

Unger, Brigitte (Ed.); Rossel, Lucia (Ed.); Ferwerda, Joras (Ed.)

Book — Published Version

Combating fiscal fraud and empowering regulators: Bringing tax money back into the coffers

Provided in Cooperation with:

Oxford University Press (OUP)

Suggested Citation: Unger, Brigitte (Ed.); Rossel, Lucia (Ed.); Ferwerda, Joras (Ed.) (2021) :
Combating fiscal fraud and empowering regulators: Bringing tax money back into the coffers,
ISBN 978-0-19-885472-2, Oxford University Press, Oxford,
<https://doi.org/10.1093/oso/9780198854722.001.0001>

This Version is available at:

<https://hdl.handle.net/10419/270661>

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COMBATING
FISCAL FRAUD
& EMPOWERING
REGULATORS

*Bringing tax money
back into the COFFERS*

OXFORD

Combating Fiscal Fraud and Empowering Regulators

Combating Fiscal Fraud and Empowering Regulators

Bringing Tax Money Back into the COFFERS

Edited by

BRIGITTE UNGER, LUCIA ROSSEL,
AND JORAS FERWERDA

OXFORD
UNIVERSITY PRESS

OXFORD

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Great Clarendon Street, Oxford, OX2 6DP,
United Kingdom

Oxford University Press is a department of the University of Oxford.
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First Edition published in 2021

Impression: 1

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Published in the United States of America by Oxford University Press
198 Madison Avenue, New York, NY 10016, United States of America

British Library Cataloguing in Publication Data
Data available

Library of Congress Control Number: 2020945723

ISBN 978-0-19-885472-2

DOI: 10.1093/oso/9780198854722.001.0001

Printed and bound by
CPI Group (UK) Ltd, Croydon, CR0 4YY

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Foreword

James Alm

Tax systems of nations around the world have been under relentless attacks in recent years from an array of short- and long-term forces. Short-term trends include the financial crisis of 2007–2008 and its ensuing effects on fiscal systems. Long-term forces include those unleashed mainly by changing technology, most all of which start with ‘digitization’, or the transformation of information storage into digital formats for use by computers. Computers have opened the doors to a range of methods that affect information retrieval and storage, information transmission, and information analysis. Indeed, with the integration of digitization into most all aspects of everyday life (or ‘digitalization’), there have been numerous additional technological innovations, which in their entirety have contributed to transformational changes in the practices of international business and international taxation: the growing use of electronic ‘cash’ (including cryptocurrencies) and electronic commerce, the internationalization of supply chains, the explosion of peer-to-peer (P2P) networks, the disclosure of massive amounts of personal information via ‘apps’, the increasing use of artificial intelligence and other ‘deep learning’ methods in the analysis of ‘big data’, and the domination of many economic sectors by large, almost monopolistic firms, driven by economies of scale and scope that often arise from technological advances.

One result of all of these forces has been the increasing difficulty, if not the steady erosion, in the ability of nations to collect the taxes required to finance the modern welfare state. Tax evasion, tax avoidance, and money laundering facilitated by digitalization have all contributed to tax base erosion of the state.

These forces have not gone unnoticed or unaddressed, notably by an alphabet soup of international agreements aimed at increasing the flow of information about these practices to tax authorities, both within and across country borders. However, a systematic assessment of these many initiatives has been absent.

At least until now.

This book brings to bear the insights from various researchers, from various disciplines, from various institutions, and from various countries to ‘analyse the impact of the new international regulations on the scope of tax evasion, tax avoidance, and money laundering’, as stated in the Introduction. The chapters in this book represent the fruits of the EU Horizon Project, ‘Combating Fiscal Fraud and Empowering Regulators’ (COFFERS), led by Brigitte Unger. These chapters do not answer all questions on how to understand, measure, and combat fiscal fraud. However, they summarize much previous research, they contribute

new and frontier research, and they suggest promising new approaches to stem the further erosion of tax bases around the world.

Indeed, I believe that a *first* central contribution of these chapters is the recognition that a multidisciplinary approach is essential in this work, in which the insights from economics, accounting, law, sociology psychology, political science, and public administration are combined in a systematic way. A *second* contribution of these chapters is the creation of such a truly interdisciplinary and cross-fertilized system of analysis, thereby creating what is termed a 'tax ecosystem' approach to combating fiscal fraud.

In short, the contributions of these chapters have the potential to stimulate entirely new directions of research that combine the insights from multiple fields into a coherent and comprehensive framework. This is indeed an exciting time—if also a challenging time—to be working on 'combating fiscal fraud and enabling regulators'.

Preface

This book is an outcome of the EU Horizon 2020 Project COFFERS, Combating Fiscal Fraud and Empowering Regulators (2016-2019). COFFERS was funded at a time of unprecedented flux in the European and international tax environment. In the context of heightened inequalities emerging from the Global Financial Crisis and the broadly adopted policy response of austerity, regulatory innovation has proceeded at pace. This innovation has aimed to reinvigorate the traction of regulation on taxable income where capital's increasing mobility and immateriality were seen to be confronting and transcending tax systems designed for an earlier era.

Partners in the COFFERS project were tasked with making sense of this flux and providing analysis that might inform regulatory discussions so that the outcomes of those discussions were more able to redress expanding inequalities. This book showcases this work providing a multidisciplinary intervention that tracks the impact of regulatory innovation on the scale and nature of tax evasion, tax avoidance, and money laundering. We consider the international tax environment an ecosystem undergoing a period of rapid change as shocks including the financial crisis, new business forms, scandals, and novel regulatory instruments impact upon it. The ecosystem evolves as jurisdictions, tax payers, and experts react. COFFERS tracks this evolution and intervenes in it so that the tax environment is a tool in lowering inequalities.

We focus our analysis on Europe and five new regulations: the Automatic Exchange of Information, which requires that accounts held by foreigners are reported to authorities in the account holder's country of residence; the OECD's Base Erosion and Profit Shifting initiative and Country by Country Reporting, which attempt to reduce the opportunity spaces in which corporations are able to limit tax payments and utilize low or no tax jurisdictions; the Legal Entity Identifier which provides a 20-digit identification code for all individual, corporate, or government entities conducting financial transactions; and the Fourth and Fifth Anti-Money Laundering Directives, that criminalize tax crimes and prescribe that the Ultimate Beneficial Owner of a company is registered. Working from accounting, economic, political science, and legal perspectives, the analysis in this book provides an assessment of the reforms and policy recommendations that will reinforce the international tax system.

Our ultimate goal is to Combat Fiscal Fraud and Empower Regulators. We show that huge amounts of money are foregone in unpaid taxes for purposes such as redressing poverty, providing education, and safeguarding the natural environment.

Regulators, academics, practitioners, and civil society might use the book as a torch to shine light on the status quo in the international tax environment and the trajectory of change going forward. In addition, the collection flags the dangers posed by emerging tax loopholes provided by new business models and in the form of freeports and golden passports. Our central message is that inequality can and has to be reduced substantially, and this can be achieved through an international tax system that ends the era of secrecy, opacity, and tax havens.

