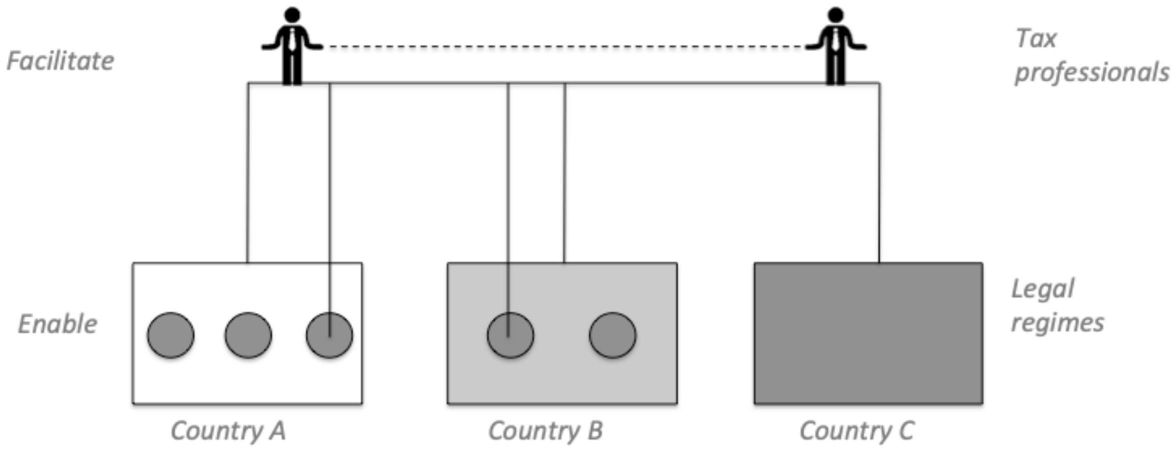
This expertise must be continuously maintained, such that tax professionals can stay ahead of regulatory changes which provide new or close old opportunities for tax minimization. The ability to use the differences between different jurisdictions, to find, innovate and suggest 'loopholes' in the tax law, depends on local knowledge, which is maintained through multijurisdictional presence and participation in knowledge sharing networks (See Poon, tan and Hamilton.. as well as article 4 of this dissertation). Figure 4 provides an overview of tax professional locations based on article 2. The quote from PwC below underscores the importance of the overview of global complexity for integrated international tax planning.

> When global opportunity means global complexity, you need strategic, integrated international tax solutions. If you're operating across borders, or competing in multiple jurisdictions, complying with local tax laws, reporting requirements and statutory filings — not to mention staying on top of new legislative developments — is more than a full-time job for your tax department. But compliance is only half of the equation. In a world of intensified global competition, the key to business success is keeping your tax strategy agile and aligned with your corporate strategy — while keeping an eye on your worldwide effective tax rate. (PwC 2017)

Dynamics between states and professionals

The preceding paragraphs have outlined how governments enable tax minimization through the competing, lenient and fragmented legal regimes they offer. Tax professionals facilitate corporate tax minimizations for firms by innovating, creating and managing the legal structures that pass through different regimes. Figure 5 demonstrates this relationship through a stylized illustration. Countries A, B and C each provide different legal regimes, which also has exemptions within (the round 'holes'). Country A is a higher tax country with three types of exemptions, country B is a medium tax country with two types of exemptions, and country C is a low-tax country. These multiple legal regimes across and within countries enable tax minimization. In order to connect firms to these legal regimes and take advantage of them, however, tax professionals across countries facilitate multi-country transactions (the connecting lines between regimes). Tax professionals share knowledge and coordinate with each other (dotted line) in order to facilitate, maintain and innovate methods of tax minimization. The figure shows how states enable tax minimization through differing legal regimes, and the use of these structures is facilitated by tax professionals.

Figure 5: enablers and facilitators



The figure answers to the enabling and facilitation of corporate behavior, but doesn't show the dynamics between the top and bottom. In fact, there are dynamics between the enabling side and the facilitation side as well. Tax professionals to a large extent facilitate not only corporate arrangements, but are also involved in designing the legal regimes that underpin the system (Elbra, Mikler and Murphy-Gregory 2020, PAC 2013).

A fundamental prerequisite to the existence of tax competition is the idea that states act in their self interest. States form tax policies in ways so that they can attract the maximum amount of economic activity while staying aligned with other fiscal priorities. How states define and understand their national interest is a wider avenue of research (Abdelal 2007, Poulsen 2015), including the micro foundations of how policy makers understand different issues to be within the public interest (Kentikelenis and Seabrooke 2017, Christensen, Seabrooke and Wigan 2021, Danzman and Slaski 2021, Murphy 2004). Given the lack of conclusive evidence of the importance of taxes and particularly tax incentives in improving economic growth and job creation (Klemm and van Parys 2012, Stausholm 2017), the understanding of tax reforms to be within the national interest remains a puzzle. One potential factor influencing how states perceive their tax policy goals is the role of expert consultants who provide governments with advice on tax system design, and by providing analytical frameworks that underscore importance of competitiveness. Private actors can influence regulatory regimes by persuading policy makers of a harmony between their interests and the public interest (Murphy 2004).

First, they are able to induce legal regime flexibility and tax rules which serves their clients. By working with governments, these professionals may sometimes act on both sides of the equation. While this raises obvious questions about their impartiality, it is not (necessarily) the case that these professionals would deliberately design loopholes or advice the government badly. Rather, the advice to governments may simply be of a nature that creates concessionary regimes, as governments engaged in tax competition are exactly in the market for.

Tax professionals in general and the ones employed in the Big Four firms in particular have access to such regulatory power with and through states. The Big Four function and quasi-regulators not only in their role as state-mandated auditors, but more broadly regulate the operation of the global economy through advice (Elbra, Mikler and Murphy-Gregory 2020) Their influence is particularly prominent in their provision of expertise on tax reform, in which they refer to their expertise but also legitimate their advice through referring to collective interests (Wilks 2013). As one Big Four representative stated under discussions of tax reform in Australia, ‘it is important that anyone making a decision to either create or repeal a section understands what all the consequences would be. So one of our duties is to ensure that those making decisions are fully informed about what the consequences would be of repealing a section or indeed introducing a new section.’(Elbra, Mikler and Murphy-Gregory 2020 p. 169), thus illustrating how the Big Four make claims of expertise that go beyond the expertise of government and are indeed a requisite for tax policy.

Beyond underlining their technical superiority, the Big Four also explicitly appeal to notions of the public interest when asserting their recommendations. Notably, they make recommendations for and against certain tax reforms by referring to a collective national interest as well as ‘unintended consequences’, indicating regulators do not hold the required expertise (Elbra, Mikler and Murphy-Gregory 2020). These recommendations are heard by government through their paid secondments to treasuries (PAC 2013), but also through lobbying and putting out expertise-based publications on tax reform. One method for cultivating this knowledge – or potentially even creating it – is by acting as advisors to governments on tax policies, giving the professionals increased expertise on how to benefit from these rules (Drucker and Hakim 2021). The big four, for example, regularly have staff seconded to treasury to help with technical issues in drafting legislation (PAC report 2013). They also enable tax minimization through their work on legitimizing tax practices, thus creating the market for their services (Anesa et al 2019).

Governments enable tax minimization through their eagerness to provide a hospitable economic environment, and facilitate it through the recognition and support of domestic and foreign legal regimes (Pistor 2019). Tax professionals enable tax minimization through their work with governments to create flexible and favorable legal regimes, and facilitate it through their work in innovating, planning and enacting the legal structures and transactions which give rise to lower tax claims.

METHODS AND DATA

The study of international political economy, as social science in general, is usually split into a principal divide between qualitative and quantitative scholars (Li 2019, Mahoney and Goertz 2006). This divide leads to siloed thinking, minimizing engagement with other relevant ideas and findings, and isolates research from societal impact if we enhance discrepancies between favored modes of research and policy engagement (Avey and Desch 2014, Li 2019).

I think of methods in IPE the way I think of subject matter in IPE. The origin of the field is that there are great insights in both international relations, political science and economics, but there are insights being missed from the siloing in these fields (Strange 1996). Therefore IPE contributes by integrating these research traditions in ways which come up with new questions as well as new answers. This is not done by combining ‘economics plus politics’ but rather by coming up with original research that draws on both fields but does not fit within the boundaries of either. The same can apply to methods, where the I do not draw upon “quantitative plus qualitative” but rather a quite wide toolbox without fitting neatly into a single box.

Dominance of single methods sometimes leads to 'academic sectarianism' in which insights from other disciplines is not only overlooked but actively discouraged (Lake 2011). One such example of the worldview within a mono-method discipline is from the economist who expressed to me that the work of qualitative research – I believe he referred particularly to work that relied on ideal types – was like 'astrology' as opposed to the 'astronomy' of economics. I do not believe he meant that as a compliment, and quantitative research remains the ruling approach within economics - though far from all economists are so dismissive as to compare qualitative work with pseudoscience (see eg. Starr 2014). On the other hand, it is also not hard to think back on examples of qualitative researchers dismissing statistics as being of limited use (Lawson 1997).

In this dissertation, I do not discriminate between qualitative and quantitative methods, but rather take on a mixed-methods approach. Some of the methods undertaken is of course clearly claimed by one of these modes over another (such as econometrics in article 2 and 5, and document content analysis in article 3), but others are really something in between. For example, reading and coding documents could be thought of as qualitative, but given the amount of contracts in my dataset (article 1) I synthesize them through quantifying the findings in the coding. I work therefore both at the level of details within single contracts and projects, and undertake a single-N case study of one particular ownership structure, but I also provide graphs and calculations of the total sample. I believe this way of working defies the qualitative-quantitative divide, and is warranted given the particulars of the research problem and the nature of the data.

A mixed-methods paradigm should preferably not be a new silo, excluding insights from qualitative-only or quantitative-only scholars (Ahmed and Sil 2012). On the other hand, while triangulation has a lot of merit, it should not be thought of as the only way to do mixed methods as it still separates two methods from each other as a '1 plus 1' rather than an integrated approach which overcomes the differences. Rather, it should be a form of 'analytic eclecticism' that serves as a mode for conversation between different research programs (Sil and Katzenstein 2010). Furthermore, the qualitative-quantitative divide must be bridged through collaboration to avoid sect-building (Lake 2011, Li 2019), and to benefit from the skills which lead to multiple complimentary ways of understanding an issue. This thesis has benefitted from such collaborations with other disciplines, including economics, sociology, data science and accounting.

The implications of analytical eclecticism and mixed methods are important to address. As different methods are typically employed by different schools of thought, certain ontological and epistemological assumptions are sometimes associated with certain methods. Here, it is important that methods get imported between disciplines in ways which are subject to a critical examination of its epistemological foundations, such that research paradigms remain coherent. This is however easily done in practice through open discussions about what we expect to 'get out' of certain methods rather than which ones 'fit'. For example, the ontological differences between understandings of causality and stability of causal patterns between different disciplines or researchers is easily bridged by taking a conservative stance on the external validity of the research. Debates on external validity remain in more positivist/realist traditions (Deaton and Cartwright 2018). Through this discussion, parametric methods can be implemented into research which take more critical ontological stances (Bache 2003). Through analytical eclecticism and an a pragmatic, collaborative mixed methods paradigm we should be able to think through problems and the best way to address them through different methods, including overcoming outdated prejudices about what methods 'fit' certain epistemological and ontological assumptions.

The orientation of this thesis is that my findings are situated in the specific research design, but not necessarily transferable outside of the specific process which generated the data for this thesis. I believe the data we have about the world in general and the actors and actions within tax minimization is particular is too limited for me to make sweeping conclusions and generalizations from it. However, by adding a little bit (or a lot) more data I can contribute to improving our partial understanding of the international political economy.

Data collection from scratch

The very nature of tax minimization is that it is competitive, secretive, multijurisdictional, and severely lacking a well-functioning international regime with secretarial capabilities. These are not the best conditions for data availability, quality and access. Previous work on tax has relied on national accounting data and on firm-level data (Clausing 2009, Zucman 2015, Fichtner 2015). These data sources have been used to produce excellent work, but has also been limited by statistical configurations (Linsi and Mügge 2019) and data availability. The latter has somewhat been remedied by the implementation of country by country reporting, though not all of these standards produce reliable data (Janský, Sedivý and Stausholm 2018). Work on professionals have relied on sources such as interviews, ethnography and archival work (eg. Harrington 2017, Harrington and Seabrooke 2022) I suggest more sources for studying this phenomenon may be needed to complement existing work.

Studying important phenomena should not be limited by what data is available. The question should rather lead the researcher to pursue new data, whether through fieldwork or desk-based research. I have focused on contributing through compiling and analyzing original sets of data, sometimes coming up with new and innovative sources and other times accepting to put in the tedious hours it simply takes to compile and standardize data. Table 1 provides an overview of the data sets I have compiled as part of this PhD. While I have also relied on existing databases, I have mostly produced the data myself (with co-authors). For article 1, I have coded the existence, length and type of tax incentives from reading contracts and legal frameworks for each country's tax system. For article 2 and 3 I have collected the number of LinkedIn profiles with specific titles across locations. For article 4, I have collected the employee numbers of the big four. For the fifth article, we relied on available national accounts data.

Table 1: Data sets

Data set	Compilation method	Original source
Tax incentives in mining	Reading and analyzing the legal framework for 113 mining contracts	Contracts are retrieved from resourcecontracts.org, Mining and investment codes obtained from various source, primarily official state web sites.
Location of the Big Four staff	Coding by hand from various sources (for 150+ countries for four firms)	Big Four member firm web pages, as well as recruitment material and LinkedIn
Location of tax professionals	Web scraping	LinkedIn
Archival data of the Big Four web pages	Retrieving relevant sites and saving as PDF documents before coding	Wayback machine internet archives

The main data collection method used is coding of documents, both in ways that have qualitative and quantitative features. For chapter 7 and 8 I have coded web pages, taking down the number of employees or LinkedIn profiles. The data type was therefore already quantitative by nature and the collection was work intensive, required some effort in terms of data access, but ultimately straight forward. In chapter 5, 6 and 9 I have coded documents such as contracts in which text has been transformed into discrete categories, identifying and sometimes quantifying policies, and identifying types of self-presentation and comparing the development of how this presentation of services changes over time. In these cases, of course the coding required more subjective judgment, though a coding guide ensured consistency throughout. In the case of judging whether a policy constituted an incentive in mining, I consulted with three legal consultants and compared different sources of law, but ultimately such coding will always be a simplification of the differential ways law may be applied in practice. Coding the web page description of the Big Four firms consisted of coding the text into into discrete categories.

Proposing prosopogeography: studying the geography of professionals

Since transnational professions exert authority over global industries, corporations, political transformations and global campaigns, mapping their network, structure and the nature of their world becomes increasingly important in studies of international business, global governance and organization studies. Previous studies of these professions include network analysis, ethnography, sequence analysis and interviews (Rossier 2019, Seabrooke and Henriksen 2017).

Studying groups collectively, such as studying the characteristics of professions, experts or elites, is a form of prosopography (Stone 1971). A widely used application is to study members of a group over time, to see either how the composition of the group changes (Ellersgaard, Larsen, Steinitz 2019) or the timeline of career patterns that provide access to a group (Christensen 2020). I propose a new method tracking the size of professional groups and the distribution of them across space. This is a type of prosopography, as it studies the common characteristics of a group by studying them collectively. It is common to include some geographical aspects in prosopographic work (Bassens, van Heur and Waiengnier 2019, Lunding et al 2020), but this treatment investigates spatial characteristics through these groups rather than studying the group itself. Thereby the spatial scale is the point of analysis rather than the point of population definition, and the analysis is not about understanding the characteristics of the group but rather the characteristics of their environment. The method is inspired by 'global cities' research, where the presence of certain professions has been used to define 'rosters' of global cities (Sassen, Parnreiter, Beaverstock).

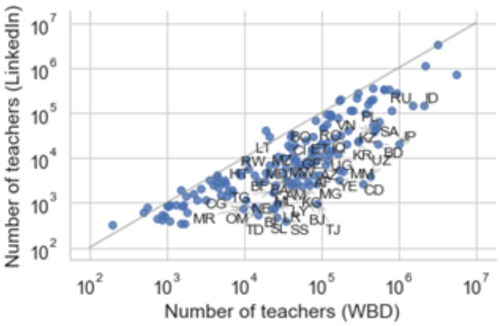
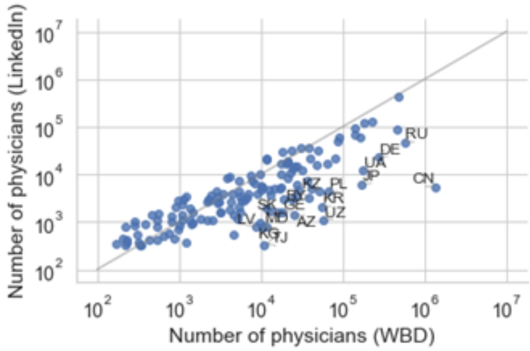
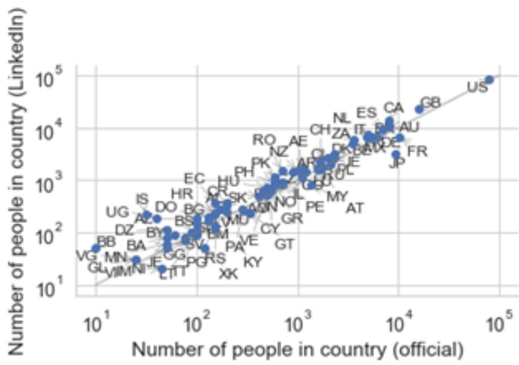
I term it prosopogeography to reflect the combination of prosopography and geography (and make it as hard to pronounce and spell as possible). Whereas prosopography studies group characteristics (Lunding et al 2020), prosopogeography studies spatial characteristics through the presence of professionals. For example, in article 2 of this thesis, we engage in prosopography as we map the geographic distribution of tax professionals, and engage in prosopogeography when we identify cities which act as 'coordination centers' based on the presence and concentration of tax professionals. Both methods provide important insights, not least because it is a difference in zooming in or out, and different things can be learned from in-depth, close studies of professionals as well as their overall structure.

Connecting the study of professionals with their associated geography is a way to connect the micro-level of professional work with the macro-level of financial and political geographies. Simply showing the distribution of certain professionals with specific characteristics tells us a lot about both the places where they are, the places where they are not, and about the profession itself. The proportional representation of professionals will show to what extent the economy is dependent upon this type of profession, and by extension, where professionals are able to exercise influence and authority. It also opens up ways of studying what institutional or spatial features are important for professional practices and for the ability of professionals to exert topological power (Allen 2011).

In terms of methods, several treatments can illuminate different aspects of transnational professional's geography. First, we can think of nonparametric or descriptive applications, in which simple charts or descriptive statistics can already be insightful in comparing countries or professions. The concentration versus diffusion of a profession is one important aspect to analyze, particularly if making a claim about the transnationality of certain professions. Here, a Lorentz curve can be deployed to compare the concentration of different professions. Alternatively, an obvious avenue is to literally map the profession, either in relative or absolute terms, providing a quick overview of the professional distribution across the globe. Lastly, the data can of course be applied in quantitative parametric analysis, both with and without a causal inference approach depending on the research design more broadly. The size of the profession can be used as both the explanatory variable or as the dependent variable. As the explanatory variable it can act as a measure of the environment, for example measuring the extent to which a city acts as a coordination point for transnational professions, and what spillover effects this might have on other outcomes. As a dependent variable it can be used to study what explains the distribution of a specific skill or profession; for example what institutional factors determine the number of local tech industry CEO's or what the relationship is between high-cost urban development and the number of private wealth managers.

In terms of data, prosopogeography relies upon access to data on professionals at the global level. Data collection is therefore a core challenge. In article 3, I collected the data on Big Four employees by hand (with co-author Richard Murphy), compiling local web pages, recruitment material and social media presence and coding the number of employees stated. In article 2, I developed a method for more efficient automated data collection with co-author Javier Garcia-Bernardo. Here, we utilize the ad-function in the social media LinkedIn to estimate the size of an ad's audience based on professional characteristics. Identifying the professional groups through titles, education, seniority and other characteristics as the first step, allows iterative search processes to identify the patterns in their distribution across countries, cities, as well as industries and firms. This and other data sources are possible to use, but only to the extent that the professionals in question depend somewhat on online presentation and presence.. Not all groups of professionals use LinkedIn or similar online professional presentation tools however, and collecting data online should therefore be used thoughtfully. Table 2 below illustrates the types of professions it is likely more useful for: the ones that depend on online presentation and is not overly secretive. Here, certain groups of transnational professionals such as management consultants or tax advisors are a good case, whereas other groups may depend more on other less public-facing channels for recruitment and networking. Future work should focus on developing more cases of transnational professionals who can be studied through this method, and provide the data to do so.

Table 2: Prosopogeographic data for different professions

	Profession does not depend on online presentation	**Profession depends upon online presentation**
Profession is easily accessed for study	No, other methods are better Example: Nurses, teachers  *Comparison between the number of teachers (primary and secondary) in LinkedIn and according to official World Bank statistics.*	Yes, but other methods are available too Example: Politicians, physicians  *Comparison between the number of physicians in LinkedIn and according to official World Bank statistics.*
Profession is not easily accessed to study	No, these professions depend upon anonymity Example: Spies, arms dealers *Search yields few or no results.*	Yes, online identities can be studied and will provide new aspects Example: Tax advisors, consultants  *Comparison between the number of Deloitte employees on LinkedIn and according to the Deloitte website.*

Note: Table and graphs developed with Javier Garcia-Bernardo.

Several articles in the thesis demonstrates the approach of prosopogeography. Article 2 shows the remarkable concentration of tax professionals, and illustrate the hypocrisy of tax haven lists as the tax minimization work is clearly done outside of blacklisted countries. In a regression analysis, we find the determinants for tax professional locations. Article 4 uses prosopography of two different professions, C(X)O's (corporate management) and tax professionals, to map the distinct parts of the firm that are usually conceptualized as Global Value Chains and Global Wealth Chains. By comparing the locations of these two professions, it is clear that while assets have opposite geographies, the managers of those assets do co-locate and therefore likely coordinate. Article 3 maps the locations of the Big Four and provide evidence of their wide reaching presence.

PART II: RESEARCH ARTICLES

INTRODUCTION

The next part of the thesis consists of five research articles. The articles correspond to the overall research question of "how is corporate tax minimization enabled and facilitated" in different ways. The first article addresses how corporate tax minimization is enabled by governments, looking at the case of mining and how governments provide extraordinary concessions to firms. It also speaks to how further minimization is facilitated, through the case of a tax holiday being taken advantage of through a low-tax jurisdiction ownership link – a structure designed by a tax advisor. The article will be published in the forthcoming edited volume Global Wealth Chains, edited by Leonard Seabrooke and Duncan Wigan.

The second, third and fourth articles all speak to the role of these professionals in facilitating tax minimization. The second article addresses the geography and infrastructural power of tax professionals. The article is co-authored with Javier Garcia-Bernardo and will be submitted to Review of International Political Economy. The third article addresses the role of the Big Four firms and how their legal and geographical structure enable them to provide tax services. The article is co-authored with Richard Murphy and Leonard Seabrooke and will be submitted to Accounting, Organizations and Society. The fourth article brings management into the discussion, and shows how global value and wealth chains are entangled. The article is co-authored with Leonard Seabrooke and has been submitted to Environment and Planning A: Economy and Space.

The fifth article is about how national or international reforms towards destination-based taxation could remove the link between investement location and taxes, thereby upending tax competition. The article considers how such a reform would impact government revenues. The article is co-authored with Shafik Hebous and Alexander Klemm. It has been published in IMF Economic Review.

While the articles all address the research question in different ways, they are also the product of different times in the PhD process, different publication targets, co-authorships and development of ideas. Writing and putting them together has been an important journey in terms of thinking through the research question in different ways. The framing chapter of the PhD therefore reflects the ideas I arrived at after working on these five articles rather than my starting point. While the terminology in some places therefore reflects different stages of the process before conceptualizing effective tax minimization, the articles still speak to this way of thinking. They all speak to the importance of tax competition and legal regimes in all countries as important for tax minimization, together with an emphasis on the importance of tax professionals.

GOLD CHAINS:

GLOBAL WEALTH CHAINS IN MINING

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Abstract

What form does wealth protection take in an industry where value creation is geographically fixed, and assets fall under government control? The location of natural resources cannot be manipulated in the ways intangible assets are moved across jurisdictions. Permission to extract these resources must also be granted by national authorities. This chapter analyzes how claims to wealth are made by mining companies operating in resource rich developing countries. These companies accrue wealth by obtaining tax advantages arising within mining countries as well as from the strategic placement of ownership rights in low-tax jurisdictions. On the basis of a close reading of 113 mining contracts across 21 developing countries, this chapter finds strong evidence that firms in the mining sector are able to piece together tax advantages via government deals and multijurisdictional structures. Three types of global wealth chains are combined in ways that provide opportunities for wealth accrual and protection by mining firms.

INTRODUCTION

What form does wealth protection take in an industry where value creation is geographically fixed, and assets fall under government control? The location of natural resources cannot be manipulated in the ways intangible goods and assets are moved across jurisdictions. Permission to extract these resources must also be granted by national authorities. This chapter analyzes how claims to wealth are made by mining companies operating in resource rich developing countries. These companies accrue wealth by obtaining tax advantages arising within mining countries as well as from the strategic placement of ownership rights in low-tax jurisdictions. On the basis of a close reading of 113 mining contracts across 21 developing countries, this chapter finds strong evidence that firms in the mining sector are able to piece together tax advantages via government deals and multijurisdictional structures. Three types of global wealth chain are combined in ways that provide opportunities for wealth accrual and protection by mining firms.

The distribution of wealth arising from natural resources is a contentious issue, as historically wealth arising from these resources has not been distributed in ways that benefitted source country's economy or population. Many resource rich economies remain poor, a paradox captured in the concepts of a "resource curse" and "dutch disease" (Auty & Warhurst, 1993; Sachs & Warner, 2001; Davis & Tilton, 2005). These outcomes have been linked to corruption (Marshall, 2001; Caripis 2017), lack of administrative capacity (Arezki et al., 2012), and inadequate tax payments from multinationals (Le Billon, 2011). Unequal distribution and unstable institutions have also been linked to social unrest and civil war (Klosek, 2018). Claims to wealth arising from the mining industry are particularly important in developing countries, where the loss of rights to mineral wealth negatively impacts poverty levels and sustainable development.

More than half of the value added in the mining sector is internal to mining firms. There are few job-creating linkages with other firms and industries making upgrading in the mining industry challenging for resource rich countries (Korinek, 2020). While locally owned mining companies source some input and services domestically, most foreign-owned mining firms do not vertically integrate within the mining country (Katz & Pietrobelli, 2018). Across most mineral and metal types, the mining global value chain consists of a long exploration and feasibility stage and a mine construction stage, before value is generated. Construction is followed by the extraction phase. All of these activities are fixed geographically. The potential global scope of the value chain arises mostly at the processing stage, with, for example, India the main location for cutting and polishing raw diamonds (Linde et al., 2021). The final phase is the retail of finished products or sale of inputs to other industries. The value added within the value chain is mostly in the geographically fixed extraction phase.

The mining value chain consists of the extraction of raw material, and processing into valuable forms of minerals and metals. The mining wealth chain consists of the legal affordances which control the distribution and transfer of the wealth arising from mining after the export of raw materials, after the sale of processed materials and after the sale of final products. Profits arising from these operations are claimed by corporate entities operating in different or several parts of the value chain and are protected from taxation by governments in both the mining country and elsewhere. Strategies for the protection of wealth include tax advantages obtained *within* mining countries in the form of contracts containing favorable fiscal regimes and the strategic use of ownership over mining rights in tax havens to obtain tax advantages by transacting wealth *between* jurisdictions.

As multinational corporations have organized their operations in global value chains, the globalization of capital has put states in a position of competing for investment, and tax policy has become one tool utilized to lure investors (Devereux, Griffith, & Klemm, 2002; Genschel, 2002; Rixen, 2011; Abbas & Klemm, 2013; Egger & Raff, 2015). Pitting of states against each other has driven a downwards trend in corporate tax rates (Devereux, Griffith & Klemm, 2002; Keen & Konrad, 2013) as well as discretionary tax advantages provided to firms to incentivize investment. Thomson Reuters (2015) recorded 10.000 instances globally since 2005 where states awarded discretionary incentives to investors, with an average incentive value of almost one fifth of the investment, or $8.19mn. Such incentives include opportunities for firms to decrease their tax bill within the jurisdiction where value generating activities take place. Even in mining, where geology rather than business climate is the key location determinant, tax advantages are granted *within* countries through statutory and discretionary tax advantages.

Given the differences between legal and taxation systems across countries, multinational firms have increasingly been able to take advantage of differences in the legal treatment of assets to obtain lower global tax rates (Jansky & Prats, 2013; Seabrooke & Wigan, 2014; Zucman & Piketty, 2015; Janský & Kokeš, 2016). The OECD's Base Erosion and Profit Shifting initiative was motivated by the prevalence of the under- or overpricing of transactions between corporate entities within the firm, treaty shopping, and the strategic shifting of debt internationally (Beer et al., 2018; UN & ECA, 2018).

Tax incentives and multi-jurisdictional tax advantages afforded by the offshore jurisdictions comprise firm tax strategy in combination. The goal of tax-minimizing firms is that profits fall *between* jurisdictions and legal categories so as to exist beyond the reach of tax authorities - to be placed 'elsewhere, ideally nowhere' (Murphy, 2009; p.16; cf. Bryan et al., 2017). While the strategic deployment of intangible assets for purposes of wealth creation and protection has extenuated an imbalance between governments seeking revenue and firms active within their jurisdictions (Bryan et al., this volume), the fact of geographically fixed assets does not necessarily constrain the use of global wealth chains. The geographical fixity of assets, however, may well change the *type* of global wealth chain governance that is engaged, as tax treatments within the mining country are more important in this context. For mining companies, the global value chain is geographically fixed as is the most of the value arising from the mining itself (Korinek, 2020). This is why obtaining tax advantages *within* countries becomes equally important as obtaining tax advantages *between* countries for this industry. This chapter demonstrates the prevalence of wealth creation and protection schemes in the mining industry, and discusses what forms of global wealth chain governance are implicated.

Mining machinery and extraction, the refinement and processing of metals, and final manufacture into consumer goods are the value adding productive activities which constitute the value chain. The wealth chain consists of the legal affordances around the value chain, which distribute rights to the wealth that arises from these activities. Claims to wealth arising from mining arise and are bolstered by a diverse and overlapping set of sources, including national law, international law and corporate legal documents (Dezalay, 2019; Mann, 2015). National legislation in the mining code and tax code stipulate the tax rates, royalty rates and other payments which should be made from the firm to the government. However, the fiscal regime is often negotiated in further detail in the contracts granting mining rights to firms. The legal framework, and in particular the contract, therefore is an asset in the sense that it provides entitlements to wealth. Contracts typically grant significant tax advantages, enabling the mining firm to accrue disproportionate amounts of wealth arising from the value creating activity. Most contracts between mining firms and governments are confidential, but recent transparency initiatives have made a push towards higher levels of disclosure (EITI, 2021; Resourcecontracts.org, 2021). Analyzing 113 contracts from 21 countries, this chapter provides an overview of how mining contracts comprise legal affordances that create and protect wealth.

DATA

The fiscal regime for mining companies derives from several overlapping sources of law. Between countries, international investment treaties and tax treaties govern how income from cross border economic activity is treated (Hearson, this volume). Within mining countries, the tax code and mining code detail the fiscal rules for mining investors, including incentives which are provided industry wide. Additionally, for each mining project contracts detail special fiscal rules governing the project (Mann, 2015). Contracts which grant mining licenses provide the legal basis for the rights to extract minerals and metals. This practice has arisen since privatization of the mining industry since the 1980's (Dezalay, 2019; Mann, 2015). These contracts provide the legal and economic basis for global value chains and global wealth chains in mining, and are negotiated between governments of resource rich countries, mining firms, and in some cases third party legal professionals (Dezalay, 2019). Contracts constitute an important data source for research in global wealth chain analysis, as they specify the relationship between buyers and suppliers, or in this case, between investors and governments (Cutler & Dietz, 2017).

This chapter analyzes a large number and range of publicly available legal documents from 21 developing, resource rich countries (see Table 1). These documents include the mining, tax and in some cases investment codes (54 documents in total). Additionally, 113 contracts provided by www.resourcecontracts.org are analyzed.[1] The contracts span over 1978 to 2016, but most are from 1990 and onwards. The legislation is the most recent at the time of research (2018). The contracts analyzed span a wide range of mineral types. Most of the contracts regard refined base and precious metals such as gold, copper and silver. The second largest group of contracts are for bulk commodities, especially iron ore. A few contracts pertain to the mining of metallurgical products such as alumina, gemstones (usually diamonds) and heavy mineral sands. The contracts sometimes combine different categories of minerals, such as gold and diamonds.

Table 1: Number of contracts by country

Country	Number of contracts
Afghanistan	6
Burkina Faso	7
Burundi	1
Cameroon	3
Colombia	5
DRC	9
Ecuador	1
Guinea	10
Liberia	17
Madagascar	1
Malawi	2
Mali	12
Mongolia	3
Mozambique	4
Niger	1
Peru	5
Philippines	7
Senegal	5
Sierra Leone	6
Tunisia	2
Zambia	6

[1] Data collection was conducted by the author with three legal consultants with expertise in the mining sector and French and Spanish language skills respectively. The data and analysis is also presented in the publications by Readhead (2018) and IGF (2019)

After identifying 11 relevant areas of tax, the documents were sorted through and coded according to these 11 areas[2]. Each mention of something pertaining to tax within a document related to either regulation or a contract would be copied into the corresponding field in a spreadsheet. Tax incentives that were coded from legislation and contracts range from lower taxes such as lower corporate income tax rate, tax holiday, property, VAT or sales tax exemptions, lower withholding tax rates, to provisions which allow for deductions on expenditure, such as accelerated depreciation or capital expenditure deductions. Others include extended loss carry forward periods and royalty rates set on a discretionary basis. Stability clauses in which the tax regime cannot be changed are also counted as a tax incentive.

After translating and summarizing these tax provisions, each field was analyzed to evaluate if it constituted an incentive. The assessment of the legislation as an incentive was based upon whether it afforded greater benefits than offered in other sectors. In a second step, the corresponding text in the contract (if there was anything specified) was assessed to see if it afforded greater benefits than already available in the law. If so, it was marked as an incentive. It is therefore possible for a country to have an incentive in the law and in the contract, if the contract provides something more extensive than the legislation.

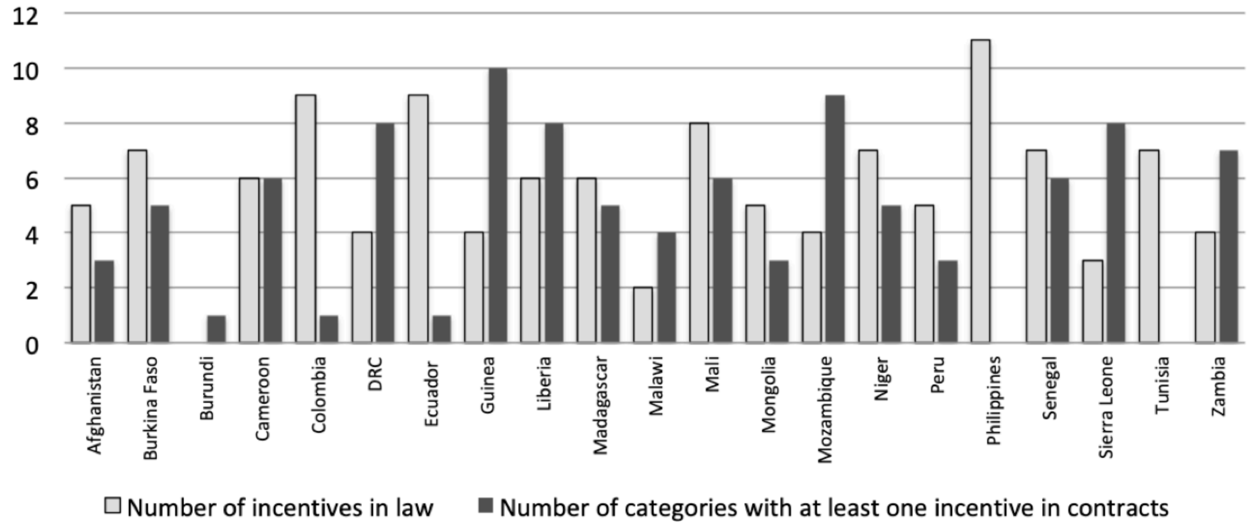
STATUTORY AND DISCRETIONARY TAX INCENTIVES

The analysis of mining codes, tax codes and mining contracts reveals that mining companies are commonly granted statutory tax advantages within mining countries. Contracts across 21 mining countries show that mining companies furthermore obtain discretionary tax incentives. Figure 1 illustrates the widespread nature of these tax exemptions across mining countries. 17 of the countries included fiscal concessions both

[2] For most countries, all contracts were analyzed provided they were available in English, Spanish or French. However, for the Philippines, Guinea, DRC and Peru only a limited selection of contracts was analysed due to the large number of available contracts. The sample analyzed was selected so it reflected the different types of minerals mined in the country.

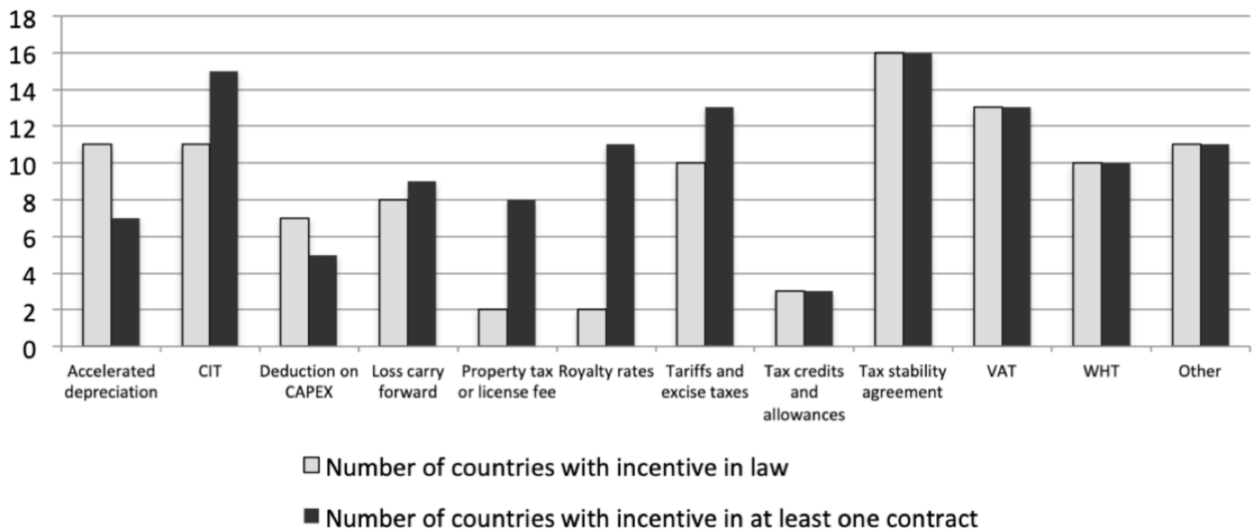
in legislation and contracts. Looking at the subfields these are in, there are overlaps between them. This implies that mining firms in some instances receive concessions beyond the incentives already granted in the legislation of that country.

Figure 1: Tax incentives by country



The three types of tax incentives that pose the highest risks of base erosion and profit shifting are lower (or exemptions from) corporate income tax rates, and concessions on withholding tax and royalty rates. Figure 12.2 illustrates the prevalence of these and other categories of incentives. Corporate income tax concessions are provided by 15 out of the 21 countries through either contract or legislation, in many cases in both. Over half the countries provide either lower royalty rates or withholding tax rates, the latter in some cases being completely exempt. The most extreme form of tax incentive is a tax holiday, which suspends corporate income tax for a period of time. These are often the most generous tax incentives, and pose the risk that they are used for tax minimization beyond that intended if the firm is able to register income such that it falls under the umbrella of the holiday (Fletcher, 2002; Zee, Stotsky & Ley, 2002). Over half of the countries provide tax holidays in either contracts or legislation. Nine out of the 21 countries have offered tax holidays with total exemptions of 3-15 years to mining firms, and a further three countries offered a semi-tax holiday where they exempt some taxes or apply a lower rate.

Figure 2: Tax incentives by category



Protections are built into contracts that mitigate against risks of future regulation. Almost all firms analyzed have a stability clause in the contract or are subject to a statutory stability clause, and there are many cases where the stability period granted in the legislation is exceeded in the contract. These clauses limit the ability of the government - including future governments - to change fiscal rules, or, in some cases, even implement human rights legislation effectively (Shemberg, 2009). The period of stability ranges from very few years to 99 years or the entirety of contract duration. The fiscal regime can therefore be effectively protected against new regulation. At the same time, there are also clauses that ensure that the fiscal regime becomes more beneficial over time. Some contracts include a provision that the firm will enjoy the same affordances that any competitor receives. In consequence if other contractors can be argued to be competitors then a concession given to one firm might be applied more broadly even when that concession is not specified in the contract. For example, one contract "*...shall entitle (company) to take advantage of any more favorable regime applicable specifically to and agreed individually with any company whether in a development agreement or otherwise.*" (retrieved from resourcecontracts.org, 2018). This can be understood in terms of the creation of fair competition and a level playing field. It also means that a contract affording the most extensive benefits might create ripple effects that extend across the entire industry, effectively ensuring a built-in race to the bottom.

The advantageousness of contracts depends on the institutional setting. Comparing contracts shows that there is variation, but that variation is limited within countries. It is therefore not the case that firms mining a specific type of mineral receive the same treatment from different governments. One type of mining is not treated more favorably than another across the board. Variation is driven more by what a country has granted than the type of mineral or metal that is mined.

MARKET-RELATIONAL GLOBAL WEALTH CHAINS

Global wealth chains consist of legal, economic and social relationships between clients, suppliers and regulators (Seabrooke & Wigan, 2017). In the mining industry, the value creation for mining firms - the client - is tightly linked to government control, and so is wealth protection. While the government in this instance acts both in the capacity of supplier and regulator, it is important that these are different agencies with different and sometimes conflicting interests, information and capacities (Readhead, 2016). The government acts as the supplier when providing tax advantages in legal codes and contracts through the ministries of mining or other politically appointed officials (Kienzler et al., 2015), and as the regulator when acting in the capacity of the tax administration.

Wealth protection through statutory and discretionary tax incentives can be seen as a combination of market and relational global wealth chains. In the case of statutory tax incentives, all mining investors are equally entitled to them, and there is no need to engage in complex negotiations, knowledge sharing or planning. This is akin to a market type of global wealth chain, in which the product - the tax exemption - is readily available for qualifying investors. While the structural power of mining companies can influence the existence of statutory tax incentives (Bell & Hindmoor, 2014, Marsh et al., 2014; Elbra, 2014), the firm does not negotiate directly and no complex information sharing is involved in obtaining this type of wealth protection.

In the case of discretionary incentives granted in contracts, this is more akin to a relational type of global wealth chain. The process of negotiating these contracts is long, often spanning several years, during which coordination and exchange of information is required between a small number of officials, officers of the firm and professionals. On the government side, the negotiation is often led by political appointees or experienced civil servants, with input from a range of technical and legal experts (Kienzler et al., 2015). The use of external expertise is however limited on the governments side as they often don't trust foreign experts or simply can't afford their fees (Radon, 2006).The firm team will be tailored depending on the relationship with the government. The team will usually include technical experts, such as engineers or geologists, in-house and outside legal counsel, financial modelers and economists, and, in some cases, firm managers (Radon, 2006; Kienzler et al., 2015). Mining companies have an advantage in their ability to deploy in negotiations greater levels of expertise and number of experts, and more experienced negotiators (Radon, 2006). In some cases, mining companies even hire members of the government team after negotiations have begun, gaining insight into government strategy and leading to turnover and instability in the government team (Kienzler et al., 2015). While perhaps not a strong trust relationship, it is a relational interaction between two teams of professionals and appointees. Over the period of negotiation, these teams will share and come to agreement on an understanding of complex geological data, infrastructure plans, timelines for construction and job creation prospects, explicitly coordinating on a wide ranging list of issues, including fiscal terms.

Relational does not imply an equal relationship between the two parties. While there is a lot of knowledge sharing and trust gaining in the negotiations, there remains strong information asymmetry between the government and the mining firm. Sharing financial and geological data in itself, and in the absence of requisite scientific and economic expertise does not produce equality between negotiating parties. The firm is most likely to hold such requisite expertise (Radon, 2006; Kienzler et al., 2015;). Valuing a mining reserve is inherently difficult, as it is impossible to know either the exact amount of resource in the ground or the costs of extraction, and because prices may fluctuate considerably (Otto, 2017). The mining firm however holds more expertise and might be better able to translate geological data into a value assessment (ICMM, 2009; Readhead, 2016). Contracts may especially be skewed in favor of the firm when the firm rather than the government has conducted feasibility studies and asset evaluations (Kienzler et al., 2015).

The government's involvement as supplier is distinct from its role as regulator and tax collector. These roles and the processes in which they play out are temporally and functionally separated. Negotiation occurs prior to tax collection, and is sometimes conducted under the authority of ministers who are no longer in power when the mine is operational and tax is to be collected. While mining ministries aim to promote development and investment, they may be less concerned with the fiscal implications down the line - both because they might no longer be in office and because they have been convinced they need to compete for scarce investment (Mann, 2015; Dezalay, 2019). The tax authorities aim to secure tax collection, but face the challenges of insufficient information, lack of sector-specific expertise, and the lack of an incentive to audit firms when they are beneficiaries of concessions and exemptions (Readhead, 2016).