Acknowledgements

Research is often thought of as a lonely endeavour. But the outcomes of this book ‘took a village’. We want to thank our EU project officer Petri Backman who supported our project for three years with insightful ideas and a dose of dry humour. Research only improves when it is put to the test by critical comments and questions, so we would like to thank all the participants of the COFFERS mini-workshops that we hosted in Vienna and Utrecht; as well as all those who participated in the COFFERS dissemination conferences in Vienna, London, Copenhagen, and Brussels.

Our work has benefited from the group work and the opinions of the researchers and academics within our project. We want to thank all of those who joined our assemblies in Utrecht, Vienna, Prague, London, Limerick, and Copenhagen. Especially our advisors Jane McCormick, Burkhard Muehl, Prof Brigitte Young, Prof Sol Picciotto, Prof Umut Turksen who guided us with their experience and knowledge of the field.

The final product of this book would not be what it is without the work of our student assistants Felix Alshut, Geke Blokland, Joana da Costa Reis, and Harini Vadakkancheri Ravi. Last but not least, a book is nothing without the words and research in it, so we thank the COFFERS team. This multidisciplinary and multicultural group of researchers who have done a tremendous amount of work that has resulted in 15 excellent chapters.

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List of Abbreviations

ABM	Agent-Based Models
AEoI	Automatic Exchange of Information
ALP	Arm's Length Principle
AML	Anti-Money Laundering
AMLD	Fifth Anti-Money Laundering Directives
AOI	Apple Operation International
AT1	Additional Tier 1
ATAD	Anti-Tax Avoidance Directive
ATP	Aggressive Tax Planning
BEPS	Base Erosion Profit Shifting
BFSI	Bilateral Financial Secrecy Index
BIS	Bank of International Settlements
BSW	Bilateral Scale Weights
BTTs	Bilateral Tax Treaties
CAA	Competent Authority Agreement
CbCR	Country by Country Reporting
CbCRIE	Country-by-Country Reporting Information Exchange
CCCTB	Common Consolidated Corporate Tax Base
CDIS	Coordinated Direct Investment Survey
CFC	Controlled Foreign Company
CFT	Combating the Financing of Terrorism
CFTC	Commodities and Futures Trading Commission
CIT	Corporate Income Tax
COFFERS	Combatting Fiscal Fraud and Empowering Regulators
CPIS	Coordinated Portfolio Investment Survey
CRS	Common Reporting Standard
CSR	Corporate Social Responsibility
CTHI	Corporate Tax Haven Index
CTPA	Centre for Tax Policy and Administration
DG	Directorate General
EM	Equity Map
EOIR	Exchange of Information on Request
ETRs	Effective Tax Rates
FATCA	Foreign Account Tax Compliance Act
FATF	Financial Action Task Force
FDI	Foreign Direct Investment
FFD	Forum on Financing for Development
FSB	Financial Stability Board

xxii LIST OF ABBREVIATIONS

FSI	Financial Secrecy Index
GLEIF	Global Legal Entity Identifier Foundation
GLEIS	Global Legal Entity Identifier System
GRI	Global Reporting Initiative
GSW	Global Scale Weight
GWC	Global Wealth Chains
HI	Haven Indicator
HMRC	HM Revenue & Customs
HNWI	High Net-Worth Individuals
HS	Haven Score
HTC	Harmful Tax Competition
IASB	International Accounting Standards Board
IBFD	International Bureau of Fiscal Documentation
ICIJ	International Consortium of Investigative Journalists
IDI	Identification Infrastructure
IFF	Illicit Financial Flows
IGA	Intergovernmental Agreements
IGO	Intergovernmental Organizations
IMF	International Monetary Fund
IOR	Information-On-Request
IP	Intellectual Property
IRS	Internal Revenue Service
KBLux	KreditBank Luxembourg
LACIT	Lowest Available Corporate Income Tax rate
LEI	Legal Entity Identifier
LOU	LEI Operating Unit
MCAA	Multilateral Competent Authority Agreement
MDGs	Millennium Development Goals
MiFID	Markets in Financial Instruments Directive
ML	Money Laundering
MLAT	Mutual Legal Assistance Treaties
MNCs	Multinational Corporations
MNEs	Multinational Enterprises
MTC	Model Tax Convention
OCW	Open Customs Warehouses
OECD	Organization for Economic Cooperation and Development
OFCs	Offshore Financial Centres
OTC	Over-The-Counter
ROC	Regulatory Oversight Committee
SEC	Securities and Exchanges Commission
SFTR	Securities Financing Transaction Regulation
SPVs	Special Purpose Vehicles
SRRR	Spillover Risk Reference Rate
SS	Secrecy Scores
STD	Savings Tax Directive

TAXUD	Directorate-General Taxation and Customs Union
TCJA	Tax Cuts and Jobs Act
TJN	Tax Justice Network
TRS	Total Return Swaps
UBS	Union Bank of Switzerland
UHNWI	Ultra-High Net-Worth Individuals
VAT	Value Added Tax
WHT	Withholding Tax

List of Contributors

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1

Introduction

Brigitte Unger, Lucia Rossel, and Joras Ferwerda

This book is the outcome of a three-year-long EU Horizon 2020 project named Combating Fiscal Fraud and Empowering Regulators (COFFERS). The project ran from November 2016 until December 2019, to do quality research that could bring tax money back into the public coffers and by doing so help to reduce increasing inequality.

For the first time, researchers from law, economics, sociology, political science, and accounting worked together in order to assess new international tax policy measures and what they imply for the EU and its Member States. Researchers from 15 countries (Argentina, Australia, Austria, Bolivia, Czechia, Denmark, Germany, Greece, Ireland, Israel, the Netherlands, Russia, Spain, Turkey, and the UK) tried to understand the changes in the rules of the game of international tax policy. The universities involved were City University London, Warwick University, University of Leicester, Istanbul Kemerburgaz University, Bamberg University, Charles University Prague, Copenhagen Business School, the University of Limerick, and Utrecht University, as well as the non-profit organization Tax Justice Network. Scholars who had experience with studying complex company structures and tax avoidance, or the role and behaviour of tax experts, merged with scholars who had studied the criminal side of not paying taxes such as tax evasion and money laundering. The multidisciplinary nature of this group of researchers is a novelty in itself, since tax avoidance, the legal part of not paying taxes, and tax evasion, the illegal part of not paying taxes, had so far been studied by separate fields. The project, led by Prof. Brigitte Unger, was one of the largest research projects on tax evasion in Europe, if not the whole world. This book seeks to present some of the most significant findings on the new tax regime, as well as its strengths and the unintended provisions or loopholes that can arise.

1.1 Background

In the wake of the financial crisis and the ensuing fiscal crisis, international organizations, as well as the EU and its Member States reacted by putting forth

new tax policy regulations at the national and international level.¹ These innovations constitute a significant change, in tax policy and for the EU fiscal regime, potentially even signifying a paradigm shift (Picciotto, 2019) after a long drought of tax policy regulation at an international level.