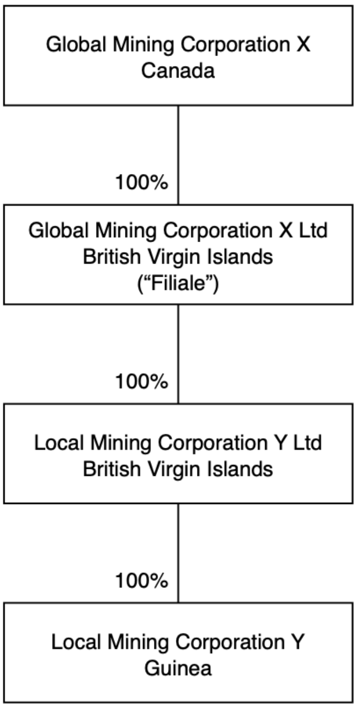
HIERARCHICAL GLOBAL WEALTH CHAINS

Though the source of the wealth is fixed, multijurisdictional ownership structures employed by mining firms enables them to engage in global wealth chains similar to other multinational companies. Intra-firm transactions through strategically placed corporate entities are a means of profit shifting and effective tax minimization. Prices for services and intermediate products or byproducts from mining (e.g. minerals that are not the main product of the project), as well as interest rates on loans, should be reported at market prices according to the 'arms length principle'. However, these prices may be subject to manipulation in transactions between related parties (Redhead, 2016; Beer & Devlin, 2021). In addition to debt financing between entities and mispricing internal sales of products and services, capital gains may be realized within offshore jurisdictions that offer a combination of low taxes and tax treaties protecting against other governments claims (see Hearson, this volume).

Even where a fiscal regime does not provide tax advantages, transfer pricing poses risk to tax collection (Otto, 2017). In a multi-country statistical analysis, Beer and Devlin (2021) find that reported profits in the mining sector are sensitive to country tax rates, estimating revenue losses from profit shifting amount to be 0.06 percent of the GDP of selected countries, or around $44bn. Finér and Ylönen (2017) show how firms in the Finnish mining sector employ a wide range of tax minimization strategies based on strategic choices around intra-group relationships and transactions. Global Financial Integrity (2014) found widespread instances of trade mis-invoicing in the mining sector in Africa (see also Grondona and Burgos on the soybean sector, this volume). Legal disputes between governments and firms may shed light on the tax avoidance of multinational mining firms. In the case of Acacia Mining in Tanzania, the firm paid large dividends to shareholders in years when they did not pay any taxes. This is likely due to a combination of the generosity of tax incentives and profit shifting through inter-company loans (Forstater & Readhead, 2017; Haines, 2017).

The ownership structure within multinational mining firms is not usually described in contracts, but in one case the appendix provided an overview. The firm in question operates a refinery project in Guinea. Figure 3 outlines the ownership structure, in which the local firm responsible for the mine is owned by a firm in Canada through two tiers of entities in the British Virgin Islands. The appendix states "b*y retaining this two-tiered (tax haven) corporate structure, (company) is preserving for its investors the most tax-efficient means for off-shore investment strategies."* The British Virgin Islands is described as "*a widely accepted jurisdiction which imposes no income tax on companies incorporated within its jurisdiction".* (contract retrieved from resourcecontracts.org, 2018). This arrangement allows dividends from the refinery project to be reinvested without first incurring a tax liability from investors' home jurisdictions. It also allows for the deferral of capital gains tax and tax on production profit, and prolongs the benefits of the tax holiday because taxes paid in the mining country after the tax holiday can be used to claim tax credits when remitting earlier profits from the haven. All these benefits are detailed in a letter from PwC, a professional service firm known for providing multinational corporations with advice on tax minimization strategies. This highlights the significance of legal and tax experts in supplying these types of complicated tax haven structures (Jones et al., 2017; Murphy et al., 2019; Ajdacic et al., 2020).

Figure 3: Ownership structure of a mining company



DYNAMIC EFFECTS OF COMBINING GLOBAL WEALTH CHAIN TYPES

Combining different types of wealth chains increases the level of wealth protection beyond the use of one standalone strategy. Table 2 outlines the different wealth protection strategies employed in the mining industry, which can be combined. Statutory tax incentives as granted in legislation require low levels of coordination, are not complex, are widely accessible, and generates low levels of a regulatory liability. Statutory tax incentives can be easily accessed by any investor, and this type of wealth protection is closest to a "market" form in the global wealth chain typology. The low uncertainty and risk of regulatory liability also applies to contractual terms, particularly if backed up by stability clauses, which a majority of the contracts examined here were. As the contract is a consequence of the relational interaction in the negotiation, in which the status/authority of negotiators impacts the outcome, and in which the notion of a mutual exchange (e.g. jobs for incentives) is important, this is best reflected in the relational global wealth chain type. The use of international ownership structures to take advantage of tax differences and obtain tax advantages *between* jurisdictions is more complex and requires a high degree of explicit coordination with tax planning expertise to the fore. This strategy might be devised and executed in-house such that the supplier-client relationship is internal to the corporation, or sourced through a professional service firm. Such a configuration conforms to a hierarchy type of global wealth chain.

Table 2: Wealth protection strategies in Mining

Wealth protection strategy	Complexity of products and services	Regulatory liability	Capabilities to mitigate uncertainty	Degree of explicit coordination	GWC form
Statutory tax incentives	Low	Low	High	Low	Market
Contractual tax incentives	↕	Low	High	↕	Relational
International structure	High	Low	High	High	Hierarchy

Mining firms can combine market, relational and hierarchy wealth chain strategies to create and protect wealth. In the case of the firm examined above, the two-tiered tax haven structure is only the cherry on top of what is already a nice sundae. The government in question already offers mining companies a lower tax rate (30 rather than 35 %), a 3-year tax holiday and a 15-year stabilization clause. The contract also provides the firm a 15-year tax holiday, a 15-year amortization of startup-costs and 5-year loss carry forwards after the period of the tax holiday, a 5% investment credit, a cap on customs expenses, and (not least) a stabilization clause which will stay in place throughout the duration of the contract. The firm thereby combines statutory and contractual tax advantages with the opportunities afforded by placing ownership in a tax haven. This is a hybrid market-relational-hierarchy global wealth chain.

Global wealth chain governance turns on managing the degrees to which explicit coordination is necessary on the one hand and information asymmetries characterize relationships on the other hand. The mining firm's objective is to maintain a large information asymmetry with tax authorities (Kienzler et al., 2015). Downplaying or misrepresenting production volumes, sales relationships and by-product exports through missing documents or unreliable record keeping is prevalent in the sector (Readhead, 2016). This is a challenge for tax authorities because of a lack of resources or expertise, but is exacerbated by the contractual and statutory exemptions which limit the incentive to audit, and by the complex ownership structures which makes it unclear whether parties to a transaction are related parties. In this way, the already existing information asymmetry between the firm and the regulator is increased through the use of market, relational and hierarchical wealth chains. Even if authorities can overcome the information asymmetry, firms may use the concessions and exemptions that they have afforded to repel efforts to tax them. In one case in Ghana a stability clause initially (though ultimately unsuccessfully) was used to argue for immunity from transfer pricing legislation (Readhead, 2016).

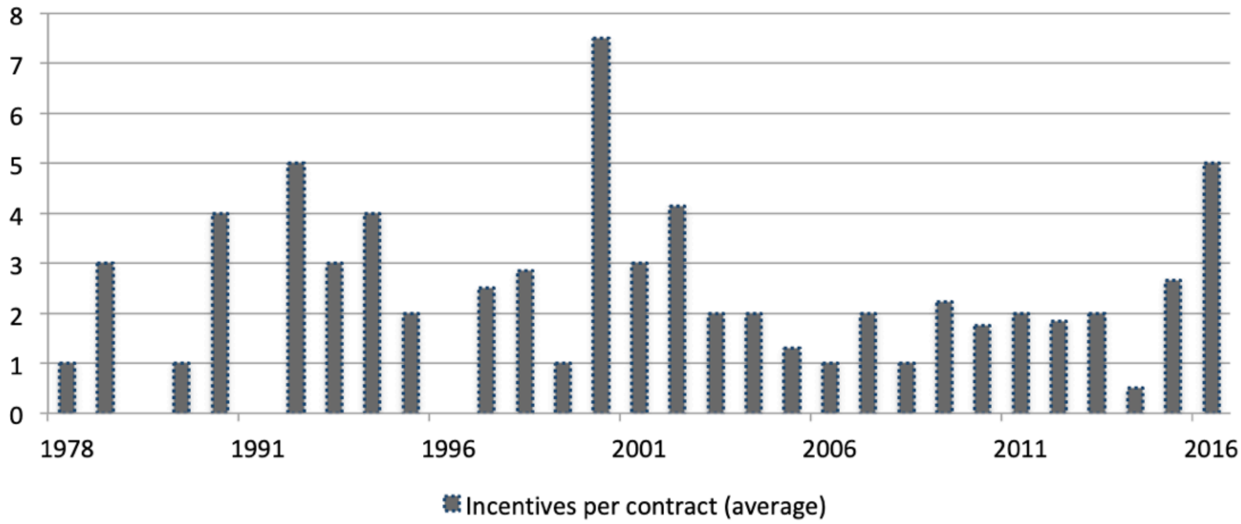
CONCLUSION

Mining firms extract value from the ground in developing countries, and extract wealth from the same countries by using legal structures to claim disproportionate ownership of the profits from the sale of mining products. Multinational mining corporations are able to obtain wealth protection by combining different strategies and affordances arising both *within* and *between* countries. Interest in mining investment incentivises governments and government officials, in the form of mining ministries and officials, to provide statutory and discretionary tax incentives. These are articulated in market and relational global wealth chain governance modes, providing very large tax savings with very low liability and uncertainty for investors. Policies to encourage investment and intended to ensure upgrading in global value chains ultimately serve as the key building blocks in global wealth chains. Mining firms can also enjoy the dynamic upgrading of the output of their global wealth chains when in many cases they are protected against future regulatory intervention and promised equal treatment in case any more favorable policy is ever extended to another firm. At the same time, these firms are able to draw upon hierarchical global wealth chains by deploying tax and legal expertise to produce tax-efficient ownership structures and organize internal transactions and finance in ways that ensure profits are transferred outside of the mining country.

The power governments hold over natural resources raises the question of why these incentives are provided at all. These are valuable resources that no-one can mine without a license. The puzzle is especially acute given that tax incentives in general are not at the top of investor's lists of reasons to invest (Unido, 2011). In some cases, the motive might be political or corrupt (Marshall, 2001; Readhead, 2016; Carpis, 2017). While corruption might explain single cases, it cannot explain the widespread nature of the practices. Notably, these practices are also prevalent in other industries (Klemm & van Parys, 2011). The incentives might be provided under conditions of imperfect information and bounded rationality (Poulsen, 2015). Information asymmetries between governments and investors mean that governments don't know to what extent tax incentives are necessary. Accepted ideas that incentives could potentially be important for investors might lead governments to use them excessively (Bell & Hindmoor, 2014). The puzzle might also be explained by the structural power of mining companies, exercised in negotiations and lobbying efforts (Marsh et al., 2014; Elbra, 2014).

While tax incentives are generally discouraged now (UNCTAD, 2012), multilateral organizations such as the World Bank and the OECD previously advised governments to provide incentives and legal protections in order to attract investment. Given a perceived scarcity of investment, governments were expected to compete to attract it (Mann, 2015). Tax incentives in mining and particularly stability clauses were historically motivated by the privatization and deregulation wave of the 1980's and the concomitant need to ensure investor confidence that new regulations or nationalization would not be enacted (Mann, 2015). Such affordances contributed to investor friendly environments and were particularly prevalent in Sub-Saharan Africa, where the perceived need to 'roll out the red carpet' was strong (Mann 2015). A naive take could be that these are phenomena of the past, and improvements in institutions will mean tax incentives become less prevalent. However, the failure of institutions to ensure a fair distribution of natural resource wealth cannot be understood as a failure that can be improved simply by imposing right legal framework. The willingness of governments to engage in tax competition enables most of corporate tax minimization and is not being addressed by current attempts to reform the international tax system. Figure 4 shows the provision of incentives has not decreased over time. These institutionalized practices should be understood as part of the colonial history of the countries that provide them, as well as a manifestation of new imperialist practices (Dezalay 2019).

Figure 4: Number of incentives over time



Further research might test how far the geographical fixity of the underlying value chain asset increases the importance of tax incentives and other tax advantages granted within countries. It is evidently an important element of mining wealth chains, but firms in other sectors also seek, and attain, tax exemptions. While it is likely the negotiated nature of firm tax liabilities increases the likelihood of at least some kind of fiscal incentive, discretionary deals are by no means unique to the mining sector. What is clear from this investigation of mining global wealth chains is the widespread use of wealth creation and protection strategies. Most of these are possible because countries to varying degrees enable them. The question remains as to the extent governments are able to transcend a perceived compulsion to compete via tax system design and discretionary tax affordances.

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ABOVE AND BEYOND TAX HAVENS:

MAPPING THE FACILITATORS OF CORPORATE TAX MINIMIZATION

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Abstract

In the last two decades, tax avoidance has risen to the top of the agenda of policy makers and international organizations. Academic research and activist organizations have pointed towards the existence and responsibility of 'tax havens' or 'offshore financial centers' (OFC). States and international organizations have named and shamed these jurisdictions through tax haven lists ("blacklists"). This approach however does not address the importance of non-state actors, particularly tax professionals, in enabling and facilitating tax avoidance. It remains unclear if their coordination and facilitation of tax avoidance actually takes place in jurisdictions placed in tax haven lists, if at all in OFC's. In this paper, we map tax professionals geographically using a novel empirical approach based on LinkedIn. We show that tax professionals generally locate in large cities in the EU and OECD, rather than in places listed in tax haven lists. Using multiple regression analysis, we find evidence that location of tax professionals correlates with the location of managerial and financial services but does not correlate with tax haven indicators or with overall economic activity. Our results underscore the asymmetry and core-periphery structure in both the provision of and regulation of offshore finance. Understanding the geographical patterns behind the facilitation of tax services opens up new avenues for accountability and regulation.

INTRODUCTION

Multinational corporations and high-net-worth individuals take advantage of geographical differences in regulation to shift income towards offshore financial centers and reduce their tax bill. Academic research and tax leaks have shed light into the workings of offshore finance and have brought tax avoidance and tax policy to the forefront of discussion by citizens, governments and international organisations (Christensen and Hearson 2019, Eskelinen and Ylönen 2017, Hearson 2018). One main aspect of tax avoidance continues to be on the spotlight: the extraordinary concentration of assets in small offshore financial centers (see eg. Fichtner 2016). The extent to which these small jurisdictions are 'central' to offshore finance has been well documented. But whether they are also central to the coordination of these flows is unknown, despite the importance of this question to understand whether power over offshore reflects a case of small states punching above their weight, or if they are mere peripheral instruments for more powerful players in 'core' countries.

The chief policy tool against offshore tax avoidance has been the deployment of tax haven lists by both NGOs and IOs (Cobham, Janský and Meinzer 2015, Sharman 2009, Eggenberger 2018). The effectiveness of these lists remains however unclear (Crasnic 2020), and it can be questioned whether blacklisting is the correct solution to the problem of tax avoidance. The effectiveness is limited by the resistance strategies of the targeted jurisdictions (Crasnic 2020) as well as the political constrains to place OECD members and their dependencies on those lists (Janský, Meinzer and Palanský 2018). The access to tax minimization may also be less dependent upon these jurisdictions in places when domestic institutions and financial services can provide similar affordances (Binder 2019). More fundamentally, the practice of blacklisting rests upon the assumption that *states* are the primary actors responsible for the existence of tax avoidance, and that the phenomenon is contained within these territories. However, it is increasingly clear that non-state actors, particularly tax professionals play an equal or more important role (Harrington 2016, Christensen, Seabrooke and Wigan 2020).

We investigate the asymmetry between blacklisting offshore financial centers and the importance of tax professionals. The existence of tax avoidance and offshore finance rely not only on offshore financial centers, but requires tax professionals who create and maintain the tax avoidance schemes necessary to reach them (Seabrooke and Wigan 2017, Christensen, Seabrooke, & Wigan 2020). Previous studies have illustrated the role of these actors in both private wealth management (Harrington 2016, Beaverstock, Hall and Wainwright 2013) and corporate tax avoidance, emphasizing in particular the role of the Big Four accounting firms (Carter et al 2015, Ajdacic, Heemskerk and Garcia-Bernardo 2021). Given that tax professionals are key to shaping and innovating tax strategies, their locations allow us to understand where tax avoidance is coordinated from, and where regulatory efforts aimed at curbing tax avoidance should be focused.

In this paper we present a novel method to gather data on professionals in general, and tax professionals in particular. We create the first comprehensive map of tax professionals using data from the social network LinkedIn, and analyze whether offshore activity, economic activity, managerial activity, or financial activity best explains the location of tax professionals. In mapping their presence we conceptualize *tax coordination centers* as places where tax professionals are both numerous and concentrated relative to total population. Based on insights from Global Cities theory, these coordination centers are seen as important as social spaces where professionals can tap into different networks, meet their clients, and access financial markets.

Rather than overlapping with blacklisted jurisdictions, we find that these coordination centers are in the larger cities of the Netherlands, Ireland, Switzerland, Belgium, the United Kingdom, Luxembourg, Hong Kong and Singapore, together with large cities in the United States and Canada. Personal tax professionals (wealth managers) are however concentrated in France, Germany, Austria, Switzerland, Luxembourg, Hong Kong, Singapore, Malaysia, the United States and Canada. Importantly, we find very low numbers of tax professionals in small-island OFCs. For example, we find only 373 tax professionals in Bahamas, Panama and the British Virgin Islands combined, although over $50 billion of corporate profits are shifted yearly to those locations (Garcia-Bernardo, Janský and Tørsløv 2021). Two thirds of all tax professionals are located in the United States and the European Union, although these locations account for only 12% of the worldwide population. This signifies the prevalent role of the ’core’ countries with respect to tax planning as opposed to the popular view of smaller OFCs in the periphery being central.

We further analyse the locational determinants of tax professionals through a series of regressions at both the country and city level. We show that while their location correlates with the location of financial and managerial activity, it does not correlate with measures of financial secrecy or profit shifting.

Our paper contributes to the literature on international political economy of tax and on the role of transnational professionals. Theoretically, we develop the concept of the 'Tax Coordination Center' and suggest these places of professional coordination of tax services from the infrastructure of tax avoidance, and point to the private infrastructural power as a result (Mann 1993, 2008). Empirically, we show that tax professionals concentrate with management and finance, but not with indicators of offshore activity or economic activity. We make our data available for further research, answering the calls to systematically analyze the geographies of tax (Bassens & van Meeteren, 2015; Aalbers, 2018; Coe, Lai and Wójcik 2014; Wójcik, 2013). Methodologically, we develop a new method for retrieving data on understudied transnational actors. Substantively, our contribution points to new directions for the study and regulation of tax avoidance.

The rest of the paper is organized as follows. Section 2 lays out the background of international political economy of tax and particularly the interest in studying tax professionals. Section 3 explains how we are using a novel empirical strategy based on LinkedIn data, which enables us to pinpoint the cities and countries where tax professionals are placed. Section 4 outlines our empirical findings of where tax professionals are, while section 5 explores the economic and financial dynamics that shape their geography by using regression analysis to systematically identify the factors correlated with the location of tax professionals. Finally, Section 6 concludes with policy implications.

POWER ASYMMETRIES AND INFRASTRUCTURAL POWER IN OFFSHORE FINANCE

Our research speaks to the role and authority of private actors in international political economy. Recent scholarship have highlighted how 'infrastructural power' matters (Mann 1993, 2008) and how it can be used by private actors (Braun and Gabor 2020).

Particularly, financial infrastructure and the intermediaries who control it, are driving and shaping economic globalisation (Braun 2020, Bernards and Campbell-Verduyn 2019, Boussebaa and Faulconbridge 2019). The organisation and control of such infrastructure determines how power can be exercised (Braun 2020).

States have previously weaponized their infrastructural power (Mann 1993) to further their interests against tax havens. In the early 1970's, Australia was battling the emergence of a tax haven in New Caledonia and Vanuatu, and in meeting resistance from the British government (Ogle 2017), resorted to monitoring and cutting off communication from these British dependencies to Sydney (Harrington and Seabrooke 2022). Today, such use is unimaginable, as control of communication infrastructure is no longer exclusively tied to states (cf. privately supplied internet to war zones, see Gordon 2022). Infrastructural power, however, is a two-way street (Mann 2008), and private actors can use control of infrastructure to control the state. The ways in which private actors have taken over control of infrastructure upon which the state relies have been highlighted in cases of capital markets (Petry 2021) and how the emergence of shadow banking is entangled with central banking (Braun and Gabor 2020).

Our argument rests upon the claim that tax professionals today exert control over the infrastructure of global tax. In Mann's definition, infrastructure is the "routinized media through which information and commands are transmitted" (Mann 2008: 358). Tax professionals hold the channels to transmit information and commands between firms and authorities in different countries. In practice, infrastructural power is exercised by intermediary firms and professionals, who control the 'pathways' through and between financial and regulatory systems. Such (transnational) professionals have been found to hold authority over global economic processes in both private and public spheres (Hearson 2018, Seabrooke and Henriksen 2017, Harrington and Seabrooke 2020). This is also the case for tax, where the role of tax professionals is to coordinate and facilitate tax minimisation of corporations (Christensen, Seabrooke and Wigan 2020) and to some extent also shape regulations through their role of advisors to governments (Elbra, Mikler and Murphy-Gregory 2020, PAC 2013). Their ability to create the legal documents, ownership structures and transaction documentation which underpin effective tax minimisation provide them with infrastructural power over tax. The execution of a global tax strategy is not done by tax havens on behalf of multinationals, but rather by professionals who control access to tax havens.

The organization of infrastructures determine how offshore finance can be governed, and studying the tax professionals who hold this power is therefore crucial to understand how offshore finance emerges and persists. In understanding how their power is exercised, we draw upon inspiration from the 'World Cities' and 'Global Cities' literatures (Friedmann, 1986; Sassen, 1991). These bodies of literature argue that there are urban sites that act as places of command and control over global capital flows (Parnreiter, 2014), where firm headquarters and business and financial services concentrate to benefit from agglomeration effects (Sassen, 1991; Brenner 1998, Van Meeteren and Bassen 2016; Carroll 2007; Beaverstock, Smith and Taylor 1999, 2000; Taylor, Catalana and Walker 2004). Identifying such cities through their professional markup have been used to identify patterns of control over different aspects of the world economy and underlines an enduring core-periphery structure (Parnreiter 2014). Locating these centers of control over tax flows is our approach to identifying power over offshore, and particularly identifying where they fall in the spectrum between 'core' and 'peripheral' states. This asymmetry is particularly important in the case of offshore finance, where the centrality of smaller island states in attracting financial flows calls into question how maps of global finance should be drawn and understood (Fichtner 2016, Haberly and Wójcik 2015b).

LOCATING TAX HAVENS

Offshore finance refers to the financial vehicles that make assets and liabilities appear outside the regulatory spaces of the home jurisdiction of the individual or corporation to access favorable regimes (Palan, 2003). By strategically placing trusts, shell companies, distributor intermediaries, or important value-creating assets (e.g. intellectual property or interest-bearing loans) in low-tax jurisdictions, multinational corporations and high-net-worth individuals can take advantage of geographical differences in regulation to shift income towards offshore financial centers (OFCs) and reduce their tax bill. The jurisdictions that enable offshore transactions are referred to as 'offshore financial centers' (OFCs) or 'tax havens' (Kudrle 2013; Clark Lai and Wójcik 2015). A large literature focuses on mapping specifically where OFCs are, using two approaches. The first approach analyzes the institutional features that enable secrecy and low taxation (Cobham, Janský and Meinzer 2015, Palan, Murphy, and Chavagneux 2010). The second approach identifies places that attract financial inflows in a scale disproportional to the size of the domestic economy (Zoromé, 2007; Haberly and Wójcik 2015a, 2015b; Hines and Rice, 1994, Tørsløv, Wier and Zucman 2018; Garcia-Bernardo et al., 2017, 2021, Fernandez and Hendrikse, 2020). Both approaches typically yield similar results, since low taxation is required to attract those extreme financial inflows.

It is also established that different categories of OFCs serving different purposes (Palan, Murphy, and Chavagneux 2010; Fernandez & Hendrikse, 2020). Some jurisdictions serve as the final destination for value booking and ownership and are referred to as 'sink-OFCs'. These are typically stable small states with ties to the former British empire, access to financial markets, high secrecy, and tax rates close to zero (Palan, Murphy, and Chavagneux 2010; Haberly & Wójcik 2015a, 2015b; Reurink & Garcia-Bernardo 2020). Others are used mainly as intermediary destinations for routing through and are referred to as 'conduit' jurisdictions (Coe, Lai and Wójcik 2014; Cohbam, Jansky and Meinzer. 2015; Garcia-Bernardo et al., 2017). These latter jurisdictions are countries such as the Netherlands, the United Kingdom or Singapore that do not act only as the location of empty shell companies and value-creating assets, but play a central role in the organization of MNCs, serving as the location of regional headquarters and high value-adding subsidiaries (Reurink and Garcia-Bernardo 2020). The existence of different kinds of offshore spaces means the spatial distinction between onshore and offshore is increasingly blurry as 'onshore' jurisdictions may provide some of the same features of offshore (Binder 2019, Fernandez and Hendrikse 2020).

BLACKLISTING NON-COOPERATIVE JURISDICTIONS

Identifying the locations which are central to offshore finance has been an extraordinary contribution to our knowledge about global capital flows and understanding the global economy. However, it is not straightforward how to translate these findings into policy implications. A favored approach has been to formally list jurisdictions as places of concern, and to potentially use these lists as a way of pressuring for reform within these countries (Eggenberger 2018) or to regulate domestic business' use of these jurisdictions (Van Dorpe, Braun and Larger 2020). In 1998, the OECD's report on harmful tax competition started a process of international blacklisting of tax havens (OECD 1998, Eggenberger 2018, Sharman 2009). The OECD list has since been abandoned, but the approach has been taken over by the EU. Since 2017 the EU has published a list of 'non-cooperative jurisdictions' (EC 2022). Over time, jurisdictions have been taken off and on the list and the current list consist of nine jurisdictions3. Some jurisdictions, such as the British Virgin Islands, have never appeared on it despite their importance in tax avoidance, potentially due to the political nature of what countries end up blacklisted (Janský, Meinzer and Palanský 2018).

Blacklisting countries has a long history as a tool in global governance, and is by no means specific to the issue of tax (Eggenberger 2018, Liss and Sharman 2015). However, whether blacklisting is effective depends on the extent to which the geographical boundaries that apply to the phenomenon. In tax avoidance, money flows and corporate structure are often designed to span through a large number of countries (Garcia-Bernardo et al 2017). In an issue where it is the relative differences between jurisdictions rather than the traits of single jurisdictions that are exploited, listing countries as responsible culprits is based on an analytical fallacy. As Poon, Tan and Hamilton (2019) argue, the network effects between professionals in different locations enables expertise to travel, and even if formal regulations change in the blacklisted jurisdictions, new structures may be innovated by tax professionals. Therefore, changing the actions of tax professionals is necessary to create long-lasting change in the arena of international taxation.

TAX PROFESSIONALS

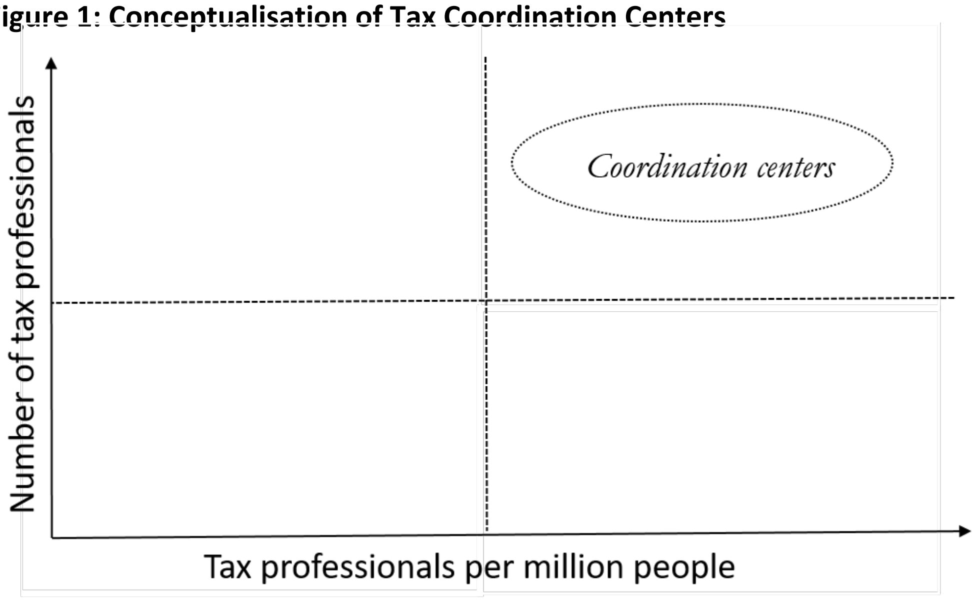
The existence of offshore finance requires not only the jurisdictions that are used for transactions, but also the people with the knowledge and the connections to access the offshore world. Tax professionals are lawyers, wealth managers, consultants and

[3] American Samoa, Fiji, Guam, Palau, Panama, Samoa, Trinidad and Tobago, Vanuatu, US Virgin Islands

accountants with an expertise in the highly technical fields of international tax law, corporate taxation and accountancy, and wealth protection (OECD, 2008; Harrington, 2016; OECD, 2018; Mulligan and Oats, 2016, Wójcik, 2020). They advise corporations and individuals, devising financial products that allow their clients to move assets offshore and escape taxation (Sikka & Willmott, 2013; Jones, Temouri and Cobham 2018; Ajdacic, Heemskerk and Garcia-Bernardo 2019; OECD, 2008; Russell & Brock, 2016; Wójcik, 2013). As such, they "hold considerable power, which they exercise by operating legal and financial vehicles designed to escape the control of governmental or intergovernmental organizations through the use of offshore jurisdictions" (Wójcik 2013,330)—i.e. by connecting distant parts of the world. These mediators are sometimes referred to as "financial elites" (Allen, 2018) or "advanced business services" (Wójcik, 2013), but we find more useful to use the term "professionals" to distinguish where their power and status derive from. They derive their power from their ability to "make things happen", which is linked to their professional prestige, and in some cases licensing and accreditation from organizations or directly from the state (Harrington, 2016).

The idea of professionals being central to tax planning and holding power over some portion of capital flows is widely established. Their role in tax planning has been conceptualized in the literature (Wójcik, 2013), demonstrated empirically (Poon, Tan, & Hamilton, 2019; Wainwright, 2011; Harrington, 2016; Beaverstock, Hall and Wainwright, 2013; Jones, Temouri and Cobham 2018; Ajdacic, Heemskerk and Garcia-Bernardo 2019), and acknowledged by international organizations (OECD, 2008). The power of tax professionals as intermediaries and suppliers of tax and business services has been conceptualized in two strands of the literature on tax and offshore finance. The Global Financial Networks scholarship (Coe, Lai and Wójcik, 2014) emphasizes how the financialization of Global Production Networks (Coe, Dicken and Hess 2008) created new financial relations between firms, onshore and offshore jurisdictions. Networks of financial and business services connect multinational corporations, financial centers and offshore jurisdictions (Wójcik, 2013; Wainwright, 2011; Clark, Lai and Wójcik 2015). The Global Wealth Chains scholarship underlines how professional networks are crucial to create the information asymmetries between clients and regulators that are needed to protect wealth (Seabrooke and Wigan, 2017, Christensen, Seabrooke and Wigan 2021). Both strands of literature emphasize the power of tax professionals as designers and operators of transnational circuits of capital storage and wealth protection. Financial flows cannot occur without the suppliers of legal, financial and accounting expertise (Van Meeteren and Bassen, 2016) connecting offshore jurisdictions to multinational corporations and wealthy individuals (Wójcik 2013). By devising and operating the financial vehicles that make offshore finance, tax professionals are able to connect "onshore" and "offshore" (Wójcik, 2013), but more importantly they are also innovating the multijurisdictional corporate structures and transactions used in tax avoidance. Locating these tax professionals is the first step towards identifying where they can be regulated (Radcliffe et al 2018). It may be the case that they are primarily based where profits are booked. If so, regulating professionals may be added to the list of demands made towards these countries. The empirical evidence is mixed. Some previous work has indeed found that they are present in jurisdictions where profits accumulate (Cobb 1999, Harrington 2016, Hen-Smith 2021, Poon, Tan and Hamilton 2019). Other studies have shown how tax professionals work within global financial centers that are not listed as tax havens, such as London and New York (Wainwright, 2013; Clark and Monk, 2014; Beaverstock et al., 1999). Given that there has so far not been any systematic review of the profession globally, it is unclear which pattern is predominant: locating close to clients in international financial centers, or locating where the institutional arrangements are favorable for tax avoidance.

Figure 1: Conceptualisation of Tax Coordination Centers



We provide a global dataset over these professionals and are able to show where they are located. When determining this question of where they are located, we take both absolute numbers and relative numbers into account. Normalizing by population makes locations comparable, but we are interested also in the aspect of where the majority of tax coordination takes place. Therefore we conceptualize the degree of 'tax coordination centrality' as the combination of high absolute and relative numbers of tax professionals. Figure 1 outlines this conceptualization. We signify the places which score high on both dimensions 'tax coordination centers'. The empirical question is then what countries and cities are in this category, and particularly where offshore financial centers and the jurisdictions featured on blacklists feature on these scales.

METHODOLOGY AND DATA

In this paper we present a novel method to gather data on professionals in general, and tax professionals in particular. Previous research on the geography of tax professionals has suffered from a lack of comprehensive empirical data (Wójcik, 2013). Previous studies have relied on case studies (Wainwright 2011, Beaverstock, Hall and Wainwright 2013) and professional ethnography (Harrington 2016) to gain insights into the dynamics of the tax profession. Leaked data (Poon, Tan and Hamilton 2019) has furthermore provided a great insight into the locations and networks of professionals, though limited to the professionals connected specifically to the Panama-based leaked company. To overcome the empirical limitations of studying tax professionals we develop a novel data driven approach using the professional networking site LinkedIn. Our approach enables us to collect data even for small offshore jurisdictions where there is normally little or no data available. We use this approach to obtain, for 203 jurisdictions, the number of three types of tax professionals: corporate tax strategy, transfer pricing, and personal tax professionals. Our approach allows us to pinpoint the cities and countries where tax professionals are located, and thereby establish the locations of tax services.

The increase in the use of social networks has provided new opportunities for investigating the financial geography of professionals and changes in professional expertise (Suddaby et al., 2015). Social networks hold extremely rich personal information and monetize it by providing targeted marketing services. Using these services, potential advertisers can reach users based on specific locations, age groups and other variables. In order to facilitate the creation of ads, social networks share the potential number of users reached by those personalized ads. This has allowed researchers, for example, to understand gender bias depending on their location or industrial sector (Fatehkia et al., 2018, Haranko et al., 2018). Our empirical approach is based on the LinkedIn Campaign Manager. The LinkedIn Campaign Manager facilitates the targeting of advertisements to specific audiences, defined based on location, job title and company size, among other criteria. This allows us to target advertisements to tax professionals—e.g. one targeted to wealth managers based in Luxembourg—and obtain the potential total number of tax professionals that theoretically would be able to see the advertisement. Here, we devised a novel methodology using the LinkedIn Campaign Manager to analyze the size of specific audiences, defined based on location, job titles and company sizes. The campaign manager allows any user to design advertisements targeted to users with specific job titles, such as tax lawyer or wealth manager, and provides an estimate of the number of profiles such an ad would target. This data is publicly available to any LinkedIn user and is aggregated (and thus anonymous).

Our approach enables us to collect data even for small offshore jurisdictions where there is normally little or no data available, and for professional groups for which there are no international statistics available elsewhere. Our search for job titles rather than firm presence also allows us to overcome the risk of overemphasizing the importance of places where lower-end services are placed (Kleibert, 2017). Furthermore the approach enables us to go beyond macro-level designations of employee groups such as industry groups, and actually break the data down by specific titles, ensuring that we are not counting irrelevant titles.

We collect information from two groups of tax professionals: corporate tax and personal tax. Corporate tax is composed of two subgroups. The subgroup 'transfer pricing' includes all users with that string in their title, who presumably work on transfer pricing matters for multinational corporations. The subgroup 'tax strategy' includes all corporate tax titles such as 'international tax specialist' that are not related to transfer pricing, and may be internal within companies or external consultants. Personal tax is represented by 'wealth managers': this term refers to people working on personal tax and wealth protection for high-net-worth individuals. Finally, we also created a group entitled 'all tax professionals', which includes all the job titles in the other groups as well as more ambiguous titles such as 'tax specialist.' LinkedIn also allows the exclusion of users from the advertisement. We used this function to exclude all tax professionals with jobs related to tax compliance or collection. Table S1 in the supplementary material shows the exact job titles used.

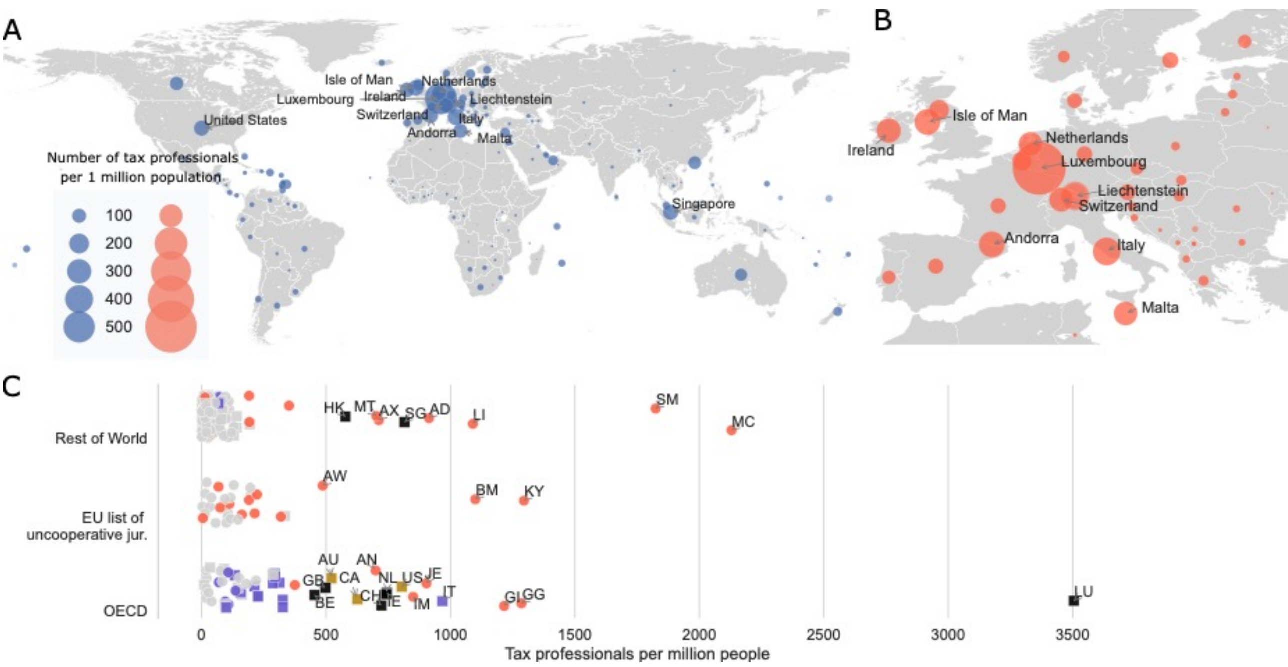
For each of the 231 available jurisdictions and 308 selected cities (see Sections S4 and S5 in the supplementary material for a complete list and our selection criteria), we collected the number of people that would be reached by an advertisement targeting each of our four groups (transfer pricing, tax strategy, wealth management, and all tax professionals). The campaign manager does not provide exact counts of the audience reached, but only rounded numbers (e.g. it shows 300+, 3000+ or 30000+ for counts between 300-310, 3000-3100 and 30000-31000, see Section S1 in the supplementary material for a more detailed explanation). We also designed advertisements targeted at profiles related to the location of the non-financial economy (e.g., engineers), managerial control, and the financial sector (see Table S1 in the supplementary material). Those titles are used in the regression analyses in Section 5.

The main challenge when analyzing social media data is to confirm external validity and rule out the possibility of systematic biases. The use of LinkedIn varies greatly between countries. While 70 % of the U.S. workforce uses LinkedIn, only 15 % of the Indian workforce does. Within countries, the use of LinkedIn also varies on the profession analyzed. The use of LinkedIn in internationally-oriented professions such as corporate tax or wealth management will be higher than that for domestically-oriented professions such as teaching. To ensure external validity, we must ensure that the coverage of tax professionals is similar across countries. We expect this to be the case, since the profession depends upon online presentation and relies on an international network of contacts maintained partially through LinkedIn. Ensuring external validity can be done by comparing the collected dataset with an external dataset from a verified source. In our case, analyzing coverage is extremely difficult given the lack of data on tax professionals in any country. We overcame this limitation by comparing the number of employees in Deloitte on LinkedIn with the numbers in the official Deloitte national websites collected by Murphy and Stausholm (2017). Deloitte is a company whose employees are comparable to tax professionals in type of education, client contact and prestige. If the number of employees found on LinkedIn and the official websites on LinkedIn is similar, this strongly indicates that most tax professionals do register on LinkedIn. Given the pivotal role of the Big Four accountancy firms in the tax planning of multinational corporations (Jones, Temouri and Cobham 2018; Ajdacic, Heemskerk and Garcia-Bernardo 2019) and the role of the Big Four on training tax professionals (Christensen, 2020), we assume that tax professionals outside the Big Four will also have LinkedIn profile. To collect data from Deloitte, we created a targeted advertisement towards employees in all Deloitte entities available on LinkedIn. We find a 98% correlation between the per capita number of professionals on LinkedIn and the per capita number that the company claims on their web page (Figure S1 in the supplementary material). We use KPMG as an extra robustness test (correlation 99%, Figure S1). Therefore, we conclude that LinkedIn is a representative source of information for analyzing tax professionals. We also analyzed the coverage for our other search queries (e.g. 'CEO' or 'accountant') and verified that all our queries, except for CEOs and CXOs (all chief officers), were highly correlated with the number available in public statistics (see appendix).

IDENTIFYING TAX COORDINATION CENTERS

We start by mapping the geographical distribution of tax professionals at the country level. Figure 2 shows a map of the number of tax professionals relative to population. We find that while there is a high concentration of tax professionals in three of the jurisdictions in the EU black list (the Cayman Islands, Bermuda, and Aruba), there is a similar concentration of tax professionals in OECD countries and in non-backlisted offshore financial centers (Figure 2). The high concentration of tax professionals in OECD countries indicates that the majority of global tax services are provided in proximity to clients, not in the places where profits are booked. The concentration tax professionals in some OECD countries point to a double role of (some) OECD member states, both as coordinating tax avoidance, and as imposers of sanctions and international tax rules to other countries (Hearson, 2018; Crasnic, 2020).

Figure 2: Tax professionals are concentrated in the developed world

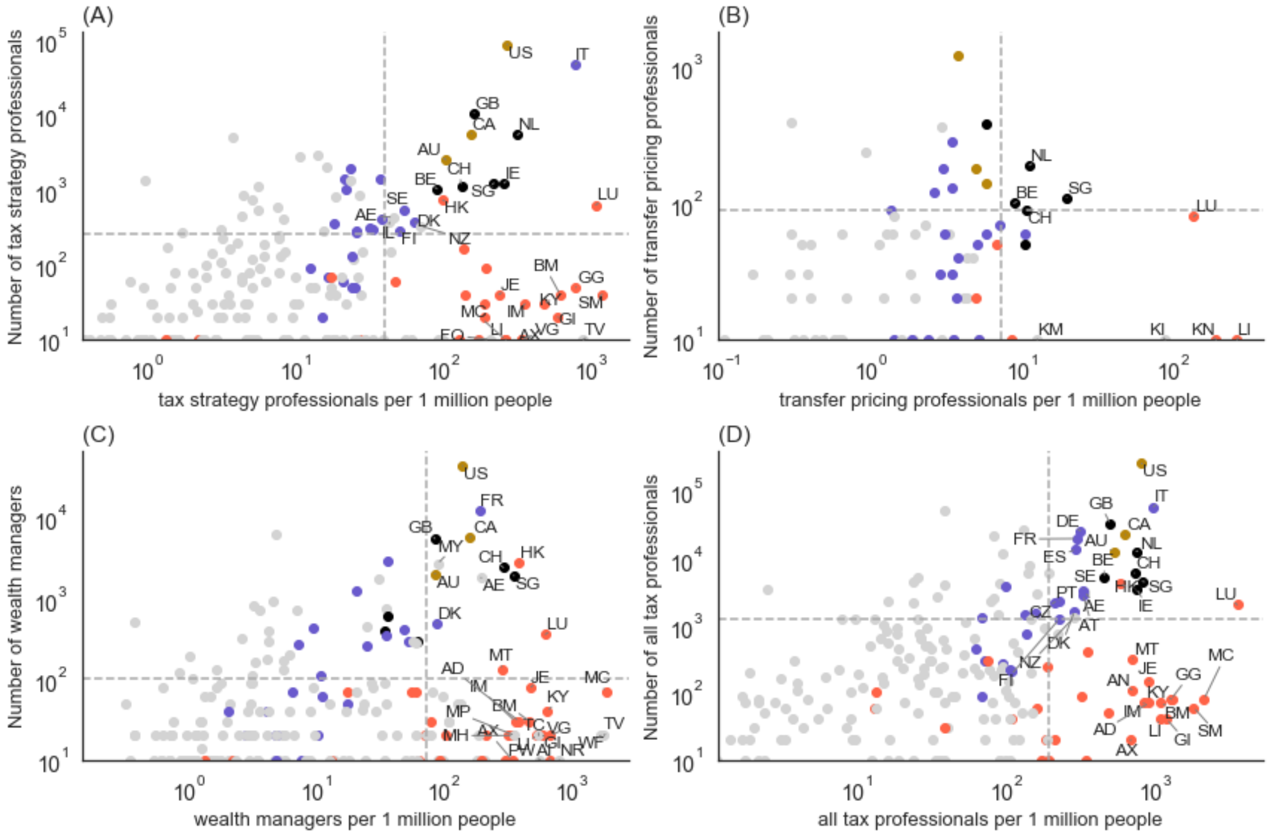


Notes: (A-C) Distribution of aggregated tax professionals (tax partners, lawyers, advisers, consultants, counsels, accountants, directors, managers, and specialists; corporate tax, international tax, transfer pricing and wealth managers). (A-B) Bubble size is proportional to the number of tax professionals per capita in (A) the world and (B) Europe. (C) Number of tax *professionals per million. Sink offshore financial centers are highlighted in red, conduit offshore financial centers are highlighted in black, EU member states are highlighted in purple. EU list of non-cooperative jurisdictions consists of all jurisdictions that have appeared on the list since 2016.*

Next, we identify places with high relative as well as absolute numbers of tax professionals. Taking absolute numbers into account is necessary to understand where the majority of tax services are provided from and identifying 'tax coordination centers'. Figure 3D shows the absolute number of tax service professionals in countries (y-axis) and the number of tax professionals relative to population (x-axis). The graph is divided into a matrix, where the grid represents for each dimension the median plus the interquartile range – the range between the 1st quartile (25th percentile) and the 3rd quartile (75th percentile)[4]. The lower left corner shows places where there are a low number of tax professionals and where they are not very concentrated. The lower right corner shows places with a small absolute number of tax professionals, but where they are very large relative to the local population. Here we find many of the 'sink' OFCs with low or no tax rates and with high levels of financial secrecy, but the low number of tax professionals suggests the interaction with clients is low relative to the large sums of profits being booked there. The upper right corner shows places where there are large numbers of tax professionals and where they are also very concentrated. Disaggregating the professional groups (Figure 3A-C) reveals that for all tax categories the coordination centers (upper right corners) are placed mostly in conduit OFCs (the United Kingdom (GB), the Netherlands (NL), Ireland (IE), Switzerland (CH), Belgium (BE) and Singapore (SG)) as well as the United States (US), Canada (CA), Australia (AU) and Italy (IT). Particularly corporate tax professionals use conduit OFCs as coordination centers.

[4] Using the median and interquartile range instead of the mean and standard deviation provides a more robust measure to outliers. In the case of normally distributed values, the robust measure is equivalent to the mean plus 1.35 standard deviations.

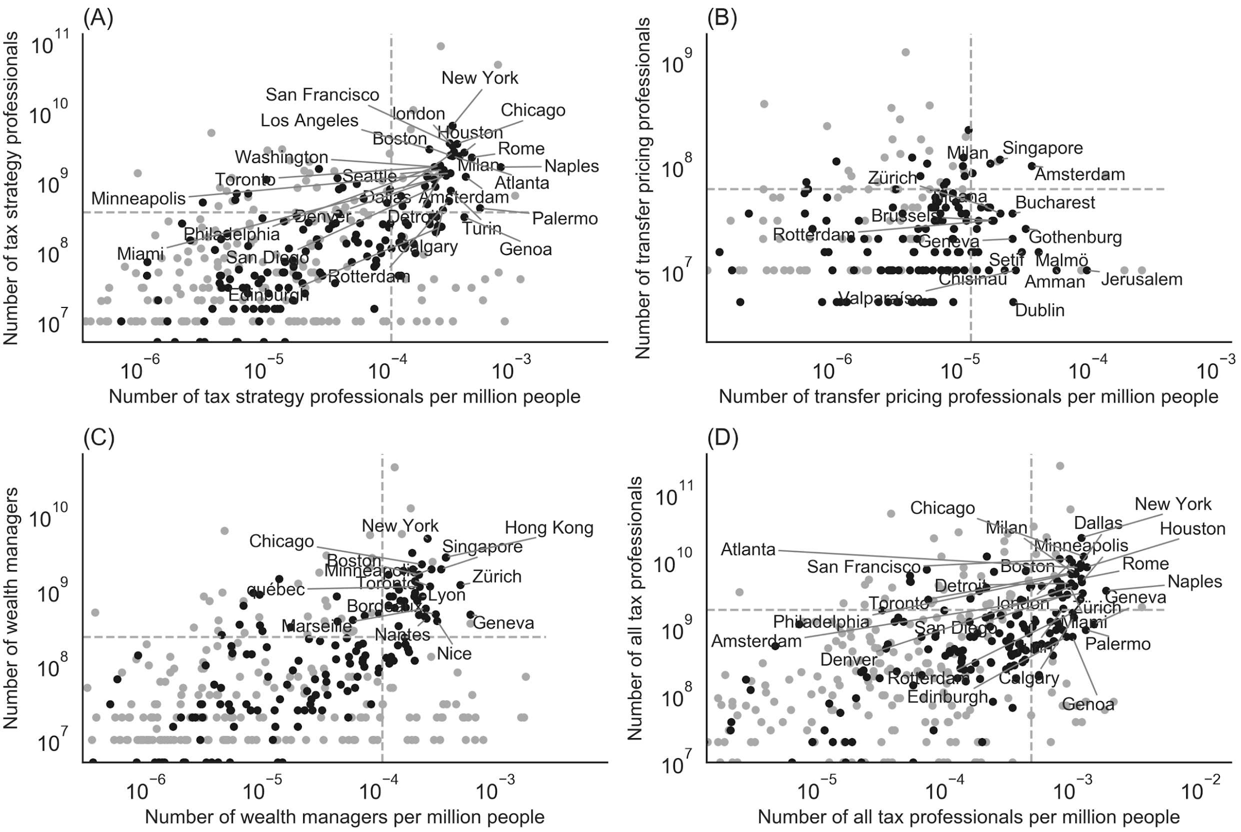
Figure 3: Tax professionals, countries



Notes: Number of professionals per capita vs absolute number of professionals for: (A) tax strategy professionals, (B) transfer pricing professionals, (C) wealth managers, and (D) all tax professionals. Dashed lines denote the median plus the interquartile range. Red countries are sink OFCs. Black countries are conduit OFCs. Gold countries are Canada, the United States and Australia. Purple countries represent the rest of the EU member states, and all other countries are visualized in gray.

In line with the 'Global City' literature, we should think of cities (instead of countries) as the coordination centers between the offshore and onshore, from which global tax-related flows are directed (Sassen, 1991, Parnreiter 2014). Professionals gather in urban spaces—they are not placed evenly across the territory of a country. In cities, tax professionals are able to tap into different networks, connecting and brokering diverse and distant operations and territories to wealthy individuals, corporate management and financial institutions through social interactions and relationships (Allen 2004, 2010, 2018). To get a more precise indication of where coordination centers are, we plotted the relative and absolute number of tax professionals in both cities and countries (Figure 4). We find similar patterns as for countries—but the concentration in cities provides an important nuance to the data, enabling us to distinguish between different types of cities, of which only some hold the right type of resources needed for tax professionals. For instance, New York has a much higher proportion as well as concentration of tax professionals than Washington D.C. Examples such as comparing New York and Washington, D.C. also indicates factors such as a large financial sector may be an important determinant of their presence. In the next section, we will systematically analyze what attributes of countries and cities are likely to predict a high presence of tax professionals, including the role of institutional features such as secrecy relative to the presence of a large financial sector.

Figure 4: Tax professionals, cities



Notes: x-axis shows number of tax professionals relative to population. Y-axis shows the absolute number of tax professionals. Both cities (in black) and countries (in gray) are included in the plot. Note that some jurisdictions are so small that they are identical to their main city (e.g., Luxembourg).

LOCATIONAL DETERMINANTS OF TAX PROFESSIONALS

The analysis of Section 4 indicates that coordination centers are generally not in the tax haven jurisdictions targeted by blacklists, but rather in cities in EU and OECD countries. But what are the attributes which determine whether a city becomes a hub for tax professionals? In this section, we study the variation in the concentration of tax professionals more systematically through regression analysis to find whether offshore activity, economic activity, managerial activity, or financial activity best explains the location of tax professionals. We estimate the locational determinants of tax professionals using the following model:

$$TP = \alpha + \beta_1 EA + \beta_2 FA + \beta_3 OA + \beta_4 MA + \beta_5 HNWI + \gamma\ Controls \qquad \text{(eq. 1)}$$

where TP is the location of the four groups of tax professionals: transfer pricing, tax strategy, wealth managers and all tax professionals as detailed in Section 3.2. Our main independent variables are economic activity (EA), financial activity (FA), managerial activity (MA), offshore activity (OA) and the location of high-net-worth individuals (HNWIs).[5]

First, we assess to what extent the global distribution of tax professionals is determined by economic activity. If tax professionals are a necessary aid to companies, then their location should correlate positively with economic activity. It is however not straightforward to measure economic activity in a way that is separated from the financial flows that can be generated by artificial profit booking (Damgaard, Elkjær and Johannesen 2019). We create three measures of the 'real' economy, the places in which physical capital is being invested, where innovation takes place, and where businesses sell their products: a) household consumption, which measures the demand-side economic activity as purchases of final goods and services; b) gross fixed capital formation measures total investment on tangible

[5] The exact operationalization, descriptive statistics, and the information of sources for all variables can be found in Table S2 in the supplementary material.

assets, which excludes financial flows; and c) the number of engineers on LinkedIn as a proxy for highly educated individuals who are working in productive industries. If tax service professionals are important to productive companies, then there should be a positive correlation between the two professional groups. These four measures are all intended to each capture part of the 'real' economy onshore and we use them all to ensure that our conclusions are not based solely on the choice of an imperfect indicator.

Second, we test the correlation with financial and business services. We expect a positive correlation given the importance of taxation for the financial sector (Hampton 1998). We employ two measures of financial activity. First, we use consolidated positions on counterparties resident in the country from BIS as a measure of the country's relevance in the global financial system. Second, we use the number of employees in the financial sector from LinkedIn as a measure of the importance of the financial sector in each country. We use one measure of business services activities: the number of accountants on LinkedIn, as this is a comparable profession to tax professionals, needed for the coordination of financial flows.

Third, we test the correlation between tax professionals and the centers of managerial control. We expect that tax professionals in coordination centers mostly service the 'managerial' part of multinational firms, rather than production lines. Therefore, we expect tax service professionals to be positively correlated with the number of managers. We collect the number of chief operating officers (COO’s) and chief financial officers (CFO’s) from LinkedIn to represent the location of the management. We exclude the number of chief executive officers given that it would include many freelancers and directors of small corporations (see Section S2 for a detailed data quality check).

Fourth, we test the correlation between the number of tax professionals and three measures related to offshore activity, as it might also be the case that tax services are facilitated from within offshore jurisdictions. The first and second measures of offshore activity are based on the financial secrecy score and the corporate tax haven score from Cobham, Janský and Menzer (2015). These scores rank countries according to more than 20 indicators related to financial secrecy or corporate tax avoidance. The third measure of offshore activity uses the approach from Tørsløv, Wier and Zucman (2018), which estimates the profits shifted by multinational corporations (see Section S3 for a more detailed explanation).

Fifth, we test the correlation between tax service professionals and the number of high-net-worth individuals. We assume that some of the tax service professionals, particularly wealth managers, service high-net-worth individuals. Therefore, we expect that these are positively correlated. We use data from Credit Suisse on the number of millionaires by country.

Finally, we identified some confounding factors, and include them in our regressions. First, the population will be the main factor affecting the number of tax professionals[6]. Likewise, we included the number of LinkedIn users in the country. Second, countries with higher tax rates may increase the demand for tax services. As such, we include the corporate income tax rate. Next, we expect countries with good governance and high credit ratings to attract higher investments and with them a higher presence of tax professionals. We operationalize governance using a mix of the six dimensions of the Worldwide Governance Indicators project.[7] We include the Trading Economics credit rating, composed from the credit ratings by Moody's, S&P, Fitch and DBRS. The average wealth of the country may also affect the ability to hire tax professionals. We included GDP per capita to account for this. Finally, we also include the complexity of the tax system using the time to prepare and pay taxes, since more complicated tax systems require more professional expertise even without the aim of avoiding taxes.

Our data is not complete for all variables. LinkedIn data is complete for all countries that do not face U.S. sanctions (Cuba, Syria, Sudan, North Korea and Iran). However, data from the World Bank and other sources is missing for some countries, especially small OFCs, where we expect a relatively large proportion of tax professions to locate. Since the data is not missing completely at random, dropping the jurisdictions where data is not available

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[6] Since we are log-transforming the variables, using population as a control is identical to using the per capita version of the variables: log (X/population) = log(X) - log(population)

[7] The six dimensions are voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption. The mix was created as a weighted sum of the variables with the weights 0.374, 0.367, 0.425, 0.414, 0.434, 0.430. The weights were calculated using principal component analysis, which calculates a linear, orthogonal decomposition of the dimensions in such a way that the first component accounts for the maximum amount of variability (in this case 84%).

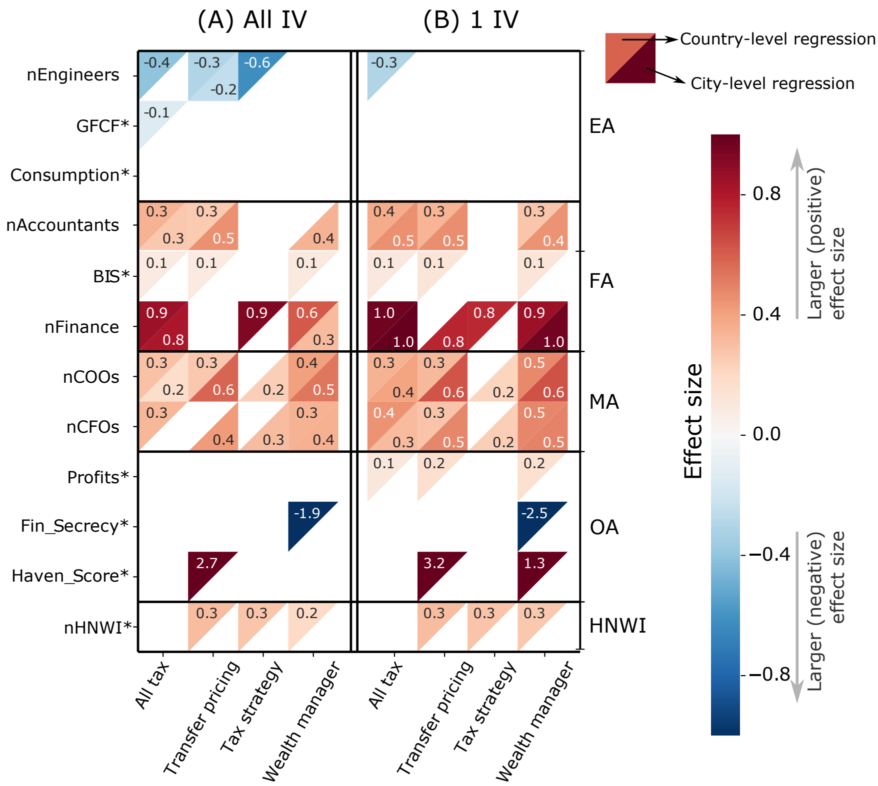
will result in biases. In order to avoid this, we imputed the missing data and ran the regressions in both the imputed and the original datasets. Firstly, we manually added the values of population and GDP for 24 missing countries, using external sources linked in the Wikipedia page of those countries. Second, we employed *KNN* (K-nearest neighbors) imputation to perform the imputation. For each country, the five most similar countries are found and their average used to impute the missing data. This was carried out using the *fancyimpute* package in Python. In order to avoid giving variables with larger values a larger weight, we scaled the variables before the imputation using the standard function BiScalar function. This gives equal importance to all variables and improves the quality of the data imputation (Hastie et al 2014). After the imputation we re-scaled the variables back to their original magnitude. Table S2 (supplementary material) shows the descriptive statistics for both the original and imputed datasets.

Since our independent variables are positively correlated, we ran two versions of the regressions in each dataset, one in which we included all the variables, and one in which we include each independent variable separately. The location of HNWI is only included to analyze the location of wealth managers. For the regressions where all the variables are included, there are several possibilities for each independent variable. For instance, when we are testing the effect of managerial control on the number of tax strategy professionals, we need to choose an operationalization of economic activity (consumption, gross fixed capital formation, number of engineers or number of accountants). We use principal component analysis (PCA) in the imputed dataset to combine the variables into one component (Section S4). The PCA weights calculated using the imputed dataset were used also to combine the variables in the original dataset and the city-level dataset.

Regressions are done at the country level as well as the city level (Section S5 and S6 in the supplementary material), with two important differences. Firstly, we do not have any measure of offshore activity at the city-level, and as such we excluded this independent variable from the analysis. Secondly, with the exception of population data from the United Nations, all our variables in the city-level regressions come from LinkedIn. In order to overcome the lack of data at the city level we run random intercept models, where each country has its own intercept. This allows us to control for country-level variables such as human capital, governance, the use of English, etc. The descriptive statistics of the variables present in this dataset can be found in Table S2 in the appendix.

Figure 5 summarizes the results of the 140 regressions using the country-level imputed dataset and the city-level dataset. The country-level dataset without imputation contains fewer observations and it is used as a robustness check (Figure S2). Figure 5 summarizes the effect sizes of the independent variable (rows) on the dependent variable (columns). The independent variables are grouped with horizontal lines in five groups: economic activity (EA), financial activity (FA), managerial activity (MA), offshore activity (OA) and high-net-worth individual activity (HNWI). Figure 5A visualizes the effect sizes in the regressions using all independent variables. Figure 5B contains the regressions adding the independent variables one by one. Each combination of dependent and independent variables has two triangles. The top triangle corresponds to the country-level regression and the bottom triangle corresponds to the city-level regression. Red colors indicate positive coefficients, blue colors indicate negative coefficients and white indicates a non-significance relationship at the 5% significance level. Variables at the country level (marked with an asterisk next to the names in the rows) are not used in the city-level regressions and their corresponding triangles are left white. All variables except for financial secrecy (Fin_Secrecy) and corporate tax haven score (Haven_Score) are log-transformed and the effect size can be interpreted in terms of percentage change. The financial secrecy and haven scores range from 40 to 100, and a 1-point increase in the score can be interpreted as increases or decreases to the number of the specific profession by a percentage equal to the effect size.

Figure 5. Effect sizes of the dependent variables.



Notes: *(A) All variables included as controls (B) Only the displayed independent variable included, in addition to the standard control variables from equation 1. Only statistically significant coefficients at the 5% significance level are displayed. Dependent variables available only at the country level are marked with an asterisk.*

The regression analysis provides a systematic analysis of the factors that are associated with the concentration of tax professionals. We find no consistent association with indicators of economic activity such as real investment (GFCF), consumption and number of engineers. This indicates that tax professionals are not located everywhere there is economic growth but rather in places that holds strategic importance. We find a positive correlation with other business services, such as accountants and the financial sector, suggesting that tax services co-locate with other business services, in line with global cities theory of concentrating to reap agglomeration effects (Sassen, 1991). We find an equally strong and significant relationship between the location of managers and tax professionals, indicating that it is particularly important for tax professionals to be able to coordinate with the managerial level of the firm.

While there seems to be a relationship between the financial secrecy (Fin_Secrecy) and corporate haven scores (Haven_Score) and the location of some tax professionals, the relationship disappears or reverses in the non-imputed dataset (Figure S3 in the supplementary material), making it not very robust. This confirms our previous findings in Section 4 that the places often considered tax havens and targeted on blacklists do not serve as coordination centers. Finally, we find a positive relationship between the number of high-net-worth individuals and the location of tax services. However, this relationship disappears in the original dataset, possibly due to the original low completeness of this variable. As high-net-worth individuals are hard to determine locations on and are furthermore very globally mobile, it is hard to say what significance their locations have for the location of their wealth managers. Overall, our regression results indicate a strong relationship with the location of finance and managerial control (Figure S4 in the supplementary material), and weak or no relationship with the location of economic and offshore activity.

DISCUSSION AND CONCLUSION

The complex nature of corporate ownership networks makes it hard for policy makers to target their efforts against corporate and individual tax avoidance. An illustrative example of tax avoidance comes from Google. Between 2012 and 2019, Google funneled $128 billion in profits from countries around the world into Bermuda. On the way to Bermuda, the profits were shifted first to subsidiaries in Ireland and Singapore, and then to the Netherlands (NOS, 2021). While Bermuda is a jurisdiction targeted by some tax haven blacklists, our research shows that the tax professionals responsible for these types of structures are more likely to be found in the intermediaries: Ireland, Singapore and the Netherlands. Blacklisting Bermuda would only result on those tax professionals finding a different tax structure.

The existence of offshore financial centers has become central to IPE debates in recent years as their importance for the governance of the economic and financial system has become clear (Sharman 2010, 2012a, Seabrooke and Wigan 2014). Scholars have increasingly discussed the role and regulation of offshore financial centers and services, variably placing at the center of the debate small tax havens (Sharman 2010; 2012, Fichtner 2016, Crasnic 2020, Haberly and Wójcik 2015), hegemonic states (Hakelberg 2016), professionals (Harrington 2016, Hearson 2018), multinational corporations (Seabrooke and Wigan 2017, Finér and Ylönen 2017) or international organisations (Büttner and Thiemann 2017, Christensen 2019, Sharman 2012b). Understanding the differentiated roles of these actors has implications for the effectiveness of chosen policy instruments. We focus on the role of professionals, as we see their role as vital in supplying the legal, financial and accounting expertise to multinational corporations, which serve the construction of new circuits of value and capital switching (Van Meeteren and Bassen 2016).

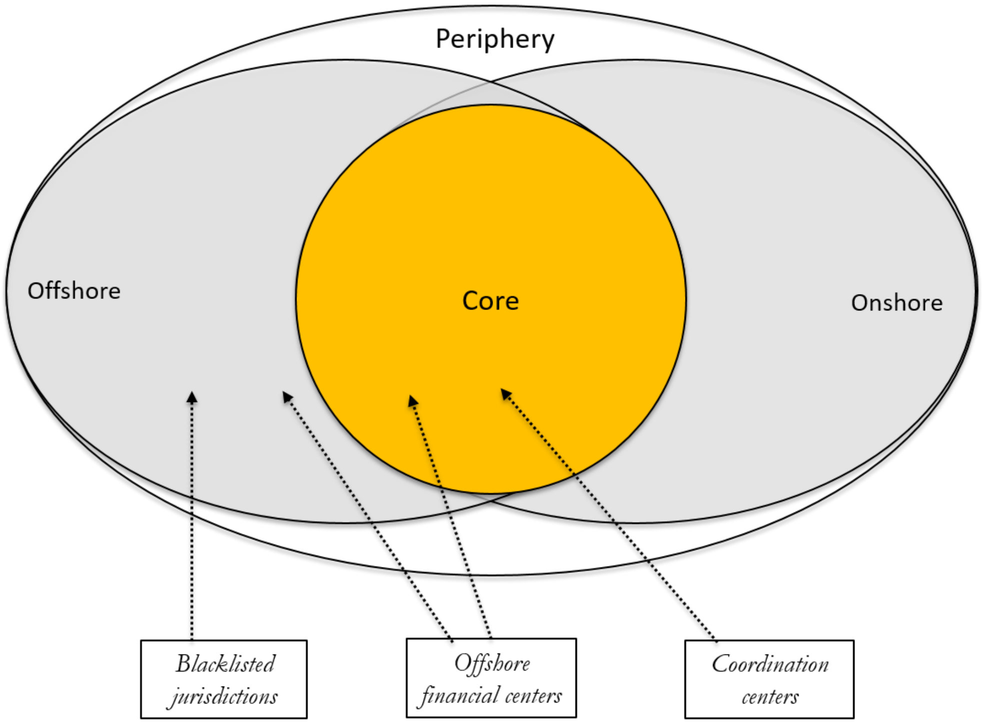
We create the first comprehensive map of tax professionals using data from the social network LinkedIn. Our findings confirm the hierarchical core-periphery structure of global capital flows, where coordination centers act as command and control centers for offshore finance, and smaller offshore jurisdictions are only central on paper. Using regression analysis, we show that tax professionals concentrate in coordination centers together with corporate management, finance, and other advanced business services. We find no relationship between the location of tax professionals and the location of real economic activity, financial secrecy, or corporate profits. We find that the most important coordination centers are in the Netherlands, Luxembourg, Switzerland, the United Kingdom, the United States, Canada, Australia, Hong Kong and Singapore. Tax professionals are more active within the countries that compile tax haven blacklists than in the jurisdictions which end up blacklisted.

Our results indicate that tax professionals are located in EU and OECD countries, in the larger cities where finance and managerial activity resides. The overlap between offshore financial centers and tax professionals' coordination centers is therefore only partial, and the overlap between tax professional locations and the blacklisted OFC's is even more limited. This confirms that the coordination centers where tax professionals are coordinating tax-avoiding capital are not spread out through all economies, nor enclaved in offshore tax havens, but are rather placed in cities where they can enjoy close proximity to managerial and financial centers. We don't intend to promote or identify an alternative state based 'blacklist' strategy. Our aim is to underscore how authority has shifted to private actors, whose geography is not limited to the territories in which tax-minimizing institutions are available, but whose networked and city-based geography enable them to coordinate global tax-motivated capital flows in adaptive ways as legal frameworks change.

Figure 6 illustrates our findings of where tax professionals concentrate in 'tax coordination centers'. The classical depiction of 'core' and 'periphery' countries is overlaid with the more ambiguous spheres of 'offshore' and 'onshore'. While 'offshore' suggests a bounded geography, there is in fact a large overlap between onshore and offshore jurisdictions, and many jurisdictions can in practice serve as onshore for some purposes and offshore for others. The overlap between onshore and offshore is what is conceptualized in 'midshore' (Coe, Lai and Wójcik 2014; The Economist 2013) as well as some types of 'conduit' offshore financial centers. As shown previously (see figure 2), OFC's are found in both core and periphery countries, at least if we define the core by EU or OECD membership. The blacklisted jurisdictions however consist only of periphery countries (non-EU and non-OECD). The tax professionals are situated and concentrated within large cities in core countries. Their city-based geography underscores the rescaling of power (Brenner 1998).

Figure 6 shows the asymmetrical relationship between the OFC's in the periphery and the OFC's in the core, in which only (some of) the peripheral OFC's are targeted by blacklists. The implication here is that core countries are hypocritical in targeting only some OFC's and that the process of listing countries is, not surprisingly, highly politicized. This hypocrisy is called out by the head of the Samoan International Finance Authority, Tuifaasisina: "To fully understand this matter, you have got to appreciate the role of larger economies in offshore structures… the key levers of the offshore industry are located in bigger countries." (Lyons 2021). While the role of offshore financial centers, including both the ones in the core and in the periphery, should not be underestimated, our research underlines that even targeting all OFC's with instruments such as blacklists does not target the coordination of tax avoidance. We add another point to the picture in terms of the location of 'Coordination centers'.

Figure 6. Location of blacklisted jurisdictions, offshore financial centers and coordination centers.



Turning back to the notion of the importance of infrastructural power (Mann 2008, Braun and Gabor 2020, Braun 2020), we suggest that the control over offshore infrastructure is only partially held by the states who are themselves OFC's and is to a large degree controlled by the tax professionals whose intermediation create offshore financial structures and transactions (Harrington 2016, Harrington and Seabrooke 2022, Christensen, Seabrooke and Wigan 2020, Wójcik 2020). Coordination centers are a form of infrastructure for the provision of tax minimization, as the clustering means they act as channels for tax professionals to share knowledge and innovate (Sassen 1991). Mapping their location underlines an even larger asymmetry to the targeted jurisdictions. The location of Coordination Centers reflects the core-periphery structure of the world economy: even though capital flows are global and everywhere, they are managed from a powerful core and only then sent out into periphery structures to take advantage of other offshore jurisdictions (Parnreiter, 2014; Van Meeteren and Bassen, 2016). The current political instruments being used is therefore akin to the core blacklisting the periphery, when offshore finance is actually handled through coordination centers in the core.

The current focus on small, ’non-cooperative’ states will not be effective in curbing tax avoidance if no effort is made towards changing the boundaries of the work of tax professionals who facilitate tax avoidance. Tax professionals may still be able to find loopholes and alternative locations to construct multijurisdictional tax avoidance schemes, even in the face of formal reforms in some of the targeted locations. This leads us to argue that tracking the professionals in charge is important in governing this issue, on par with tracking the institutional and financial characteristics of jurisdictions. Rather than merely focusing on ‘blacklisting’, a multipronged approach to governing the issue which considers how these professionals may be influenced, is important. Killian et al (2020) find that softer initiatives aimed at changing norms within professional bodies and the ethos of large organisations which employ tax professionals is an important vein of influence, together with expert activists and professionals themselves (Tsingou 2018, Seabrooke and Wigan 2016). Radcliffe et al (2018) also find that tax professionals are impacted by changing moral perceptions of tax, and consider the reputational costs of tax minimization strategies for their clients. Our results show that such norm-changing initiatives would carry the most weight if they were not mainly targeting the places figuring on the EU and OECD blacklists, but rather they would target tax professionals in the larger cities of EU and OECD countries themselves. It also means that if governments who lose revenues to offshore tax avoidance are serious about reforming the international tax regime, as recent efforts at the OECD level suggests (OECD), they may be able to create significant change without the cooperation of all offshore financial centers.

As these professionals are not only facilitators for firms’ tax minimization, but also advice governments on how tax systems should be structured through their consulting with governments (Elbra, Mikler and Murphy-Gregory 2020, PAC 2013), these geographical patterns hold importance beyond understanding the futility and hypocrisy of tax haven ‘blacklists’. Professionals are important for regulatory processes and therefore may gain influence in the places they concentrate. Previous research has claimed that some small OFCs are captured by tax professionals to promote favorable legislation (Christensen and Hampton, 1999). This could also be the case in coordination centers if their technical expertise provides them with access to politicians and high-level bureaucrats (Christophers, 2016; Seabrooke and Tsingou, 2021; Abbott, Levi-Faur and Snidal 2017). Their geography may also be important for the trajectory of future modes of tax minimization, as the global tax regimes is presently in flux and both regulations and moral perceptions are changing (Radcliffe et al 2018). As such, their location and intra-network relationships may have implications for the future development of state policies and the configuration of corporate structures. By systematically mapping them, we show where they are likely to be able to act as intermediaries or advisors in regulatory processes.

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APPENDIX

Supplementary Figures

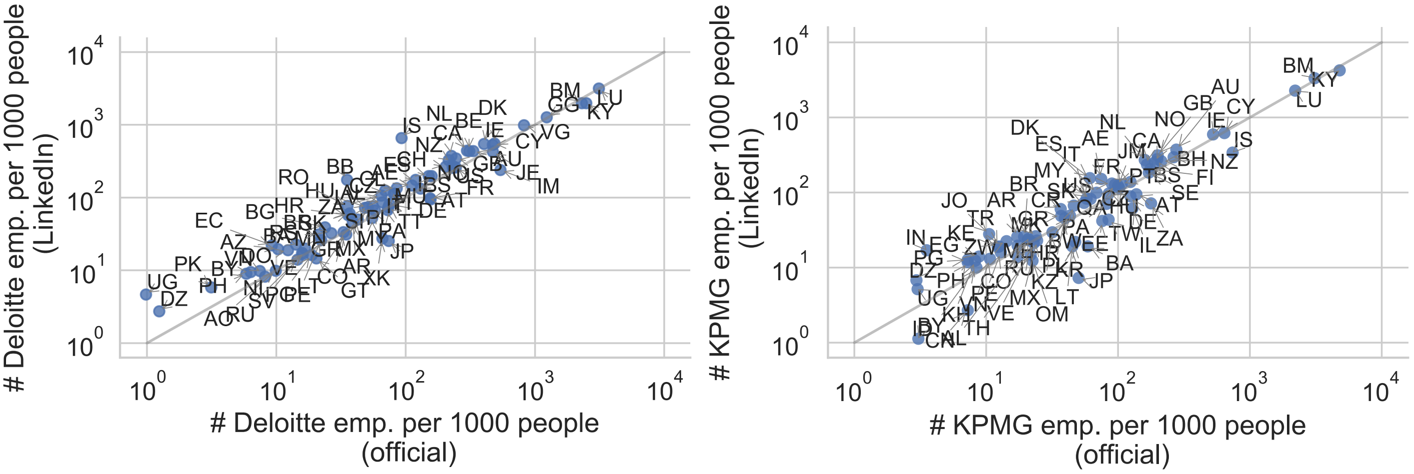

Figure S1: Data verification. *Number of employees per 1000 people according to the local Deloitte and KPMG websites—versus number of employees per 1000 people according to LinkedIn.*

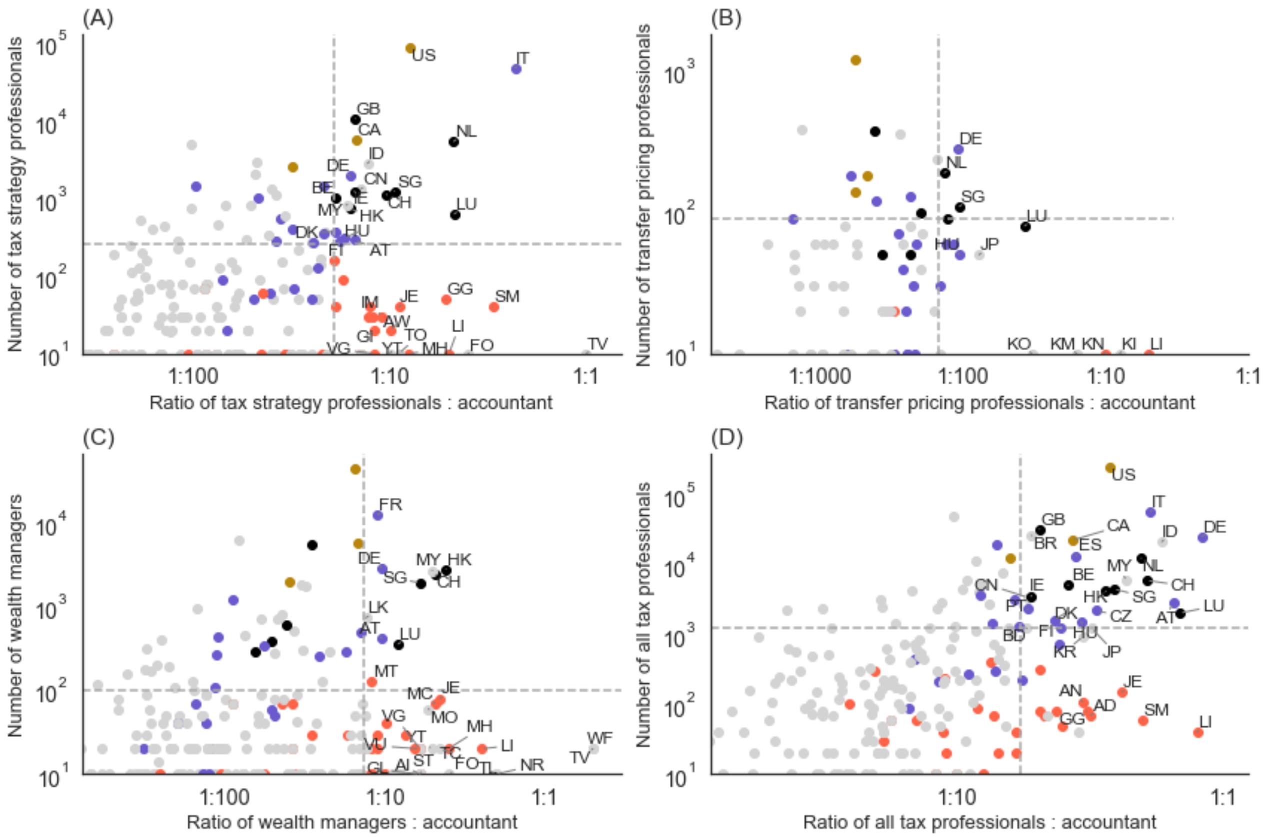

Figure S2: *Number of professionals per capita vs absolute number of professionals for: (A) tax strategy professionals, (B) transfer pricing professionals, (C) wealth managers, and (D) all tax professionals. Dashed lines denote the median plus the interquartile range. Red countries are sink jurisdictions. Black countries are conduit jurisdictions. Gold countries are Canada, the United States and Australia. Purple countries are the rest of the EU member states, and all other countries are visualized in gray.*

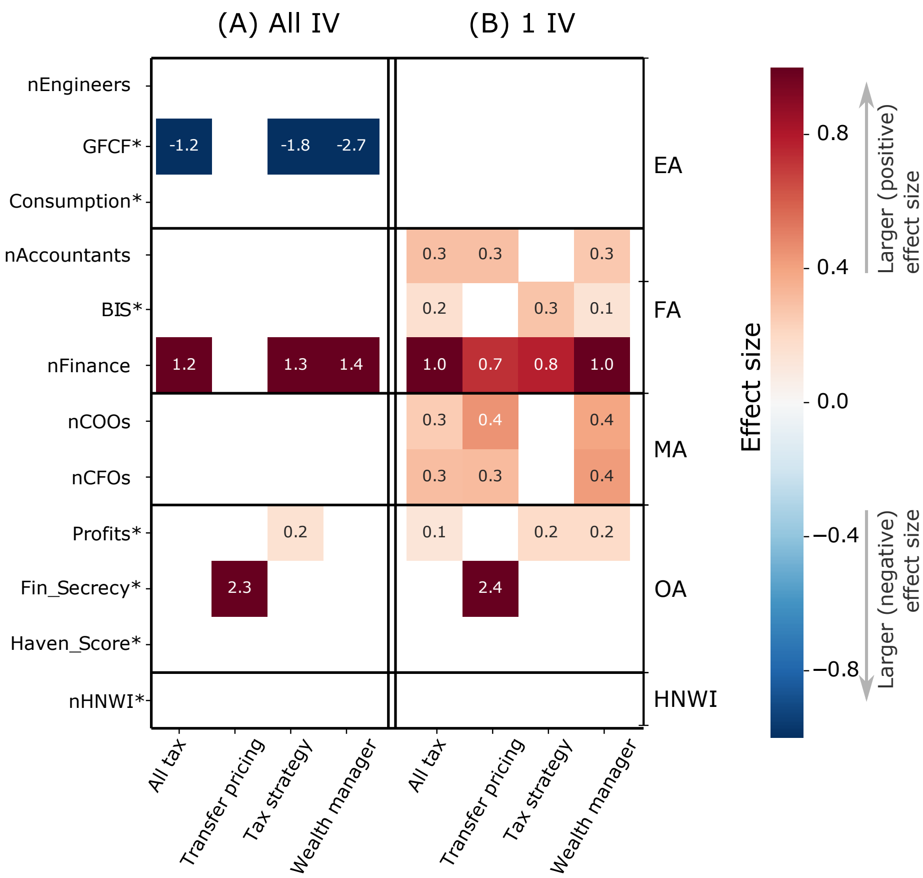

Figure S3: Robustness check using the original dataset. *The minimum number of observations is 26 for the regression looking at the effect of HNWI on the number of transfer pricing professionals and including at the same time all other independent variables. The maximum number of observations is 131, for the regression looking at the effect of the number of engineers on the number of all tax professionals (see Supplementary tables).*

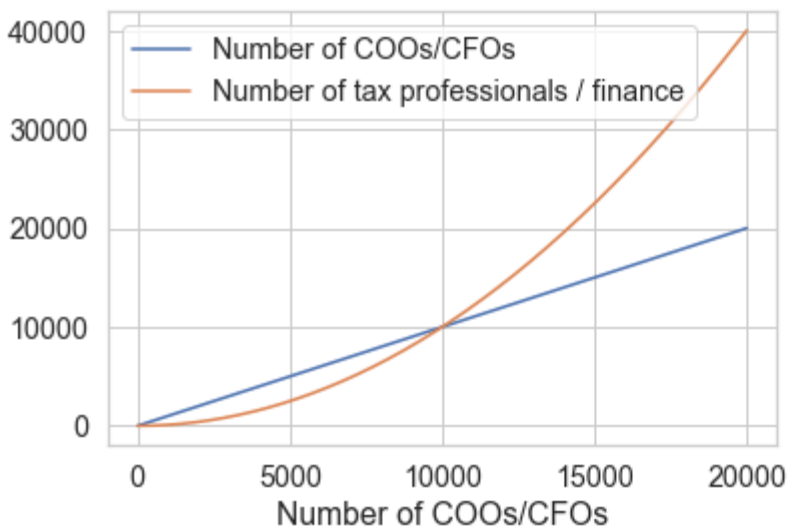

Figure S4: Relationship between the location of managers (blue) and the location of tax professionals and finance (orange).

Tables

Target	Job Titles
Tax strategy	corporate tax, international tax, tax director, tax manager
Transfer pricing	transfer pricing
Personal tax services	wealth manag* (all titles containing wealth manag, such as wealth manager or wealth management)
All tax professionals	tax partner, tax lawyer, tax advisor, tax consultant, tax counsel, tax accountant, transfer pricing, corporate tax, international tax, tax director, tax manager, tax specialist, wealth manag*
Accountant	accountant (excluding all titles with the word "tax")
CEO/CFO/COO	chief executive officer/chief financial officer/chief operating officer
Engineer	engineer
CXO	The number of chief executives was collected using the pre-established LinkedIn filter "Job Experience: Job Seniority: CXO," and company size of at least 1000 employees.
Financial sector	The number of employees in the financial sector was collected using the pre-established LinkedIn filter "Job Experience: Job Functions: Financial."

Table S1. Operationalization of our search strategy. *For targets 1-4, we excluded the profiles matching the following job titles: tax compliance manager, tax preparer, tax audit, tax inspector, tax collector, tax examiner, tax preparer, revenue agent. The list of inclusion and exclusion was created manually based on the options containing "tax" provided by the campaign manager. LinkedIn automatically translates all titles in local languages to English.*

	Indicator	Operationalization	Country Imputed	Country	City	Year and source
DV	All tax professionals	Log10 of the audience reached in Linkedin with the job titles detailed in Table 1.	2.37 (0.94) N: 207	2.38 (0.95) N: 203	2.53 (0.91) N: 215	Feb. 2019 LinkedIn
	Transfer pricing		0.60 (0.82) N: 207	0.61 (0.83) N: 203	1.36 (0.34) N: 207	
	Tax strategy		1.68 (0.93) N: 207	1.69 (0.94) N: 203	1.89 (0.79) N: 214	
	Wealth management		1.62 (0.81) N: 207	1.63 (0.81) N: 203	1.78 (0.78) N: 215	
IV: EA	nEngineers	Log10 of the audience reached on LinkedIn with the title "engineer"	3.89 (0.97) N: 207	3.89 (0.97) N: 203	3.93 (0.72) N: 215	Feb. 2019 LinkedIn
	nAccountnts	Log10 of the audience reached on LinkedIn with the title "accountant", excluding "tax accountant"	3.46 (0.83) N: 207	3.46 (0.83) N: 203	3.24 (0.80) N: 215	Feb. 2019 LinkedIn
	GFCF	Log10 of gross fixed capital formation (constant 2010 USD)	9.86 (0.96) N: 207	10.15 (0.90) N: 143		Mean 2014-2018 NE.GDI.FTOT.KD
	Consumption	Log10 of final consumption expenditure by households and non-profit institutions serving households (constant 2010 USD)	10.28 (0.95) N: 207	10.56 (0.89) N: 148		Mean 2014-2018 NE.CON.PRVT.KD
IV: FA	BIS	Log10 of the sum of consolidated positions on counterparties (USD). Table B4 of the Consolidated banking statistics.	3.88 (1.21) N: 207	3.94 (1.23) N: 187		Q3 2018 Bank for International Settlements.
	nFinance	Log10 of the audience reached in Linkedin with the job function Finance	3.84 (0.86) N: 207	3.84 (0.86) N: 203	3.78 (0.85) N: 215	Feb. 2019 LinkedIn

IV: MA	nCOOs	Log10 of the audience reached in Linkedin with the job title COO	2.23 (0.84) N: 207	2.24 (0.85) N: 203	2.21 (0.83) N: 215	Feb. 2019 LinkedIn
	nCFOs	Log10 of the audience reached in Linkedin with the job title COO	2.37 (0.83) N: 207	2.38 (0.84) N: 203	2.29 (0.86) N: 215	Feb. 2019 LinkedIn
IV: OA	Profits	Log10 of the misaligned profits (USD) with a minimum cut of $1 billion	9.20 (0.44) N: 207	9.44 (0.63) N: 73		2019 missingprofits.world
	Financial Secrecy Score	Financial Secrecy Score, by the Tax Justice Network	0.47 (0.33) N: 207	0.65 (0.11) N: 98		2019 TJN
	Corporate Tax Haven Score	Corporate Tax Haven Score, by the Tax Justice Network	62.15 (14.34) N: 207	65.39 (16.92) N: 61		2019 TJN
IV: HNWI	nHNWI	Log10 of the number of high net worth individuals (adults with wealth above 50 millions)	0.74 (0.98) N: 207	1.07 (1.06) N: 132		Global Wealth Report 2018 by Credit Suisse
Controls	Audience	Log10 of the number of profiles on Linkedin by country (using the Campaign Manager)	5.55 (0.86) N: 207	5.56 (0.87) N: 203	5.45 (0.72) N: 215	Feb. 2019 LinkedIn
	Population	Log10 of population. The missing population (24 countries) was added manually.	6.67 (0.99) N: 207	6.66 (1.00) N: 203	6.28 (0.41) N: 215	Mean 2014 - 2018 SP.POP.TOTL (WBD)
	Credit Rating	Trading Economic credit rating, composed from the credit ratings by Moody's, S&P, Fitch and DBRS	49.00 (24.35) N: 207	52.60 (26.26) N: 144		Feb. 2019 tradingeconomics.com
	English speaking	Official language 1 in the CEPII GeoDist dataset	0.27 (0.44) N: 207	0.26 (0.44) N: 189		Mayer, T. and Zignago, S. (2011)
	Governance	First PCA component of the six dimensions of the Worldwide Governance Indicators project	0.01 (2.17) N: 207	0.04 (2.22) N: 184		info.worldbank.org
	CIT	Statutory corporate tax level	0.21 (0.14) N: 207	0.23 (0.09) N: 179		Mean 2014 - 2018, Janský, Petr;

						Palanský, Miroslav (2019)
	Tax complexity	Time to prepare and pay taxes (hours)	235.81 (197.54) N: 207	246.71 (208.97) N: 175		Mean 2014 - 2018, IC.TAX.DURS (WBD)
	GDP per capita	Log10 of gross domestic product divided by population. The missing data on GDP and population was added manually	3.60 (1.07) N: 207	3.58 (1.08) N: 194		Mean 2014 - 2018, NY.GDP.MKTP.KD / SP.POP.TOTL

Table S2: List of variables and sources

Section S1. Minimum audience in LinkedIn

A minor obstacle using the LinkedIn Campaign manager is that it does not show results when the maximum audience falls below 300 people. In order to collect this information, we started by adding a jurisdiction with an audience between 300 to 400 people. Then, we added each of the remaining 230 jurisdictions and subtracted the base audience. For instance, if the audience of wealth managers in Luxembourg is 380 people, and the audience of wealth managers in Serbia is 30 people, we would add both countries and find the combined audience of 410 people, from which we subtracted the 380 people from Luxembourg.