A great deal of the problems of international taxation were well understood already in the 1930s. The regulations introduced then, which were taken over and reinforced by the OECD from the 1960s onwards, were designed for an era that had died before the onset of capital account liberalization and the rise of globalization later in the 1970s and 1980s. Accounting and tax regulation survived without severe challenge until the mid-1990s. This despite that the prevailing structure was a decidedly twentieth-century one, consisting of transfer pricing regulations, controlled foreign company rules, the treaty system, rules on source and residence-based taxation and nascent anti-money laundering regulations, all of which were hindered by numerous layers of opacity worldwide.

In 1998, the EU started with a Code of Conduct for its Member States to reduce tax competition. Two years later, in 2000, the OECD launched the Harmful Tax Competition Report. These initiatives attracted heavy criticism. One was that it was unfair to put the blame only on small islands since no OECD country was included in the list of Harmful Tax Competitors. The other criticism was that the list was useless, as EU countries known for being tax havens, like Luxemburg, did not accept the Code of Conduct (see Sharman 2006; Radaelli 2003; Unger and Ferwerda 2008).

Before the developments aimed at reducing tax avoidance, a new international regime of fighting money laundering had already started. In 1986, after a hopeless war on drugs, rather than chasing drug dealers, the Clinton administration came up with a new approach: follow the money. Instead of trying to catch drug dealers, the new policy aimed at depriving drug dealers of reaping the benefits of their crime, in order to discourage them. Pushed by the US, the intergovernmental organization named Financial Action Task Force (FATF) set up in 1989 (see Sharman 2006). In the late 1990s, the European Union jumped on the bandwagon by implementing the first Anti-Money Laundering (AML) Directive. This directive expanded in scope and importance swiftly, from initially covering drug crimes to eventually reaching corruption and terrorism financing. In 2012, the FATF added to its standards that tax crimes should be a predicate crime for money laundering. The fourth EU AML Directive in 2015 followed suit. From 2018 onwards, countries have to criminalize tax evasion severely. Tax evasion, a white-collared crime, was put into the same basket as drugs, corruption, human trafficking, and terrorism financing. This regulatory change means that drawing the line between what is tax avoidance and what is tax evasion has become more

¹ Parts of this introduction have drawn inspiration from the COFFERS proposal. The document is available at www.coffers.eu

important, as the latter can now be a serious crime and hence a predicate offence for money laundering.²

The international fight against money laundering and tax fraud soon spread over the whole world. By today, almost all countries—more or less voluntarily under the threat of being blacklisted with severe economic consequences—have signed to comply with anti-money laundering standards. This push and experience of how to fight money laundering have certainly also influenced the speed in which international tax policy has developed.

It was, once again, the United States, who made the first decisive move towards a more international tax regulation with the Foreign Account Tax Compliance Act (FATCA) in 2010 (Sharman 2006). Since this, financial institutions from all over the world have to report assets held by US account holders to the American Internal Revenue Service (IRS). The EU followed by enacting Automatic Exchange of Information (AEOI) which obliged Member States to report accounts held by foreigners to the country of residence of the account holder. Under pressure from the G8, when the issue of corporate tax abuse had become a hot political issue, the OECD adopted Country by Country Reporting (CbCR) in its Base Erosion and Profit Shifting (BEPS) initiative (Action 13 on *Guidance on Transfer Pricing Documentation and Country by Country Reporting* out of in total 15 Actions). Multinationals, with a turnover of over 750 million Euros, are compelled by CbCR to disclose how much profits were made in each country in which they operate; as well as their turnover, the amount of taxes paid, number of employees and a description of their activities and the value of their assets.

In 2011, the Legal Entity Identifier (LEI) was put forth by the G-20. It is a 20-digit code that is the same globally for each legal entity. Before, each country had a different code system to recognize the counterpart corporation of financial transactions. One reason for the financial crisis was that financial institutions could not identify and trace the risk exposure of diverse companies. Currently, the US and the EU require corporations to use a LEI when reporting the details of transactions of Over the Counter Derivatives to financial authorities (see Chapter 9). If applied to all companies, LEIs would allow identifying the beneficial owner of any—however complicated—corporate structure.

Compared to the period before 2010, the speed at which new regulations are taking place is remarkable. The US, the G-8, the G-20, the OECD, and the EU (through diverse DGs such as TAXUD and DG Home) all initiated and put forth new regulations. This ‘hot phase of regulation’ (see Chapter 2) means that policy initiatives exist parallel and have a higher chance of being successful than earlier

² For further information on the grey zone between tax avoidance, tax evasion, and money laundering see the results of the COFFERS Vienna conference and for a short and comprehensive overview of the history of money laundering and how it connects to tax evasion see the video of Brigitte Unger titled Money Laundering Regulation—from Al Capone to Al Qaeda. Both are available at www.coffers.eu.

initiatives. At the same time, there is a risk for an increase in loopholes that can stem from these new regulations since they were not developed consecutively but in parallel by different institutions or by independent departments within the same institution.

1.2 Aims and Objectives of the Book

This book aims to analyse the impact of the new international regulations on the scope and scale of tax evasion, tax avoidance, and money laundering. We do so by proposing a new way of viewing taxation issues like a tax ecosystem, a space based on the ‘recognition of sovereign jurisdictions and their legal systems, political mandates from states and intergovernmental organizations, markets interests from corporations and other private actors, and of normative agendas from activists and civil society’ in Chapter 2. The tax ecosystem remains as a guideline throughout the book and through the analyses of global policies that have affected this ecosystem. In particular, Automatic Exchange of Information (tax authorities abroad have to be informed if foreigners hold assets in a country, see Chapter 7); Country by Country Reporting and Base Erosion and Profit Shifting which aim to reduce the possibility of companies to shift profits into low tax havens (see Chapters 3, 6, 7, and 8); Legal Entity Identifiers, an initiative by the G-20 to give companies a trusted 20-digit code technology which could indicate the origin, activity, and ultimate beneficial owner of a company (see Chapter 9) and anti-money laundering policy (see Chapter 13). The book derives policy recommendations for an improved international tax system by analysing the new regulations from different fields and perspectives, such as law, political science, accounting, and economics.

Furthermore, this book seeks to add to an increasing amount of literature on the pervasive effects of tax evasion and tax avoidance, the actors involved in managing and designing tax avoidance and evasion schemes, the evaluation of global policy tackling it, and the estimation of how much money is lost. We add to the literature on tax effects by proposing in Chapter 4 new ways of measuring the tax gap; this chapter adds to existing literature focusing on the number of governments that prepare tax gap estimates or definitions of what tax gaps are/should be (Mazur and Plumley 2007; Murphy et al. 2019). Chapter 5 is a comprehensive overview of illicit financial flows and adds to a vast literature of IFF and its effects by compiling the estimates in one chapter; by doing so Chapter 5 also incorporates previous work of other authors in the book such as Cobham and Jansky (2017) and Janský and Palanský (2019). Chapters 6, 7, 8, 9, and 13 seek to add to the literature that measures the effects and design of global financial governance instruments such as CbCR, AEOI, LEI, FATF Recommendations. Research on this has been done by organizations such as the

OECD, non-governmental institutions such as our partner Tax Justice Network and researchers such as Johanssen and Larsen (2016) and the previous work of two contributors of this book Leo Ahrens and Fabio Bothner (2019). When it comes to the actors involved in the tax ecosystem, we add to the literature by deepening the analysis on individual actors as well as corporate actors.