Section S2 Comparisons with Eurostat:

Apart from the data on tax professionals, we collected LinkedIn data targeting profiles related to the non-financial economy, managerial control and the financial sector. In order to understand if our sample is representative across countries, we obtained data from Eurostat on those related professions. For instance, we compared the number of engineers on LinkedIn with the number of scientists and engineers according to Eurostat, or the number of COOs with the number of companies with at least 250 employees in Eurostat. The list of comparisons is:

Credit institutions: number of persons employed (Eurostat table: tin00016).

Accountants: Accounting, bookkeeping and auditing activities; tax consultancy (Eurostat table: sbs_na_1a_se_r2).

Engineers: Scientists and engineers from 25 to 64 years (Eurostat table: hrst_st_nocc).

CEO/CXO/COO/CFO: Number of enterprises in the non-financial business economy with at least 250 persons employed (Eurostat table: tin00145)

The correlation between the per capita counts are 35% (CEO), 47% (CXO), 57% (financial sector), 58% (CFO), 59% (COO), 72% (Accountant) to 80% (Engineers). The correlations are very high for the two titles with the most comparable definitions (accountants and engineers), and relatively good for the loosely related titles (CFO, COO and financial sector). We excluded the CEO and CXO matches from the analyses since many freelancers and owners of small companies use the CEO title[8]. While the focus on Eurostat does not guarantee that the pattern

[8] According to the campaign manager, there are 1.6 million chief executives in the United States. However, the occupational employment statistics (https://www.bls.gov/oes/current/oes111011.htm) record only 195,530 in

extends outside of the European Union, we only use these variables as robustness tests in our regression analysis.

Section S3:

We used the updated data from 2019 (https://missingprofits.world/), and set all countries where the shifted profits were below US $1 billion was to $1 billion. This allows us to study the countries that receive profits from other countries, while at the same time keep the countries with negative shifted profits in the sample. We set the threshold was set by looking at the distribution of misaligned profits. The misaligned profits are below $1 billion for the majority of non-tax havens and the small tax havens, and go up to $117 billions in Ireland.

Section S4: PCA

PCA calculates a linear, orthogonal, decomposition of the variables in a way that the first decomposed component captures the highest amount of variability. If we would, for example, do a PCA analysis on a dataset containing population and GDP, the first component would likely capture the size of the country (which affects both population and GDP), while the second component would capture something similar to GDP per capita. In order to give the same weight to all variables, we first normalized them and calculated the first component of PCA to combine them. Our combined variable accounts for 95%, 98%, 85% and 57% of the variance in the variables measuring economic, managerial, financial and offshore activities.

Section S5: List of jurisdictions studied

Algeria, Barbados, Ghana, Hungary, Mozambique, Swaziland, Montenegro, Isle of Man, Fiji, Namibia, Albania, Jordan, Timor-Leste, United Arab Emirates, Belgium, Senegal, Serbia, Cameroon, China, Afghanistan, Guatemala, Sierra Leone, Tonga, Chad, Paraguay, Mauritania, Equatorial Guinea, Singapore, Tanzania, Netherlands, Estonia, Kiribati, Norway, Tunisia, Nepal, Bosnia and Herzegovina, Malaysia, Denmark, United States, Slovak Republic, Hong Kong, Seychelles, Madagascar, South Sudan,

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May 2018. We tried to correct for this by selecting only companies with at least 1000 employees for CXOs. Given the lower correlation (47%) and that this filter would bias the results in sectors where large companies do not have a LinkedIn account, we decided to exclude the results of CXO with the company size filter as well.

Martinique, Bahrain, Korea, Cayman Islands, Gibraltar, South Africa, Switzerland, Niue, Spain, Moldova, Azerbaijan, Gambia, Bulgaria, Chile, Guyana, Marshall Islands, Macao, Belize, Myanmar, Malta, Nauru, Dominica, Sri Lanka, Turkmenistan, Sweden, Wallis and Futuna, Benin, Western Sahara, Andorra, Peru, Russian Federation, Guinea-Bissau, Bermuda, Ecuador, Ethiopia, Uganda, Equatorial Guinea, Malawi, Qatar, Samoa, Tajikistan, Colombia, Comoros, Croatia, France, Vietnam, Belarus, Cook Islands, Vatican City State (Holy See), India, Turks and Caicos Islands, Burkina Faso, Honduras, Democratic Republic of the Congo, Nicaragua, Morocco, Yemen, Lebanon, Latvia, Saint Vincent and the Grenadines, Dominican Republic, Finland, Haiti, Rwanda, Venezuela, Brazil, Norfolk Island, Botswana, Nigeria, Ireland, American Samoa, Bahamas, Faroe Islands, Bhutan, Congo, Romania, British Indian Ocean Territory, Northern Mariana Islands, Brunei Darussalam, Armenia, Costa Rica, Cape Verde, Eritrea, Portugal, Djibouti, Mali, Kuwait, Liberia, Grenada, Canada, Poland, Japan, Austria, Mauritius, Gabon, Slovenia, Pakistan, Kyrgyzstan, Niger, Papua New Guinea, Palestinian Territory, San Marino, Iceland, Czech Republic, Virgin Islands (U.S.), Mayotte, Zimbabwe, Vanuatu, Virgin Islands (British), Liechtenstein, Falkland Islands (Malvinas), Jersey, Sao Tome and Principe, Kenya, Philippines, Netherlands Antilles, Montserrat, Aruba, New Zealand, Puerto Rico, Bangladesh, Thailand, Macedonia, Solomon Islands, Laos, Israel, Kazakhstan, Guernsey, Guadeloupe, Lesotho, Georgia, Indonesia, Suriname, Somalia, Argentina, Iraq, Turkey, Australia, Cote D'Ivoire (Ivory Coast), Monaco, Saint Helena, Greece, Luxembourg, Palau, Saint Kitts and Nevis, Italy, Bolivia, Mexico, Kosovo, Germany, French Southern Territories, Cyprus, Federated States of Micronesia, Guam, Ukraine, Togo, Saint Lucia, Uruguay, Reunion, Trinidad and Tobago, Uzbekistan, Mongolia, Burundi, Muscat Governorate, Oman, Cambodia, Aland Islands, Egypt, Lithuania, Zambia, Tuvalu, Jamaica, French Guiana, Greenland, United Kingdom, New Caledonia, El Salvador, Pitcairn, Anguilla, Angola, Saudi Arabia, Panama, French Polynesia, Antigua and Barbuda, Central African Republic, Taiwan, Maldives, Libya.

Jurisdictions with a total audience (number of people reached in the location with no filters) below 10,000 were discarded: Falkland Islands, British Indian Ocean Territory, Montserrat, Norfolk Island, Niue, Pitcairn, Saint Helena, Ascension and Tristan da Cunha, French Southern Territories, Vatican

Cuba, Syria, Sudan, North Korea and Iran are not available locations in Linkedin and were excluded. Curaçao, Sint Maarten, Bonaire, Saba and Sint Eustatius are considered one location for Linkedin and were combined into the Netherlands Antilles. Aruba, which seceded before the dissolution of the Netherlands Antilles, is not included within the Netherlands Antilles in LinkedIn.

Section S6: List of cities studied

We analyzed the 566 cities with a population of at least 500,000 starting from data from the United Nations (http://data.un.org/Data.aspx?d=POP&f=tableCode%3a240). We complemented this list with the list of global financial centers (https://en.wikipedia.org/wiki/Global_Financial_Centres_Index#cite_note-GFCI-6) for a total of 617 cities. We then matched those cities to the cities available in LinkedIn. The coverage from Korean and Ukrainan cities was poor compared with the LinkedIn coverage in Korea and Ukraine, which indicates that users in Korea and Ukraine do not provide their region. We deleted the data to avoid underestimating the users in those two countries. We finally manually ensured that all major Western cities were included in the sample. The final number of cities matched was 311.

Adelaide, Australia South Australia; Ahmedabad Area, India Gujarat; Al-Riyadh Governorate, Saudi Arabia Saudi Arabia; Alexandria Governorate Egypt; Algiers Province Algeria; Amman Governorate Jordan; Amsterdam Area, Netherlands North Holland Province; Antwerp Area, Belgium Flanders; Arequipa Region Peru; Asunción Province, Peru Ancash Region; Athens, Georgia Area Georgia; Auckland, New Zealand New Zealand; Bahrain Middle East; Baltimore, Maryland Area Maryland; Bandar Lampung Area, Lampung, Indonesia Indonesia; Bandung Area, West Java, Indonesia Indonesia; Bangkok Thailand; Banjarmasin Area, South Kalimantan, Indonesia Indonesia; Barcelona Area, Spain Catalonia; Basel Area, Switzerland Canton of Bern; Batna Province Algeria; Beijing China; Beirut Governorate Lebanon; Belo Horizonte Area, Brazil Minas Gerais; Belém Area, Brazil Pará; Bengaluru Area, India Karnataka; Berlin Germany; Bermuda Latin America; Bhopal Area, India Madhya Pradesh; Bilbao Area, Spain Basque Country; Birmingham, Alabama Area Alabama; Biskra Province Algeria; Blida Province Algeria; Bogotá D.C. Department Colombia; Bordeaux Area, France Aquitaine; Brasília Area, Brazil Distrito Federal; Bremen Germany; Brisbane, Australia Queensland; Bristol, United Kingdom United Kingdom; Brussels Capital Region Belgium; Bucharest, Romania Ilfov County; Budapest Hungary; Buri Ram, Thailand Territories; Béjaïa Province Algeria; Cairo Governorate Egypt; Calgary, Canada Area Alberta; California United States; Campinas Area, Brazil São Paulo; Cape Town Area, South Africa South Africa; Caracas Venezuela; Casablanca Prefecture, Morocco Grand Casablanca; Cayman Islands Latin America; Chaiyaphum Thailand; Changchun, Jilin, China Jilin; Chelyabinsk Region, Russian Federation Russian Federation; Chengdu, Sichuan, China Sichuan; Chennai Area, India Tamil Nadu; Chiang Mai Thailand; Chiang Rai Thailand; Chiba, Japan Japan; Chiclayo Province, Peru Lambayeque Region; Chisinau, Moldova Moldova; Chlef Province Algeria; Chongqing China; Coatzacoalcos Area, Mexico Veracruz Llave; Cologne Area, Germany North Rhine-Westphalia; Concepción Province, Peru Junín Region; Constantine Province Algeria; Copenhagen Area, Denmark Capital Region; County Dublin, Ireland Leinster; Curitiba Area, Brazil Paraná; Cyprus Europe; Córdoba, Spain Andalusia; Dalian, Liaoning, China Liaoning; Dallas/Fort Worth Area Texas; Delhi India; Denpasar Area, Bali, Indonesia Indonesia; Djelfa Province Algeria; Dongguan, Guangdong, China Guangdong; Dortmund Area, Germany North Rhine-Westphalia; Dresden Area, Germany Saxony; Duisburg Area, Germany North Rhine-Westphalia; Durban Area, South Africa South Africa; Düsseldorf Area, Germany North Rhine-Westphalia; Edinburgh, United Kingdom United Kingdom; Edmonton, Canada Area Alberta; Essen Area, Germany North Rhine-Westphalia; Fortaleza Area, Brazil Ceará; Frankfurt Area, Germany Brandenburg; Fukuoka, Japan Japan; Geneva Area, Switzerland Canton of Geneva; Genoa Area, Italy Liguria; Gibraltar Europe; Giza Governorate Egypt; Glasgow, United Kingdom United Kingdom; Goiânia Area, Brazil Goiás; Gothenburg, Sweden Västra Götaland County; Greater Atlanta Area Georgia; Greater Boston Area Massachusetts; Greater Buenos Aires Argentina; Greater Chicago Area Illinois; Greater Denver Area Colorado; Greater Detroit Area Michigan; Greater Jakarta Area, Indonesia Indonesia; Greater Los Angeles Area California; Greater Minneapolis-St. Paul Area Minnesota; Greater Philadelphia Area Pennsylvania; Greater San Diego Area California; Greater Seattle Area Washington; Greater St. Louis Area Missouri; Guadalajara Area, Mexico Jalisco; Guadalupe Area, Mexico Nuevo León; Guangzhou, Guangdong, China Guangdong; Guatemala City Guatemala; Guernsey Europe; Guiyang, Guizhou, China Guizhou; Haerbin, Heilongjiang, China Heilongjiang; Hamamatsu, Shizuoka, Japan Japan; Hamburg Germany; Hangzhou, Zhejiang, China Zhejiang; Helsinki Area, Finland Southern Finland; Hiroshima, Japan Japan; Hong Kong Asia; Houston, Texas Area Texas; Hyderabad Pakistan; Indore Area, India Madhya Pradesh; Irbid Governorate Jordan; Istanbul, Turkey İstanbul Province; Jaipur Area, India Rajasthan; Jambi Province, Indonesia Indonesia; Jersey Europe; Jerusalem District Israel; Jinan, Shandong, China Shandong; Johannesburg Area, South Africa South Africa; Johor Malaysia; Kanpur Area, India Uttar Pradesh; Kawasaki, Kanagawa, Japan Japan; Khon Kaen Thailand; Kingston upon Thames, United Kingdom United Kingdom; Kitchener, Canada Area Ontario; Kobe, Hyogo, Japan Japan; Kolkata Area, India West Bengal; Kraków Area, Poland Poland; Krasnodar Territory, Russian Federation Russian Federation; Krasnoyarsk Territory, Russian Federation Russian Federation; Kuala Lumpur Malaysia; Kumamoto, Japan Japan; Kunming, Yunnan, China Yunnan; Kyoto, Japan Japan; Lahore Pakistan; Las Palmas De Gran Canaria Area, Spain Canary Islands; Leipzig Area, Germany Saxony; Liechtenstein Europe; Lille Area, France Nord-Pas-de-Calais; Lisbon Portugal; Liverpool, United Kingdom United Kingdom; London, United Kingdom United Kingdom; Lucknow Area, India Uttar Pradesh; Luxembourg Europe; Lyon Area, France Rhône-Alpes; Maceió Area, Brazil Alagoas; Madrid Spain; Maha Sarakham Thailand; Makassar Area, South Sulawesi, Indonesia Indonesia; Malmo, Sweden Skåne County; Malta Europe; Manaus Area, Brazil Amazonas; Manchester, United Kingdom United Kingdom; Marseille Area, France Provence-Alpes-Côte d'Azur; Mascara Province Algeria; Mauritius Africa; Medan Area, North Sumatera, Indonesia Indonesia; Melbourne, Australia Victoria; Mendoza Province Argentina; Mexico City Mexico; Miami/Fort Lauderdale Area Florida; Milan Area, Italy Lombardy; Monaco Europe; Monastir Governorate Tunisia; Monterrey Area, Mexico Nuevo León; Montreal, Canada Area Quebec; Moscow, Russian Federation Russian Federation; Mumbai Area, India Maharashtra; Munich Area, Germany Bavaria; Murcia Spain; Málaga Area, Spain Andalusia; Médéa Province Algeria; NCR - National Capital Region, Philippines Philippines; NWFP Peshawar Pakistan; Nagoya, Aichi, Japan Japan; Nagpur Area, India Maharashtra; Nakhon Ratchasima Thailand; Nakhon Sawan Thailand; Nakhon Si Thammarat, Thailand Territories; Nanjing, Jiangsu, China Jiangsu; Nantes Area, France Pays de la Loire; Naples Area, Italy Campania; Natal Area, Brazil Rio Grande do Norte; New Delhi Area, India Delhi; New York United States; Newcastle, Australia New South Wales; Nice Area, France Provence-Alpes-Côte d'Azur; Niigata, Japan Japan; Nizhny Novgorod Region, Russian Federation Russian Federation; Northern Punjab Rawalpindi Pakistan; Nottingham, United Kingdom United Kingdom; Nova Iguaçu Area, Brazil Rio de Janeiro; Novosibirsk Region, Russian Federation Russian Federation; Okayama, , Japan Japan; Omsk Region, Russian Federation Russian Federation; Oran Province Algeria; Osaka, Japan Japan; Ottawa, Canada Area Ontario; Padang Area, West Sumatera, Indonesia Indonesia; Palembang Area, South Sumatera, Indonesia Indonesia; Palermo Area, Italy Sicily; Panama Latin America; Paris Area, France Île-de-France; Pekanbaru Area, Riau, Indonesia Indonesia; Perm Territory, Russian Federation Russian Federation; Perth, Australia Western Australia; Phetchabun Thailand; Phoenix, Arizona Area Arizona; Port Elizabeth Area, South Africa South Africa; Port Said Governorate Egypt; Porto Alegre Area, Brazil Rio Grande do Sul; Poznań Area, Poland Poland; Prague, The Capital, Czech Republic Czech Republic; Pretoria Area, South Africa South Africa; Pune Area, India Maharashtra; Qingdao, Shandong, China Shandong; Quebec Canada; Recife Area, Brazil Pernambuco; Region IX - Zamboanga Peninsula, Philippines Philippines; Rio de Janeiro Brazil; Roi Et Thailand; Rome Area, Italy Lazio; Rosário do Sul Area, Brazil Rio Grande do Sul; Rotterdam Area, Netherlands South Holland Province; Saint Petersburg, Russian Federation Russian Federation; Saitama, Japan Japan; Salta Province Argentina; Salvador Area, Brazil Bahia; Samara Region, Russian Federation Russian Federation; Samut Prakan Thailand; San Francisco Bay Area California; San Juan Province Argentina; Santa Fe Province Argentina; Santiago Metropolitan Region Chile; Sapporo, Hokkaido, Japan Japan; Saratov Region, Russian Federation Russian Federation; Semarang Area, Central Java, Indonesia Indonesia; Sendai, Miyagi, Japan Japan; Shanghai China; Sheffield, United Kingdom United Kingdom; Shenyang, Liaoning, China Liaoning; Shenzhen, Guangdong, China Guangdong; Sidi Bel Abbès Province Algeria; Singapore Asia; Skikda Province Algeria; Sofia Province Bulgaria; Songkhla Thailand; Southern Punjab Multan Pakistan; Stockholm County Sweden; Stuttgart Area, Germany Baden-Württemberg; Suez Governorate Egypt; Surabaya Area, East Java, Indonesia Indonesia; Sydney, Australia New South Wales; São Luís Area, Brazil Maranhão; São Paulo Brazil; Sétif Province Algeria; Taipei City, Taiwan Taiwan; Tampa/St. Petersburg, Florida Area Florida; The Hague Area, Netherlands South Holland Province; Tianjin China; Tiaret Province Algeria; Tijuana Area, Mexico Baja California; Tlalnepantla Area, Mexico

Mexico; Tlaquepaque Area, Mexico Colima; Tlemcen Province Algeria; Tokyo, Japan Japan; Toluca Area, Mexico Mexico; Tonalá Area, Mexico Colima; Toronto, Canada Area Ontario; Toulon Area, France Provence-Alpes-Côte d'Azur; Toulouse Area, France Midi-Pyrénées; Trujillo Venezuela; Turin Area, Italy Piedmont; Tébessa Province Algeria; Ubon Ratchathani Thailand; Udon Thani Thailand; Valencian Community Spain; Valparaíso Region Chile; Vancouver, Canada Area British Columbia; Vienna Austria; Volgograd Region, Russian Federation Russian Federation; Voronezh Region, Russian Federation Russian Federation; Warsaw Area, Poland Poland; Washington United States; Wellington & Wairarapa, New Zealand New Zealand; Winnipeg, Canada Area Manitoba; Wrocław Area, Poland Poland; Wuhan, Hubei, China Hubei; Yokohama, Kanagawa, Japan Japan; Zapopan Area, Mexico Mexico; Zaragoza, Spain Aragon; Zürich Area, Switzerland Canton of Zürich; Łódź Area, Poland Poland

SEARCH AND DEPLOY:

THE LEGAL AND PROFESSIONAL GEOGRAPHY OF THE BIG FOUR'S ORGANISATIONAL FIELD

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Abstract

What protects organizational fields? Here we examine the Big Four's legal and professional geography, which provide both a search mechanism to collect information and a means to buffer against risks. We suggest that while the focus on organizational fields has been on processes related to identity formation, the Big Four's legal partitioning and location of staffing deployments provide the basis for organizational field protection. These structural properties of the organizational field provide the Big Four with the means to search for information on client and regulatory practices, as well as provide plausible denials when threatened by external interventions. What is seemingly a global-local paradox in how the Big Four are organized is a collection of strategies for their protection. Drawing on the web pages of the Big Four as well as public documents, we outline the legal structure and geographical staffing as an arsenal from which the organizational field can be defended. We stress the importance of tracing changes to the structural properties of organizational fields, and locate how recent debates on responses to challenges against Big Four professional practices are predicated on structural dimensions as much as moral ones.

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INTRODUCTION

Accounting studies has embraced the conception of the organizational field as a means to explain how organizations coping with uncertainty tend towards "homogeneity in structure, culture, and output" (DiMaggio and Powell 1983: 147). In particular, the concept of organizational field has been applied to global professional services firms (GPSFs), especially global accounting firms (Suddaby, Cooper, and Greenwood 2007). The concept of organizational field has been especially useful in helping understand processes of professionalization within GSPFs (Greenwood, Suddaby and Hinings 2002; Suddaby, Gendron and Lam 2009; Kipping and Kirkpatrick 2013). It has contributed to a body of institutional theorizing seeking to answer a paradox originally identified by Paul DiMaggio and Woody Powell, whereby "rational actors make their organizations increasingly similar as they try to change them" (DiMaggio and Powell 1983: 147). Such theorizing, with rich empirical examples, have also concentrated on the 'paradox of embedded agency', concerned with how agents promote change within the structure in which they are embedded (Seo and Creed 2002; Horton and de Araujo Wanderley 2018). Such theorizing has been applied to explain how GPSFs like the Big Four—Deloitte, EY, KPMG, and PwC — have been able to innovate, including the expansion of new business services within their 'mature field' (Greenwood and Suddaby 2006). At the core of this theorizing is a concern with how organizations protect themselves within the field, including threats from changing moral claims against their practices (Radcliffe et al 2018).

Drawn from both Institutional Theory and Bourdieu-inspired field-theoretic scholarship, this literature has explored organizational fields and how they contain paradoxes and contradictions in relation to the Big Four global accounting firms. This work includes research on how professionals within the Big Four are able to navigate the field and what identities stabilize their success (Carter and Spence 2014; Lupu and Empson 2015; Bévort and Suddaby 2016; Spence et al. 2016), as well as locating to what extent the Big Four are global or local (Belal et al. 2017; Spence, Sturdy and Carter 2018; Zhu, Spence, and Ezzamel 2021). On top of this literature have been recent questions about the involvement of the Big Four in systemic international corporate tax avoidance (Addison and Mueller 2015; Radcliffe et al. 2018; Elemes, Blaylock, and Spence 2021).

We contribute to this literature on paradoxes and contradictions of the Big Four by specifying their legal and professional geography. DiMaggio and Powell's (1983) seminal contribution to Institutional Theory refers to coercive, mimetic, and normative pressures involved in the structuration of the organizational field. Coercive pressures include the legal structure, mimetic pressures include copying of administrative systems, and normative pressures include professionalization of the labor force (DiMaggio and Powell 1983: 150-154). All of these pressures can be located in the legal and professional geography of the Big Four, though in ways where the Big Four need to navigate a local-global dialectic (Giddens 1991; Barrett, Cooper and Jamal 2005) and the conflicting isomorphic pressures from local societies and global firm strategies (Kostova and Roth 2002). We suggest that establishing these legal and professional geographies helps illuminate how the Big Four maintains its organizational field, as well as to what extent the Big Four accounting firms are global or national entities.

We argue that the Big Four uses legal and professional geographies to protect their field. The articulation of these geographies is important as a search mechanism to collect information and as a means to buffer against risks. Analyzing the legal and professional geography of the Big Four also helps us develop our understanding of how they may overcome scrutiny, through a form of decoupling of subunits from each other and avoidance of inspection (Meyer and Rowan 1977: 360).

Whether the Big Four accounting firms should be understood as predominantly global or local firms has been subject of interest in accounting and organizational research, with both views being supported by empirical findings. The firms consist of membership structures in which local member firms form a global network (Cooper et al. 1998). Legally, they essentially only exist through the local level (Knechel, Niemi, and Zerni 2013), and local manifestations reflect local cultures (Belal et al. 2017). Other evidence, however, points to them acting as global entities. They have shared and identical communication, put out global publications, and have global heads of different service lines. Most remarkably, Elemes, Blaylock and Spence (2021) find evidence of tax-motivated profit shifting within the networks, which requires a high degree of financial coordination between the units. How can we understand the concurrence of evidence in seemingly contradictory directions? We suggest this evidence is in fact not contradictory, but is instead by design.

As the Big Four provide a hybrid mix of professional services aimed at different, and even conflicting, clients, they adopt hybrid legal and organizational structures that enable them to strategically decouple and decouple when convenient. Our understanding is based on the insight of scholars like Jean-Philippe Robé (2020) and Katharina Pistor (2019) who emphasize how law can be manipulated by professionals. Such work includes an important distinction between organizational and legal form (Robé 2011). The social and economic relationships of the 'firm' is separate from the legal obligations of the 'corporation'. This difference explains how firms can manipulate structures such that value-producing units and legal claims to assets can be placed in different jurisdictions, as is common by multinational firms for tax purposes. A legal perspective to financial organization stresses how the law can be used to affirm hierarchy, as well as manipulate ownership and liabilities for strategic gains (Pistor 2013). Informed by such scholarship, we contend that through legal and professional geographies the Big Four is able to ring-fence risk between local units and on behalf of clients, while maintaining the ability to serve clients as a globally uniform one-stop-shop for tax advice.

We focus on the particular aspect of the Big Four's portfolio of corporate tax services as a case of a contested issue where protecting the organizational field is important. As Radcliffe et al (2018) illustrates, the Big Four are well aware of the changing moral perceptions of tax planning by multinational corporations. Previous work has emphasized how policy makers exhibit the behavior of the Big Four on tax as 'the dark side of professions', and how the firms have responded with alternative rhetorical framings (Addison and Mueller 2015). Balancing the 'aggressiveness' of tax advice with their own reputation rests on their ability to emphasize differences when being scrutinized. Dunne, Brennan and Kirwan (2021) illustrate how they distance themselves from clients in the case of audit failures. Our study shows how they are able to present themselves as 'separate legal entities' if scrutinized, such that the global firm and other member firms can distance themselves from deviant units. The separation on the legal side is organizationally counteracted by networks and knowledge brokers within the firm to ensure knowledge sharing and uniform application of complex standards (Kohler, Pochet and Gendron 2021).

By switching between coupled and decoupled modes of local or global organizing, the Big Four act as shape-shifters depending on who they are interacting with, and where. Their legal and professional structure enables them to seem exclusively local to legal authorities, a global firm for staff, a global unit of local knowledge for corporate clients and a local unit of global knowledge for public clients. In the case of tax services by the Big Four, their professional geography enables them to source local knowledge crucial for tax planning through the global presence in a large number of jurisdictions, and sharing them through formal and informal networks which provide the conditions for global unity towards clients. In case of scrutiny of these services or other threats, the field is protected by the legal geographic partitioning which ringfences risk between parts of the field.

We contribute with an original data set mapping the geographical staff presence of the Big Four. Beyond this empirical originality which increases the transparency of the Big Four, we believe it is important in its own right to understand the structure of the Big Four accounting firms. These firms are influential in the coordination and regulation of the world economy, and their activities and societal impact needs to be understood. We believe studying the legal geography of these firms is one avenue towards increased understanding as their presence tells us where and through what jurisdictions they are able to influence societies and organizations.

The article continues with six sections. First, we outline our research approach using web pages and other documents. Second, we provide some context to the provision of tax services by the Big Four. The third section provides our justification for looking at the legal and professional geographies to understand organizational paradoxes. The fourth section provides our analysis of the professional geography of the Big Four, while the fifth section provides our analysis of the legal geography of a case study of KPMG. The final section discusses the implications of our findings for the Big Four's organizational field.

METHODS AND DATA

Our study relies on public documents, web pages, reports and social media presence of the Big Four. The description of what these firms do is very similar by location because the websites of most of these firms appear to be driven by a consistent template, itself a symbol of strong isomorphism within the firms (cf. Drori et al. 2016). We use a similar approach as Dunne, Brennan and Kirwan (2021) who contrast their websites with the communication provided elsewhere. In their case, public remarks distancing their involvement with clients after audit failures is compared to their client-facing communication in which close relationships are emphasized. In our case, we contrast the web page description of them as a 'global firm' with their transparency reports and legal documents detailing a 'local only' structure.

To provide context for the provision of tax services by the Big Four and the ways their services rely on their formal structure and staff patterns, we go through the ways the Big Four present themselves and their services on their web pages. Given the considerable public scrutiny and moral pressure on the Big Four and other professionals dealing with tax services in recent years (Radcliffe et al. 2018), we take a large span of years into account so we are not limited by any changes in public communication. We use the Wayback Machine, which archives web pages. Previous work on the Internet pages of the Big Four traced their diversification into new markets, especially into global legal services (Wilkins and Ferrer 2018). Our interest was in their core activities in providing tax services. We search the saved web pages from the home pages of the Big Four firms that describe their tax services. By obtaining these saved web pages we are able to collect data on how they present these services from 1998 to 2019. A constant theme across years is an emphasis on the global and complex nature of corporate tax, the importance of the global network and presence of the Big Four, and their ability to provide bespoke, innovative and up to date tax planning strategies.

To map the geography and staff of the Big Four, we rely, once again, on web pages, but also on social media presence and recruitment material. This mapping was completed by hand, compiling all of these different sources and noting down the staff number of each firm in each jurisdiction, as this is not data the firms themselves make available. To map the legal structure of KPMG, we rely primarily on the web pages and transparency reports of the firm.

GLOBAL TAX SERVICES

As global professional service firms, the scope of services provided from the Big Four is extremely varied and impacts both industries and public policies. A recent strand of scholarship has questioned the role of GPSFs in the replication of practices and structures in the international political economy that exacerbate inequalities and power asymmetries (Ajdacic, Heemskerk and Garcia-Bernardo 2021). GPSFs have been identified as forming strategic alliances, using tactics to leverage their expertise and lobbying power, and how, in their professional practices, they infiltrate client organizations, align worldviews on what is appropriate conduct and actively dismiss alternatives. Their power is considered to be episodic in their use of coercion and manipulation, as well as systemic in promoting forms of domination and subjectification via professionalization and rhetorical legitimation (Boussebaa and Faulconbridge 2018). As such, GPSFs provide a form of 'neo-imperialism' in the 'periphery' while also being heavily engaged in accountancy and consultancy services within all advanced industrial countries (Boussebaa 2017, Boussard 2009; Sturdy et al. 2016; Hurl 2018; Ylönen and Kuusela 2018).

One practice of the Big Four which deepens such inequalities is tax avoidance (Alstadsæter, Johannesen and Zucman 2018). The activities of the Big Four have been linked to services that enable tax avoidance and actively lowers the tax payments of their corporate clients (Sikka and Hampton 2005, Jones, Temouri and Cobham 2017, Ajdacic et al 2021). Certainly executives and tax directors in multinational firms have considered the Big Four as excellent in providing 'added value' through tax services (Crest 2006). Some studies have explicitly considered how the Big Four are part of a broader industry for tax avoidance (Sikka 2003, Wójcik 2013), as well as considering the role of these firms in 'secrecy jurisdictions' (TJN 2010). Their involvement in jurisdictions with high secrecy and low taxes has been peripherally observed (Palan 2006, Palan et al, 2010, Shaxson 2011, Shaxson 2018), though, systematic research on the scale of their activity in such locations has been rare—a deficiency which we fill in our mapping in the next sections.

Table 1: Global revenue

Activity	Deloitte	PWC	KPMG	EY
	US$'bn	US$'bn	US$'bn	US$'bn
Assurance / audit	9.4	15.3	10.1	11.3
Advisory / consultancy	20.5	11.5	9.7	10.6
Tax	6.9	9.1	5.6	7.8
Total	36.8	35.9	25.4	29.7

Note: Source is authors compilation of web pages and transparency reports in 2017.

Table 1 illustrates the sources of income for the Big Four. Tax services make up around a quarter of their total revenues, a significant portion of their activity. In their own words, they provide "tax consultancy services for many of the world's largest multinational companies" (EY 2019). This includes "bespoke transfer pricing policy that minimizes the group's overall effective tax rate" (KPMG 2010). The goal is clearly to minimize taxation, as expressed through helping "companies understand the drivers of their effective tax rate (ETR) and potential opportunities to reduce it" (Deloitte 2013) and "keeping an eye on your worldwide effective tax rate" (PwC 2017). These quotes show the clear intent of tax services which is to minimize worldwide effective tax rates and as such, "deliver tangible benefits to our clients, thereby contributing to their competitive advantage" (EY 2019).

The role of Big Four in providing tax services in secrecy jurisdictions has come under challenge since tax avoidance and secrecy jurisdictions were linked to the Global Financial Crisis (Sikka and Wilmott 2013; Haberly and Wójcik 2017). From being largely overlooked, it has become an issue at the center of attention for governments and international organizations, and new reforms are launched aimed at ensuring the tax base of multinational corporations (Seabrooke and Wigan 2016). This has happened at the backdrop of increased criticism of aggressive tax planning schemes from the civil society as well as media attention on the low tax rates of certain companies. This change in the public's perception of tax planning intensifies their need to protect their status as highly trusted authorities within the market for assurance and policy advice as well as how they work with clients on tax services (Radcliffe et al 2018). We therefore identify tax services as both a core service line of the Big Four, but also a potential threat, in which they need to navigate the conflicting demands of public and private stakeholders and clients as well as conflicting demands between different local contexts.

ORGANIZATIONAL PARADOXES OF THE BIG FOUR

Locating the number of staff in GPSFs, and how 'transnational' they are, is a topic of considerable interest in recent years (Spence et al. 2015; Belal et al. 2017; Spence, Sturdy and Carter 2018). This concern comes from wishing to understand professionalization trends as well as career and social mobility (Duff 2017). We contribute to this literature. The firms report their size to be as follows:

Table 2: Global staff

	Deloitte	PWC	KPMG	EY
Global headcount	244,445	223,468	188,982	230,800
Partners	11,122	10,830	9,843	Not known
Professionals	193,199	177,182	147,028	189,111
Admin staff	40,124	35,456	32,111	41,689

Note: Source is authors compilation of web pages and transparency reports in 2017.

The fact that each of the firms report global staff and financial data as if they are single entities operating on a multinational basis, but do not easily make available local figures, indicate that each has a desire to appear to be a global entity. They reinforce this perception by clearly having the ability to secure the necessary data to report information on a global basis. What they do not then do is supply the financial data that most organizations of that type would deliver the both investors and stakeholders, which is a set of consolidated financial statements for the organization as a whole. It is the paradox of a structure that permits a perception of having the form of a multinational entity whilst operating with only local obligations.

Previous work has emphasized how multinational firms in general, and GPSFs in particular, have immense trouble keeping a 'one firm' strategy given local regulatory, normative and cultural-cognitive differences (Scott 2005, Muzio and Faulconbridge 2013). This has been explained through the dual isomorphic pressures from global headquarters and local societies faced by local chapters or subsidiaries (Kostova and Roth 2002) and has been found to be a great challenge for global professional service firms (Muzio and Faulconbridge 2013, Belal et al 2017). We do not argue against the finding that local chapters need to balance isomorphic pressures from both local societies and the global organization, as there are indeed strong pressures for conformity both within the organization and from local environments. This is evident in multiple case studies (see eg Belal et al 2017, Agrizzi, Soobaroyen and Alsalloom 2021), and the configuration of this balance likely varies across markets. While global standards can be appropriated locally, the global-local divide is particularly relevant for firms when they need to handle multinational clients and therefore need to interact across national dividing lines. This is overcome through elaborate coordination mechanisms (Barrett, Cooper and Jamal 2005). The tensions between adapting to local cultures and maintaining global uniformity is particularly salient in the language use. Here, the Big Four overcome these challenges through segmenting into language teams and adapt to the preferred language of clients (Detzen and Loehlein 2018).

What we propose is going beyond this paradox by thinking about it differently and suggesting that the duality is not a result, in this case, of conflicting pressures, but rather a deliberate choice to uphold the paradox. While previous work has studied multinational firms who actively seek to be 'one firm' but are challenged by local isomorphic pressures, the Big Four are qualitatively different in this respect. They are not caught in between but rather emphasize both aspects, depending on context. How we view them depends on whether organizational or legal (and accounting) perspectives are taken. From a legal or accounting perspective, the corporations are distinct and has limited ties to each other, and contracts with personnel and clients as well as with local regulations do not spill over.

From an organizational perspective, they are much more globally oriented, particularly in their interaction with corporate clients.

Robé (2011) provides a framework for understanding the paradox of being at once global and local through understanding the difference between the firm and the corporation. In this framework, the firm is the organizational unit, including employees, clients, and most stakeholders. The corporation is the legal entity, which is the legal unit that owns assets, and which investors, creditors and tax authorities hold claims to. Distinguishing these is important as it enables us to understand how firms may be two things at once. It is the same mechanism used in corporate tax minimization, where a firm might be loss-making and profitable at the same time, depending on who looks – the tax authorities or the investors. By creating corporate structures where corporations in higher-tax countries pay marked-up fees to corporations in lower-tax countries, profits can be shifted across jurisdictions. The tax authorities in the high-tax countries will thereby view them as loss-making, even if the firm is globally profitable. Their legal structure provides ring-fencing between the units, such that malpractice or market problems of one unit does not affect the other members. It also protects clients, as their relationship with one unit does not fall within the jurisdiction of regulators of other countries, and all parties therefore only need to live up to the local laws in each jurisdiction.

From an organizational perspective, personnel and clients can travel and interact between units, and benefit from spillover effects of knowledge and ideas within the network. While the individuals who work in Big Four firms are skilled experts within their own right, the knowledge and expertise which underpins the dominating position is not a sum of the individual parts. Rather, it is the networked ability to share information and innovate across disciplines and jurisdictional boundaries to find the best method of legal and accounting techniques which serve their clients. This expertise is cultivated at the local level through presence, and particularly working intimately with clients and regulators in all jurisdictions. As such, they act as a knowledge management organization, in which clients can tap into a pool of knowledge amassed through working with clients and governments in different sectors and jurisdictions worldwide, as Pistor (2019) has suggested is the case for law firms.

If tax minimization strategies are about placing assets ‘elsewhere, ideally nowhere’ (Murphy 2009), the opposite is true for the organizations of the Big Four. Here, the goal is to be ‘here, ideally everywhere’. They are present globally, with local offices and staff in over 150 jurisdictions. One aspect is of course their ability to provide services in all markets. However, ability to serve local clients everywhere is not, we suggest, the most important part of their wide spread presence. Rather, it is the ability to collect local knowledge for all jurisdictions in ways that enrich the entire global network with knowledge of potential tax mechanisms in those systems. As such, they work as “more than just a network of locally controlled national tax practices. We are a global team” (EY 2019).

Being locally present through more than a store front and actually immersed in local practices and cultures with clients and authorities is a necessity to gain timely knowledge about the tax developments within all jurisdictions. Elbra, Mikler and Murphy-Gregory (2020) show how the Big Four have close relationships with authorities, as they provide advice on tax system design. This close relationship of consulting with governments provides them with insight into legislative developments. EY emphasize the importance of building good relationships with authorities: “we create highly networked teams who can advise on planning, compliance and reporting and maintain effective tax authority relationships — wherever you operate” (EY 2008). The relationship to authorities is crucial in acquiring knowledge that anticipates changes in the tax landscape. As PwC boasts on their web page: “We also have the latest information on both current and upcoming legislative developments affecting inter-company loans globally, as well as boots--on--the--ground knowledge of local tax authorities’ evolving attitudes towards transfer pricing of financial transactions.” (PwC 2017) While all employees of the Big Four are likely smart experts, their academic credentials do not provide them with the intimate knowledge of *upcoming* legislation or *attitudes of tax authorities.* Such knowledge can only come through what they themselves term as ‘boots on the ground’, the importance of local presence. As such, the firms “leverage the network's collective knowledge of how tax authorities operate, and increasingly work together, to help resolve difficult or sensitive tax disputes. To ensure that continuous performance improvements are instigated after a controversy, we work with EY's other tax professionals to ensure that similar events are less likely to occur" (EY 2013).

The knowledge acquired by local teams does not only stay there for the benefit of local clients, but is actively shared within the firms through networks and knowledge brokers within the firm (Kohler, Pochet and Gendron 2021). Through setting up formal or informal knowledge-sharing mechanisms on tax, for example through "virtual hubs" (EY 2019), the firms are able to draw upon these insights across the globe. KPMG expresses this strategy as "Our professionals exemplify the 'think globally, act locally' principle. They regularly work together in teams formed specifically to meet our firms' international clients' needs. They also bring a strong understanding of tax law and business conditions in numerous jurisdictions." (KPMG 2013). EY outlines even more strongly how the knowledge is shared as they emphasize an 'international assignment program' which combines local knowledge and global insight: "Senior tax professionals, working on rotation in major business centers around the globe, gain a clear understanding of the subtleties of a range of tax issues, of the complexities of how tax systems interface with one another — and of different business cultures. They use this knowledge to our clients' advantage to discuss the tax implications of an issue or to provide the latest developments and insights" (EY 2019). They go on to say they are the "world's most globally-coordinated tax practices, with a network of 28,000 professionals in more than 120 countries dedicated to setting the standard for exceptional client service" and emphasized their "centralized and coordinated services" (EY 2019).

Across all four firms, there is a clear thread of marketing to clients not only their local knowledge, but to emphasize the global network. In their communication to clients—which is already uniform globally—they ensure 'access to the global network'. This emphasis points to how they wish to be perceived as global one-stop-shops for access to tax knowledge across jurisdictions, through compiling knowledge across units into the network. While work cultures may differ locally, the Big Four act as global, singular firms in their relationships with clients, engaging in cross-national 'networks of interpretation' (Kohler, Pochet, and Gendron 2021) to ensure equal approaches in the approach to clients.

On their web pages, several of the firms describe the relationship between local and global to be ‘seamless’, indicating that clients do not need to navigate different work cultures. As EY boast:

> Located across the globe, our teams of experienced transfer pricing professionals have in-depth and broad knowledge of local and regional issues that can help interpret the intent of tax authorities in the countries where you currently operate or are planning to operate. As part of an integrated and extensive global network, our teams work seamlessly together from offices around the world, responding quickly to your global and local needs (EY 2019).

While their clients should experience a seamless and globally integrated organization, the local differences are also important for their strategy. Engaging with local clients and not least authorities is key to their work of collecting information through close relationships built upon trust. A globally uniform culture would not only be hard to enforce, but would also stand counter to their ability to build local relationships. These relationships go beyond secondments and consulting and even stretch into identifying with local authorities and national interest (Elbra et al 2020). Such strong local affiliation is necessary for firms to gather the insight into authorities thinking. This way, they are able to – paradoxically – work for the national interest, across nations.

The local firms work as search engines, who go deep into local environments to have constantly updated information and detailed knowledge about local regulations and not least tax rules in each jurisdiction. Recognizing the importance of multi-jurisdictionality in tax planning, expertise from around the globe is compounded across the network. Deloitte underline the importance of this knowledge search here: “In today's world of dynamic change, our closely linked teams of industry and tax service specialists monitor key tax and business issues around the globe, to provide knowledge to clients wherever they do business. This approach is essential to our “global, yet local” service.” (Deloitte 2002)

Recognizing this importance, the Big Four are present in an overwhelming majority of countries. Table 4 lists the jurisdictions where we were able to establish office presence of at least one of the Big Four firms. We include this data in full, as we believe this mapping to be of relevance to the studies of Big Four and global professional service firms more widely. The data on presence and particularly the number of staff by jurisdiction is not made available by any of the firms themselves. We have compiled it based on the descriptions on their webpages, but also from social media and recruitment material. In the cases where we could establish an office presence, but not the staff number, we have imputed the staff number based on the staff number of the other firms in that jurisdiction. The appendix further details both data collection and imputation formula.