When it comes to individuals the research in Chapter 12 on accountants and tax experts complements existing literature on the role of big accountancy firms (Jones et al. 2018). Furthermore, Chapter 10 on the rise of Luxury Freeports is a contribution that fills a literature gap on non-financial wealth kept in tax havens (Zucman 2015). Through Chapters 3 and 11 we expect to contribute to an increasing amount of literature interested in the behaviour of corporations through an analysis of sophisticated financial engineering by big corporations in Chapter 3 and the analysis of Uber in Chapter 11.

1.3 Scope and Content

The book views the new regulations (AEOI, CbCR, BEPS, LEI, AML) as a regulatory shock to a tax ecosystem (see Steinmo and Swank 2002). Similar to a ‘real ecosystem’ in ecology, after a shock, some species will become bigger, others will die out, and others will move to new niches in order to survive. Species in the tax ecosystem are jurisdictions, companies, tax experts, and the international community all acting in an environment of constant legal and political changes. Chapter 2 in this book gives an overview of the diverse actors of the tax ecosystem.

We study the reactions of the actors of this ecosystem to the changes in regulation such as jurisdictions, companies, and tax experts. We find that some countries will specialize in new forms of tax competition (see Chapter 7), while other countries will try to ignore the new regulations (see Chapter 6). Companies will react as well, some will develop new ways to commit tax avoidance, and others will decide to restructure. New types of companies will also appear (see Chapters 3 and 11).

The individuals that work in the tax ecosystem such as tax experts, tax advisors, lawyers, and accountants will also respond and react to the new regulations by changing their behaviour and perceptions of what is correct (see Chapter 12). This group of professional financial service providers who were once busy detecting loopholes in the international tax system and advising companies on how to avoid paying taxes now has to discover new loopholes for their survival in a new regulatory regime. Once they discover this, the regulatory system will need to update and adjust once again to the changes. This need for update is why the legal system is constantly updating and why we research the role of changes in anti-money laundering regulation and their expansion to tax crimes across the

EU, to understand how countries can implement international regulations too heterogeneously (see Chapter 13).

In order to estimate the dimension of the problem, we provide diverse estimates on tax avoidance, tax evasion, tax gaps, and money laundering (see Chapters 4 and 5). In addition, we provide new indicators to rank countries according to how harmful they are for international tax competition and as secrecy providers (see Chapter 6 and 8; and the first COFFERS PhD, Meinzer 2019).

Finally, Chapter 14 derives policy recommendations by modelling a tax ecosystem with its diverse actors through an agent-based model. This allows for a more comprehensive study of the effect of policy reforms. Contrary to former economic models, agents do not have to be rational, but can also act irrationally and based on coincidences. When there are shocks, one cannot predict the future based on past events. Agent-based models, however, allow making predictions of the future also under big shocks. The only assumption needed is that people's behaviour is stable. The agents in the model will use their old behavioural patterns to overcome these big shocks. The interdependence of agents in the international tax policy regime becomes clear when one sees the complexity and outcomes of this model.

We focus our study mainly on analysing the EU Member States. Nevertheless, when analysing global issues, we include the whole world, such as complex corporate structures using tax havens to avoid taxes, or the estimation of tax evasion or money laundering flows.

1.4 A New Area of Research

The book opens a new area of research, in that:

- It chooses an evolutionary approach, the tax ecosystem approach, by analysing the reactions to regulations and the readjustments needed. The advantage of this approach is that it can look forward. Backwards-looking approaches that then try to extrapolate past experiences into the future are not adequate when analysing significant shocks. So far, tax policy has not been analysed from this angle.
- It takes on an interdisciplinary approach because analysing tax policy and regulation needs authors of diverse disciplines: economics, accounting, law, sociology, psychology, political science, and public administration.
- It provides new estimations of tax evasion, tax avoidance, tax gaps, and money laundering, using diverse methods and methodologies.
- It identifies loopholes in the existing international tax regime.
- It wants to empower regulators by suggesting policy recommendations on how to improve the international tax regulatory regime.

The topic we enquire on is very new, some regulations studied have only been in place since 2018. The impact of these new international regulations on tax evasion, tax avoidance, and money laundering has not been done so far. Hence, this book wants to empower regulators and enable them to take further actions towards reducing tax avoidance, tax evasion, and money laundering on time.

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2

Actors and Authority in the International Tax Ecosystem

Jakob Laage-Thomsen and Leonard Seabrooke

Taxation is subject to governors and an object of governance. Taxation exists within a social ecology, a space where actors interact to control the types and content of taxation, how practices are configured, and how power is exercised through taxation to govern people and enterprises. Interactions around taxation are commonly both procedural and conflictual. As taxation distributes wealth and changes how value is created, it deepens or lessens inequalities. As such, tax issues are sites of politico-economic contestation, ranging from street protests over tax justice to organized lobbying from corporations and interest groups, to governments pursuing their national interests, to intergovernmental organizations seeking to affirm their preferred policy scripts.

The purpose of the chapter is to consider how we should understand changes in the international tax ecosystem, and how changes are driven by actors' claims to official, professional, and practice-based forms of authority. We begin by describing three broad disciplinary approaches to taxation, grouped in the main according to their assumptions on how actors operate. These are simplifications and deal mostly with the parts of the disciplines that have dealt with tax issues. We use this approach to argue for the necessity of an inclusive theoretical framework; the ecosystem. We argue that such a framework unites the disciplinary approaches by transposing the main question from explaining change based on behavioural assumptions among fixed actors to assessing how actions to support claims to authority are made to justify a change. We present this framework as a useful heuristic for interdisciplinary work of the kind found in this volume. In Section 2.2, we apply our framework to present the most important/major changes to the international tax ecology in the last decade. We end by discussing how explanations for these changes reflect work that operates at different levels of analysis.

2.1 Actorhood and Authority

Taxation is understood from a range of disciplines that carry different assumptions about how actors operate, how they make claims to authority, and what level of analysis is appropriate in explaining the drivers of behaviour. As such, studies of taxation operate in an interdisciplinary arena. However, these differences confuse scholars and practitioners trying to get a hold on the literature. For this reason, this section provides a basic framework for ordering and identifying studies based on assumptions about actors, authority, and scale of analysis, before giving examples of studies and approaches.

The disciplines that have a serious grasp of tax matters include economics, accountancy, law, political science, management studies, and sociology. Within these scholarly fields, there are strong assumptions about how actorhood and what drives actors' behaviour. As such, how actors operate across scales and how they make claims to authority are important to clarify.