Table 3. Big Four total staff and office numbers

Country	Staff (offices)	Country	Staff (offices)
Afghanistan	392 (3)	**Denmark**	6169 (53)
Albania	504 (4)	**Dominican Republic**	452 (5)
Algeria	347 (5)	**East Timor**	na (1)
Andorra	na (2)	**Ecuador**	409 (8)
Angola	527 (5)	**Egypt**	2051 (7)
Antigua and Barbuda	125 (1)	**El Salvador**	389 (4)
Argentina	6832 (18)	**Equatorial Guinea**	na (3)
Armenia	na (4)	**Estonia**	485 (4)
Aruba	189 (4)	**Ethiopia**	203 (2)
Australia	17559 (41)	**Fiji**	na (6)
Austria	4350 (28)	**Finland**	3046 (68)
Azerbaijan	464 (4)	**France**	26250 (79)
Bahamas	340 (7)	**French Guiana**	na (1)
Bahrain	1746 (4)	**French Polynesia**	na (1)
Bangladesh	824 (5)	**Gabon**	na (5)
Barbados	326 (4)	**Georgia**	403 (4)
Belarus	520 (4)	**Germany**	36131 (88)
Belgium	8257 (37)	**Ghana**	449 (5)
Benin	25 (1)	**Gibraltar**	196 (4)
Bermuda	740 (4)	**Greece**	2850 (8)
Bolivia	4072 (7)	**Greenland**	48 (4)
Bonaire	116 (3)	**Guam**	na (6)
Bosnia and Herzegovina	403 (5)	**Guatemala**	665 (4)
Botswana	338 (4)	**Guernsey**	377 (4)
Brazil	19400 (55)	**Guinea**	na (2)
British Virgin Islands	111 (4)	**Honduras**	na (8)
Brunei	na (4)	**Hong Kong**	10481 (4)
Bulgaria	887 (7)	**Hungary**	2700 (5)
Cambodia	591 (4)	**Iceland**	441 (23)
Cameroon	na (4)	**India**	44187 (45)
Canada	24796 (131)	**Indonesia**	8481 (6)
Cape Verde	59 (1)	**Iraq**	41 (4)
Cayman Islands	748 (5)	**Ireland**	9230 (20)
Chad	na (3)	**Isle of Man**	363 (4)
Channel Islands	na ()	**Israel**	5100 (18)
Chile	7350 (19)	**Italy**	15400 (89)
China	43939 (68)	**Ivory Coast**	na (4)
Colombia	5500 (17)	**Jamaica**	657 (5)
Cook Islands	na (1)	**Japan**	27479 (104)
Costa Rica	1947 (5)	**Jersey**	427 (4)
Croatia	659 (4)	**Jordan**	821 (4)
Cuba	25 (1)	**Kazakhstan**	2603 (12)
Curacao	189 (4)	**Kenya**	2024 (7)
Cyprus	2520 (14)	**Kosovo**	240 (2)
Czech Republic	3200 (16)	**Kuwait**	1386 (4)
DR Congo	na (6)	**Kyrgyzstan**	na (4)

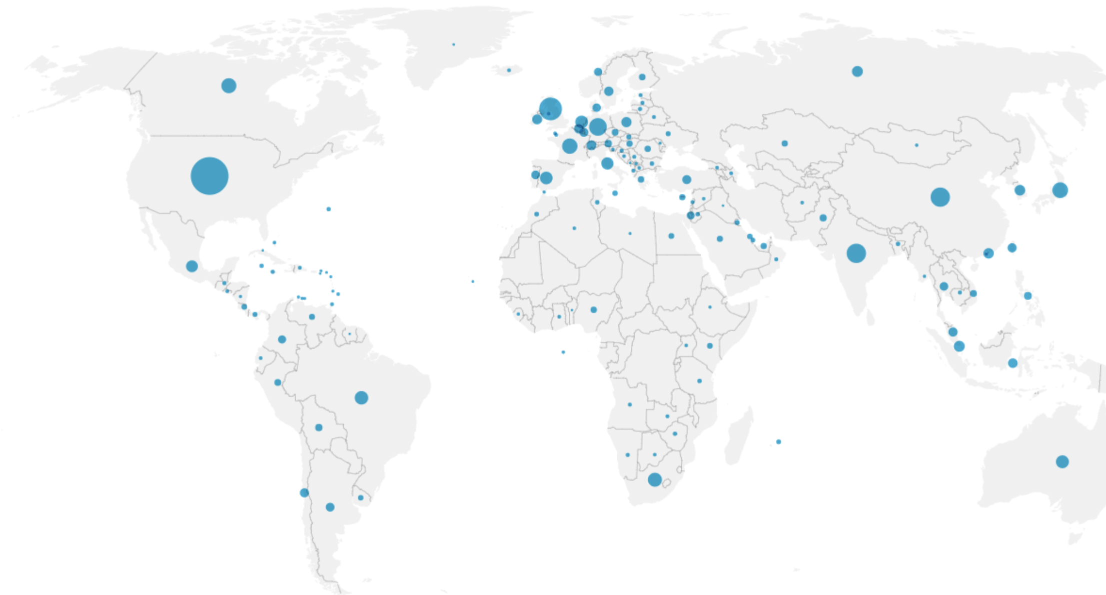
Note: Countries without presence not included. See appendic for source and methods.

Table 3 (continued)

Country	Staff (offices)	Country	Staff (offices)
Laos	na (4)	**Russia**	11700 (33)
Latvia	610 (4)	**Rwanda**	na (4)
Lebanon	564 (4)	**Saint Lucia**	123 (2)
Liberia	na (1)	**St Vincent and Grenadines**	na (1)
Libya	124 (3)	**Saudi Arabia**	2476 (13)
Liechtenstein	na (2)	**Senegal**	na (4)
Lithuania	694 (5)	**Serbia**	552 (4)
Luxembourg	7034 (4)	**Seychelles**	na (1)
Macau	161 (4)	**Sierra Leone**	250 (2)
Macedonia	362 (4)	**Singapore**	11697 (4)
Madagascar	na (2)	**Sint Maarten**	72 (2)
Malawi	na (6)	**Slovakia**	1390 (9)
Malaysia	7635 (39)	**Slovenia**	412 (4)
Maldives	na (3)	**Solomon Islands**	na (1)
Malta	1663 (4)	**South Africa**	21226 (52)
Martinique	na (1)	**South Korea**	10875 (7)
Mauritius	1110 (4)	**South Sudan**	na (1)
Mexico	14209 (69)	**Spain**	16749 (70)
Moldova	158 (4)	**Sri Lanka**	na (6)
Monaco	na (4)	**Suriname**	25 (1)
Mongolia	252 (4)	**Swaziland**	na (2)
Montenegro	47 (4)	**Sweden**	8087 (225)
Morocco	1063 (6)	**Switzerland**	9142 (41)
Mozambique	na (8)	**Syria**	302 (3)
Myanmar	237 (4)	**Taiwan**	7545 (23)
Namibia	599 (7)	**Tajikistan**	na (1)
Netherlands	16997 (52)	**Tanzania**	878 (4)
New Caledonia	na (2)	**Thailand**	6425 (4)
New Zealand	4000 (26)	**Togo**	na (2)
Nicaragua	194 (4)	**Trinidad and Tobago**	465 (6)
Nigeria	2751 (10)	**Tunisia**	871 (4)
N. Mariana Islands	na (1)	**Turkey**	7300 (16)
Norway	5600 (113)	**Turkmenistan**	na (1)
Oman	546 (4)	**Turks and Caicos Islands**	na (2)
Pakistan	3847 (12)	**Uganda**	350 (4)
Palestine	256 (5)	**Ukraine**	1332 (7)
Panama	1254 (4)	**United Arab Emirates**	2583 (15)
Papua New Guinea	517 (5)	**United Kingdom**	63236 (84)
Paraguay	na (3)	**United States**	187804 (324)
Peru	3300 (7)	**US Virgin Islands**	25 (1)
Philippines	4801 (18)	**Uruguay**	1723 (8)
Poland	10000 (30)	**Uzbekistan**	na (3)
Portugal	6582 (8)	**Venezuela**	2346 (20)
Puerto Rico	na (4)	**Vietnam**	3360 (10)
Qatar	1129 (4)	**Yemen**	na (2)
Republic of the Congo	na (7)	**Zambia**	492 (7)
Romania	2750 (16)	**Zimbabwe**	753 (8)

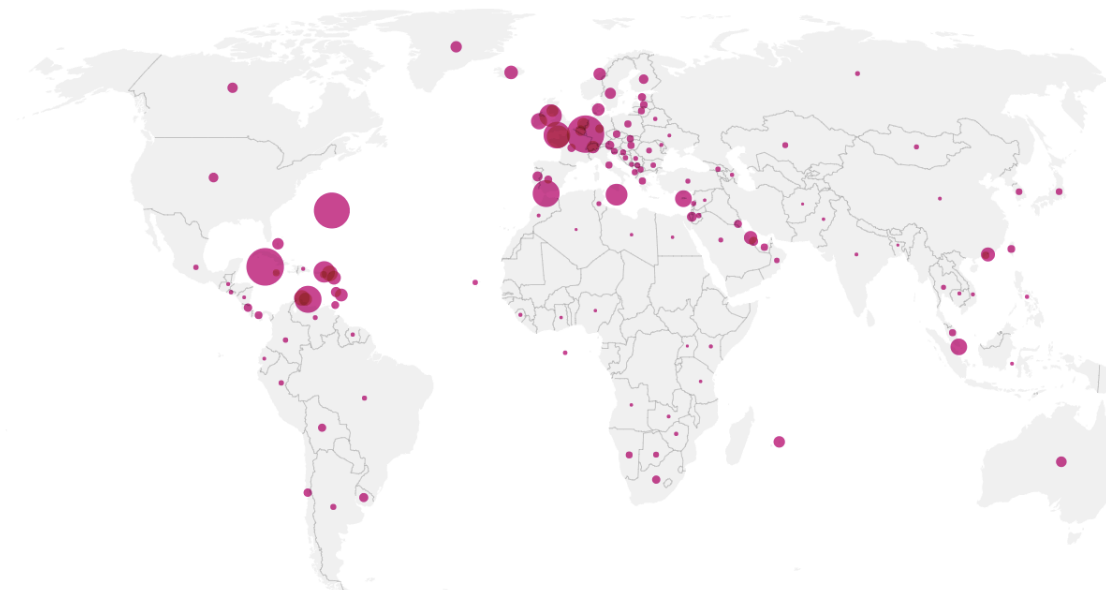
We map the locations of Big Four employees in Figure 1. We argue there are two factors determining their staff numbers: first, they have staff where their clients are, serving the local markets. Second, they have staff in the markets where they need to be present to gather local expertise or serve international clients. These factors are important everywhere but perhaps the second factor is more important in very small countries which has a limited amount of (local) clients, but provides jurisdictional advantages in terms of favorable tax regimes that could be of interest to their clients. Indeed, their staff numbers relative to population in countries with lower taxation far exceed their relative size in higher-tax countries. Figure 2 maps the staff relative to local population. Relative to local population, the places with the most employees are the Cayman Islands, Luxembourg, Bermuda, Bonaire, Gibraltar and the Channel Islands. If we look at the number of staff relative to GDP, which is likely a better measure for the local market, the top jurisdictions are Malta, Cyprus, Luxembourg, Bolivia, Antigua and Barbuda, Mauritius, Saint Lucia and Barbados. Most, though not all, of these jurisdictions are known for providing tax regimes with favorable conditions such as high secrecy, low taxes and ease of incorporation.

Figure 1



Sources: as noted above.

Figure 2



Sources: as noted above.

LEGAL GEOGRAPHIES

The preceding section outlined the vast geographical scope of the Big Four, and suggested that this local presence is important as a 'search engine' in which relationships with local authorities and clients across the world builds knowledge that is then shared in the network. As such, this global reach through local affiliations is a key resource for the firms. The global scale however also poses risks. With respect to tax, for example, what is legal and acceptable in one jurisdiction may be more controversial or even illegal in others, and providing clients with advice on how to take advantage of the more lenient regime might prove problematic for other units, or even for the global reputation of the firm. Therefore, it is essential that there are partitions between the units which enable them to remain legally separate.

While the social and economic organization of the firm is a global network of expertise, which seems unlimited to clients, has no borders, does not need to distinguish between jurisdictions but can be dynamic and flexible, this is not the case for the legal structure. Organizations commonly adapt legal structures for strategic gain, particularly when organizations may be hybrids (Haigh, Kennedy and Walker 2015). Corporations are local legal entities, which are subject to regulatory borders. This means they can ring-fence such that they only need to live up to the regulatory standards of each of the jurisdictions they are placed in. It is through the use of the legal entity of locally incorporated units that the Big Four are able to mitigate risks and external pressures. While clients, employees and stakeholders mostly or exclusively need to be concerned with the firm and thus can experience the 'seamless' global integration, if authorities would want to scrutinize the advice given to domestic firms on foreign tax-minimizing opportunities, they would be stonewalled by the limits posed by the legal structure.

We provide here a case study of KPMG's international legal structure, though this structure does not seem to be substantially different from that of the other Big Four firms. Each firm has a central organizing body that appears to control its intellectual property, license members of the network and enforce common standards. Three of the Big Four locate the company responsible for this activity in London. The companies in question are Deloitte

Touche Tohmatsu Limited[9], a UK private company limited by guarantee that regulates the Deloitte network[10]; PricewaterhouseCoopers International Limited[11], which is again a UK private company limited by guarantee, for PWC[12] and yet another such company, Ernst & Young Global Limited[13] for EY[14].

UK companies limited by guarantee have a particular appeal for these networks for three reasons. First, because membership of such companies does not necessarily result in a right to receive income, changes of ownership rarely give rise to capital gains tax charges, meaning that the tax situation when there are membership changes is simple. Second, if a company is organized using this structure, which is commonly used by membership and charitable organizations, it is easy to argue that the firm does not trade but just undertakes mutual activities on behalf of the members that should not then be subject to UK tax. These companies appear to take advantage of this opportunity. Third, as a result, the accounting disclosures required by UK law are minimal: the latest PWC accounts for the noted company only just extend onto a second page. The whole structure is, therefore, highly opaque. A UK base, UK law, and UK tax arrangements can all be taken advantage of and yet almost nothing need be disclosed as to what these companies really do.

KPMG uses a different but similar structure. In its case the coordinating entity is a Swiss cooperative[15] called KPMG International Cooperative. Bloomberg[16] suggests that this entity is registered at the KPMG office in Zurich[17]. Other sources suggest that it is

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[9] https://beta.companieshouse.gov.uk/company/07271800/filing-history accessed 27 May 2017: the 2017 accounts give no hint of the company's role

[10] https://www2.deloitte.com/content/campaigns/global/global-report/index.html accessed 27 May 2017

[11] See https://beta.companieshouse.gov.uk/company/03590073/filing-history accessed 27 May 2017. The UK accounting requirements for this company are now so limited that it just files two pages of data as its annual accounts for the year to 30 June 2016. In 2009 it was six.

[12] See https://www.PWC.com/gx/en/about/corporate-governance/network-structure.html accessed 27 May 2017

[13] https://beta.companieshouse.gov.uk/company/04328808/filing-history accessed 27 May 2017. Perhaps refreshingly only EY chose not to go for the absolute minimum possible level of disclosure in their 2016 annual accounts, although that does not mean much insight is obtained as a result.

[14] http://www.ey.com/gl/en/about-us/our-global-approach/global-review accessed 27 May 2017

[15] The term is used loosely here: it means a mutual entity run solely for the benefit of its members and is likely to work in very similar way to the UK companies limited by guarantee used by the other Big Four firms.

[16] See https://www.bloomberg.com/profiles/companies/1710Z:SW-kpmg-international-cooperative/switzerlnad accessed 2 May 2017

[17] See https://home.kpmg.com/xx/en/home/about/offices/zurich-1.html accessed 2 May 2017

registered in the Swiss Canton of Zug[18]. KPMG Luxembourg says in its Transparency Report (in a statement remarkably similar to those in many other such reports) that[19]:

> The independent member firms of the KPMG network (including KPMG Luxembourg, Société coopérative) are affiliated with KPMG International, a Swiss cooperative which is a legal entity formed under Swiss law.
> KPMG International carries on business activities for the overall benefit of the KPMG network of member firms but does not provide professional services to clients. Professional services to clients are exclusively provided by its member firms.
> The structure is designed to support consistency of service quality and adherence to agreed values wherever in the world the member firms operate. One of the main purposes of KPMG International is to facilitate the provision by member firms of high quality Audit, Tax and Advisory services to their clients. For example, KPMG International establishes and facilitates the implementation and maintenance of uniform policies and standards of work and conduct by member firms and protects and enhances the use of the KPMG name and brand.

The implication is clear: there is a unity within this structure and yet at the same time there is a considerable degree of separation within the firm. That this separation may not be as stark as the legal wording implies is suggested by the job titles of those working for the global operation, such as 'Global Head of Audit' and 'Global Head of Advisory'[20]. These suggest a degree of coordination in such activities that is contrary to the impression of a diversely controlled firm[21]. The substance of the firm may not, in other words, be what the form implies, which would indicate a case of organizational 'decoupling' (Meyer and Rowan 1977). There is other evidence of this conflict between the substance and form of the firm. For example, the actual operational structure of KPMG may be a little more complex than the published statements suggest: it appears that the functional control of KPMG internationally actually rests in the Netherlands. This is the international address provided for KPMG International supplied by the UK-based KPMG LLP as part of its

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[18] See https://en.wikipedia.org/wiki/KPMG accessed 2 May 2017
[19] See https://assets.kpmg.com/content/dam/kpmg/lu/pdf/lu-en-Transparency-Report-2016.pdf pages 28 - 30 accessed 2 May 2017
[20] https://home.kpmg.com/uk/en/home/about/leadership-governance.html accessed 27 May 2017
[21] Titles taken from https://home.kpmg.com/content/dam/kpmg/iar/international-annual-review-2016.pdf accessed 2 May 2017

regulatory filings[22]. Despite this, remarkably little attention or publicity is given to this operation. The 2016 KPMG global annual review gives no hint, for example, of a contact address for this head office operation. As the entirely typical Luxembourg Transparency Report[23] says:

> KPMG is the registered trademark of KPMG International and is the name by which the member firms are commonly known. The rights of member firms to use the KPMG name and marks are contained within agreements with KPMG International.
> In these agreements, member firms commit themselves to a common set of KPMG Values. Under agreements with KPMG International, member firms are required to comply with KPMG International's policies and regulations including quality standards governing how they operate and how they provide services to clients. This includes having a structure that ensures continuity and stability and being able to adopt global and regional strategies, share resources, service multinational clients, manage risk, and deploy global methodologies and tools. Each member firm takes responsibility for its management and the quality of its work.

The report goes on to list the sanctions available for use by KPMG against non-compliant member firms. KPMG is structured as if it is made up of individual member firms and yet each of these has to operate to common standards that are rigorously enforced. There are also common financial interests: KPMG firms, for example, share a common captive professional indemnity insurance operation.
Despite this, all is also not apparently equal within the KPMG organization. As the same Luxembourg Transparency Report notes when discussing the KPMG governance structure:

> The key governance and management bodies of KPMG International are the Global Council, the Global Board, and the Global Management Team.
> The Global Council focuses on high-level governance tasks and provides a forum for open discussion and communication among member firms. It includes representation from 58

[22] See http://www.auditregister.org.uk/Forms/OfficeList.aspx?ID=2548845&DisplayText=Firm%20Detail%20(Offices)&ParentText=All%20Firms accessed 2 May 2017
[23] An almost identical statement will be found in the International Transparency Report for 2016, see https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2016/12/international-supplementary-report-2016.pdf accessed 2 May 2017

> member firms that are 'members' of KPMG International as a matter of Swiss law. Sub-licensees are generally indirectly represented by a member.

This reference to there being 58 core members makes clear that there are tiers of membership within the KPMG structure that are not at all apparent to the public (though the practice of correspondent firms have been noted in previous case studies, see eg Belal et al 2017). It also suggests that KPMG's operations in many countries may actually be operated under sub-license from other jurisdictions, although which operations have which status is not clear. As KPMG LLP's UK regulatory filings suggest24, the maintenance of a local operation means that regulatory obligations can be geographically curtailed. The firm is only registered to provide services in the UK, Jersey, Guernsey, the Isle of Man, Japan and the USA. There are a number of regional (rather than local) firms. KPMG East Africa, which is incorporated in Mauritius, operates a number of KPMG offices. The offices in a group of mainly Dutch Caribbean locations also appear to be under common control. The small KPMG office in the British Virgin Islands appears to control the KPMG office in St Lucia. Whether the offices of KPMG in the Channel Islands are one or two firms is not clear: one seems to be likely. The operation of some of the KPMG Offices in the Balkans is undertaken by locally located companies but these are then subsidiaries of a company called KPMG CEE Limited, a company incorporated in Cyprus. None of these structures appear to replicate each other: diversity at the local level is characteristic of the operation, as far as can be ascertained. However, since in 55 locations the website does not say what entity is representing KPMG in the jurisdiction in which an office is located the extent to which such diversity exists cannot be stated with certainty. In the jurisdictions where the website does not identify a local operating company there is invariably a reference to the website being operated by KPMG International. The locations in question represent 91 offices (12.3 per cent of the total) but just 4.8 per cent of identified staff, although it should be noted that there is a much higher incidence of being unable to identify staff working in these locations than in those in which ownership can be determined.

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[24] http://www.auditregister.org.uk/Forms/OfficeList.aspx?ID=2548845&DisplayText=Firm%20Detail%20(Offices)&ParentText=All%20Firms accessed 2 May 2017

It has not proved possible to identify the ownership of all KPMG offices. In the case of 106 websites, each representing a different national firm, a named local entity was identified as the local KPMG firm, it then being stated that KPMG International, based in Switzerland, was the international organization of which it was a member. The firms in question represented 648 (87.7 per cent) of KPMG offices and 95.2 per cent of all KPMG staff. There were exceptions to control by a national entity. For example, KPMG Azerbaijan Limited that runs the KPMG operation in that country is a company incorporated in Guernsey[25] whilst the structure of KPMG India is particularly obscure. The local website[26] makes clear that ownership is by an Indian partnership but its Transparency Report[27] says:

> KPMG is a partnership firm registered under the Indian Partnership Act 1932. The two legal partners in KPMG are two companies incorporated in the Netherlands: KPMG International Investments BV (a wholly owned subsidiary of KPMG International Cooperative) and KPMG Advisory NV (a company which is part of the KPMG Europe LLP group of companies). However, both such companies hold the interests in KPMG ultimately for, and at the direction of, KPMG International Cooperative, a Swiss cooperative which is a legal entity formed under Swiss law ("KPMG International"). Notwithstanding the legal ownership structure, KPMG International and/or the legal partners do not manage or exercise control over the management of KPMG or extract profit from KPMG.

Who might actually benefit from the ownership of KPMG India is not made clear.

Our case study of KPMG reveals two findings. First, that they have a two-tiered structure of licensing and membership. Secondly, the legal structure provides partitioning between units, such that, while seeming like a homogenous and centrally controlled organisation to clients, its national operations are subject to separate ownership. This distinction between regulatory form and commercial function ring-fences risk between units and protects the global firms and their clients.

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[25] https://home.kpmg.com/az/en/home/about.html accessed 2 May 2017
[26] https://home.kpmg.com/in/en/home/careers.html accessed 2 May 2017
[27] https://home.kpmg.com/content/dam/kpmg/pdf/2016/06/India-Transparency-Report-2016.pdf accessed 2 May 2017

While there may be several factors behind the choice of structure of dispersed ownership, this model enables the firms limited regulatory and legal liability as well as ring-fences client activity from enquiry, all of which are helpful devices in ensuring their ability to avoid scrutiny into their tax services to corporate clients. By the use of contractual arrangements, the firm prevents disclosure, limits the scope of regulation imposed upon it; creates limits to liability to authorities for information held whilst increasing the barriers that protect client confidentiality and at the same time mitigates risk. The structure allows each member firm to argue that it only has liability to its own clients and to its own regulators. This means that it is able to prevent the disclosure of client related documentation to regulators outside its own jurisdiction, whether for tax or other purposes. As a result, the maintenance of client confidentiality in the face of regulatory investigation is much easier to secure.

This separation is not only important to protect clients, but also to protect the firm from risks which arise through local business practices. Creating individual member firms that might be 'ejected' from membership of the overall organization in the event of catastrophic failure mitigates risks to the firm. The lessons of Arthur Andersen's failure after its audit of Enron may have been noted,[28] as it was a more integrated form than the others at that time. If a local unit is perceived to risk the reputation of the global firm, it is important to be able to 'cut loose' this part of the operation. In the case of tax, this is for example the case if a local unit is found to provide advice that is too aggressive or even illegal.

The local risks may also be external, as in the case of war breaking out. Russia's attack on Ukraine has led the Big Four to withdraw from Russia. Notably, this does not entail letting go any employees, but just stopping the cooperation with the local member firms. Thereby, the local firms can continue operations locally but are no longer part of the global network. It is possible that these firms could even re-join the networks when times permit. In principle the failing or exclusion of one member firm—whether for financial reasons due to operational difficulties or, liability arising as a result of a successful professional negligence claim or from a regulatory failing—may not prove to be a risk for the whole

[28] Including by organization theorists for its influence on professional cultures, see Hallett 2003.

organization because of the structure used. As an example, the $456 million fine imposed on KPMG in the US in 2005 for criminal tax violations[29] did not appear to have consequences for other member firms in the global organization. While there are practical difficulties with removing a firm from the network (Taylor 2022), this extreme flexibility in the loosely coupled legal arrangements is a key structural underpinning of the Big Four's organizational field, which protects the global organization from local problems. Or put another way, it demonstrates that the whole is bigger than the sum of its parts.

DISCUSSION AND CONCLUSION

We argue there that the Big Four's articulation of legal and professional geographies provides both a search mechanism to find information as well as a buffer against risks. Through these geographies, the Big Four is able to protect its dominant position in the organizational field. Since Meyer and Rowan (1977) and DiMaggio and Powell (1983), accounting scholarship has drawn on Institutional Theory and Bourdieu-inspired work to discuss how organizational fields change and stabilize. Of particular interest have been paradoxes in how the Big Four are able to innovate within a 'mature field' (Greenwood and Suddaby 2006), whether they are global or local (Belal et a. 2017), and how professionals navigate the field (Carter and Spence 2014).

In this paper, we examined two conditions which are key for the Big Four's organizational field: their professional geographical scope covering a vast array of jurisdictions, and their legal partitioning between units across these jurisdictions. The varying legal dimensions across the globe require local ownership and control stand in stark contrast to the commonality of organizing principles, codes of conduct and ethics, working practices and commercial practice noted during our research. Together, these findings given an impression of a paradox within the field, in which the Big Four are simultaneously found to be predominantly global and predominantly local. Our research finds that this is by design; that the Big Four indeed present themselves as a global network of local expertise. The firms, understood as the social and economic organizations, are designed to work as global

[29] https://www.irs.gov/uac/kpmg-to-pay-456-million-for-criminal-violations

units delivering 'seamless' and uniform services to multinational clients. The key resource for these services is their close relationships to and within local markets and authorities and ability to share this information in the network. At the same time, their legal structure is opaque and partitioned such that local units can absorb local risks without harm to the rest of the organization. The paradox of global or local is therefore explained by considering the social organization separately from the legal form. If they were fully global, they would not have access to the most fundamental resource: intimate knowledge and relationships across jurisdictions. If they were fully/mostly local with limited coordination, clients would not benefit from their accumulated knowledge across the network.

Given the importance of GPSFs to contemporary capitalism, including both the public and private sectors, developing investigative cases into how the Big Four operate is important. In doing so, distinguishing between the organization and the legal units is vital. The legal partitioning between units protects the field from risk spillovers, and is a key instrument in ensuring client operations across jurisdictions, but doesn't limit their ability to form cross-country networks of expertise and knowledge sharing. The geographical scope provides them not only with access to a wide range of markets, but, importantly, acts as a real-time 'search engine' in which the organizations can source expertise in current and upcoming legislation and other actions, particularly with respect to tax. The fact that standardized practices in Big Four's work are filtered through local cultures and contexts in ways that limit global uniformity does not necessarily undermine the global commercial identity of the Big Four (Belal et al 2017). Rather, it enables local chapters to create local relationships with authorities and clients which enriches the wealth of knowledge in the network on potential regulatory changes.

Accounting technologies are crucial to the globalization of capital, including the role of large accounting firms as an effective 'pinstripe mafia' (Mitchell and Sikka 2011). We suggest these firms also use legal technologies to support this work. The boundaries between international action and local regulation is deliberately obscured, not least because it makes establishing accountability for their actions difficult to establish. In this sense both structural and institutional analyses of these firms highlight system level prerequisites for the operation and proliferation of 'global wealth chains' (Seabrooke and Wigan 2017, 2022).

The ways legal structures and geographies protect and underpin organizational fields should be studied further. It has been recognized that claims to the 'actorhood' of contemporary firms in their self-presentation extends far beyond the 'legal fiction' presented in commonly espoused theories of the firm (Bromley and Sharkey 2017). An approach to firm-corporation organizing that draws from scholarship like that of Robé (2020) and Pistor (2019) can help make claims to operational actorhood and manipulation of corporate structure clearer. As seen above, an important source of legal protection are partnership structures, which protect the firms from certain forms of financial and legal scrutiny. One tradition once associated with the accountancy profession was the use of unlimited liability partnership structures. This pattern has been subject to regulatory and cultural change in recent years, encouraged by the growing availability of limited liability partnership structures. It appears from our case study of KPMG that just 21 locations representing 62 offices, or just 8.4 per cent of all offices, now operate as partnerships with unlimited liability. The implications for risk profiles of the firms in general and the tax advice to clients in particular under limited rather than unlimited liability is another subject worthy of further study.

Our mapping shows that the Big Four share similar legal and professional geographies. Given that the Big Four almost exclusively audit most larger multinational corporations, this means they can rely on other Big Four firms to audit transactions into a jurisdiction, rather than a local firm. The importance of this trust between the Big Four in terms of auditing transactions, particularly when such transactions include tax planning, is a subject worthy of further study. Furthermore, studies of how professionals navigate careers in the Big Four have noted how they are caught between the global and the local (Spence et al. 2015; Spence, Sturdy and Carter 2018), showing how professional identities need to grapple with the organizational paradox. Tracing how professionals are engaged in legal partitioning, and the coupling and decoupling of organizing would provide an important political economy context for their work.

Finally, we return to the classic question in Institutional Theory with which we began: how organizations facing uncertainty tends towards “homogeneity in structure, culture, and output” (DiMaggio and Powell 1983: 147). Meyer and Rowan (1977: 360) suggested that isomorphism in an elaborated institutional environment will likely lead to three outcomes. The first is the “decoupling of structural subunits from each other and activity”, the second is “rituals of confidence and good faith”, and the third is “avoidance of inspection and effective evaluation”. Our investigation of the Big Four suggests that all three elements are present, and that through tracing the Big Four we have a robust case of isomorphism and its effects. Particularly, we show how the Big Four use the local-global ambiguity to avoid inspection and effective regulation. By strategically coupling and decoupling different units whenever convenient, they are able to have their cake and eat it too.

In light of the Big Four’s legal and professional geographies, there is no particular contradiction between the global and local, and that innovation doesn’t necessary come from within the core of the Big Four’s organizational field, but through the development of search mechanisms through a global network of professionals supported by a legal structure that can easily couple and decouple.

Acknowledgements

This research was funded by the European Union's Horizon 2020 Research and Innovation Programme under grant agreement #727145 (COFFERS) and European Research Council grant agreement #694943 (CORPLINK).

Our thanks to Selma Skov Høye for research assistance with the collection and organization of archival data

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APPENDIX

The first object of this research was to determine the extent of each of these firms. We do so in three steps. First we confirm presence in each country from the list of jurisdictions that each of the Big Four publish of their offices to estimate their global presence. We then count the number of offices per country to estimate the geographical spread within countries. Lastly we estimate the number of employees per country to estimate the scale of activity in each country.

The mapping exposed the lack of detailed reporting by these firms. Even lists of offices had inconsistencies not just over time (publications between September 2016 and march 2017) but also across different publications, such as transparency reports versus web page lists. We checked these disparities in a number of ways and find that the firms generally under-disclose their global presence in their public presentation compared with what we could find through secondary sources such as LinkedIn and recruitment pages

Table A1

Firm	Number of jurisdictions where the firm usually says they are present	Number of jurisdictions where we have found evidence of the firm being present	Total number of offices based on our research
Deloitte	140	157	731
PWC	157	158	737
EY	155	159	710
KPMG	152	161	738

Sources: Authors' estimates

Beside presence in a location we are also interested in whether this presence is centralized around a single office or spread out across the country. We establish how many offices each firm had in each country in which they operated using the methods already noted. Figure 2 shows the number of offices by location. We find that their work is done out of a single office in countries that are very small or developing countries, while their European and north American business is more spread out across the country. The disparity between the two maps makes clear that the Big Four only have a limited presence in many of the lower-income countries in the world.

The number of offices that a firm maintains in a location is one indicator of the scale of its operations, but not a wholly adequate one since an office could in principle be just a few people, or a large-scale operation. Research showed that there are offices of Big Four firms with fewer than 10 staff employed and others with thousands. The firms do not themselves publish detailed geographical breakdown of the number of employees in each country, but only a very limited breakdown across regions (as provided in table 5). As a result, research was undertaken to establish the number of staff employed by each firm in each jurisdiction in which they are located to more reliably determine the significance of each. In many cases the local web page of a Big Four firm provided information on the number of staff (and sometimes partners) engaged in a jurisdiction. When this data was not available the necessary information on employee numbers was researched in the firms' transparency reports, sustainability reports, annual reports (if published) or in the recruitment materials that they publish. If these sources did not provide the required data then the LinkedIn page for the firm was checked. These combined sources were considered to be primary data sources for research purposes.

Table A2

	Deloitte	PWC	KPMG	EY
North America and the Caribbean		*57,773*		
South and Central America		*13,110*		
Americas	107,942	70,883	54,111	69,718
Central and Eastern Europe		*9,273*		
Western Europe		*69,627*		
Middle East and Africa		*13,036*		
Europe/Middle East/Africa	86,574	91,936	96,404	112,871
Asia		*53,010*		
Australasia and Pacific Islands		*7,639*		
Asia	49,929	60,649	38,467	48,211
	244,445	223,468	188,982	230,800

Sources: as above. Note: only PWC provides the breakdown noted in italics.

When primary data sources did not secure data on staff numbers for a jurisdiction alternative, secondary, sources were used. These included newspaper articles, descriptions from top employer awards, job listings, Facebook pages and even the personal resume of an HR official. Finally, if none of these sources could be found, but the company was present on LinkedIn, we used the range provided by the LinkedIn entity to approximate size. These company pages report firm size as categorical ranges, which we would take the mid-point of. For example, when a LinkedIn listing for the firm suggested it had between 51 and 200 employees, we recorded it as having 125 staff. This data was inevitably approximate in some cases.

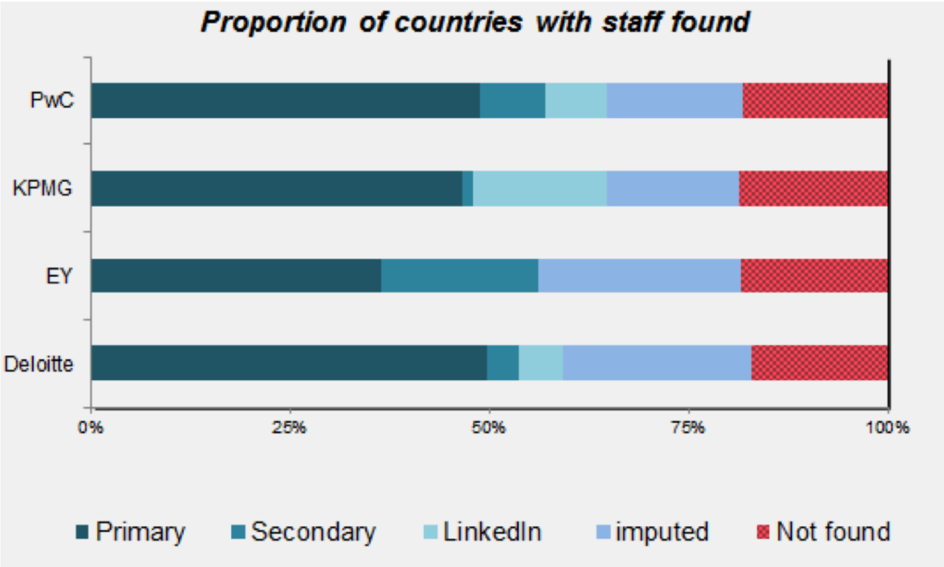
Using these combined methods the number of staff in 61 per cent of known locations of all firms could be determined. These 61 per cent of locations represented 91 per cent of the declared number of global employees. Missing data was then imputed where sufficient data on firm presence and office numbers and the number of staff employed by other firms in the location for which imputation was to take place made this possible using the formula:

$$\textit{Imputed staff}_{ic} = \textit{Global size}_{i} \times \textit{Average local size}_{Bc} \times \textit{Number of offices}_{ic}$$

The global size of the firm is the relative size of the firm's global staff number relative to the average (of the four firms); average local office size is based on the number of staff per office for the firms where we could find the data, and number of offices is the number of offices for that firm in that country. *B* indicates the average of the Big Four; *i* indicates the individual firm and *c* indicates the country. The imputed staff number is therefore based upon the size of the firms in the countries where data is available corrected for differences between firm size and number of offices. Testing that it is a reasonable assumption that office size of each firm would be close to the average office size for the other firms in the same jurisdiction shows correlations that are very close to 1 and significant at the 99 per cent level of confidence. This enabled imputation to increase the number of locations for which staff numbers could be suggested to 82 per cent of jurisdictions representing 97 per cent of employees. There remain jurisdictions where lack of data for any of the four firms means no imputation is possible. These countries only appear in analyses of office data as a consequence. This introduces a limitation since the places where they are present but there are no data available is possibly the places of secrecy jurisdictions. These places include Andorra, Brunei, Cook Islands, Liberia, Liechtenstein, Monaco, St Vincent and the Grenadines, the Seychelles and Turks and Caicos Islands.

The proportion of staff located for each firm by the different means noted above were as follows:

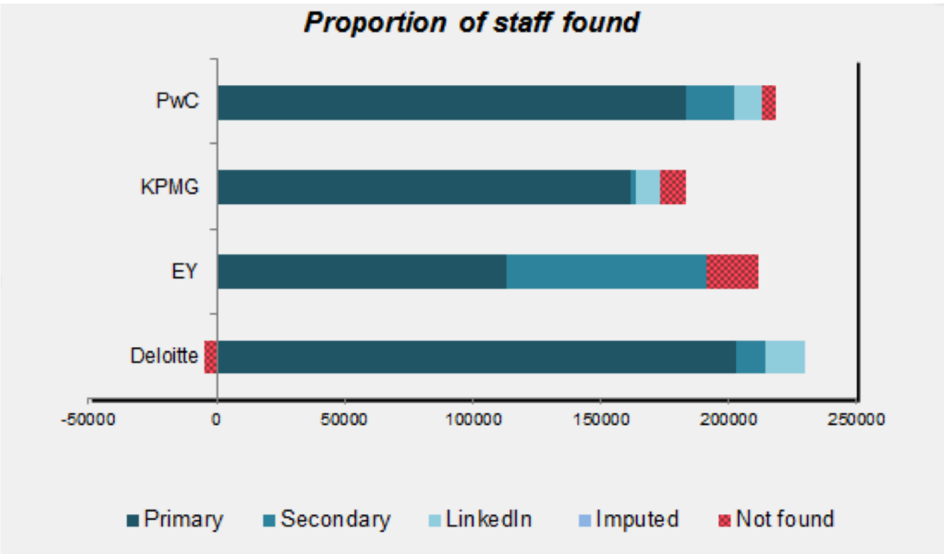
Figure A1



Sources: as noted above

Using these methods it was possible to locate a significant proportion of the global staff number for each firm:

Figure A2



Sources: as noted above. Note that slightly more staff were located for Deloitte than they declare that they employ.

SEEING LIKE A BOSS:

MANAGERIAL CONTROL OVER GLOBAL VALUE AND WEALTH CHAINS

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Abstract

Managers of contemporary multinational enterprises (MNEs) oversee a network of value-producing and wealth-protecting entities. Scholarship in economic geography and international political economy associates value-producing entities organized in Global Value Chains (GVCs), and wealth-protecting entities in Global Wealth Chains (GWCs). They are rarely analyzed together. Here we suggest that 'seeing like' an executive manager – a CEO, CFO, COO, etc. - of an MNE includes exercising control over both of these chains at once with the assistance of Global Professional Service Firms. We contrast the differentiated geographies of value-producing and wealth-protecting assets with the highly correlated geographies of managers and professional tax planners, each responsible for planning and controlling value and wealth chains respectively. We measure GVC location through the number of LinkedIn profiles for productivity managers. GWCs are measured by number of LinkedIn profiles of tax professionals. We find that these roles and their locations are highly correlated, enabling the capacity to 'see like a boss' over value chains and wealth chains. Our findings contribute to both the theorization and empirical strategies to studying how GVCs and GWCs are entangled by design in contemporary capitalism.

INTRODUCTION

How do the executive managers of multinational enterprises (MNEs) control the complex structures of finance and production? The strategic use of corporate entities in different legal jurisdictions is typical in multinational corporate structures. There are a variety of reasons for this to occur, including outsourcing to jurisdictions with lower operational and labor costs, to handle exchange rate risks, to manage intellectual property, and ease intra-firm trade, among many other factors. Contemporary MNEs rely on professional services to plan these multinational corporate structures, especially Global Professional Service Firms (GPSFs) for accounting and financial management (Beaverstock 1991, 1996; Boussebaa and Faulconbridge 2019). Executive managers of MNEs – such as CEOs, CFOs, and COOs – coordinate with tax professionals to govern complexity.

As documented in economic geography and international political economy scholarship, the globalization of production and finance has led to distinct governance systems for Global Value Chains (GVCs) and Global Wealth Chains (GWCs) (Gereffi et al. 2005; Seabrooke and Wigan 2017). Value chains are governed to control production processes, while wealth chains are articulated to manage and protect wealth. In this article we suggest that 'seeing like a boss', an executive manager, in a MNE can be imputed from the presence of managerial locations and tax professional locations linked to GVCs and GWCs. We contrast an asset-based view of GVC-GWC integration, which links the geographic specificity of chain location to the trading of products and financial services, with a managerial view of GVC-GWC integration that assesses the presence of productivity managers (GVCs) and tax professionals (GWCs). We demonstrate that a managerial view of value and wealth chain integration provides insights into how MNE executives control complex systems of production and finance.

We suggest that a 'managerial' view of how GVCs and GWCs are entangled in contemporary MNEs is needed for three reasons. The first is that an asset-based view of GVCs and GWC depicts two distinct spheres of activity with sites of production and sites of financial management. For production one can take a country-based view of where value is added in trade relationships, but this tells us little about financial management, such as tax planning. For finance one can take a view of what jurisdictions offer financial secrecy and act as tax havens, but this is commonly delinked from value chain activity. Put simply, an asset-based view is vital for understanding activity but does not help us understand how GVCs and GWCs are entangled from the perspective of management. If we wish to offer a stronger understanding of the 'firm-territory nexus' we need to have information on how physical proximity and professional affinities can support relationships among managers to develop global business strategies. As Dicken and Malmberg suggest, this

> involves recognizing the nature of firms not only as legally bounded entities and owners of proprietary assets (both tangible and intangible) but also as institutions with permeable and highly blurred boundaries—in other words, conceptualizing them as "networks within networks" or "systems within systems" (Dicken and Malmberg, 2001, p. 346).

Identifying what we call the managerial view assists in understanding how these networks and systems are articulated based not on asset location but on where managerial worldviews are coordinated and reproduced.

The second reason for the managerial view is that have known for many years that finance has changed how MNEs operate but less on how this changes the spatial location of activities. Fligstein (1990) noted long ago that managerial control within MNEs was being transformed by finance, empowering those "determined by a legal framework and a self-conscious vision of the world that make both old and new courses of action possible and desirable" (Fligstein 1990, p. 4). Similarly, Zorn (2004) noted the rise of the CFO as a new organizational actor that was diffusing across American enterprises in response to regulatory pressures. We have less information on how the rise of finance is linked to GVC-GWC entanglement (exceptions can be found in Milberg, 2008; Coe et al. 2014), especially in how wealth is managed. Understanding and planning tax minimization requires the assistance of experts facilitating the connection between value creation and wealth protection entities (Wójcik 2013, Clark and Monk 2014; Christensen et al. 2020).

The third reason for a managerial view is that it is important to have a geographic conception of control over value and wealth chains that can operate across scales and are not victim to what Agnew identified as the 'territorial trap' (Agnew 1994). This trap is to view states as fixed sovereign units and as 'containers' of firm activities. The asset-based view of GVC and GWC governance often falls prey to this trap, in part as a consequence of the international organization of available data on asset location (Linsi and Mügge 2019). We suggest that a managerial view can tell us more about how global activities are planned across scales, with command over strategy located in cities (Sassen 2004), especially where financial services are concentrated (van Meeteren and Bassens 2016). Included in such a view of scale is the idea that positionality assists how actors connect between distant places, including the maintenance of 'wormholes' in which social networks condition what is possible and replicate power asymmetries (Sheppard 2002, 324).

A managerial view also encourages us to look at executive managers and professionals are located, and from where they plan how GVCs and GWCs are linked. With the three above reasons in mind we suggest that a managerial view allows us to 'see like' a boss. As such, we add to other 'seeing like' contributions in economic geography and international political economy that emphasize how agents make their subjects 'legible' through economic, geographic and social planning (Scott 1998). This approach to identifying planning systems through the eyes of their designers has been applied to a range of actors and issues, including economists (Helgadóttir 2021), intergovernmental organizations (Broome and Seabrooke 2012), businesses (Harrison 2021), cities (Zukin 2020), and markets (Fourcade and Healy 2017). Consistent to this work linking actors' positionality to how they manage is noting how planning requires delimitation and scalability. In our case 'seeing like a boss' - an MNE executive manager – shows how tax planning is not separate to MNEs but has proximity to where corporate planning happens. In this context certain locations, especially cities, are important sites for tax planning because of a combination of legal opportunities, physical proximity, and professional concentration (Helgadóttir 2020).