Figure 2.1 depicts common assumptions about actorhood that correspond to the fields noted in Figure 2.1. The most obvious starting point can be found in economics where actors are considered *rational economic agents* who seek to maximize their interests. Governments aim to create tax systems that optimally provide welfare provisions for the least cost (Diamond and Mirrlees 1971). Such theories of actorhood and taxation have continued to develop, increasingly with a view that taxation as a 'system of coercively collecting revenues from individuals who will tend to resist' (Slemrod 1990: 157). A similar view of actors as *rational political agents* can be found in political science. Margaret Levi's (1989, pp. 8–9) masterwork on taxation argues that 'individuals calculate the costs and benefits to themselves of various actions they are considering and then choose the alternative most consistent with their fixed preferences. I then post that rulers maximize

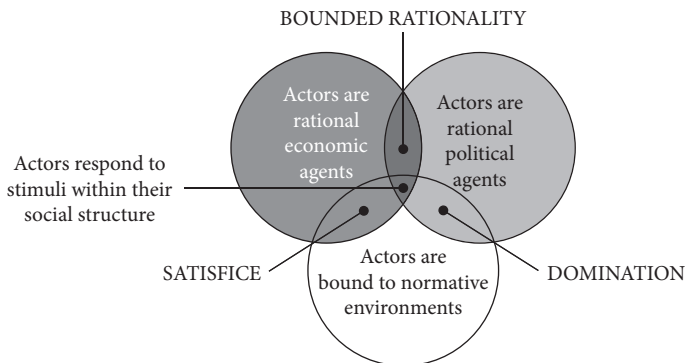


Figure 2.1 Assumptions about actorhood.

Source: Author-made.

revenue to the state subject to determinant constraints on their behaviour'. The system of tax collection and willingness to pay is one of 'quasi-voluntary compliance' (Levi 1989). Individuals game the system and the state is responsible for ensuring that the game has some rules.

A departure from the rational view can be found in more sociological works on taxation, which stress how *actors are bound to normative environments*. While the influence of cultural attributes is certainly integrated into some rationalist accounts (Lieberman 2003), the view here is that attitudes and behaviour towards tax issues are saturated with normative predispositions. Such work can be found in ethnographic studies (Björklund Larsen 2017), as well as in the 'new fiscal sociology' that stresses not only political pacts but normative alignments in path dependencies associated with taxation (Prasad 2005; Martin et al. 2009).

Figure 2.1 also suggests a number of overlaps. We have a range of theories where characteristics of actorhood can be found. First of all, theories of *bounded rationality* abound in the social sciences, stating that actors are rational within limits (March 1978; Simon 1979). Such insights have been applied to taxation, demonstrating that protest can occur over seemingly small tax increases that break with established settlements (Kato 2003). Work on *domination* demonstrates how dominant political actors can establish normative environments in which their claims are normalized and socially accepted, which then accentuate their power. Examples from inheritance taxes and property taxes in the United States provide good examples of this kind of research (Graetz and Shapiro 2011; Martin 2015). Finally, the literature on *satisficing* places more emphasis on the psychological dimensions of choice and when actors are willing to settle (Simon 1990). Such work has informed more experiment-based work on willingness to pay taxes (Fairbrother 2019). The point here is that the overlaps provide points of debate for discussion on how actors respond to stimuli in their social structures as they deal with issues.

The same can be said for theories of authority. Figure 2.2 presents these in the same manner as Figure 2.1. First of all, assumptions about authority in economics are commonly based on the *rule of law to protect and defend contracts* and/or claims to dominance over practices and prices from *market share*. The obvious sources here are scholars who draw on a range of economists from those viewing contracts as the basis for market activity (such as Hayek) to those who view contracts as enmeshed in social relationships (such as Commons and Veblen). On taxation, the authority of law is assumed, with deviance from it being of interest (Slemrod 2007). The provision and defence of property rights are critical to the establishment of state capacity in tax systems (Besley and Persson 2009). Research on the international economics of tax avoidance, tax evasion, and money laundering has concentrated on how authority is enforced through law, matching legal determinations (criminality) to modelled estimations of economic activity (Walker and Unger 2009). Given the strong assumptions required for such

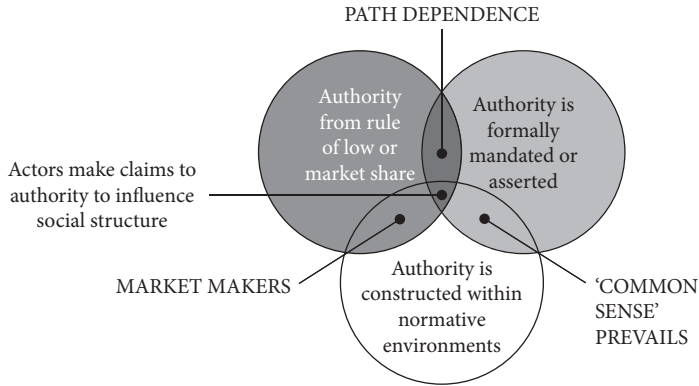


Figure 2.2 Assumptions about authority.

Source: Author-made.

research, critics have asserted that it is based on ‘highly questionable high-end guesstimates based on heroic assumptions and extrapolations’ (Levi et al. 2018, p. 311). Still, the principle here is that authority is derived from the rule of law.

Second, research in political science typically views authority as linked to those actors that have the *formal institutional mandate* for the issue in question, or those who can credibly assert their authority. Here the authority of the state is kept, more-than-less, in check by its citizens (Timmons 2005), in accordance with the ‘quasi-voluntary compliance’ basis of actorhood described above. What can be taxed is not only a matter of enabling laws but making difficult political choices over redistribution (Buchanan 1987). As such governments need ‘political will’ to assert their authority and reform tax systems in compliance with the world’s best practices (Tanzi and Zee 2000). Citizens expect political representation from formal authorities when they pay taxes to them, though this has not always been the case in how state capacity has been built (Boucoyannis 2015). More recently, scholars working on tax have viewed state-based authority claims as contingent on their relationship to other actors in the ecosystem, including ‘stakeholders’ such as civil society and corporate groups. For example, Genschel and Zangl have noted how the state has changed from ‘virtual monopolist to manager of political authority’ (Genschel and Zangl 2014).

Third, work in sociology often makes the claim that authority is constructed within a normative environment, with actors making claims to legitimacy based on a formal-rational, charismatic, or traditional basis (Weber 1978). On taxation, there is a vast literature on how fiscal systems underpin state capacity (Tilly 1975; see Martin and Prasad 2014), including how these systems are integrating into international trade (Hobson 1998) and financial systems (Seabrooke 2006). Given these studies, the common view is that social groups compete and cooperate over tax issues, with national cultural differences helping to explain the outcome.

Figure 2.2 also identifies a number of overlaps. First here is the volumes of work on *path dependence*, which makes the point that institutions are likely to follow the track established by pacts, agreements, laws, and formal mandates—that institutions are hard to change—is the default position of most contemporary political economy and economics (Pierson 2000). Incidentally, the concept is also central to ‘new’ and historical institutionalism in sociology, where the mechanisms of institutional change and stability are central research questions (Padgett and Powell 2012; Greve and Rao 2012). On taxation regimes, the notion of path dependence has been applied in explaining the differences between national systems (classically: Steinmo 1993), as well as for the adoption of common forms of tax, like value-added taxation, across polities (Helgason 2017).

The literature on how markets are made, market makers, points to how claims to authority take place within organizational fields, with prominent firms and actors using their position to secure normative environments in which particular laws and market share are protected (Fligstein 2002; see more generally Fligstein and Dauter 2007). On taxation, the most relevant scholarship here has concentrated on how the Big Four global professional service firms in accounting and auditing have established their market share through rhetorical claims to legitimacy and thus authority (Suddaby and Greenwood 2005; Murphy et al. 2019). The social relationships that underpin such claims, and how they lead to certain types of behaviour in the treatment of tax issues across multiple jurisdictions is also studied in the budding ‘global wealth chains’ literature (Seabrooke and Wigan 2017).

Finally, work that overlaps between organizational sociology and political science points to how actors actively seek to cultivate a *common sense* to shape standards and regulations (Strange 1988). Such actors are not only from formally mandated institutions but are active in fostering networks where common sense can be transformed. This approach has been explained in more ‘hegemonic’ and ‘institutionalist’ forms on tax issues, with the former drawing on Gramscian critiques to locate the authoritative common sense of taxation within inequality dynamics (e.g. Pascale 2008) and the latter focuses on how professional networks encourage a common sense among policymakers in how they make claims to authority over how tax policy is scripted (Ban 2015; Kentikelenis and Seabrooke 2017; Seabrooke and Wigan 2016).

If we want to understand changes in the international tax ecosystem, there will not be agreement among scholars on the prevailing forms of actorhood and authority that dominate. Instead, it is important to provide an approach that is sensitive to claims about authority being made to support or justify changes.

What needs to be understood from an interdisciplinary perspective is how forms of actorhood and authority exist within what we can understand as an ecosystem. The emphasis then lies on identifying forms of actorhood and how claims to authority are being made. By being sensitive to this rather than

closing down permissible forms of actorhood and authority from disciplinary assumptions, we can gain insights into how the international tax ecosystem is transforming.

2.2 The International Tax Ecosystem

Studying actors and authorities in the international tax ecosystem begs the question: what is the international tax ecosystem, and how did it evolve? Since the history of taxation is linked to the history of fiscal policy, and fiscal policy, in turn, is a major component of the history of states themselves, such description is daunting and complex (but see Christensen and Hearson 2019). Recent contributions have focused on global tax fairness (Dietsch and Rixen 2014; Pogge and Mehta 2016; Elbra and Mikler 2017) the extent of tax avoidance and evasion (Harrington 2016; Saez and Zucman 2019; see also Chapter 5 of this edition) and practices and trends in the global tax landscape.

The international tax ecosystem is composed of the following elements:

- jurisdictions (sovereign entities, legal systems)
- political mandates (IGOs, governments, geopolitical pressures)
- markets (corporations, professional service firms, investors)
- normative environments (NGOs and civil society).

These elements correspond to the rule of law, political decision-making, market activity, and activism. Through all of this is the role of expertise in knowing how to manipulate the law (Chapter 12), how to create policy, and how to interrogate tax systems for normative goals. We see these elements as corresponding to particular actors and their claims to authority. They include governments and intergovernmental organizations that use political decision-making and the law, to corporations who rely on these same measures, and to activists who make mixes of expert and moral claims. The current international tax ecosystem is comprised of these actors and their claims to authority. Claims work through two channels. The first is direct and works within the policy process. The second is an indirect channel in working in and across sovereign jurisdiction where actors seek to place pressure on the formal governance system (Eccleston 2013). Thinking this way, we can arrive at an overall description of what pertains to the international tax ecosystem and how it came to be.

The international tax ecosystem, seen from the perspective of jurisdictions, can be construed as a network of legal texts and enforcement mechanisms (Picciotto 2011). At a basic level, taxation is often presented as grounded in the sovereign right of each nation to tax economic activity within their jurisdiction based on national tax and legal systems. Such legislation most often has provisions for

taxing activity within the jurisdiction, but also on national entities' activities outside of the jurisdiction. Historically, bilateral treaties have been negotiated to divide the tax base of cross-border economic activities between countries, and to these have been added a series of more or less shared guidelines and standards for how to interpret and apply treaty principles, present financial accounts, share information between authorities, etc.

Bilateral tax treaties¹ (BTTs) are not identical but results of negotiations between the jurisdictions, reflecting historical political and economic relations. However, a series of international agreements have sought to standardize and harmonize the BTTs, and uniquely in international politics, most treaties follow the basic template of the OECD Model Tax Treaty (Brauner 2002). In short, BTTs are concerned with dividing the tax base of cross border transactions and activity as being taxable in one or the other jurisdiction for individuals and other legal entities. As we account for below, the model treaties specify that capital income from dividends, interests, etc. be taxed in the country of 'residence', where income from sales is taxed at 'source'. Importantly, the treaties regulate 'the interface' between tax jurisdictions, but governments retain the right to decide how to tax their share of the transnational tax base (Rixen 2011).

The position of the OECD as the central forum for international tax policy is largely a result of geopolitical developments throughout the twentieth century. At the turn of the century, international commerce was at a peak in that was not matched again until nearly a century later (Fouquin and Hugot 2016) and taxation revenues came mostly from tariffs, land, and commodities. With the implementation of income and corporate taxes across western countries in the early 1900s, corporations working across jurisdictions began to raise complaints about 'double taxation', which was largely responded to through unilateral measures (Rixen 2008, p. 87).²

The basis for the existing tax ecosystem, based on the division of taxing rights between source and residence countries to avoid double taxation, came with the first international tax treaty within the 1928 League of Nations convention. In 1921 the League had established an investigatory committee to assess the economic principles and effects of 'double taxation' and propose guidelines to determine states' taxing rights (Rixen 2011), not least in response to the great war's effect on rising tariffs and other levies. The report recommended governments to work towards providing relief of double-taxation, as any costs (for example, in the loss of tax revenue) could be made up for by increased investments (Rixen 2011). In the 1928 treaty, resident countries would gain rights to taxing

¹ Interchangeable with 'Double Tax Treaties' or 'Double Tax agreements'.

² Interestingly, in this period of time the UK saw double taxation as quite appropriate since corporations utilized both countries' infrastructures and public services (O'Hear and Graetz 1997, p. 1070).

passive income (interest, dividends, etc.), while source countries would gain rights to tax active business income from activity in their territory (Avi-Yonah 2005). This division of taxing rights has remained at the centre of international tax policy.

This division has remained at a nexus of contention between capital-exporting and importing countries. An example of this was during the Committee's conferences in Mexico 1940 and 1943. These conferences saw the absence of many European countries and set a pro-source country agenda, which, for example, stressed the right of the source country to tax income from moveable capital (Benshalom 2008). However, the post-war conference in London 1946, saw a return of western countries, and support for more residence-based taxation rights.

Post-1945 political developments brought (western) international tax cooperation under the auspices of the OECD. In the newly formed Financial and Fiscal Commission under the Economic and Social Council of the UN, tax debates became politicized with the inclusion of developing and Soviet countries. A stalemate between perspectives meant that the Commission ceased to meet after 1954. In response to the UN gridlock, the precursor to the OECD, the OEEC, established its own Fiscal Committee in 1956, to develop a new multilateral treaty. Only after morphing into the OECD in 1960, a result was reached in 1963 with the 'Draft Model Convention on Income and Capital'. In terms of the allocation of taxation rights, the model convention followed the 1928 League of Nations model (Rixen 2011). It is the norms and principles of this convention that has endured in further developments and updates of international model treaties (Rixen 2011).