This article is organized into five sections. First, we discuss the importance of locating different functions of multinational enterprises in economic geography and international political economy. Second, we discuss how the asset-based view has focused on ascribing location in a manner that links functional activity to national jurisdictions. Third, we further develop the managerial view, specifying how 'seeing like a boss' relies on the separation of the firm and the corporation and how this assists the managerial view. Fourth, we describe our data and methods to assess the relations between GVCs and GWCs in the asset-based view and in the managerial view, showing our results. Finally, we discuss the implications of the managerial view for how we theorize and locate control over GVCs and GWCs.

LOCATION, LOCATION, LOCATION

A long-standing research agenda in economic geography and international political economy has been to identify the locations of differentiated economic activities (Beaverstock et al. 1999; Lavoratori et al. 2020), and understanding why certain economic activities are clustered in specific places (Dunning and Norman 1983, 1987, Wang et al 2011). The *location of headquarter offices* and managerial staff services, has previously been explained by different approaches. Dunning and Norman's ownership-location-internalization approach (1983: 687) pointed to how the location of executive and professional staff was not especially linked to labor costs or specific geographies but more on staff availability as well as social and cultural factors (see also Faulconbridge et al. 2008, 212). Early theories contended that once a firm is of sufficient size the location of offices is driven by two concerns. The first is the need to establish clear communication between the office and the 'plant'. The second is to consider the "multiple duties of many of the top men in the firm-duties which relate sometimes to plant operations and sometimes to office operations" (Evans 1973, 688). The balance between whether parts of the corporation were producing value or engaging in 'office operations' was an important consideration, with the latter centering around metropoles.

The drivers of the *location choices of production sites* and service units have also been studied intensely within economic geography as well as managerial economics (e.g. Bristow et al. 2000). A commonly identified driver is low-cost competitive advantages (Porter 1994, Abernathy et al. 2006, Bernhardt and Pollak 2016). For scholars investigating GVCs and Global Production Networks the location of production has been studied as a source of variation in chain types or network propensities. Yeung and Coe (2015, 37) detail the dynamics between cost and capabilities of lead firms and suppliers, and underline the importance of lead firms for location choices made in lower-tiers of suppliers. The importance of co-location between different firm activities is also an object of study, particularly studying whether the co-location with manufacturing matters for innovation processes (Belderbos et al 2016; Buciuni and Finotto 2016, Moodysson et al. 2008). The importance of face-to-face interactions continue to be emphasized in economic geography (Storper and Venables 2004).

In the GWCs and Global Financial Networks literature the *location of firm financial assets and ownership structure* has been conceptualized as driven by tax planning motivations (Seabrooke and Wigan 2014, 2017; Finér and Ylönen 2017). By placing corporate entities and assets in lower-tax jurisdictions and making use of strategic intra-company sales and financial contracts, profits can be subject to lower global tax. This creates curious patterns in global investment, as lower-tax jurisdictions take on an outsize role (Dixon 2014; Haberly and Wójcik 2015a, 2015b). These ’tax haven’ or ‘offshore’ jurisdictions, have been scrutinized in their ability to facilitate these practices (Hampton and Christensen 1999, Fernandez and Hendrikse 2020), though others have also pointed to alternative spaces (Wainwright 2013, Helgadóttir 2020) as well as ‘onshore’, ‘midshore’ or ‘conduits’ all playing a role in providing tax benefits through asset placement (Fernandez et al. 2016, Garcia-Bernardo et al. 2017).

The *location of professional services* has been a focus of debate regarding what mix of affinity, proximity and strategic advantage is the basis for location (Dunning and Norman 1983; Strange 1988; Faulconbridge et al. 2008). Affinity can be important in allowing professionals to identify and learn from each other, as well as form networks of trust and reputation (Faulconbridge 2014). Proximity is important in allowing professionals to meet regularly with clients and foster control of their activities through socialization (Beaverstock 2004). Strategic advantages come in various forms, depending on if the business activity is directed at production or finance. The political and economic context for the location of professional services as opposed to production-based activities matters. Accordingly, this literature converged around relational and network-based explanations of why professional services are internationalized and how they are formed around ‘institutional pockets’ (Morgan and Quack 2005) and ‘relational geometries’ strongly informed by political and economic opportunities (Yeung 2005). Networks of trust and reputation are especially important in affirming where professional services are located, allowing regular interactions to build trust over professional competence and goodwill (Glückler 2005).

We contribute to the above work in showing that locating different aspects of a multinational enterprise will lead to very different conclusions regarding the overlap between the financial and productive parts, depending on whether an asset based or managerial view is taken. We identify how managerial roles are co-located, allowing the 'bosses' to oversee the management of complex multinational enterprises and control both value-producing and wealth-managing processes. This provides some insight into how GVCs and GWCs are 'entangled' by design (the theme of this Special Issue).

THE ASSET-BASED VIEW

The GVC and GWC typologies are frameworks for how spatial separation of firm processes can enhance value and wealth for the managerial and ownership level of lead firms or lead suppliers. While GVCs valorize material and technological practices available through the transnational governance of a dispersed production process (e.g. Whitfield and Staritz 2021), the use of GWCs harnesses opportunities in law, finance, and accounting (Seabrooke and Wigan 2017). Both GVC and GWC literature places emphasis on the location of productive and financial assets to understand how the chains are composed and to compare them against the ideal types that are vital to the explanatory power of the frameworks (*market, modular, relational, captive,* and *hierarchy* in both, see Gereffi et al. 2005; Seabrooke and Wigan 2017). We call this common tendency to locate activity as taking place where assets are held or embodied as physical property (like the 'plant' referred to above) as the 'asset-based view'. In the asset-based view, trade and financial linkages are commonly used to measure the position of an economy within the complex network of value and wealth chains.

The emphasis on measuring upgrading and GVC integration through the location of production sites and export market share has been particularly important for understanding uneven geographic development (Hess and Coe 2006; Bair et al. 2021). Bernhardt and Pollak (2016), for example, measure economic upgrading by the export value and export market share within an industry, identifying what countries upgrade in GVCs over time. In country level analysis, the measurement of GVCs is focused on the level of integration of a country into GVCs as measured by trade in value added (OECD 2021, Johnson 2018, Mahutga 2011). Such work shows that some countries over time experience increased or decreased economic and social downgrading by assessing value chain integration and up/downgrading via trade linkages (Mahutga 2011, Johnson 2018, Criscuolo and Timmis 2018). While it can be assumed that power resides where integration is high (Mahutga 2014), this biased the field toward studies of inclusion, overlooking how 'disarticulations' are important in the replication of uneven development (Werner and Bair 2011).

For GWC research an asset-based view has been common. Strategically placing asset ownership in low-tax jurisdictions has been a regular emphasis, especially tracing how firms and elites have developed strategies to exploit opportunities in particular jurisdictions like the British Virgin Islands (Robertson 2021; Stausholm 2021), Liechtenstein (Sharman 2017), Luxembourg (Finér and Ylönen 2017), and others. Cross-country analyses of GWCs have mostly focused on identifying so-called 'tax havens' or 'offshore jurisdictions', which has been done through a range of different approaches, such as identifying the features of financial secrecy (Cobham, Jansky and Meinzer 2015), or measuring centrality of countries in ownership links within MNEs (Garcia-Bernardo et al. 2017). Such studies have also identified how such jurisdictions attract financial inflows in a scale incommensurate with the size of the domestic economy (Tørsløv et al. 2018). Investigations have also shown how corporate ownership networks center around low-tax jurisdictions (Siegler et al. 2019). Studies of the role of tax professionals in this space emphasize the role of the relationship between tax service suppliers and client location (Ajdacic et al. 2021).

The GVC and GWC approaches currently both compare countries by measuring their *productionness* and their *offshoreness*, measuring this either as network centrality as a destination for *flows* or as a destination for placing either productive capital assets or for wealth *stock*. Not surprisingly, these methods of ranking countries show very different maps of the world, as productive and financial assets can be placed in different places for different purposes. This asset-based view therefore suggests there is no necessary geographical overlap between GVCs and GWCs. This asset-based method of mapping countries makes it conceptually hard to discuss what possible dynamics exist between them (Bair et al. 2021), and not only for the fact of lacking bilateral trade data for many of the financial jurisdictions that prove central in GWC networks (Garcia-Bernardo et al. 2017). While the overlap between GVCs and GWCs has been discussed conceptually (Quentin and Campling 2018), it has not been demonstrated empirically.

Mapping the location of professionals holding executive power holds important insights to understanding how contemporary MNEs are structured. While others have explained the location of different types of professional services and executive functions (Dunning and Norman 1983), we focus on the co-location between these. Studying where different professionals are located gives us important insights into where decisions are made, and what type of functions are co-locating. Disentangling the professional profiles of corporate agents enable us to locate the centers of corporate networks that serve different functions. Instead of measuring the *productionness* of a country we can measure the *managerialness* of specific locations, chiefly cities. Measured by the number of corporate executives, this can be thought of to what extent a certain place serves as the place where the corporate network bases their managerial expertise. Similarly, we offer the *tax-planningness* of a location as an alternative to the conception of *offshoreness*. This can be thought of as the extent to which a jurisdiction serves as the place where the corporate network places or source their tax planning expertise, which may or may not overlap with the placement of assets. Both *managerialness* and *tax-planningness* are city-based and talk to the positionality of those who are able to see like a boss.

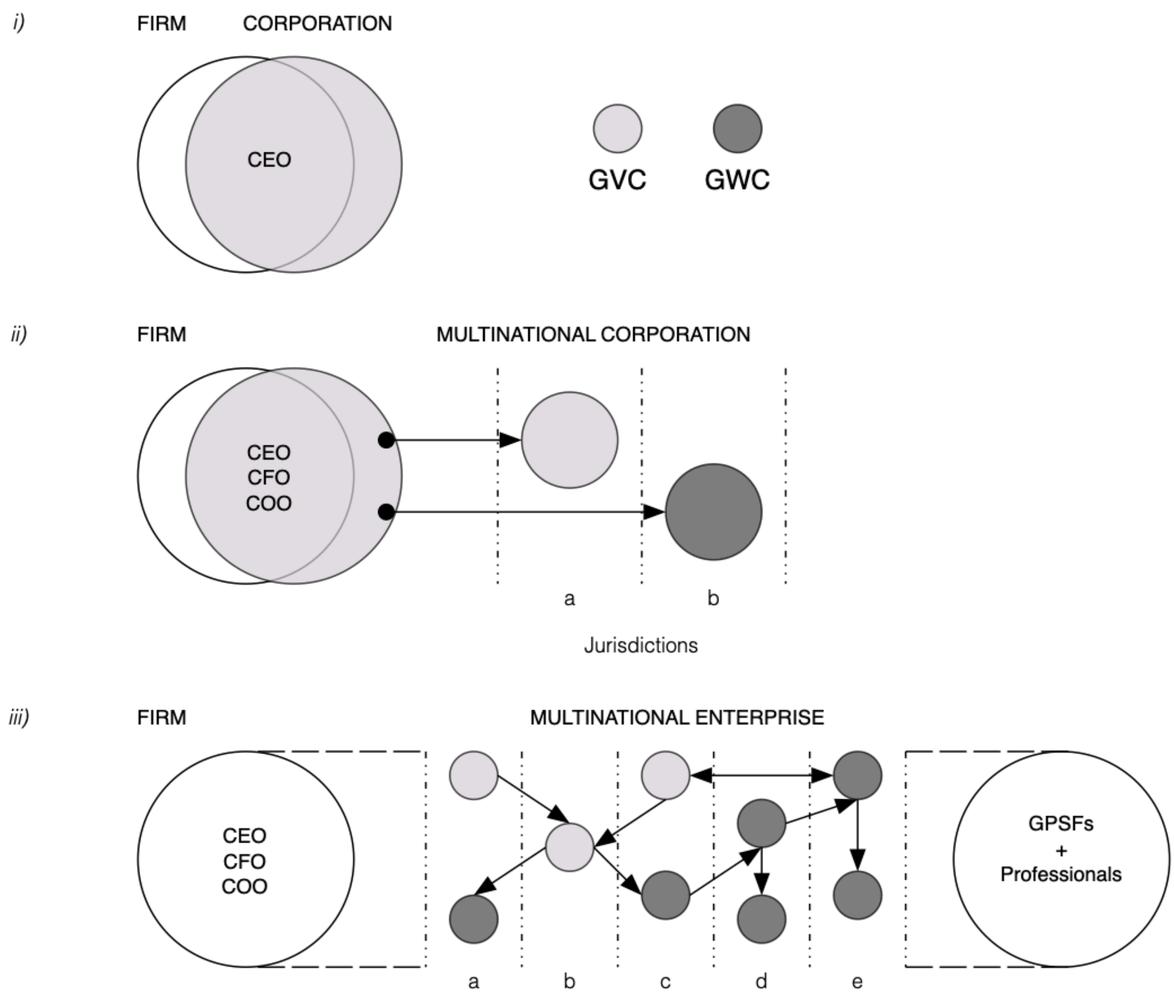
THE MANAGERIAL VIEW

Taking a managerial view of the structures of GVCs and GWCs means analyzing the relational aspects of firm strategy and locating the positions from which control is exercised. This managerial view follows recent trends in GVC and GWC literature to locate more relational aspects of how chains are governed. For example, Dallas et al. (2019, 667) reconceptualize GVC governance as the "actions, institutions and norms that shape the conditions for inclusion, exclusion and mode of participation in a value chain, which in turn determine the terms and location of value addition, distribution and capture". There has been greater emphasis on the relations supporting how GVCs are formulated (see also Kano 2018). On GWCs, Christensen et al. (2020) explore how relationships between professionals, clients, and regulators determine the relations around GWC articulation. Santos (2021a, 2021b) has provided ethnographic research on how relational work underpins multi-generational wealth management in GWCs. This trend in GVC and GWC research is to identify the kinds of relationships at the base of governance strategies.

We suggest that to 'see like a boss' requires us to rethink some basic imagery on how to view the relationship between the firm and the corporation. In the asset-based view the lead firm in GVCs, or lead supplier of professional services in GWCs, guides how the chain is articulated. The firm and the corporation are synonymous, akin to the use of business, enterprise, etc. In this conception of 'lead firm' or 'lead supplier' is an idea of the firm as primarily a social organization with greater control of governance within the respective chain. Understanding the relational aspects of this social organization benefits even more from an analytical and legal distinction between the firm and the corporation. This distinction helps us locate how managers in the firm are positioned, and often co-located in cities, to oversee the management of corporate entities in different jurisdictions that offer benefits in production or financial and legal management.

Figure 1 provides three stylized images of how we can make this firm/corporation distinction. In the first image (*i*) the firm and the corporation are conflated with the CEO in charge. This view of seeing the firm and the corporation as interchangeable is common, but analytically problematic, since the ownership over assets legally falls to corporate entities whereas the firm is a social organization with no legal rights (Robé 2020). Conflating them makes the distinction between GVC and GWC difficult since everything is corporate strategy.

Figure 1: Seeing the Firm and the Multinational Enterprise to see GVCs-GWCs



In the second image (*ii*) we have the firm and the corporation still conflated with an extension into a multinational corporation through investment into GVC or GWC entities in different jurisdictions. The image here is that the headquarters contains a CEO, CFO, and COO that control investments into foreign subsidiaries for strategic planning over production and finance. This conception fits with the asset-based view described above. A key issue here, however, is that the firm and the corporation are still conflated. As Robé (2011) has explained, this is a common problem that can blind us from seeing managers operate in practice. For Robé the firm is the organizational unit, the going concern, and the corporation is the legal framework created to protect managers and appease shareholders. The implication of this is that executive managers in the firm control assets owned by entities in the corporate structure, which is divided and protected by the legal personality of the corporate entities. Executive managers are officers of the corporation in determining corporate strategy and assigning dividends, but their interest is to protect their control around the firm. As such they do not work for shareholders, but have fiduciary duties in the management of the corporate structure.

In the third image (iii) the firm and the corporation are separated to provide us with a more accurate depiction of the managerial view – seeing like a boss. The CEO, CFO, and COO are all present in the firm and oversee the composition of GVCs and GWCs within a multinational enterprise. We denote this as a MNE because the proliferation or collapse of corporate entities follows the strategic interests of the managers in the firm rather than giving greater permanence to what we would conventionally think of as a multinational corporation based on foreign direct investment choices. The creation of elaborate corporate structures permits the rapid use of ''in-betweener' rather than 'stand-alone' corporate entities, especially for aggressive tax planning (Petersen et al. 2021). The dashed lines from the executive managers on the left depict how they oversee the multinational enterprise. On the right we have GPSFs and professionals, such as tax professionals, who assist in maintaining the elaborate structure and how GVCs and, especially, GWCs behave within it. This includes the functional differentiation of what GVCs and GWCs do, including whether professional activity around GWCs is to funnel money through a jurisdiction or help to store and hide it ('conduits' and 'sinks' for Garcia-Bernardo et al. 2017; Ajdacic et al. 2021). Even the top management of the firm may be unaware of the full extent of the legal devices used to optimize wealth protection (Robé 2020, 266), meaning that GWC creation is a relationship established between the firm's managers and the external tax professionals. In these cases, therefore, tax professionals may take over some of the ability to act and see 'like a boss' or, at the very least, provide the tools needed for managers to make the strategic decision to minimize taxation.

The asset-based view would suggest that the geographical dimension of GVCs and GWCs is constituted by the interlinkages between countries in terms of trade in products and financial services. This is vital information but, to identify GVC-GWC entanglements, needs to be supplemented with a managerial view to identify where strategic decision-making powers are positioned. Central to this strategy are decisions in terms of production, such as choosing suppliers and locations, and finance, such as choosing the optimal mix of jurisdictional presence to route wealth through in ways that minimize taxation.

ANALYSIS AND FINDINGS

We explore the differences between the 'asset-based view' and the 'managerial view' by analyzing how countries are placed within GVC and GWCs using these different concepts. In this analysis, we ask what the geographical relationship is between GVCs and GWCs based on two different conceptualizations of how this geography can be measured. First, we correlate GVC and GWC geographies based on where the productive and financial assets are placed in a national setting. We then contrast this to the correlation between GVC and GWC geography based on managerial control functions, at the city level.

Table 1: Data Overview

	GVC	GWC
Asset-based view	Trade linkages *Data source: OECD Trade in Value Added Database*	Financial linkages *Data source: Financial Secrecy Index*
Managerial view	Management locations *Data source: LinkedIn*	Tax professional locations *Data source: LinkedIn*

The databases providing insight into GVC backwards and forwards linkages are limited by data availability. The database with the largest coverage is the OECD Trade in Value Added database which covers 64 countries (OECD 2021, Johnson 2018). We use data for 2015 for backwards and forwards linkages in GVCs in percent of GDP, taking the entire world as the trading partner for each country. Similar to Criscuolo and Timmis (2018) we take the average of forwards and backwards linkages to obtain a measure of GVC centrality.

We contrast the measure of GVC centrality with the measure of GWC centrality, using the Financial Secrecy Index (hereafter FSI, see Cobham et al. 2015). This Tax Justice Network index ranks economies based on their institutional capacity to act as havens for corporate or personal tax avoidance, coupled with their relative importance for cross-border financial services according to the volume of transactions. The FSI is important because it does not link financial secrecy to a list of 'tax havens' declared by political entities (like the European Union, which excludes its own 'tax havens'), but from the presence of regulations for secrecy and the amount of capital operating through these jurisdictions (Karhunen et al. 2021). The index covers 112 countries and territories, but the overlap with the TiVA data is only 52 countries.

Figure 2: The Asset-Based View of GVC-GWC Entanglement

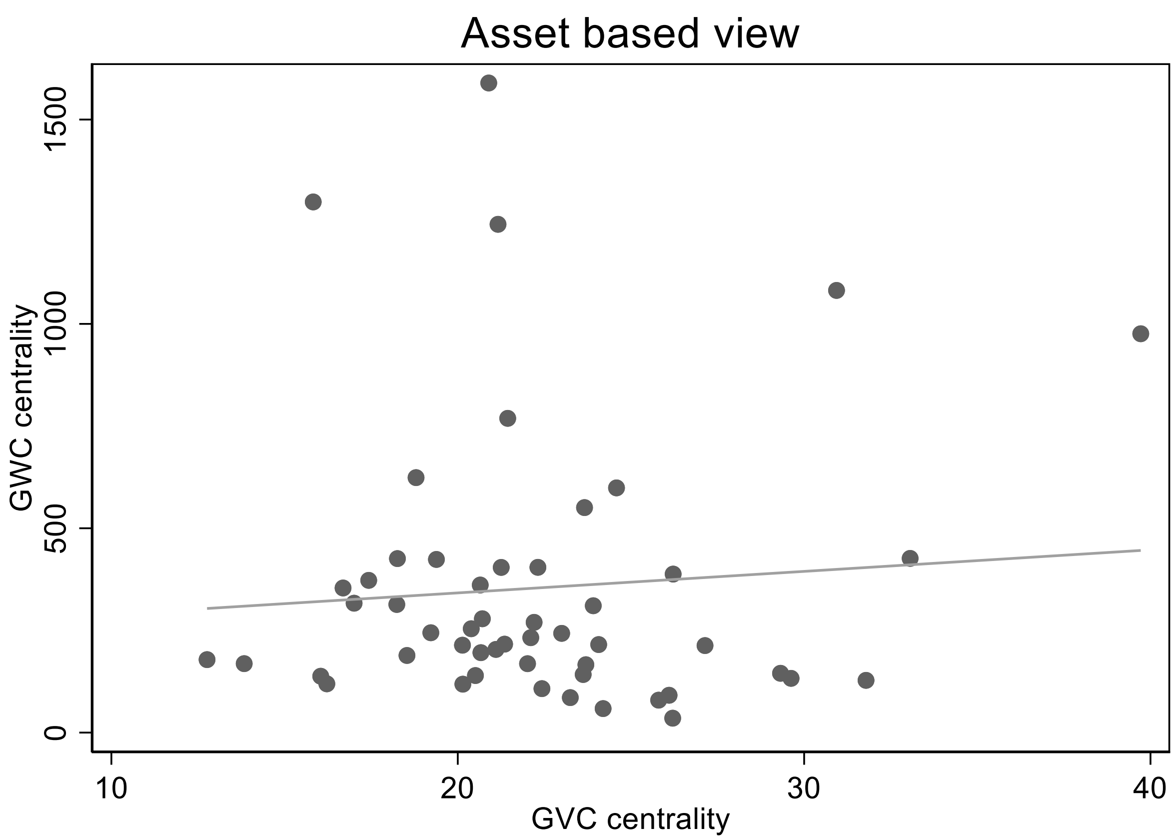


Figure 2 illustrates the correlation between a country's centrality in GVCs and GWCs, measured via the asset based view, as described above. As can be seen, a regression using OLS yields a correlation coefficient that is not statistically significantly different from zero. The lack of overlap between international production and financial asset placement is not surprising. It can be seen as a stylized fact about the world economy (i.e. Criscuolo and

Timmis 2018). A meaningful integration of the research on the productive assets in GVCs and the financial assets of GWCs is hard to achieve when their geographical patterns are so distinct (for country labels see Figure A in the Appendix).

Control over these assets is not necessarily disintegrated if we take the managerial view. MNEs' complex networks are ultimately planned and managed by people, and we focus the data on the level of individuals, and count their presence at the city level. While trade and financial flows are measured at the country level, the importance of national borders should not be overestimated, as cities are more likely to act as the social spaces in which professionals interact (Christophers 2012; Kleibert 2017). Publicly accessible LinkedIn data provides an opportunity to analyze these characteristics, and we consider the aggregated number of LinkedIn profiles with particular characteristics as a measure of the size and scope of a profession. Through defining LinkedIn queries with city-based geography, and job titles, search measures can be constructed to fit a specific group of professionals.

The method for data collection is a novel way to retrieve data from an online professional social network. LinkedIn offers advertisers the possibility to target ads to certain professional demographics. By setting up an ad in the 'campaign manager' we can cross boxes off for specific job titles, industries, educational background or similar characteristics, which professionals usually make available on their profile. After specifying profile characteristics, the site provides a number for how many profiles fit the description (the potential audience, if we were to purchase the ad). By specifying geographic limitations in iterative searches, the site gives a number of profiles for each place. LinkedIn is the most popular application for professional networking and online resumes, but it does have competitors in some countries, and the relative size of the user base varies across countries. Use also differs across professions, meaning that some professions are more represented than others. We assume that the coverage for professions that are highly internationalized is not systematically skewed across countries, even if coverage is not at 100 percent anywhere. We do not approximate the total size of the profession, but rather the relative distribution across countries. Garcia-Bernardo

(2020) provides further details on how this search can be useful for studying the geography of professional groups.

Our use of LinkedIn data to locate professionals followed two steps. First, we obtained data on the GVC dimension, mapping where ‘CXO‘ (CEO, COO, CFO) executives are placed, using data from Garcia-Bernardo and Stausholm (see Garcia-Bernardo 2020, ch. 4). While the governance of the GVC is complex and there are many layers of decision makers, the strategic decisions are made at this level. The data is taken from LinkedIn and is available on the city level based on the reasoning that this is a precise scale to study the location and positionality of managers. We combine the different managerial job titles to provide an overall assessment of CXO roles linked to GVC management.

Second, we want data on the GWC dimension. GWCs are characterized by needing professional expertise from tax professionals (Hearson 2018; Christensen et al. 2020). Some of these professionals work within the firm, whereas others are consultants (Ajdacic et al 2020, Carter et al. 2015). Again we use data from Garcia-Bernardo and Stausholm (see Garcia-Bernardo 2020, ch. 4), who identify a number of LinkedIn profiles with these titles by searching across cities in the Campaign Manager tool of LinkedIn. We use the absolute numbers, given that restricting to larger cities takes out some of the bias towards populated areas that would otherwise drive the results. This measure of tax professionals provides a new method to update earlier important work estimating the rise of professionals in offshore financial centers (Cobb 1999).

Figure 3: The Managerial View of GVC-GWC Entanglement

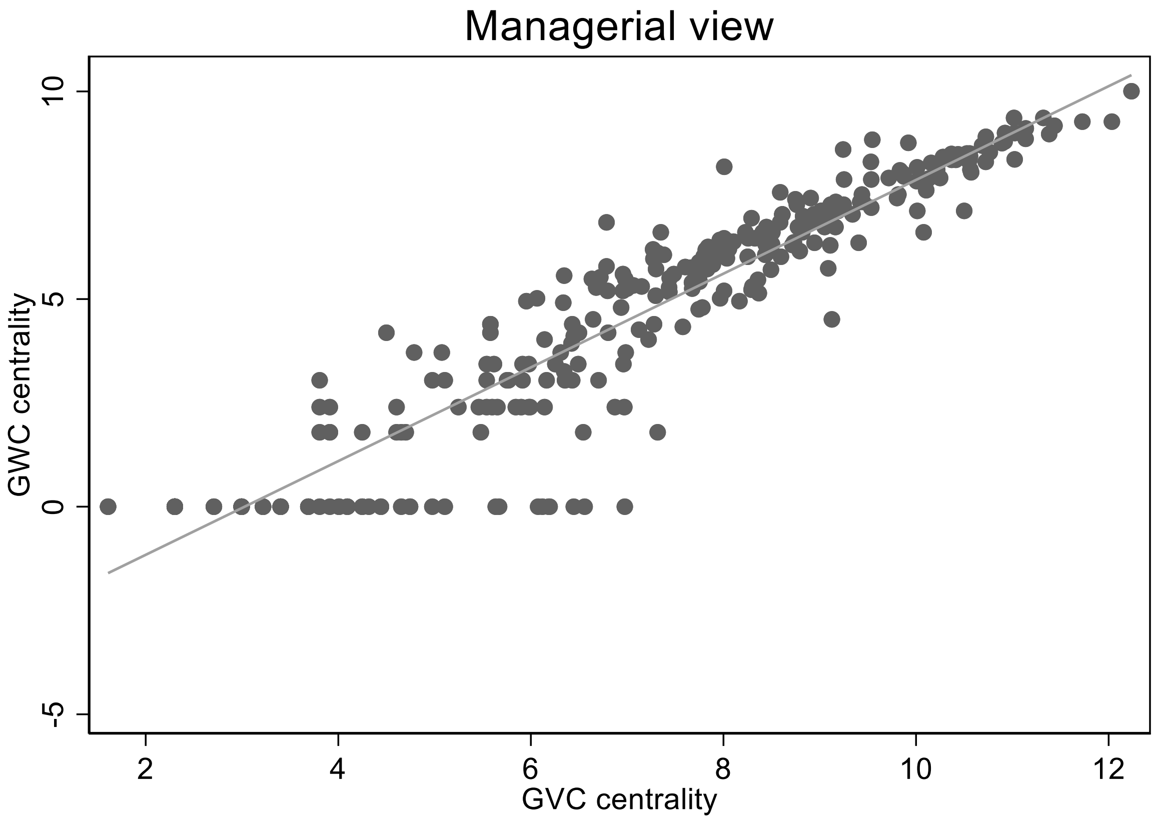


Figure 3 shows our correlation of this CXO and tax professionals data, linking city centrality to show how GVCs and GWCs are entangled from the managerial view. In contrast to the asset-based view, the managerial view shows a high degree of geographical overlap between the GVC dimension and the GWC dimension. Regression analysis using OLS yields a coefficient of 1.1 which is statistically significantly different from zero at the 99 percent confidence level (see appendix). This indicates there is a high degree of co-location between the managers in charge of the supply chain in the GVC sense, and the tax professionals in charge of creating the strategy and instruments tasked with optimizing the GWC. Seeing like a boss means seeing GVCs and GWCs as integrated parts of MNEs. In Figure 3 the very top right corner includes cities where CXO and tax professional roles are highly prominent, such as New York, London, Chicago, San Francisco, and Toronto (for city labels see Figure B in the Appendix). We can also see cities in the same highly correlated segment of Figure 3 where tax professionals are more prominent (such as Sao Paulo), or where CXO roles are more prominent (such as Paris). Such findings match well with research on how cities, like New York, have attracted multinational enterprises to locate their headquarters in the city through favorable 'governing law clauses' that benefit both GVC and GWC management (e.g. Potts 2016), as well as through intense professional network maintenance (Boussard 2018; Kipping et al. 2019). It also conforms with research suggesting that corporate elites have become more both more North American based and transnationalist (Beaverstock 2005; Carroll 2009), and how financialization has restructured MNEs (Morgan 2014). In short, while the geography of assets suggests GVC and GWC should be understood to be completely separate, the managerial view suggests that the professional location of planning production and finance are entangled.

DISCUSSION AND CONCLUSION

Scholarship on GVCs and GWCs has a common aim in establishing who controls and governs production and financial activities across multiple jurisdictions. For GVC literature this ambition has led to a focus on lead firms and then locating where value chain activity takes place, including distinctions between different service or production-based functions. Trade flow data provides data at the country level to identify how GVCs are established. For GWC literature the emphasis has been on lead suppliers of transnational financial and legal professional services, including differentiating why capital flows into what jurisdictions and for what likely purpose (tax minimization, secrecy, etc.). Data on financial secrecy, tax rates, and the scale of financial activities running through a country, provide estimates to identify how GWCs are composed. Above we have described these ways of tracing GVCs and the GWCs as the asset-based view. Such research provides vital information for understanding how GVCs and GWCs are – separately - articulated.

A criticism of the asset-based view is that it falls into Agnew's (1994) 'territorial trap'. At worst such research can treats countries as empty nests and legal boxes, ignoring power relations across space and the social relations within space. This is partly because macro-level data is created to fit data-standards that reflect trade between nations and the definitions that are meaningful from the viewpoint of a government statistical agency (Linsi and Mügge 2019). 'Seeing like' a regulatory body, a trade policy unit, a tax agency, or a statistical agency means seeing only what exists in legal form, meaning only the locally incorporated entities and their legal relationships to other units. More complex social relationships in the social organization of a firm are lost if we limit our research to the legal units of assets, owned by corporations, within states (Robé 2020).

To stress the importance of control in how GVCs and GWCs are entangled (again, the Special Issue theme), we suggest a 'managerial view', taking a relational view of the firm as suggested by Dicken and Malmberg (2001). Firms are not confined to national borders, but consist of networks-within-networks with open boundaries – particularly, we argue, open boundaries that allow connection between executive managers (CEO, CFO, COO) and tax professionals to control GVCs and GWCs. We suggest the managerial view is necessary in understanding how GVCs and GWCs are *entangled by design*. While we remove countries from the analysis, we include cities which are the more relevant scale for firm executives and professionals in global cities (Sassen 2004).

By mapping the location of executives and tax professionals in global cities, we arrive at a very different map of the world than taking the asset-based view. We find an almost exact correlation between the location of these professionals, even if the geography of the assets they manage remain mirror images. This indicates that there is scope for analyzing GVC and GWC together, particularly how the coordination between these professionals happens in practice, rather than seeing them as separate economic processes that are spatially divorced. The variegations of capitalism perspective proposes seeing capitalism as a single economic system with local manifestations, but not fixed by national models of discretely bounded states (Peck and Theodore 2007). 'Seeing like a boss' helps us identify sources of variegation. While we have here shown a ranking of where cities rank in terms of *managerialness* and *taxplanningness*, we do not see the managerial view as simply a new way of ranking countries or cities. Taking a managerial view opens up the avenue of understanding how managerial strategies and firm functions transcend national boundaries through exploiting their differences strategically.

What we describe as the managerial view is not opposed to the asset-based view but should work in tandem with it. For example, the asset-based view has produced ample insights on the increased complexity of corporate ownership structures, where layers of ownership are often ten deep, what some have noted as the 'great fragmentation of the firm' (Reurink and Garcia-Bernardo 2020). What is worth studying from a managerial view perspective is whether and how this complexity empowers executive managers, and to what extent this increased complexity increases reliance on consultants specialized in tax and other risk management strategy experts. As we have described above, distinguishing between the firm and the corporation also helps us to 'see like a boss', especially in understanding how managers operating in the firm oversee MNEs composed of corporate entities with the assistance of GPSFs and tax professionals.

Distinguishing the firm rather than the corporate units has further implications for economic geography and international political economy research beyond understanding the overlap between GVCs and GWCs. The firm/corporation distinction is also useful in understanding the difference between transnational and cross-national analysis. Whereas the corporation exists as units within nations, firms may act transnationally. This capacity to act and assert control comes from locations in which executive managers and tax professionals can interact.

To put this another way, seeing like a boss to trace GVC-GWC entanglements informs of us the importance of positionality and how power from positionality can be affirmed through the co-location of actors. Sheppard (2002) has discussed how the positionality of particular social groups can be replicated through 'wormholes', allowing professionals to connect between distant places with ease (see also Johnson 2016 for a similar concept on central banking communities). The capacity for firm managers and tax professionals to oversee GVCs and GWCs from the cities prominent in Figure 3 comes from the maintenance of social networks that replicate power asymmetries, including those related to class, gender, and race (Sheppard 2002). Such networks bolster selective interpretations of what firms can do with their corporate entities, allowing firms to leverage 'legal affordances' from permissive jurisdictions with the knowledge that likeminded professionals and organizations, like the Big Four GPSFs, will support them (Grasten et al. 2021). We already know that GPSFs' professional services extend beyond GWC governance and are also involved in transnational labor governance within GVCs, including opposing binding public regulations and civil society oversight (Fransen and LeBaron 2019). Tracing how executive managers and professionals affirm their social networks and positionality is important for understanding GVC-GWC entanglements not only on production and finance, but also for labor and environmental issues.

Our contribution to the managerial view is not, of course, without limitations. While the LinkedIn data provides a novel way of studying professionals at the macro level, and has the benefit of the data being easily obtained and very fine grained, it does have some constraints. It is hard to verify the figures, and we have to rest on the assumption that firm managers and tax professionals generally use online social networks. Furthermore, since it is retrieved via a search function, the data can only be obtained deductively, leaving little space explore what other professionals might be relevant. Further work could focus on improving the indicators for the managerial view measures of both GVC and GWC centrality. We hope that future work will also be able to study more closely the coordination and reproduction of managerial worldviews, and how social relationships shape the location of both production sites and financial assets. We hope further work can look at how these interactions are made possible and what sources of authority and expertise lie behind the managerial decisions to place assets strategically.

It is worth speculating whether this aligned GVC-GWC coordination is a new phenomenon, and whether it predates or has been diffused through the rise of firm fragmentation into GVCs and GWCs. Our data does not allow us to study the phenomenon of managerial coordination with tax professionals, or their co-location, over time. Jiang et al (2018) have data over time, showing that 'island' (tax haven) directors become more commonplace in US corporate boards. The use of tax professionals to coordinate and execute strategies for transfer pricing, is illustrative of a profession which governs GVC-GWC entanglements in practice (Christensen 2020). We hope future work will explore further how relationships to tax expertise are copied and diffused across firms and sectors.

The distinction between the asset-based and managerial view has important policy implications, particularly in the area of corporate tax avoidance. The asset-based view with its focus on where firms set-up corporations to book profits under a lower taxation regime has led to political efforts aimed at naming and shaming jurisdictions offering low taxes (eg at the G20 (Retmann 2011) and EU (European Council 2021), rather than the social process by which this is conducted. The managerial view would provide politicians with an alternative to targeting these 'offshore' jurisdictions. By focusing on the relational and social processes which place the assets there in the first place, focus can be reoriented away from naming and shaming jurisdictions to regulating the practices of professionals (Cobb 1999), or redefining tax bases toward more immobile definitions of corporate revenue (e.g. formulary apportionment, see Avi-Yonah, Clausing and Durst 2008; or destination-based cash flow taxation, see Auerbach 2017, Hebous et al. 2020).

In conclusion, the managerial view is a relational view, which suggests a geographical analysis of GVCs and GWCs should focus on where decision-making powers are placed. 'Seeing like a boss' means seeing the firm as a social organization with shared purposes and strategy. If we take on board Robé's (2011, 2020) distinction between the firm and the corporation then the MNE is organized by managers in the firms, using corporate entities across jurisdictions to control GVCs and GWCs. These managers maintain relationships with GPSFs and tax professionals to oversee GVC-GWC governance, and such relationships are city-based and connected by wormholes that are supported by positionality (Sheppard 2002). This has implications for the question of whether the GVCs and GWCs are entangled: seen from the asset-based view they are not, since assets are placed in very different national jurisdictions. However, seen from the managerial view we find a very close correlation between the CXOs and tax professionals in charge of coordinating the production of value and protection of wealth in contemporary capitalism.

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APPENDIX

Figure A: The Asset-Based View of GVC-GWC Entanglement with country labels

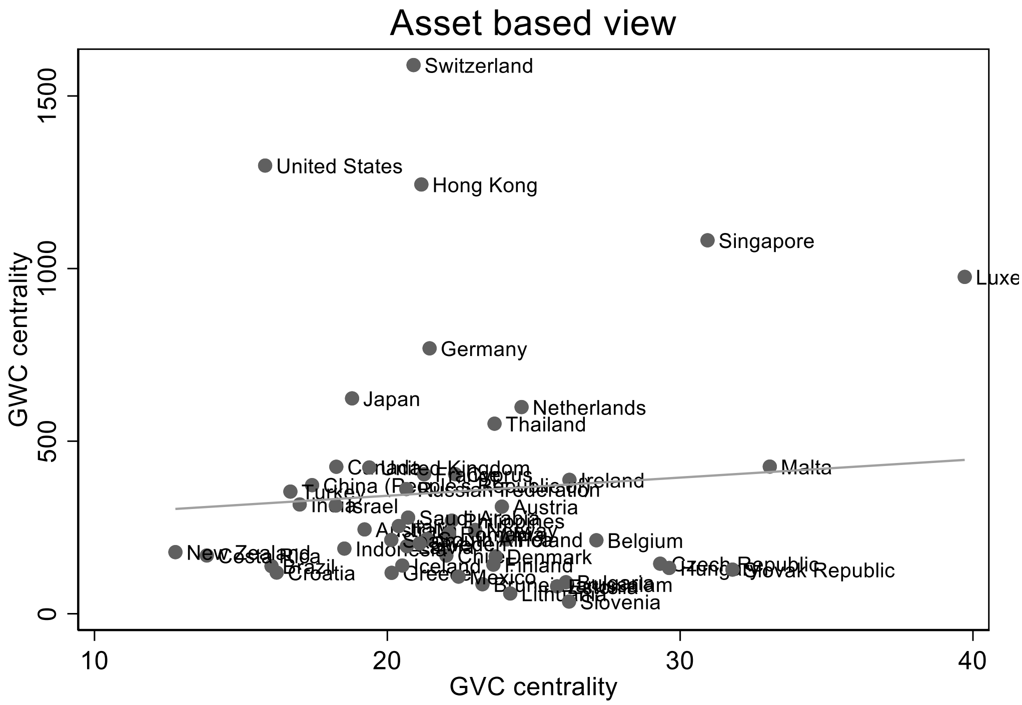

Figure B1: The Managerial View of GVC-GWC Entanglement with city labels

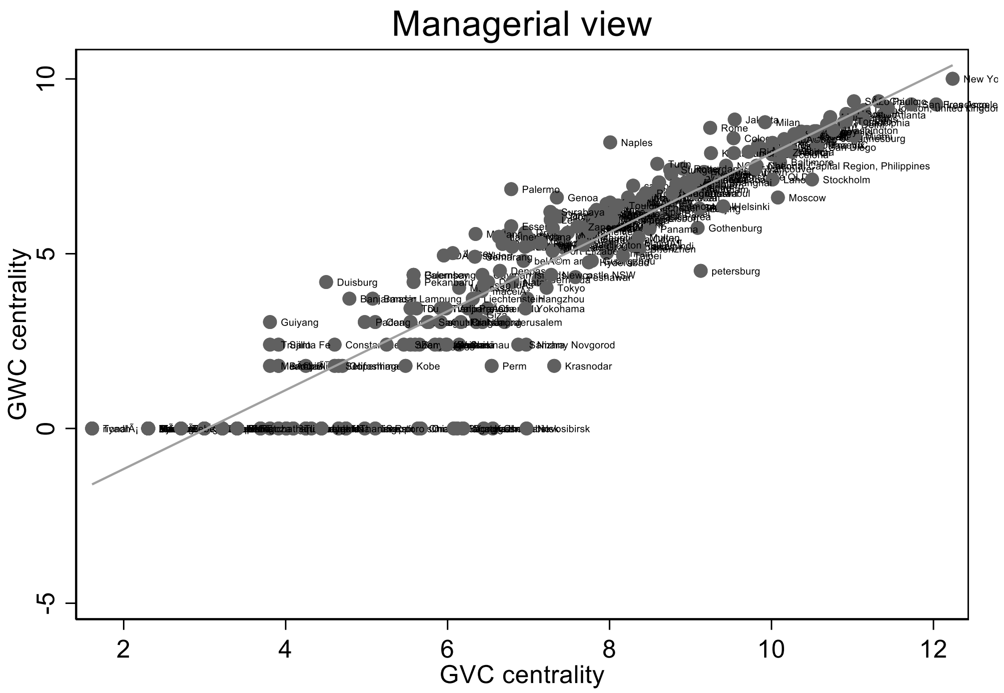

Figure B2: The Managerial View of GVC-GWC Entanglement with city labels (only top cities)

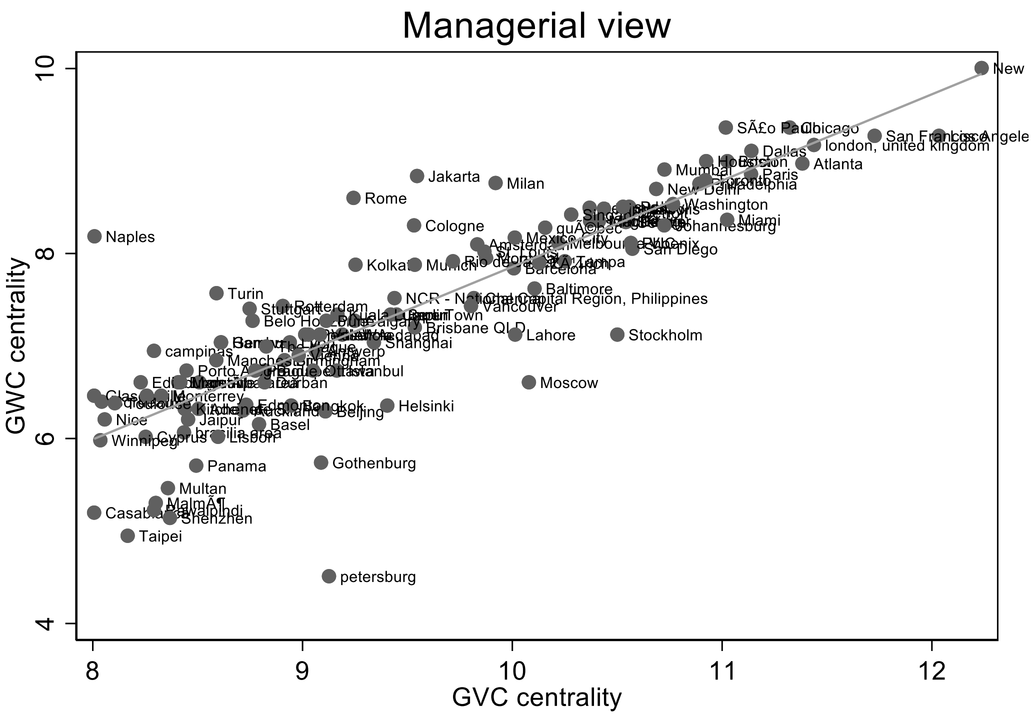

Table A: Regression table

VARIABLES	GWC Asset-based view	GWC Managerial view
GVC Asset-based view	5.266	
	(11.18)	
GVC Managerial view		1.077***
		(0.0310)
Constant	236.5	-1.695***
	(251.9)	(0.185)
Observations	52	218
R-squared	0.006	0.840

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table B: Variable explanation

	GVC	GWC
Asset-based view	Average of forward and backward linkages with the rest of the world "FEXDVAPSH,""Forward participation in GVCs: Domestic value added in foreign exports as a share of gross exports, by foreign exporting country" DEXFVAPSH,""Backward participation in GVCs: Foreign value added share of gross exports, by value added origin country	Financial secrecy index score
Managerial view	ln(CXO)	ln(tax professionals)

Table C: List of countries – Asset based view

Australia	Denmark	Italy	Russia
Austria	Estonia	Japan	Saudi Arabia
Belgium	Finland	Latvia	Singapore
Brazil	France	Lithuania	Slovak Republic
Brunei Darussalam	Germany	Luxembourg	Slovenia
Bulgaria	Greece	Malta	South Africa
Canada	Hong Kong	Mexico	Spain
Chile	Hungary	Netherlands	Sweden
China	Iceland	New Zealand	Switzerland
Costa Rica	India	Norway	Thailand
Croatia	Indonesia	Philippines	Turkey
Cyprus	Ireland	Poland	United Kingdom
Czech Republic	Israel	Romania	United States

Table D: List of cities – Managerial view

Adelaide SA	Dallas	Kuala Lumpur	Oran
Ahmedabad	Delhi	Kumamoto	Osaka
Al-Riyadh	Denpasar	Kunming	Ottawa
Alexandria	Djelfa	Kyoto	Padang

Algiers	Dongguan	Lahore	Palembang
Amman	Dortmund	Las Palmas de Gran	Palermo
Amsterdam	Dresden	Canaria	Panama
Antwerp	Duisburg	Leipzig	Paris
Arequipa	Durban	Liechtenstein	Pekanbaru
Athens	Düsseldorf	Lille	Perm
Auckland	Edinburgh	Lisbon	Perth WA
Bahrain	Edmonton	Liverpool	Phetchabun
Baltimore	Essen	London, united	Phoenix
Bandar Lampung	Fortaleza area	kingdom	Port Elizabeth
Bandung	Fukuoka	Lucknow	Port Said
Bangkok	Geneva	Lyon	Porto Alegre
Banjarmasin	Genoa	maceiÃ	Prague
Barcelona	Giza	Madrid	Pretoria
Basel	Glasgow	Maha Sarakham	Pune
Batna	Goiânia	Makassar	Qingdao
Beijing	Gothenburg	Malmö	Quebec
Beirut	Atlanta	Malta	Rio de Janeiro
Belo Horizonte	Boston	Manaus	Roi Et
Belém	Buenos Aires	Manchester	Rome
Bengaluru	Chicago	Marseille	Rosario
Berlin	Denver	Mascara	Rotterdam
Bermuda	Detroit	Mauritius	petersburg
Bhopal	Jakarta	Medan	Saitama
Bilbao	Los Angeles	Melbourne	Salta
Birmingham	Minneapolis	Mendoza	salvador area
Biskra	Philadelphia	Mexico City	Samara
Blida	San Diego	Miami	Samut Prakan
Bogotá	Seattle	Milan	San Francisco
Bordeaux	St. Louis	Monastir	San Juan
Brasilia	Guadalajara	Monterrey	Santa Fe
Bremen	Guadalupe	Montreal	Santiago
Brisbane	Guangzhou	Moscow	Sapporo
Bristol	Guatemala City	Mumbai	Saratov
Brussels	Guernsey	Munich	Semarang
Bucharest	Guiyang	Murcia	Sendai
Budapest	haerbin	Malaga	Shanghai
Buri Ram	Hamamatsu	Macao	Sheffield
Béjaïa	Hamburg	NCR - National Capital	Shenyang
Calgary	Hangzhou	Region, Philippines	Shenzhen
Campinas	Helsinki	Peshawar	Sidi Bel Abbés
Cape Town	Hiroshima	Nagoya	Singapore
Caracas	Hong Kong	Nagpur	Skikda
Casablanca	Houston	Nakhon Ratchasima	Sofia
Cayman Islands	Hyderabad	Nakhon Sawan	Songkhla
Chaiyaphum	Indore	Nakhon Si Thammarat	Multan
Changchun	Irbid	Nanjing	Stockholm
Chelyabinsk	Istanbul	Nantes	Stuttgart
Chengdu	Jaipur	Naples	Suez
Chennai	Jambi	Natal	Surabaya

Chiang Mai Chiang Rai Chiba Chisinau Chlef Chongqing Coatzacoalcos Cologne Constantine Copenhagen Dublin Curitiba area Cyprus Dalian	Jersey Jerusalem Jinan Johannesburg Johor Kanpur Kawasaki Khon Kaen Kingston Kitchener Kobe Kolkata Krasnodar Krasnoyarsk	New Delhi New York Newcastle NSW Nice Niigata Nizhny Novgorod Rawalpindi Nottingham Nova Iguacu Novosibirsk Okayama Omsk	Sydney São Luís São Paulo Setif Taipei Tampa The Hague Tianjin Tiaret Tijuana Tlalnepantla Tlaquepaque Zamboanga

REVENUE IMPLICATIONS OF DESTINATION-BASED CASH-FLOW TAXATION

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Abstract

We estimate the revenue implications of a Destination Based Cash Flow Tax (DBCFT) for 80 countries. On a global average, DBCFT revenues under unchanged tax rates would remain similar to the existing corporate income tax (CIT) revenue, but with sizable redistribution of revenue across countries. Countries are more likely to gain revenue if they have trade deficits, are not reliant on the resource sector, and/or—perhaps surprisingly—are developing economies. DBCFT revenues tend to be more volatile than CIT revenues. Moreover, we consider the revenue losses resulting from spillovers in case of unilateral implementation of a DBCFT. Results suggest that these spillover effects are sizeable if the adopting country is large and globally integrated. These spillovers generate strong revenue-based incentives for many—but not all—other countries to follow the DBCFT adoption.

[30] The views expressed in this paper are those of the authors and do not necessarily represent the views of the IMF, its Executive Board, or IMF management.

INTRODUCTION

There is an intense debate about the vulnerability of current corporate income tax (CIT) arrangements to profit shifting practices by Multinational Enterprises (MNEs) and tax competition between countries. One approach to addressing these challenges is through reforms within the current system, such as by tightening anti-tax avoidance rules and enhancing tax transparency—e.g., through the G20-OECD Base Erosion and Profit Shifting (BEPS) initiative. Another approach is a fundamental reform of profit taxation that would resolve the vulnerabilities to profit shifting and tax competition.

One specific option for a fundamental reform is a destination-based cash-flow tax (DBCFT), occasionally referred to—slightly misleadingly—as a border-adjusted corporate income tax or a border-adjustment tax. The DBCFT was first proposed in Bond and Devereux (2002) and recently further analyzed in various papers (e.g., Auerbach et al. (2017a; 2017b)). Beyond the academic interest, in 2017 the U.S. congressmen Ryan and Brady proposed introducing a variant of the DBCFT in the United States.[31] While the U.S. tax reform in December 2017 ultimately did not include a DBCFT, the proposal triggered unprecedented policy interest in destination-based profit taxation.

The DBCFT has two components. First, a cash-flow component that enables full expensing of investment and denies interest expense deduction. This component ensures that the DBCFT is a tax on economic rents, leaving normal returns untaxed. Second, the border-adjustment component (i.e., destination-based principle) denies the deduction of imported inputs and excludes revenues from exports from the tax base. This shifts the tax from an origin to a destination base. The DBCFT is thus a rent tax collected at destination.[32]

The DBCFT triggered a discussion on a variety of matters. One much discussed issue is the impact on trade, given the taxation of imports and exemption of exports. Based on theoretical considerations, there should be no impact as changes in real effective exchange rates are expected to undo the impact of the tax.[33] Whether this applies fully in practice is

[31] See: A Better Way Forward—Our Vision for a Confident America, Tax, June 24, 2016.

[32] There are other forms of a destination-based business profit tax. For example, Hebous and Klemm (2020) discuss a destination-based allowance for corporate equity (DBACE), including its revenue implications and how they deviate from those of a DBCFT in the short (greater revenue for the DBACE) and long run (no difference in present discounted value terms, but less volatility in case of a DBACE).

[33] This point is made in several papers. For a particularly clear exposition see, e.g., Auerbach (2017a).

subject to some debate.[34] Certainly under fixed exchange rates, adjustment will have to occur through the price and nominal wage level, which would take some time. Apart from the economic impact, there is also a legal debate on implications under existing tax treaties and world trade rules (e.g., Avi-Yonah and Clausing, 2017).

The purpose of this paper is to contribute to the debate on the pros and cons of a DBCFT by shedding light on one very important empirical question: what are the revenue consequences of adopting a DBCFT? This analysis considers the impact of such an adoption on the DBCFT base and identifies country-characteristics that influence its size and thus revenue. It follows a macro-approach utilizing comparable national accounts statistics and other available macroeconomic aggregates for a panel of countries.

Theoretically, the implications for the tax base are ambiguous: One may be tempted to argue that since the CIT, in theory, taxes both normal return and rent while the DBCFT only taxes rent, the CIT base should be larger. However, many countries provide (often inefficient and ineffective) tax incentives, thereby giving up taxing (a portion of) normal or even supernormal returns. Moreover, MNEs avoidance and tax planning strategies are known to significantly erode the CIT base, especially in high tax countries. Additionally, interest expense deduction from the taxable corporate income can be sizable in some countries. All these factors imply that the actual reported CIT base is not necessarily larger than a destination-based rent tax.

The question should therefore be addressed empirically. Surprisingly, there are, thus far, no cross-country estimates, only estimates for the United States (Patel and McClelland, 2017). The present paper calculates potential DBCFT revenues using an estimated tax base constructed with national accounts data for 80 countries.

Initially, the paper calculates the revenue impact if the tax is applied globally. Our findings suggest that the level of DBCFT revenue, on a global average, is close to the current CIT revenue, given prevailing tax rates. However, a DBCFT significantly redistributes revenues across countries, given unchanged tax rates. In particular, countries with trade deficits, developing economies, and/or countries with less reliance on natural resources are more likely to gain (or lose little) revenue under a DBCFT. As a DBCFT is robust to profit shifting

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[34] Barbiero et al. (2018), for example, argue that the dynamics of adjustment are complex and, depending on anticipation and the exact implementation of the reform, can be incomplete.

and tax competition, revenue losses can in many cases be offset or turned into revenue gains, by raising rates beyond what is currently feasible.

Regarding the revenue gains of countries with trade deficits, the long-term impact of the DBCFT can be different, as current accounts should balance over time.[35] To the extent that imports will be financed by future exports, current "winners" from the DBCFT that maintain a negative net international investment position (NIIP) could lose in the long-term, and vice versa.

Additionally, we discuss further properties of DBCFT revenues regarding volatility, cyclicality, and the role of loss-making firms. Overall, we find that given the deductibility of investment, the volatility of DBCFT revenue is higher than the CIT, but with substantial variation between countries. Regarding cyclicality, the DBCFT could be expected to have a more procyclical impact, given the investment deductibility or a more countercyclical impact, given the immediate refunds of taxes on losses.[36] Empirically, it turns out to be more likely to have a procyclical effect, unlike the CIT which can play a role as an automatic stabilizer. Another effect of immediate tax refunds on losses is an increase in revenue risks from fraudulent and unsuccessful businesses.

Following the analysis of a global introduction, we also consider strategic interactions between countries resulting from unilateral adoption. Global adoption of a DBCFT would mean closing all (known) profit-shifting opportunities, as discussed for example in Auerbach et al. (2017b). DBCFT adoption by one country (or a small group) should, however, intensify profit shifting out of countries maintaining a CIT and also encourage moving rent-earning investment out of those countries. This is because the DBCFT reduces the tax rate on any profits shifted into a DBCFT-adopting country to zero, and also does not tax export-related rents of investors locating real capital in such a country. To shed light on this important issue, we estimate revenue spillover effects from a DBCFT country to the rest of the world. We find that spillover effects are sizeable if the implementing country is large and globally integrated and are pronounced for its major foreign partner countries. The spillovers can be large enough to prompt several countries to follow the DBCFT

[35] Except if the currency is used as foreign reserve currency. Moreover, even under a balanced current account, trade imbalances can be financed from the income account, which also has tax consequences as will be discussed.

[36] We assume introduction of a pure DBCFT. The U.S. proposal did not include this feature.

country in adopting a destination-based tax, leading to second round effects on remaining origin-based countries.

The rest of this paper is structured as follows. Section II discusses how the DBCFT base and revenue can be estimated from available data. Section III presents our results and discusses the factors that determine which countries are likely to gain or lose revenues and possible revenue risk factors. Section IV relaxes the assumption of global adoption and discusses the implication of unilateral adoption by one country. Section V concludes.

II. ESTIMATION METHODOLOGY AND DATA

A. The Tax Base of the DBCFT

A tax base can be estimated using a top-down approach or a bottom-up approach. The latter is particularly useful for simulating the CIT base and requires detailed administrative tax return data. Commercial (accounting) data can be misleading because in many countries financial accounting conventions differ in important aspects from tax accounting rules, for example, on depreciation, or the treatment of past losses. Using national accounts for simulating the CIT base is even more challenging, because these statistics average out profits and losses and do not take into account losses carried forward. Moreover, the concept of operating surplus is different from profits under both an accounting and tax definition, notably because it is gross of interest. Still, economists have tried to estimate tax bases from national accounts, not least because other data—especially administrative data—are not publicly available in many countries.[37]

Fortunately, however, for simulating the DBCFT base, available national accounts data are much more suitable, because they are very close to the definition of the DBCFT base: (i) a DBCFT does not allow interest to be deducted, so using gross operating figures which are gross of interest is an advantage; (ii) a DBCFT should be symmetric to be functional, i.e., tax refunds should be paid to loss-making firms, implying that the use of aggregate profit data that nets out profits and losses of different firms is appropriate;[38] and (iii) as depreciation is not deductible under the DBCFT, there is no concern about any potential

[37] See Ueda (2018) for a discussion of the relationship between national accounts concepts and CIT bases.
[38] Carry-forward, even with interest, would not be effective, because some firms, notably exporters, are likely to be in a systematic tax loss position and would not benefit from it.

differences between tax and accounting depreciation rates. Thus, national accounts data—which are available for many countries—provide useful information for estimating the DBCFT base.

There is more than one possible way of estimating a DBCFT using aggregate statistics. The most straightforward—and as it turns out the one providing the greatest number of observations—is as follows: We start with the nonfinancial[39] corporate gross operating surplus (Π). As this is gross of depreciation (or capital consumption in national account terminology), there is no need for any related adjustment. To obtain the tax base of a cash-flow tax, corporate investment (I) needs to be deducted. To implement the border adjustment, imports (M) are added and exports (X) deducted. Revenues (R) can then be estimated by multiplying the base by the tax rate (τ):

$$R^{DBCFT} = \tau(\Pi - I + M - X) \qquad (1)$$

Note that the tax rate is the statutory rate—including and local rates, where applicable—rather than an effective tax rate, because under a DBCFT depreciation allowances, interest deductibility, and other tax rules would be abolished. Of course, if a country were to keep some special regime, be it a deduction from the tax base or a reduced rate, this would have to be reflected.

Depending on data availability, equivalent calculations could be undertaken. The tax base could be defined starting with gross value added (VA), deducting investment and compensation of employees (CE), and then adding the border adjustment (Equation (2)). Another option would be to start with aggregate final domestic retail sales (S), i.e., excluding revenues from exports and intermediate goods, and deduct compensation of employees (Equation (3)). In practice, these approaches, especially the latter yield fewer observations than those under Equation (1) and thus are not used in the empirical analysis.

$$R^{DBCFT} = \tau(VA - I - CE + M - X) \qquad (2)$$

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[39] In principle, Equation (1) should add deposit and transaction fees and other non-interest income since these would remain taxable under a DBCFT whereas cost of employment in the financial sector should be deducted. However, for most countries, as both effects are in opposite directions, they would likely (to a large extent) offset making a potential bias rather negligible (possibly except for a few financial centers). Internationally comparable data on the subcategories of financial fees and cost of employment in the financial sector are not available for most countries.

$$R^{DBCFT} = \tau(S - CE) \tag{3}$$

Irrespective of how revenues are estimated, we define the change in revenue as the difference between actual CIT revenues and estimated DBCFT revenues:

$$\Delta R = R^{DBCFT} - R^{CIT} \tag{4}$$

The use of actual CIT revenues in this comparison has the advantage that it reflects all complicated aspects of the CIT system that could not be modelled. Under the DBCFT, assuming a clean introduction, there would be no such complications. One disadvantage of comparing actual to theoretical revenues, however, is that actual CIT revenues also reflect compliance. The DBCFT revenue measure, however, implicitly assumes full compliance (at least to the extent that national accounts items are not mis-measured because of noncompliance with the current system). Compliance is likely to be higher under a DBCFT than the current CIT, because there are fewer margins available to companies to reduce tax liabilities. Sales are very hard to falsify, and the border adjustment removes international profit-shifting opportunities. Nevertheless, compliance is unlikely to be full, as some options, such as cross-border shopping, would continue to exist and immediate tax refunds may open the door for tax fraud schemes. The estimate of revenue changes may therefore be slightly biased upward.

B. The Impact of Profit Shifting

The estimates calculated from the approach above do not take into account that moving to a different tax base would also change behavior. A particularly sizable and rapid response can be expected on profit shifting, which will be analyzed in greater detail. An impact on real investment decisions can also be expected with a change to a neutral tax system. The size of that change is, however, difficult to gauge.[40] Even the sign is ambiguous, as current tax systems discourage equity-financed investment, but often subsidize debt-financed investment, so moving to a neutral system could boost or reduce the capital stock, depending on the marginal source of funding in a given country. Both channels also interact: profit shifting reduces the cost of capital and hence encourages investment. In

[40] See Carton, Fernandez-Corugedo, and Hunt (2019) for an analysis of the impact on investment using a multi-region forward-looking DSGE model.

high tax countries this is the case, because firms know that they can avoid some of the tax. In low-tax countries this is the case because locating investment there may facilitate profit shifting from operations in high-tax countries.[41] Both effects that would disappear under a DBCFT.

Under global adoption, a DBCFT would remove any incentive for profit shifting. However, as the current tax system encourages profit shifting, the removal of such incentives would change behavior. Another way to think about it is to consider current macroeconomic statistics, on which our estimates rely, as contaminated by profit shifting. For example, low tax jurisdictions can be expected to have overstated trade balances, because the prices of exported goods likely tend to be exaggerated, and the prices of imported goods understated.

Auerbach (2017b) argues that this is not a concern, because any mismeasurement of the trade balance resulting from profit shifting would also affect measured GDP (or the underlying operating surplus in equation (1)). The two effects cancel out in estimating the tax base of a DBCFT so that unadjusted figures can be used—which is what we do in most of our reported estimates.[42]

C. Data

Data for gross operating surplus and investment are taken from the OECD wherever possible. Specifically, these are the series: gross operating surplus (nonfinancial accounts, generation of income account, gross operating surplus and mixed income) and investment (gross fixed capital formation – corporations). To extend the sample, data for additional countries are taken from the United Nations Statistics Division.[43] The UN publishes data from countries calculated using different vintages of the methodology. We use the newest vintage as the starting point, extending the data backward with older vintages by splicing it using the ratio of the most recent common year.

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[41] See Klemm and Liu (2019) for a discussion and further references.

[42] Despite the theoretically compelling argument by Auerbach, if data on the gross operating surplus are collected differently from trade data, then changes in profit shifting could affect measures of both items differently. As a robustness check, we therefore repeat the analysis in this paper, with data that are published by Tørsløv, Wier, and Zucman (2018) published data corrected for profit shifting. While there is an active and so far unsettled debate about the validity of recent profit shifting estimates(Blouin and Robinson, 2020), we have used those adjusted data as a robustness check and obtained very similar results from those on unadjusted data.

[43] United Nations Statistics Division: National Accounts Official Country Data: Non-financial corporations.

Data for current revenues are taken from the World Revenue Longitudinal Database (WoRLD). Corporate income tax rate data are taken from the IMF FAD Tax Policy Rates Database and include any local or surtaxes. Data for exports and imports as well as some control variables are taken from the latest published version of the WEO (Spring 2018).

The resulting sample contains data on operating surplus and investment for 80 countries and data for CIT revenues for 73 countries. However, the number of years available vary substantially and do not always overlap. The year with the most observations is 2011 where we can compare 63 countries directly. A relatively large and wide balanced panel covers the years 2002 to 2011, for which there are data for 48 countries. This 10-year panel forms the basis of most of the comparisons over time and is described in Table 1 through selected statistics. Because of data availability, some calculations are made on different sample, which is then indicated in the relevant figure/table headings.

Table 1. Descriptive Statistics for Balanced 10-year Panel

(in percent of GDP, unless otherwise noted)

Variables	Observations	Mean	S.D.	p5	Median	p95
Imports (M)	480	45.7	24.1	17.4	39.9	81.5
Exports (X)	480	45.6	27.2	16.8	40.3	83.5
Investment (I)	480	13.8	4.5	6.6	13.4	22.0
Gross operating surplus (Π)	480	26.2	6.1	17.5	25.3	37.8
CIT revenue (R^{CIT})	480	3.3	1.7	1.4	2.9	6.3
Tax rate (τ) (in percent)	480	26.8	7.3	15.0	28.0	38.9

Source: Authors' calculations.

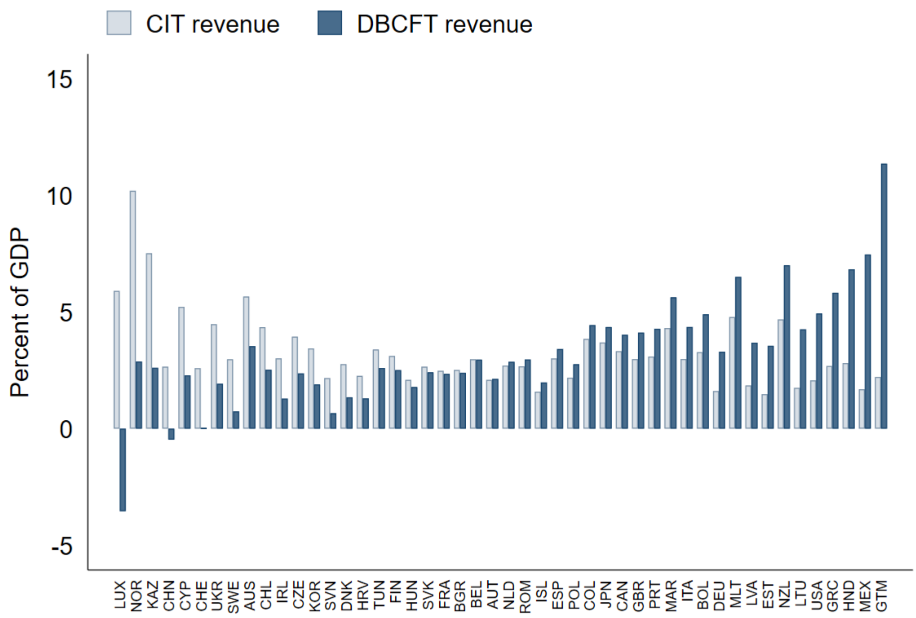
III. RESULTS UNDER GLOBAL ADOPTION

D. Estimated Revenues

We find—maybe surprisingly—that on average across countries and years, revenues from the DBCFT would be close to those obtained from the current CIT. However, there are substantial differences between countries, creating winners and losers. The sample is distributed such that around a third each would lose substantially, stay at around the same level, and gain substantially. Some countries would even end up with negative revenue from compensating tax losses. As shown in Figure 1, countries that stand to gain the most are Guatemala, Mexico, Honduras, Greece, and the United States. On the losing side are Luxembourg, Norway, Kazakhstan, China, and Cyprus. In the following analysis, we will investigate the factors determining these differences in outcomes.

For the United States, we can compare our results to a study by Patel and McClelland (2017) who use U.S. tax return data to simulate the DBCFT base. They find that the domestic cash-flow tax base is similar to the existing CIT base. However, once the border-adjustment is taken into account, the DBCFT base is significantly higher, in line with our result.

Figure 1. DBCFT and CIT Revenues, (Averages over 2002-2011)



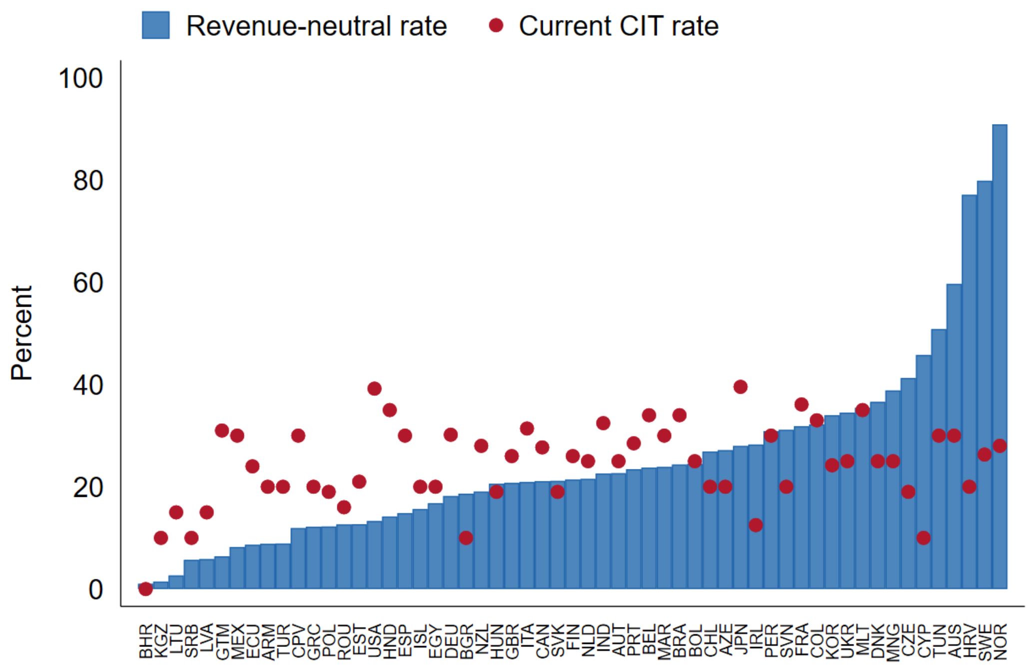
Source: Authors' Estimates.

In the sample period, the share of countries that gain from a DBCFT is relatively stable at about 52 percent, on average representing 70.6 percent of total GDP in the sample. The fraction of years for a country that would yield revenue gains from a DBCFT is approximately 50 percent, on average. However, this average value masks cross-sectional heterogeneity as some countries benefit in most or all years (such as the United States) while others lose in most years (such as Switzerland and Luxembourg). Also, in some cases, a country may switch "status" from a loser to a gainer but the with a little gain.

Another way to illustrate the issue is by considering the tax rate that would need to be charged under a DBCFT to maintain the same revenue as under the current system.

Remembering that under DBCFT, the tax rate is irrelevant for location decisions of firms, countries would arguably be able to raise rates compared to the current ones. Tax rates that would maintain revenues in 2011 are shown in Figure 2. This reveals that for two thirds of all countries, the change in rate would be negative or a small increase. Almost 90 percent of countries would be able to maintain revenues with rates of no more than 40 percent. However, for the remaining countries, revenue-neutral rates would be very high, so that this is not a realistic option, although the feasible maximum rate is likely much higher than under the current system. Moreover, as seen in Figure 1, some countries would have negative tax bases, which would not allow maintaining revenues at any rate.

Figure 2. Revenue-Neutral Tax Rates in 2011



Note: Countries with negative tax base are not included.
Source: Authors' Estimates.

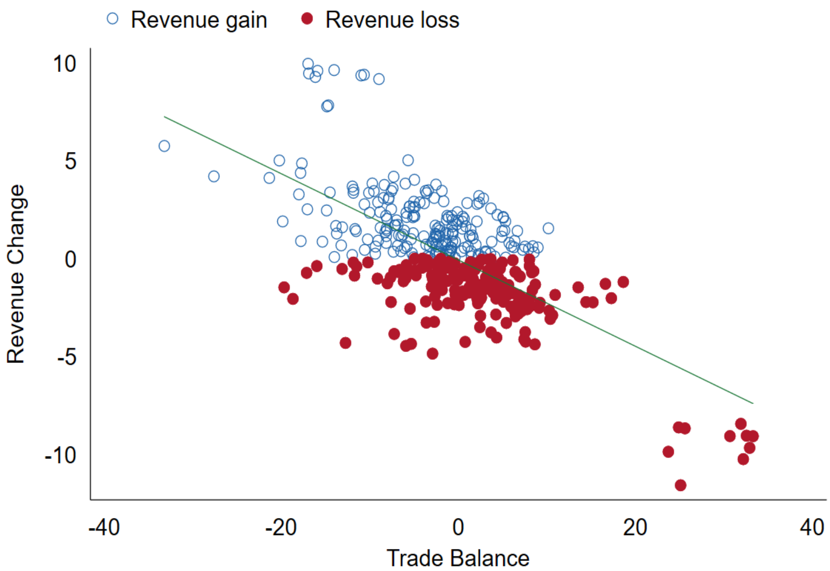
Low tax jurisdictions are expected to lose revenues from switching from current CIT arrangements to a system without (or with significantly less) profit shifting. The reason is that currently these countries attract profits from other countries without necessarily attracting the underlying real production (at least there is some foreign profit in low tax countries that is not generated by domestic production). Consistently with this prediction, results in Figures 1 and 2 suggest that well-known "investment hubs" (such as Cyprus, Ireland, Luxembourg, and Switzerland) tend to have a lower tax base under a DBCFT compared to the current CIT base. However, the tax attraction of such jurisdictions is not necessarily reflected by the statutory CIT rate, for example, because of preferential tax regimes.

The Role of Trade Balances and Border Adjustment

Because imports are taxed and exports exempted under the DBCFT, in terms of tax revenue trade deficit countries would be expected to gain from DBCFT adoption, whereas trade surplus countries would lose. As shown in Figure 3, this is indeed true on average, with a clearly negative relationship between the trade balance and the revenue change. Nevertheless, there are still many individual cases where a trade surplus country would gain revenue and vice versa, because the other factors outweigh the effect from the trade balance. For example, a country with a trade surplus, but that is currently losing significant revenues from profit shifting, could potentially gain from a DBCFT.

Figure 3. Trade Balance and Revenue Change, Excluding Resource-Rich Economies

(percent of GDP)

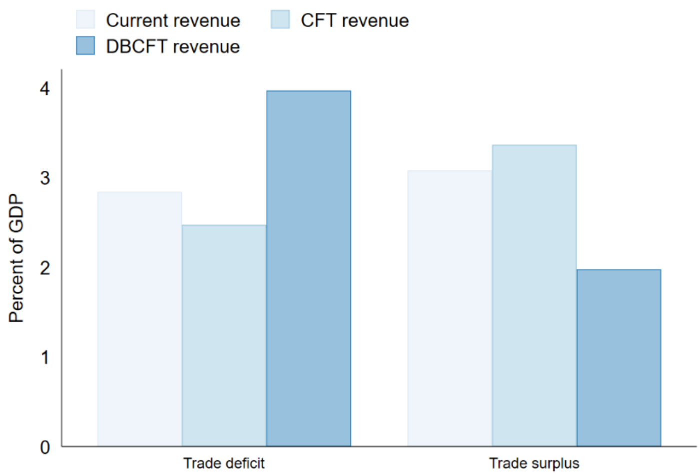


Source: Authors' Estimates.

As shown in Figure 4, the impact of the border adjustment far dominates the impact of moving to a cash-flow base, both in trade surplus and trade deficit countries, although obviously in opposite directions. Even the cash-flow component has opposite effects, reducing the tax base in trade deficit countries and raising it in trade surplus countries.

This pattern is in line with higher investment (which is deductible) in trade deficit countries, which can be expected, given that a negative balance of payments implies investments exceeding savings. However, as under a destination base, imported investment goods would not be deductible, it is not surprising that this tax base-reducing effect does not hold after the border adjustment.

Figure 4. Border Adjustment versus Cash Flow Component of Revenue Change



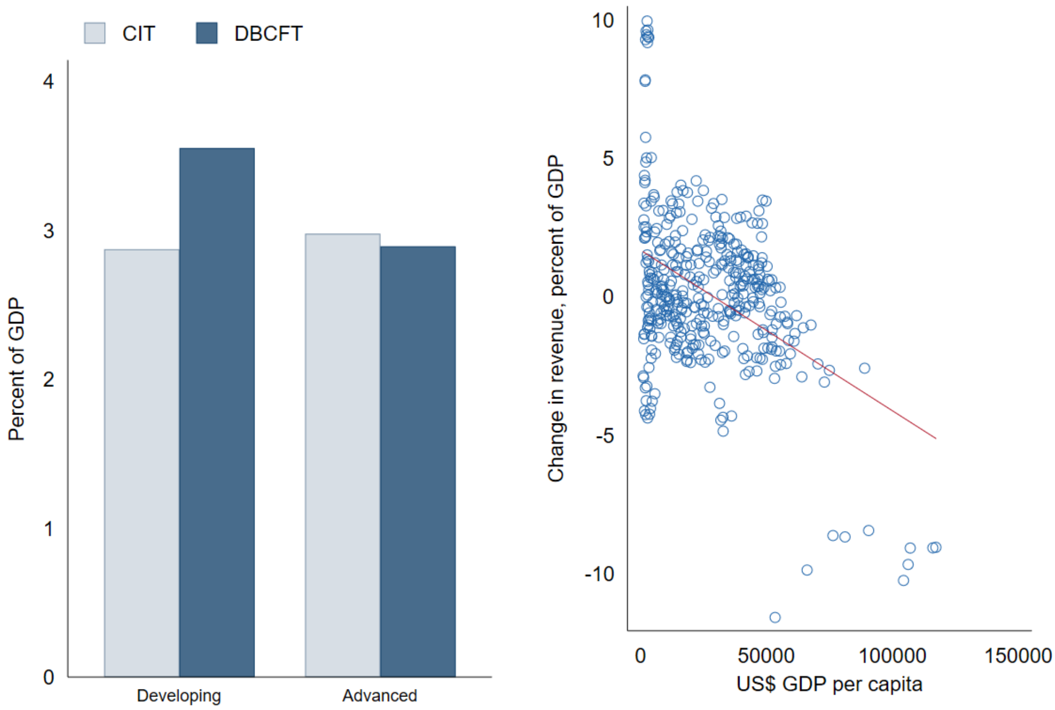
Source: Authors' Estimates.

Advanced and Developing Economies

An important question in evaluating the effect is the distribution of gains and losses between advanced and developing economies. A priori, the relative impact on developing countries is ambiguous. Given their higher growth rates, they can be expected to be capital importers running trade deficits, which would raise revenues—although in practice developing countries are often capital exporters. Moreover, tax incentives are particularly common in developing countries (see for example, Abbas and Klemm (2013)); replacing them with a clean cash-flow tax would be more likely to broaden the base than in advanced economies. On the other hand, developing countries often rely heavily on the resource sector and the taxation of location-specific rents. While we exclude those countries most reliant on resource revenues (which are analyzed further below), it is still likely that the share of revenues from the resource sector is higher in developing economies.

As shown in the left panel of Figure 5, developing countries would on average be beneficiaries of a move to a DBCFT. Moreover, as shown in the right panel, there is a more general tendency that advanced economies lose more revenue. Among both types of economies there is a wide range covering revenue winners and losers.

Figure 5. Revenues by Income Group and Level



Source: Authors' Estimates.

As the balanced sample used for these charts does not include that many developing countries, we also repeated the same analysis on a wider unbalanced sample, which yielded the same result. One note of caution regarding developing economies is that the assumption of full compliance might be particularly problematic for them.

Natural Resources

Natural resources—and in principle any other location-specific rents—can be taxed efficiently at source. Profit shifting in this sector is still a major issue in many (especially developing) countries. Taxing location-specific rents on a destination basis can be expected to dramatically reduce revenues in resource-rich economies. However, there are counterarguments.

First, if the CIT is replaced by a DBCFT, any additional sector-specific taxes could continue to apply, and there would be no reason for those to be switched to a destination principle. Natural resources are subject to location-specific taxes as well as CIT, of which only CIT would be affected by the change to DBCFT. The sum of origin-based (non-CIT) taxes and revenues make up an important source of revenue in many natural resource rich countries. These include, for example, efficient rent taxes or simple volume-based taxes such as production royalties and other revenue arrangements such as production sharing agreements. The revenue loss would therefore be limited to CIT collected from this sector. Countries wishing to maintain the same level of revenue from the resource sector could raise their sector-specific taxes.[44]

Second, just because the DBCFT is collected at the destination, it does not follow that its incidence will also occur at the destination. It will depend on whether investors exploiting the resource are residents and when and how they spend their gains:

- If a resident investor exploits a natural resource, then the rent obtained will show up as a stronger trade balance. For the external accounts to balance, this will require imports to rise too (at least ultimately, temporarily the proceeds could be invested abroad—see below for a discussion on trade balance reversals). The imports are, however, taxed, so ultimately revenue will be same as if collected on an origin basis. Another way to think about this is to use the result that the DBCFT is incident on consumption financed out of non-wage income (Auerbach et al., 2017a), including rents from exploiting natural resources.

- If a foreign investor exploits the resource, the rent would equally boost the trade balance. In this case, however, as there is an offsetting outflow on the income balance, the overall balance of payments need not adjust, and no tax is collected in the country where the resource is located (and revenue may be lost if there are deductible costs).

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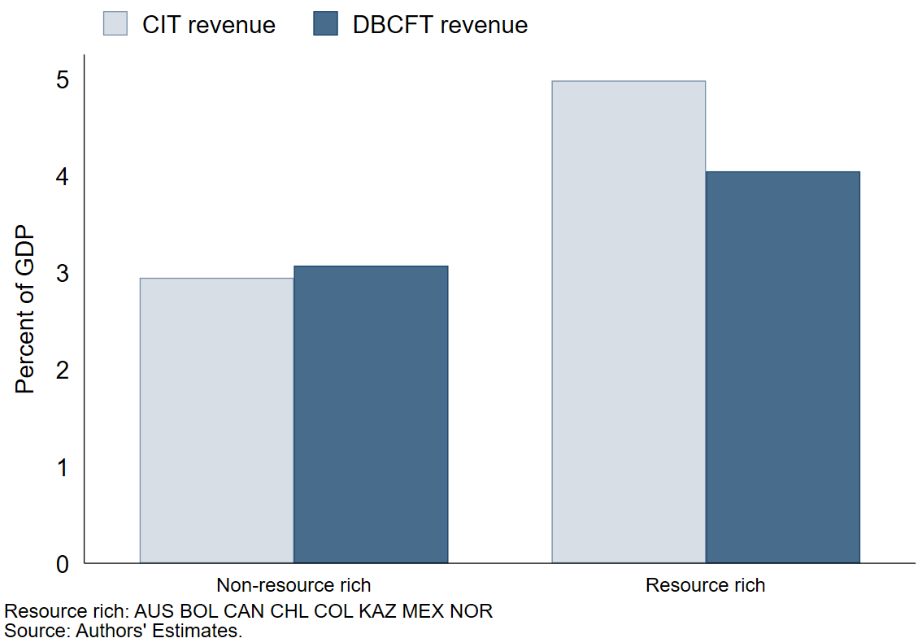
[44] See Daniel, Keen, and McPherson (2010) for options on efficient resource-sector taxes.

Overall then, resource-rich countries should be expected to lose revenues to the extent that rents in this sector are earned by non-residents. As shown in Figure 6, resource-rich countries would in practice lose revenues on average. It should also be noted, though, that if the graph is done with the entire (unbalanced) sample, which increases the number of resource rich countries, the difference in gains or losses disappears, so this finding is not very robust.

Figure 6. Revenues by Resource Dependence



Combined Analysis of Revenue-Determining Factors

As all the discussed factors behind revenue gains and losses interact, it is useful to undertake a multivariate regression analysis to identify the main correlations. Moreover, using country and year fixed effects estimation on panel data allows us to control for any unobserved country-specific differences and common shocks.

Table 2 shows that the most important determinants of the revenue gain from moving to a DBCFT are the trade balance, the investment rate, resource rents, and income levels—which all reduce the revenue gain from moving to a DBCFT. This finding holds both in parsimonious regressions (regressions (1) through (3)) and those with more simultaneous control variables (regression (5)). While the income level is important in determining the revenue gain (regressions (3) and (5)), there is no evidence that the relationship between the revenue gain and the most significant explanatory variables is different in advanced economies (regression (4)).

Table 2. Change in Revenue and Explanatory Variables

	(1)	(2)	(3)	(4)	(5)
Trade balance	-0.227***	-0.171***	-0.220***	-0.260***	-0.184***
	(0.028)	(0.028)	(0.026)	(0.026)	(0.028)
Investment	-0.263***	-0.237***	-0.248***	-0.311***	-0.243***
	(0.043)	(0.048)	(0.043)	(0.042)	(0.044)
Resource rents		-0.087**			-0.082**
		(0.038)			(0.038)
GDP per capita			-0.686*		-0.671*
			(0.359)		(0.379)
Investment*Advanced				0.123	0.048
				(0.082)	(0.099)
Trade balance*Advanced				0.090	0.030
				(0.058)	(0.062)
Observations	1,097	889	1,097	1,097	889
R-squared	0.434	0.374	0.443	0.445	0.387
Country FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Number of countries	73	71	73	73	71

GDP per capita is logged. All other variables are in percent of GDP. Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1
Source: Authors' Estimates.

E. Further Considerations

Trade Balance Reversals

In principle, countries cannot continually record current account surpluses or deficits. Balance of payment deficits will add to foreign liabilities until an adjustment takes place and extended trade deficits are expected to be followed by future trade surpluses. Hence, countries that would gain revenue from a DBCFT on introduction (in the short-term) because of their trade deficit are in general expected to lose some of the revenues in the future. While answering the question of how much and how fast the trade balance should change in the future to satisfy solvency conditions is beyond the scope of this paper, we illustrate the impact of this adjustment on the long-term gains from a DBCFT.

Recall, the NIIP in year t can be expressed as a period-by-period resource constraint in an open-economy as follows:

$$NIIP_t = X_t - M_t + (1 + r_t)NIIP_{t-1,} \tag{5}$$

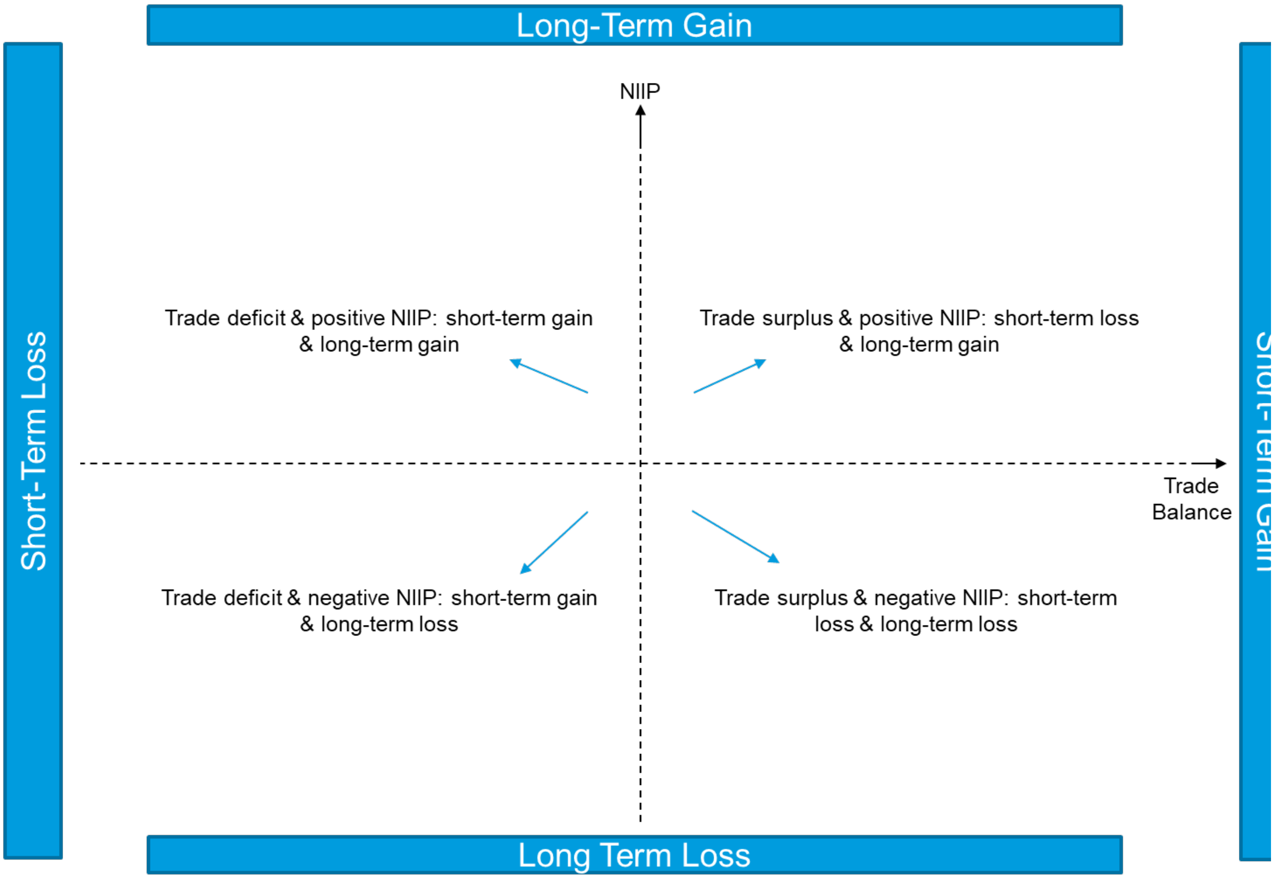
where r_t is the interest rate on external assets and liabilities. From this, under standard simplifying assumptions in the literature (e.g., Bohn, 2007; Durdu et al., 2013), it can be shown that the intertemporal resource constraint can be formulated as:

$$NIIP_{\square} = -\sum_{t=1}^{\infty} \rho^i E_t(X_{t+i} - M_{t+i}), \tag{6}$$

where $\rho = \frac{1}{1-r}$. Equation (6) states that, in present-value terms, expected future trade surpluses equal the current value of outstanding net liabilities vis-à-vis the rest of the world. Thus, if today a country 's NIIP is positive and the trade balance is positive the country is expected to run a trade deficit in the future. This implies that while the country would initially lose from a DBCFT, it would gain revenue as the trade balance adjusts. Note, the change in the revenue due to the border adjustment is given by $\tau(M_t - X_t)$. To illustrate, such a case is depicted in the upper right quadrant of Figure 7, and the opposite case is in the lower right quadrant (i.e., countries that would benefit today from a DBCFT, but the effect is expected to reverse in the future). There are four quadrants in Figure 7. The vertical line separates the trade surplus from the deficit countries, which provides a good (albeit not perfect) indication of likely short-term revenue loss or gain. The horizontal line separates the positive NIIP countries from the negative NIIP countries indicating long-term impact. Below this line, countries have a greater chance of losing revenues in the future as they are expected to run trade surpluses. Figure 8 then populates the same quadrants with data and reveals both the current and likely future path of DBCFT revenues for the countries in the sample.