The OECD developed into the preeminent forum for and source of expertise on international tax issues. This can, amongst other things, be seen in its model tax conventions, updated regularly from 1992 onwards, the 'Transfer pricing guidelines' since 1995 (though written in 1979), and the 2002 'Model Agreement on Exchange of Information in Tax Matters', which came out of the OECD's pre-BEPS work on 'Harmful Tax Practices'. Furthermore, the OECD has also been successful in building up expertise, with its Centre for Tax Policy and Administration [CTPA] employing some 130 international civil servants (OECD 2016). Thus, leading up to our period of focus, the OECD sat at the centre of 'a virtually impervious architecture of tax policymaking' (Christians 2010), supported by the US and developed OECD countries.

The late 1990s and early 2000s saw a crystallization of challenges to the status quo in the existing tax ecosystem that maintained a core policy consensus around the relief of double non-taxation. Two events manifest these changes. Firstly, in 1998, the OECD released its report on 'Harmful Tax Competition' (HTC) in response to a 1996 call from Ministers to 'develop measures to counter the distorting effects of harmful tax competition on investment and financing decisions and the consequences for national tax bases' (OECD 1998). The report signified a novel move in considering certain forms of tax competition harmful

and identifying ‘Tax havens’ and ‘harmful preferential tax regimes’. Secondly, in 2000, Oxfam International released the report ‘Tax havens: releasing the hidden billions for poverty eradication’ (Oxfam 2000). The report marks the beginning of ‘modern’ civil society mobilization on issues of international taxation and was later credited, by the Tax Justice Network (formed in 2003), as ‘the seminal report’ bringing attention to the issue of taxation, particularly concerning development and developing countries (J. Christensen 2012).

The HTC report and the subsequent work by the OECD’s Committee for Fiscal Affairs (CFA) on the topic was a response to concerns around the harmful effects of the globalization of capital and integrated financial and economic systems, in the form of tax competition. The increased mobility of capital in the second half of the twentieth century, not least a result of increased trade due to the removal of tariffs (WTO) and the double-non-taxation work of the OECD itself, led to competition between jurisdictions to attract capital (Rixen 2011). Developed countries had generally responded by shifting the tax burden from (mobile) capital to (less mobile) labour, property or consumption taxes (Avi-Yonah 1999; OECD 1998). On average this corresponded to lower statutory tax rates and a broadening of the ‘tax base’. Probably the ‘most important’ development in the evolution of the tax structure had been the nearly universal introduction of Value Added Tax in the 1960s and ’70s, particularly in Europe and Latin America (Cnossen 1999). With the HTC report, the OECD considered harmful ‘tax havens’ and ‘preferential regimes’ that significantly undercut the effective tax rates levied on income from ‘mobile activities’ (capital) in other jurisdictions. Such undercutting has the effects of ‘distorting investment’, undermining the ‘fairness of tax structures’ (by shifting the tax burden to labour and consumption), increasing costs and compliance burdens, etc. Interestingly, the HTC report identified the exchange of information between jurisdictions as a critical countermeasure to tax competition.

The HTC project is broadly accepted to have failed. Not least due to the withdrawal of support from the US Bush administration and an effective political coalition of offshore centres coordinated by the Commonwealth Secretariat (Sharman 2006, pp. 59–60, Eggenberger, 2018). Furthermore, the HTC project has been criticized for its hypocritical approach, demanding compliance from non-member states, while member states with secrecy jurisdictions were largely exempt from criticism (Woodward 2006). For example, both Luxembourg and Switzerland abstained from the HTC report. There is little doubt that such ambiguities in the project helped the resistance to the project.

The growing civil society mobilization since the 2000s marks a significant change in the normative environment surrounding international tax policy and has continued developing since 2009. Figure 2.3 shows the number of reports on international taxation published per year by select civil society organizations, that were later involved in the OECD BEPS project. The figure indicates how these

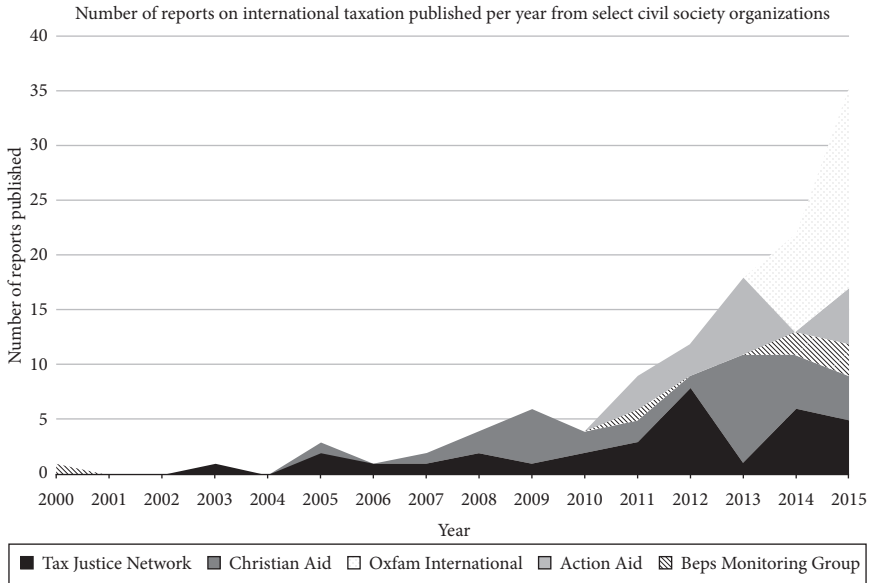


Figure 2.3 Number of reports on international taxation published per year from select civil society organizations (2000–2015).

Source: Author-made. The reports were gathered from each organization’s publication directory on their websites in 2016.

transnational activist networks, spanning existing NGOs, activists and academics, after a decade of incremental increasing activity, dramatically increased their yearly output after 2008. These actors have been instrumental in increasing the salience of a number of tax issues across countries. Examples are; the development of the term ‘secrecy jurisdictions’ and the subsequent ‘financial secrecy index’ (see e.g. Cobham and Janský 2018; Cobham et al. 2015; also Chapters 6 and 8), highlighting the abusive potential of many OECD member countries’ laws, criticisms of the value of BTs for developing countries, calls for unitary taxation of multinational corporations (see e.g. Picciotto 2012) and the idea of country-by-country reporting (CbCR). The CbCR accounting standard proves a case in point and has been pushed by tax activists since its inception in 2003. It requires MNCs to account for their activities on a country-by-country basis. It was first attempted pushed through the IASB (International Accounting Standards Board) but has later successfully made it into EU and OECD reforms. This has not least been due to the successful combination of claims to moral high ground with claims to academic expertise by a number of academic-activists within the networks of transnational policy-makers (see Seabrooke and Wigan 2015, 2016).