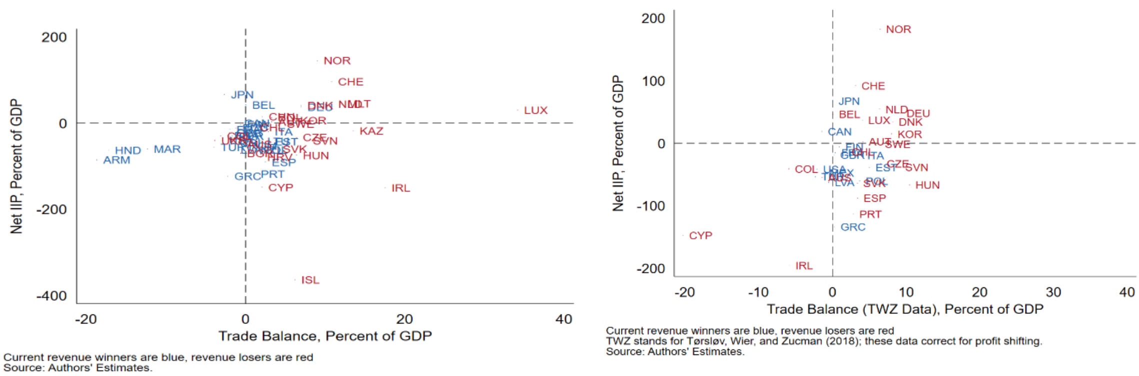
An interesting observation that follows from this is that if the DBCFT were introduced at the beginning of time, when all country had an NIIP of zero, then one could expect gains and losses from trade balances would even out over the years. However, given that introduction would occur with some legacy NIIP, it means that countries that have accumulated foreign assets in the past never gave up revenue, but will stand to gain from the trade deficits that they can finance from their strong income balance, and vice versa.

Figure 7. Trade Balance and NIIP: Short- vs. Long-Term Impact of DBCFT



Source: Illustration by the authors.

Figure 8. Trade Balance and Net International Investment Position, 2014



There are various reasons, though, why future trade balances may follow a different path than expected under Equation (6). First, current trade statistics can be contaminated by profit shifting practices, particularly with a pronounced effect in the case of international trade with services (Hebous and Johanessen, 2020). This implies that the trade balance in very low tax jurisdictions is likely to be overestimated (overstating exports and understating imports), and the opposite occurs in high tax countries. To shed more light on this issue, the right panel of Figure 8 use trade balance data that correct for profit shifting from Tørsløv, Wier, and Zucman (2018). Admittedly, it is challenging to precisely correct trade statistics for mispricing. Still, these numbers are indicative. In the right panel of Figure 8, countries such as Ireland and Cyprus move to the bottom left quadrant as after correcting for profit shifting their trade balances switch from a surplus to a deficit. As argued above, this should not affect the estimated DBCFT base, but it does mean that trade account reversals may be of different size than indicated by unadjusted figures.

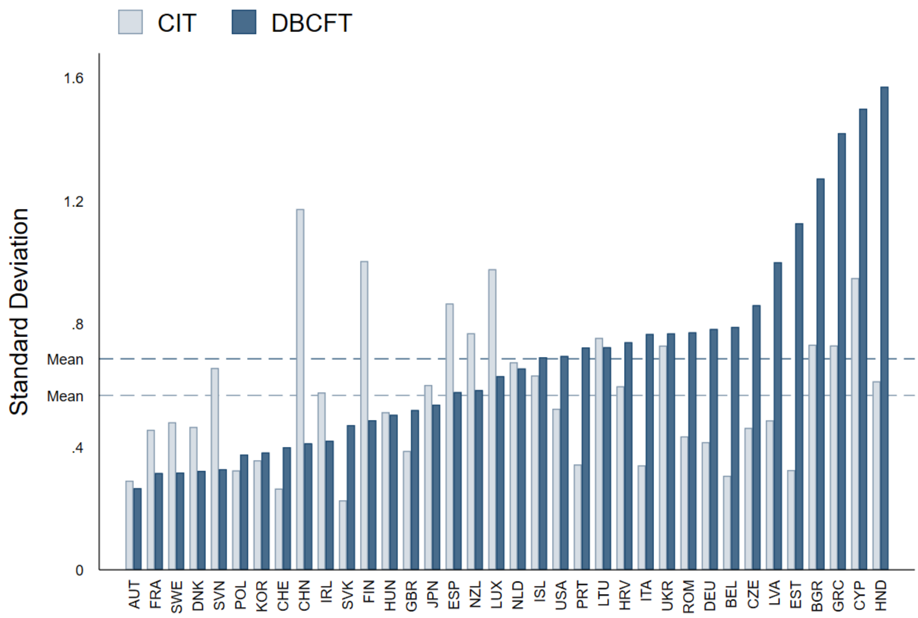
Second, the NIIP may also change as a result of valuation gains or losses, which are ignored in the equation and hard to predict. Third, while Equation (6) assumes that only the NIIP matters for the income balance, in practice returns on assets could be very different from those on liabilities. For the United States, for example, it is documented that the rate of return on its international assets is larger than the rate of return on its international liabilities, meaning that even with a negative NIIP, foreign income can be positive and finance a permanent current account deficit. Moreover, countries that issue reserve currency could permanently run deficits, financed by the demand for such currency by other countries.

Volatility

While the analysis so far has focused on the amount of revenue raised, another important consideration is the stability of revenues. The DBCFT can be expected to be more volatile than a standard CIT, because investment, which is a flow variable, will vary more over the cycle than depreciation, which is linked to a stock and averages out the flows of various past years. Another reason for expecting greater revenue volatility is the immediate refund of tax on losses, while most current CIT systems merely allow the carry forward (or very limited carry back) of losses, smoothing revenues over time. The impact of the border adjustment is less clear: in countries where the economic cycle is strongly dependent on demand from the rest of the world, the non-taxation of exports could reduce volatility, but in countries where domestic demand is more volatile, not taxing export earnings could increase volatility.

To assess this empirically, we calculate the standard deviation of tax revenues under both systems. Figure 9 presents the results and shows that the DBCFT is indeed more volatile on average, but not in every country. These results were calculated for the longer panel to allow calculation of the standard deviation of a longer period. Calculated on the shorter and wider panel, the difference between both average standard deviations is much smaller.

Figure 9. Standard Deviation of Annual Revenue, 2000-2014



Source: Authors' Estimates.

Cyclicality

Another important consideration in assessing a tax is its revenue performance and its cyclical impact. There is a natural tension between the aim to have taxes with countercyclical impact, i.e., those whose revenues rise in booms and decline in recessions,[45] and with the need for regular revenue provision discussed above. Countries may place more importance on one or the other feature, depending on their circumstances, but both need to be considered in evaluating a tax.

The CIT, as a tax on profit, acts as an automatic stabilizer, because profits are highly cyclical. On one hand the DBCFT may weaken this aspect, because investment, which is highly cyclical, is deductible, reducing tax payments during boom times. On the other hand, the immediate refund of tax on losses, would be a powerful counter-cyclical aspect in times of recession. Which of these effects dominates over the cycle is an empirical question. We address it by running a standard regression from the literature assessing cyclicality of fiscal policy:[46]

$$R_{it} = \beta_0 + \beta_1 R_{it-1} + \beta_2 G + f_i + \varepsilon_{it}, \qquad (7)$$

where β are regression coefficients, G is an indicator of the cyclical position, such as the output gap or the growth rate, f is a country fixed effect, and ε an error term. Subscripts i and t indicate country and time.

The regression is estimated on the full sample of countries, as well as on a sample restricted to advanced economies, because the empirical literature on cyclicality has generally found that advanced economies have more countercyclical fiscal policy.[47] The combination of a lagged dependent variable and a fixed effect can lead to biased results. This bias, however declines with the number of time periods (Nickell, 1981). Given that our panel is quite long with 14 to 19 time periods on average per country, depending on the specification, the bias should be minimal. We also repeated all regressions without a lagged dependent variable, obtaining very similar results. Another important consideration in estimating Equation (7) is the endogeneity of the cyclical position, because this can be affected directly by tax policy. To address this, we instrument it by its lagged value.

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[45] Some confusion may occur because the terms pro and countercyclicality can be used to describe association with the cycle or the policy impact. Hence, a procyclical income tax (whose revenues rise with greater amplitude than GDP) has a counter-cyclical impact.

[46] See Appendix in Klemm (2014) for a table summarizing the specifications used in the literature.

[47] E.g., Gavin and Perotti (1997), Alesina, Campante, and Tabellini (2008).

The results (Table 3) show that the existing CIT has an acyclical or countercyclical impact, depending on whether we use the output gap or growth rate as an indicator. The DBCFT, however, is always a less effective automatic stabilizer: in regressions using the output gap it acts procyclically, and in those using the growth rate it is acyclical.

Overall, the conclusion is then the DBCFT is less likely to act countercyclically. This is particularly regrettable, as it is also more volatile. In trading off revenue certainty with automatic stabilization, the DBCFT appears to be a deterioration in both dimensions.

Table 3. The Cyclicality of the CIT and DBCFT

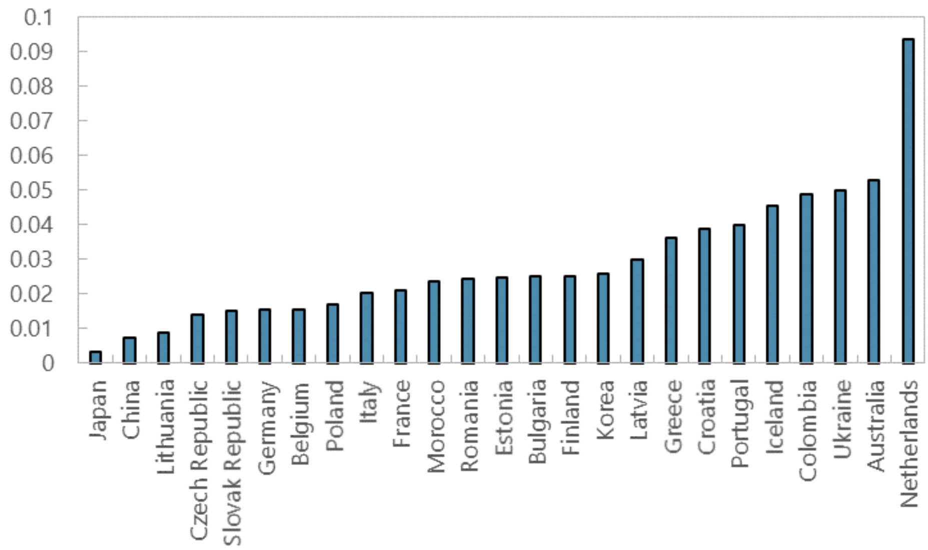
Dependent variable	CIT revenue				DBCFT revenue			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sample	Full		Advanced economies		Full		Advanced economies	
Lagged depenent variable	0.599***	0.641***	0.734***	0.754***	0.772***	0.770***	0.844***	0.856***
	(0.063)	(0.031)	(0.032)	(0.029)	(0.040)	(0.022)	(0.030)	(0.032)
Output gap	-0.025		-0.011		-0.029**		-0.032**	
	(0.026)		(0.012)		(0.014)		(0.015)	
GDP growth		0.082***		0.069***		0.007		-0.032
		(0.026)		(0.013)		(0.020)		(0.023)
Observations	1,473	2,179	666	676	952	1,143	612	617
Countries	89	154	35	35	61	78	32	32

Note: Output gap / GDP growth instrumented with their lag. Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.
Source: Authors' Estimation.

Loss-Making Firms

Under a DBCFT, losses would trigger immediate tax refunds rather being carried forward. This is needed for it to function, as some firms, notably those whose sales are mostly to foreign customers, would be expected to have systematic tax losses. Loss carry-forward, even with an interest rate, would therefore not be an option.

Figure 10. Average Ratios of Losses to Sales, 2015-18 (Percent)



Source: Authors' Calculations Using Orbis Data.

This poses another risk to public finances. The calculated DBCFT revenue estimates already include the impact of losses, as the starting point is the corporate operating surplus, which nets off all profits and losses in the economy. However, given the increased value of losses in a system where they lead to immediate tax refunds, the incentive to create losses, including artificial ones, would rise. The extent to which this may happen is unknown, but data on the prevalence of losses may give a rough indication of where such risks may be high and where rules are particularly important to deal with legacy losses (Figure 10).

IV. UNILATERAL ADOPTION

Theory and Methodology

Thus far, our focus has been on the revenues and implications for the countries that implement a DBCFT. In the unlikely case of all countries moving simultaneously to a DBCFT, that would be the only relevant scenario. More likely is that one or a few countries introduce a DBCFT, which would have repercussions on all other countries. Multilateral adoption would put an end to known forms of tax competition and profit shifting. Unilateral adoption, however, would imply an extreme intensification of incentives to shift profits or real investment that earns export-related rents into the DBCFT country.

Profit shifting can occur through transfer price manipulation, royalty payments, and the location of debt. The first two would increase measured exports of the DBCFT country and imports of the CIT country. The latter would be reflected in international interest flows. There are no tax implications of any of these profit-shifting methods for the DBCFT country, as exports and interests are untaxed. The tax base of the CIT country, however, would be reduced.

Relocation of real activity to the DBCFT country could also occur. Suppose a firm that produces and sells in the non-DBCFT country moves production to the DBCFT country (maintaining its only market in the non-DBCFT country). Exporting to the non-DBCFT country becomes untaxed but the cost of production for the firm goes up due to the adjustment in real exchange rates. The normal return is therefore untaxed. Any export-related firm-specific rent, however, would also be untaxed, making this a very attractive move. There are no direct tax implications for the DBCFT country (since exports are untaxed), but there may be indirect consequences, for example if employment rises. For the country maintaining origin-based taxes, there is both a direct loss of revenue, as well as any indirect effect from losing employment.

Focusing on the direct tax consequences for countries maintaining origin-based CITs, we calculate the expected loss, based on elasticities from the literature. This literature relates profit-shifting or real investment decisions to changes in relative tax rates between countries (or sometimes to the absolute tax rate of the host country). In the case of a DBCFT country, the relevant tax rate is then zero. For each country, assuming that their own tax rate remains constant, the relative change in tax rates is therefore equal to the original tax rate in the DBCFT country (which is cut to zero), weighted by the importance of the DBCFT country.

The tax revenue (T) from taxing an MNE in (non-DBCFT) country c is given by:

$$T_c = \tau_c f(K_c)\left[1 - \varepsilon_s\left(\tau_c - \sum_j \omega_{c,D}\tau_D\right)\right], \tag{8}$$

where $f(K_c)$ is the real profit from producing using capital K. As shown in the term in the square bracket, shifting profits depends on the difference between the own tax rate and the weighted average foreign tax (where the MNE operates) denoted by $\sum_j \omega_{c,D}\tau_D$, where ω is the bilateral weight and the elasticity ε_s, which depends on the cost of profit shifting. Taking a semi-log transformation yields:

$$\ln(T_c) = \ln(\tau_c) + \ln\big(f(K_c)\big) - \varepsilon_s\left(\tau_c - \sum_j \omega_{c,D}\tau_D\right). \tag{9}$$

There are two spillover effects from a change in a foreign tax rate, or —put it differently— from a foreign country adopting a DBCFT. First, the impact of profit shifting from country c to D on the tax base of c is given by $\varepsilon_s\omega_{c,D}\tau_D$. The second spillover effect is the impact of shifting investment from c to D on the tax base of c. Let the reaction of capital to changes in the domestic tax rate and the weighted average foreign tax rate be: $\frac{d\ln(f(K_c))}{d(\tau_c-\sum_j \omega_{c,D}\tau_D)} = -\varepsilon_k$, and the capital intensity be $\alpha = \frac{dln(f(K))}{dln(K)}$, then the change in the tax base in country c as a result of a 1 percentage point change in the foreign tax rate τ_D is $\alpha_c\varepsilon_K\omega_k$. Combining both effects:

$$\frac{dT_c}{T_c} = (\alpha_c\varepsilon_K + \varepsilon_S)\omega_{c,D}\tau_D, \tag{10}$$

where ε are the elasticities for real investment (subscript K) and profit shifting (subscript S) with respect to the tax rate. We use the above equation to compute the change in revenues for each non-DBCFT country c if one country adopts a DBCFT by setting the tax rate for the DBCFT country to zero. We abstract from policy reaction (i.e., we keep all other tax rates unchanged).

To parametrize the equation, we use the standard assumption of 1/3 for the capital intensity. For the elasticity of capital, we use 2.4 based on the meta study by De Mooij and Ederveen (2008), and for the profit-shifting elasticity we use 1.5 based on the meta study by Beer, De Mooij, and Liu (2019). The calculations assume common elasticities across country pairs. Also, Equation 10 abstracts from a potential covariance between ε_K and ε_S.[48]

[48] The covariance between profit shifting and real investment can be of either sign. There can be a colocation of real assets and paper profits (e.g., because the presence of capital makes profit shifting easier) and/or a decoupling (as raising tax rates discourages investment less strongly when profits can be shifted). See Klemm and Liu (2019) for a discussion of the interaction between investment and profit shifting.

In practice, profit shifting and real investment responses can be linked. The weight should reflect how closely linked both economies are in terms of bilateral capital mobility. As this is a theoretical concept, based on potential rather than actual capital movements, there is no perfect measure for it. As an approximation, we use existing FDI links between both countries:

$$\omega_{c,k} = \frac{FDI\_In_{c,D} + FDI\_Out_{c,D}}{FDI\_In_{c,world} + FDI\_Out_{c,world}}, \tag{5}$$

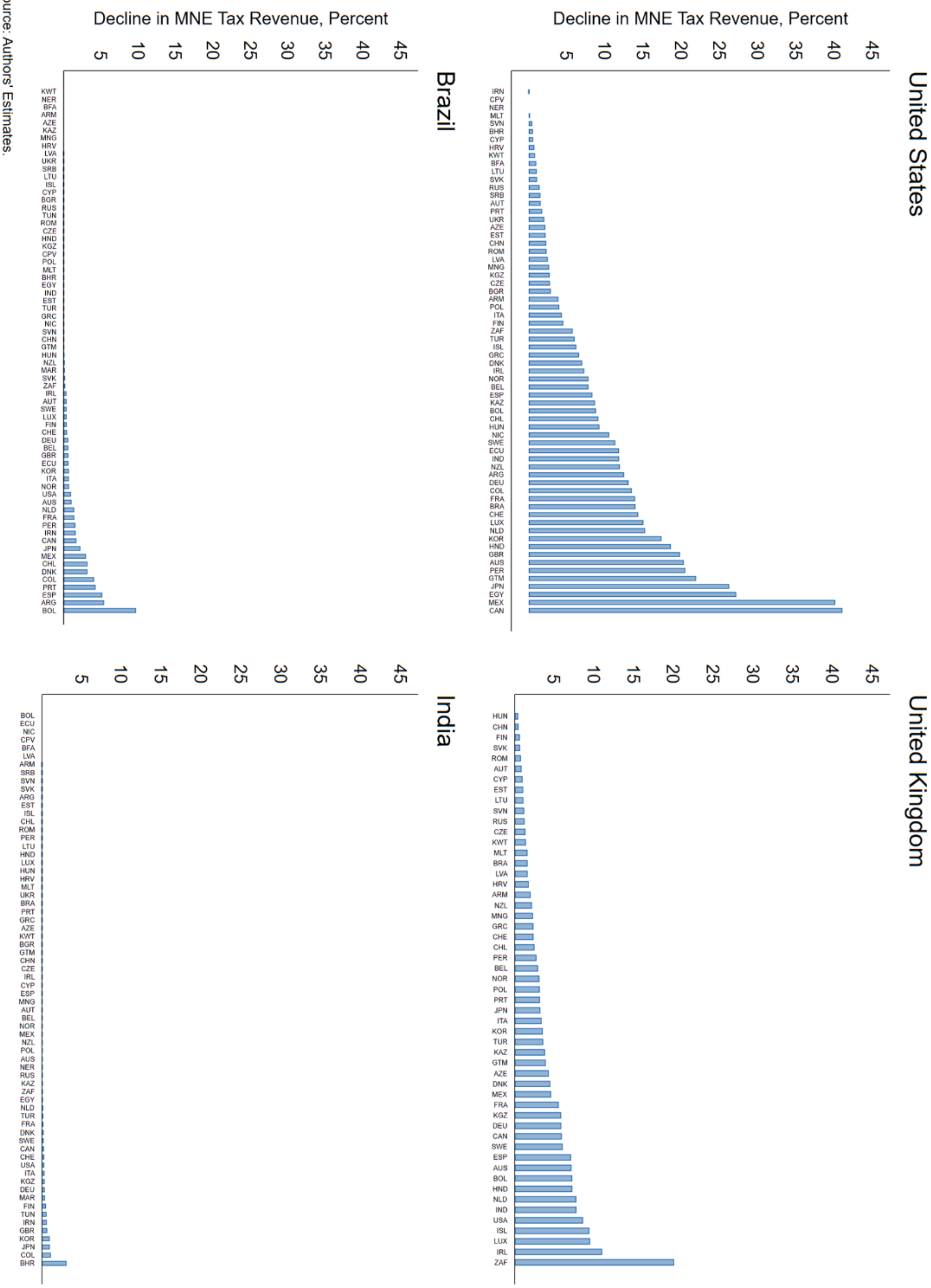
where *FDI_In* is the FDI stock in country c and *FDI_Out* is the stock owned abroad by country c. The second subscript indicates the partner, either the DBCFT country D or the whole world.

To calculate the impact, we need to pick a first mover to introduce a DBCFT. To give a flavor of possible differences we use (i) the United States, as the largest and a highly-integrated economy, (ii) the United Kingdom, as a smaller advanced economy that is also very highly integrated, and (iii) India, and (iv) Brazil, as two emerging markets. The choice is purely illustrative and does not imply any judgement about the likelihood of such a reform in those countries.

Results

Figure 11 shows the results of the simulation using data for 2011. If the United States adopted a DBCFT, resulting revenue losses would be quite high, especially in countries like Mexico and Canada that have very close economic links. The spillovers would be lower if the United Kingdom adopted such a tax, but still sizeable in some economies. If Brazil or India adopted a DBCFT, the impact on the rest of the world would be much smaller, although all of these findings are subject to the caveat that current FDI links are only a rough proxy for economic links between countries.

Fig 11. Revenue Spillovers from Unilateral DBCFT Adoption, 2011



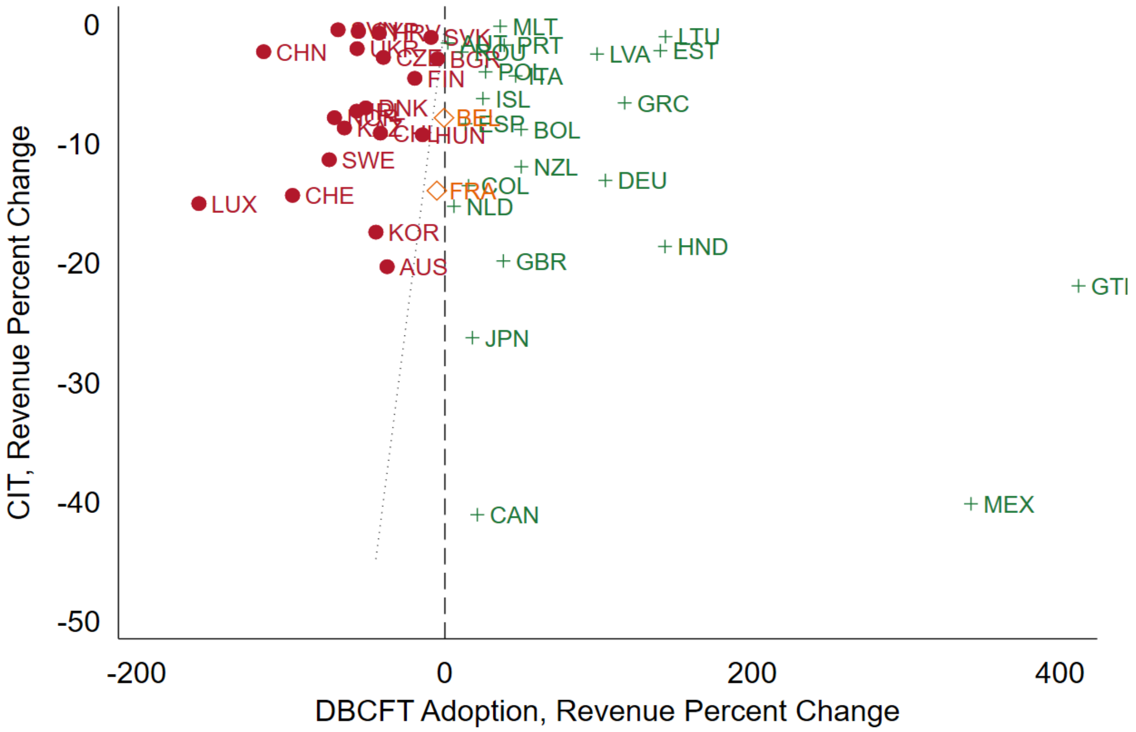
Source: Authors' Estimates.

Incentives for Policy Reactions

There is an empirical literature on fiscal reaction functions, estimating how countries react to tax cuts elsewhere, recently surveyed by Leibrecht and Hochgatterer (2012). One possible approach for non-DBCFT countries would be to think of the DBCFT country as a CIT cut to zero, and then react accordingly by reducing their own tax rate to regain competitiveness. Another option—and the one focused on here—is to follow by adopting a DBCFT as well. This would reduce revenues in some countries, as calculated above, but is likely to be much less costly than a massive reduction in the tax rate. In some cases, the revenue loss from DBCFT adoption may even be smaller than the revenue loss from staying put and suffering from profit and capital outflows.

Figure 12 compares the revenue impact of different policy choices following the hypothetical adoption of a DBCFT in the United States in 2011, with the dotted line indicating equal revenue impacts. If a country also adopts a DBCFT, there is no revenue loss from profit shifting and the revenue gain or loss, as calculated in Section IIIA, applies and is marked on the horizontal axis. As before, the losses under a DBCFT are averaged over the time span of the main sample to address the high volatility of the DBCFT. If a country maintains a standard CIT, there will be losses from more intense profit shifting to the United States (as in the upper left panel of Figure 11) and these are marked on the vertical axis. Countries that gain revenue by adopting a DBCFT are marked green. Countries that lose revenue by adopting a DBCFT but would lose even more revenue if staying with a CIT are marked orange. Finally, countries that would lose more from adopting a DBCFT than from staying put are marked red.

Figure 12. Revenue Changes under DBCFT and CIT Following Hypothetical U.S. Adoption of DBCFT in 2011



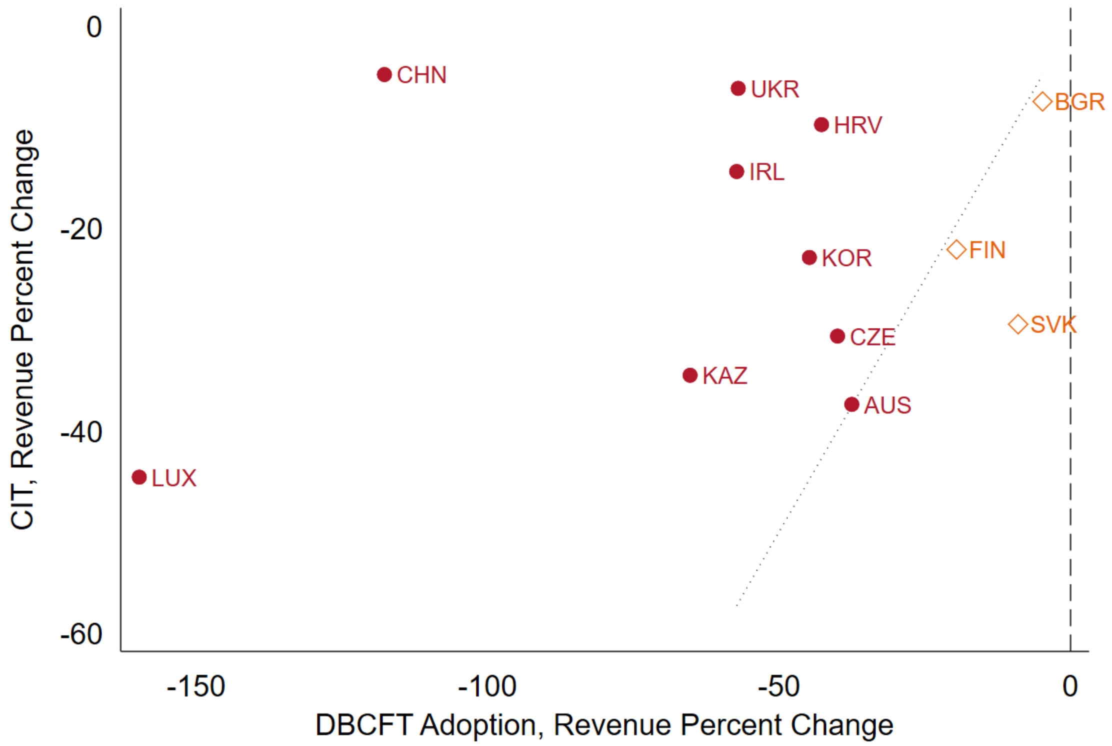
Source: Authors' Estimates.

If, following adoption in the United States (or any other country), there is no backlash in terms of a legal challenge or retaliation, then the green (i.e., revenue-gaining) countries have a clear incentive also to introduce a DBCFT. Equally the orange countries have an incentive to follow to minimize their losses. Once all of these countries adopt a DBCFT, the losses of the red countries will rise further, as now many more of their economically-linked partners have a DBCFT.

Figure 13 shows the revenue losses for countries that were red in Figure 12, following DBCFT adoption by all countries that were green and orange Figure 12. The loss under DBCFT adoption is unaffected, but the loss if maintaining a CIT rises, as profit shifting pressures increase with more partners having effectively a zero rate on shifted profits. As a result, a further three countries now have an incentive to adopt a DBCFT. In principle further rounds are possible, but as these three additional countries are small, no further reaction occurs in this particular sample. Ultimately, further countries might introduce a DBCFT even if it is not the revenue-maximizing option, because they might value the higher investment. Some countries, however, would face massive revenue losses under the

DBCFT—with even negative revenues in some cases as noted—imposing a high cost on the option of following with DBCFT adoption.

Figure 13. Second-Round Spillovers



Source: Authors' Estimates.

V. CONCLUSION

This paper has provided estimates of DBCFT revenues using national accounts data. On average, a universally adopted DBCFT surprisingly generates a similar level of revenue as the CIT, but some countries lose while others win. Countries with a large trade surplus would face the largest decline in revenue, at least in the short term. We find no evidence that developing countries lose more revenue than developed countries—if anything, results suggest that the opposite pattern is more likely. Natural resource-rich countries, on average, would generate lower DBCFT revenue than CIT revenue, but would still have additional taxes at their disposal. Other factors such as loss-making firms and revenue volatility could pose revenue risks for some countries.

Unilateral DBCFT adoption can generate negative spillover effects, which are found to be sizeable if the DBCFT country is large and integrated. We find that spillovers could prompt other countries to adopt a DBCFT, too, either as an immediate reaction, or in some cases in a later round, as a rising number of DBCFT countries raises the cost of maintaining source-based CITs. Some countries, however, would never have a revenue incentive for adopting a DBCFT.

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PART III: CONCLUSION

CONCLUSION

When international corporate tax raises headlines, it is usually with a focus on the firms who achieved an extraordinarily low tax rate, or the jurisdictions they used towards that goal. Often accompanied by pictures of palm-clad islands, we get the impression of a far-away 'treasure island' (Shaxson 2011), 'haven' (Sharman 2011) or 'fiscal paradise' (Hines and Rice 1994) as responsible for tax minimization. Following the money has led researchers to identify these jurisdictions (Haberly and Wojcik 2015, Fichtner 2015, Garcia-Bernardo et al 2017, Ates 2020), but this thesis argues that the focus on flows and ownership links mistakes the system for the sum of its parts. Were these 'havens' to sink into the ocean tomorrow, tax payments by multinational corporations would not go up. Instead, other mechanisms would take its place, enabled by states who compete for capital inflows through tax minimization, and facilitated by tax professionals who are able to innovate new tax-saving mechanism across the world. Focusing on *effective tax minimization* – the total minimization through all channels – provides a broader view of the system of how corporate tax minimization is enabled and facilitated.

Effective tax minimization occurs when tax regimes become more lenient, and when regimes provide ambiguities, which open them up to exploitation. Tax competition not only lowers taxes but also creates the conditions for further tax minimization, as discretionary benefits available to single regions or on a case by case basis provides fragmentation which opens up interfaces and ambiguities to be exploited. Therefore, corporate tax minimization is not only enabled by governments of small states with no tax rates. A larger role may be played by governments who oversee large financial centers and 'conduits' (Garcia-Bernardo et al 2017), or at least they may carry more responsibility. But enabling corporate tax minimization cannot be reduced to single states, given the hundreds of governments who lower corporate tax rates (Bray 2021), set up special economic zones (Mösle 2019), provide tax holidays (Klemm and van Parys 2012, Stausholm 2017), or provide patent boxes (Bradley, Dauchy and Robinson 2015). Whether as a result of constituency-pleasing or a genuine hope that minimizing taxes will maximize capital inflows, governments become complicit in undermining their own revenue.

Navigating these different regimes and identifying ways to further minimize taxes through them, we have tax professionals who facilitate tax minimization. With presence and expertise across the globe, they are able to innovate and construct tax-minimizing legal structures and transactions. They are more than intermediaries, however, as they also consult with governments on how tax regimes should be designed. As 'system brokers', particularly the Big Four are able to influence tax minimization through both firms and governments, as they consult with governments and advice on tax systems that provide favorable legal regimes for international investors (Elbra, Mikler and Murphy-Gregory 2020, PAC 2013).

Overview of findings

The thesis asks how corporate tax minimization is enabled and facilitated. The framing chapters address this question through a reconceptualization of tax minimization which focuses on the availability of lenient legal regimes, which tax professionals can exploit to create strategies for tax minimization through identifying and constructing legal affordances.

The first article finds that tax competition has not only decreased statutory tax rates for mobile capital, but also for investments in immobile industries such as mining. Here, governments provide tax incentives to investors both on a statutory and discretionary basis through negotiated contracts. This creates a configuration of global wealth chains in which the government becomes a supplier of tax minimization, while tax professionals also contribute to further this minimization through international ownership structures. Thereby the article finds that tax minimization is enabled by governments and further facilitated by tax professionals.

The second article examines the relationship between the tax professionals and so-called tax havens or offshore financial centers. It finds that tax professionals are not located within low-tax jurisdictions, but rather in financial and managerial centers. Thereby the political targeting of tax havens by EU and OECD stands in stark contrast to the fact that the facilitation is itself done within EU and OECD countries.

The third article explores the legal and professional geographies of the Big Four who are the main providers of global tax advice for corporations. Through their web pages and public sources, we examine how they navigate the paradox of being local and global at the same time. The article finds that the local presence and legal partitioning between units is a fundamental prerequisite for the ability of the firms to provide tax advice, while intra-firm networks provide knowledge sharing which enable uniform and global presentations to clients.

The fourth article synthesizes scholarship on global value and wealth chains, and finds that the lack of interaction between the two is due to the focus on assets and ownership, which produces quite different world maps of the two parts of the corporation. By taking instead a relational view and looking at the people facilitating both value and wealth chains, the article finds that these are much closer entangled than previously thought.

The fifth article analyzes a potential reform which would address tax minimization and finds that such a reform would be feasible under either a multilateral process or through cascading effects from a large first adopter. The revenue from corporate income taxes would be similar, but redistributed across countries to the benefit of trade deficit countries.

Policy implications

The integration in the world economy and the rise of multinational corporations means international regulation needs to 'run harder and harder to keep us in the same spot' (Strange 1975 p 222). This insight is important to keep in mind when assessing the developments in the arena of global tax governance in the past two decades. A multitude of new initiatives have emerged, but it remains to be seen whether these initiatives have actually changed the system or are (barely) enough to keep us in the same place.

As discussed in the previous sections, corporate tax minimization occurs within systemic, institutional and instrumental opportunity spaces, enabled and facilitated by governments and tax professionals. Given the importance of international structures beyond the control of single governments, policy reforms should also address not only the mechanisms but also the underlying structures to be effective. In the past decade, increasing focus within international policy forums has been on exactly this, and policy makers have initiated multilateral processes through the OECD. There is a broad consensus that the current system of fragmented legal regimes corresponds poorly to globalized markets and multinational firms (Christensen and Hearson 2019). Multiple reform ideas have been launched by scholars, activists and policy makers addressing the system level, such as corporate reporting regimes (Murphy 2003), destination based taxes (Auerbach et al 2017), global minimum tax (OECD 2021) or unitary taxation (Rixen 2011b, Morgan 2016).

These reform ideas all have merits and complications. I will refrain from a full comparative analysis, but I will make a short note with respect to the core question of this thesis. Based on my findings in this thesis, any tax reform which addresses profit shifting but does not address tax competition may be effective at limiting some forms of tax avoidance, but not curb overall effective tax minimization. If only the instrumental level, the legal mechanisms used to obscure ownership and shift profits, are addressed, tax experts will be able to innovate new mechanisms and construct new loopholes, or take advantage of new tax limitations offered by governments competing for investment. Therefore it is important to discuss the reforms on the basis of not just how they limit current forms of tax avoidance, but how they change the system – and therefore limit future forms of tax minimization. Furthermore, it is important to consider the feasibility of adoption and implementation, given that states and coalitions within states may not share the same interests.

The most recent development is the international agreement by virtually all countries to a global minimum tax at 15 percent (OECD 2021). If implemented well, such a tax would impose a top-up tax, such that firms could never achieve a lower tax rate than 15 percent – no matter where in the world they operate. The incentive to move assets for tax purposes is thereby somewhat decreased. In principle, this decouples the tax rate that applies to economic activity from the location of that activity, and therefore decreases the pressure of tax competition. Whether this reform can be seen as stopping the race to the bottom, however, depends both on whether governments may move competition into other areas of the tax system (Bunn 2021), as well as how we define the ‘bottom’. If we take the bottom as 0, a minimum tax of 15 percent is a huge increase. For most countries though, a 0 percent corporate tax rate is unlikely to be realistic, given fiscal responsibilities such as welfare provisions. For firms, it is also not the case that they are currently at 0 or approaching it. Certainly, that is the case for some, but it is more common for firms to target a band of effective tax rates which also takes reputational costs into account (Radcliffe et al 2018). Current effective tax rates are, though declining, significantly higher than 15 percent (Garcia-Bernardo, Janský and Tørsløv 2022). This suggests the reform merely institutionalizes a bottom rate which countries were already racing towards.

Article 5 of the dissertation considers the proposal for a destination-based cash-flow tax which would more fundamentally alter the coupling between economic activity and taxation, and thereby minimize tax competition for capital inflows. The tax would reverse the system such that imports rather than exports were taxed, meaning taxes would be paid in the location where end consumption takes place. By placing taxation at destination, the economic activity of production and use of tangible and intangible assets is decoupled from taxation. This decoupling means there is no incentive for states to compete through tax rates to attract economic activity. Tax systems could therefore be simpler (without need for targeted exemptions and incentives), and each country could set the tax rate they would prefer without losing investment to competing countries. This is a reform that limits the structural power of global capital without limiting capital mobility.

The fifth article in this thesis shows that while a multilateral process behind adopting it is preferable, unilateral action might also be a potential route towards global adoption. If unilateral action imposes substantial costs for non-adopters, it may drive a cascading process, where a leading state with leverage over others via a threat of market exclusion is able to act unilaterally in a way that raises the costs of maintaining a policy regime that runs counter to the reformed system. In the case of FATCA, the United States requirement for automatic information exchange on US citizens and entities with bank accounts outside of the United States enlarged the opportunity space for the OECD's multilateralization of automatic information exchange (Palan and Wigan 2014). In the case of destination-based cash-flow taxation, such cascading would be imminently needed for many economies as the costs imposed by a large first adopter would be substantial.

The multilateral process is of course a challenging arena, as both corporate interest lobbying and diverging interests of states are at play. With these challenges to the multilateral process in mind, it is worth considering unilateral approaches. Nevertheless, a reform without a multilateral process behind it takes agency away from smaller and developing economies. While the revenue effects of a destination-based tax would not theoretically be bad for these countries, this depends on the assumption of administrative capacities and full implementation, and ultimately removes agency away from countries subject to the power of larger countries.

If the current regime is 'sovereignty preserving' (Christensen and Hearson 2019) then states must realize that it is not authority-preserving. Corporations hold authority over corporate taxation as long as they are able to determine where the taxing rights to their profits apply (Strange 1996). States therefore face not the dilemma of giving away sovereignty but rather whether they should continue to give authority to private actors or should reclaim this authority through cooperation with other states. In order to create conditions for capital that may spur growth, governments themselves provide opportunity structures for this transfer of authority. If the newly implemented and proposed reforms are effective at shutting down tax-minimizing mechanisms but not the innovation and proliferation of them through government tax competition and tax professional innovation, they will prove to only be enough to keep us in the same place.

Tax professionals are able to not only facilitate the exercise of this authority in an efficient manner, but also to innovate ways which increase this autonomy through increasing private discretion in tax policy. While reforms such as destination-based cash-flow taxation and global minimum taxation challenge some of the underlying structures that enable corporate tax minimization, they do not address the facilitation. As the global economy is dynamic, regulation also needs to adaptable to new financial and legal innovations.

Further research

This thesis aims to reconfigure the discussion of tax, and therefore opens up at least as many questions as it answers. The reconceptualization of tax minimization opens up further research into uncovering the extent of tax competition and its comparative political economy. New data on the extent of tax competition and the fragmentation of legal regimes is necessary to fully understand the mechanisms behind tax minimization. The taxonomy could also be configured in terms of types of economies. While the criticism of 'virtual' versus 'real' tax competition stands, the types of tax competition undertaken in economies do differ, and feature differently into local political economy contexts. Future research could investigate, for example, how tax competition and regime design features differently in different growth models (Baccaro, Blyth and Pontusson 2022).

The thesis finds that global wealth chains and global value chains are not separate, but rather configured in close collaboration. The potential for tax minimization across all countries rather than in 'tax havens' alone underscores the potential for such overlap, and means future research into the actions of corporations cannot just look at presence in certain jurisdictions to gain an idea of their tax strategy. Future research needs to untangle how exactly tax minimization occurs across the global value chain, and to what extent global value and wealth chains are entangled (see eg. Stausholm 2022 (article 1 in this thesis) and Højris Dahl 2022). This requires interdisciplinary scrutiny of corporate structures to investigate the purposes of units and particularly the tax minimizations available in each jurisdiction.

While the thesis has focused exclusively on corporate tax, it is embedded in the wider literature in international political economy on how states undertake policies which paradoxically seem to undermine their authority. Here, financial deregulation serves as a related area, where governments try to improve conditions for capital in order to increase growth – even if it leads to instability and inequality. Further research should build on the integration of firms, professionals and states and interrogate the role of these facilitators in shaping the government's perception of their own interests - when it comes to tax competition as well as other areas. This may come in distinct flavors based on the different economic sectors. Future work might also consider how these findings apply to other areas of corporate strategy, as well as other areas of taxation such as taxes on personal and generational wealth.

This thesis has sought to uncover the complex web of authority behind who gets taxed, by how much, and where. While the authority is to a large degree in the hands of the tax professionals and multinational firms who hold infrastructural and structural power, states can reclaim authority if they are able to limit these. Regulating tax professionals and the firms who work closely with states in designing tax systems is one avenue. Another is changing the tax system in ways that limit the structural power of firms by decoupling tax rates from investment decisions. While states may try to create rules that protect their tax bases in different ways, these will only be minor frictions until tax professionals find new ways to minimize taxes. Only by considering the authority question, and particularly by limiting the infrastructural and structural power of professionals and multinationals, can tax minimization be addressed. The thesis argues that states should receive more attention for their role in enabling tax minimization, but the role of non-state actors, in particular tax professionals, should be further scrutinized. For example, the configuration of new technologies of digitalization and automation into their work should be investigated as a risk-factor to acceleration of tax minimization services. The substantial role of tax professionals in advicing governments and their role as 'system brokers' also deserves more attention, particularly the extent to which they are able to influence how policy makers perceive their interests in relation to maximization of capital inflows through minimization of tax.

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