The governance capacity of the OECD remains ambiguous and contested, and often overshadowed by other international organizations such as the International

Monetary Fund, the World Trade Organization or the World Bank (Eccleston 2011). This is despite, or perhaps because of, the OECD's recognized role as a think tank and policy forum, which as one of the largest international bureaucracies occupies a central role in international knowledge networks (Porter and Weber 2008). Thus, the 'soft' power of the OECD, oftentimes unsupported by binding legal sanctions, particularly on the issue of tax is often discussed, although 'soft' strategies such as blacklisting have been shown to be effective in improving compliance from jurisdictions (Sharman 2009). Furthermore, since the financial crisis, with the emergence of the G-20 as a new forum for international leadership (Christians 2010), its endorsement of the OECD on the tax agenda has been central to promoting and legitimizing the work of the OECD, and more specifically the CTPA (Center for Tax Policy and Administration) (Eccleston et al. 2015).

Despite the existence of a UN Tax Committee since 1977, international tax governance has largely taken place at the OECD level (Rixen 2008). Calls for a global intergovernmental tax body under the United Nations has been brought up on several occasions, particularly in relation to the financing for development conferences, most recently by the G77 and China (Horner 2001; Oxfam et al. 2015). The gist of the criticism has been that the OECD lacks a 'global mandate' for setting international tax policy, where the existing UN Tax committee lacks political authority. These calls can be interpreted as an on-going struggle for authority in who 'controls' international tax policy. The inclusion of the non-OECD G-20 countries in the 2013 BEPS project, and the later extension of the 'Inclusive framework' to a large number of jurisdictions worldwide, shows that the OECD has not been immune to such claims (or alternatively; it's a result of seeking effective implementation). These developments are illustrated in Figure 2.4.

Given the above, the international tax ecosystem involves in a system where claims to sovereignty and the primacy of legal jurisdiction have become enmeshed in more networked forms of governing where political mandates, assertions of market strength, and calls from groups of activists are all at play. As such, evolution in the ecosystem is characterized by persistent legal indeterminacy and political complexity (Picciotto 2015). The ecosystem thus provides a social space for different kinds of actorhood to be exercised and different kinds of claims to authority to be made. The scholarly concern, then, is being open to these different forms of actorhood and authority while untangling evolution within the international tax ecosystem.

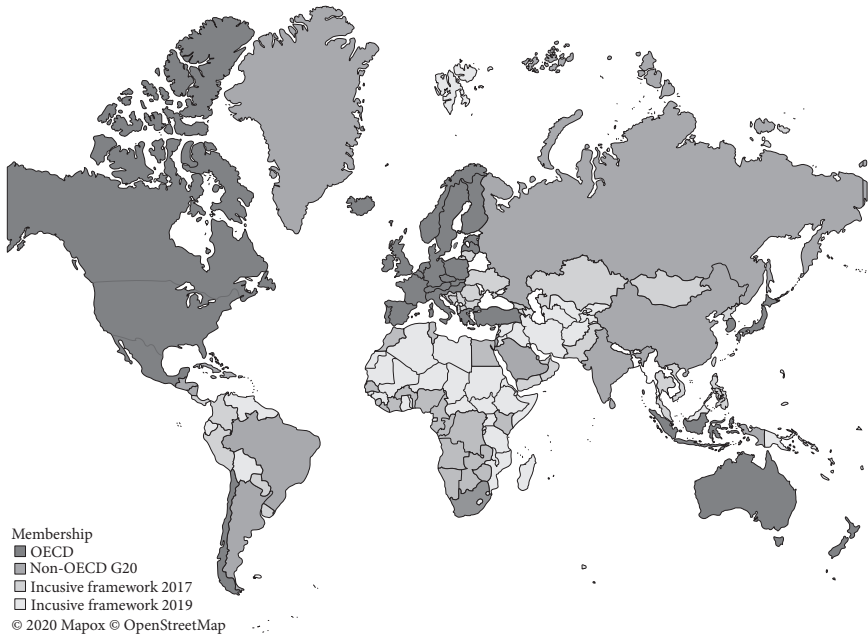


Figure 2.4 Jurisdictions participating in various stages of the OECD/G-20 BEPS project.

Source: Author-made based on OECD data.

2.3 Major Changes to the International Tax Ecosystem (2009–2019)

Having outlined the major constituents and history of the international tax ecosystem, we now turn to the major changes in the last decade, which constitutes an era of unprecedented change (Christensen and Hearson 2019). Figure 2.5 presents some of the major changes and events in the ecosystem going back to the late 1990s, focusing on (politically mandated) regulatory initiatives, and civil society initiatives and public events. Chiefly, the figure exhibits the intensification of regulatory actions in the context of increased normative pressures exemplified in civil society initiatives and public scandals, following a prolonged period of sparse EU and OECD reforms (Radaelli 1999; Sharman 2006).

Notable developments in the tax ecosystem stem from geopolitical shifts that have had the effect of strengthening the voice of emerging and developing countries in international tax affairs (Christensen and Hearson 2019; Lesage et al. 2020). Particularly, the G-20 has been accorded particular significance as a post-financial crisis forum for international (tax) leadership (Christians, 2010; Eccleston et al. 2015). The OECD/G-20 led BEPS project and the subsequent ‘Inclusive framework’ further points towards the explicit inclusion of non-OECD

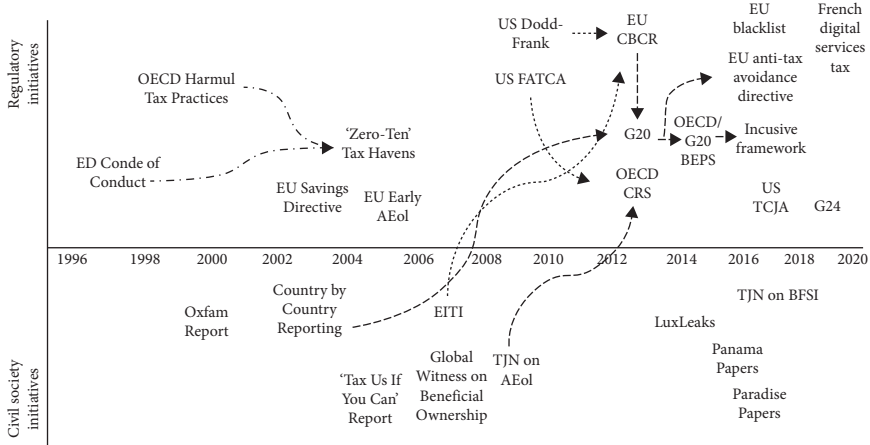


Figure 2.5 Recent changes in the international tax ecosystem.
 Source: Author-made.

countries in regulatory reform initiatives. Thus, the role of the United States in shaping international tax policy has become a topic of debate. As mentioned in the previous section, a central element of the failure of the OECD HTC initiative was accorded to the withdrawal of support by the Bush administration. However, recent developments have cast doubt over existing theories that posited the need for the United States to take the lead on international tax policy (Eccleston 2013).

While the ability of the US to shape the tax agenda in international forums may be changing, unilateral action by the United States has been a catalyst for international tax policies. The preminent example of this has been the US Foreign Account Tax Compliance Act. Adopted in 2010, FATCA mandated all foreign financial institutions operating in the US market to automatically report financial account information of US citizens to the US authorities. Impelled by such action, not least by the G-20, the OECD developed the Common Reporting Standard in 2013, mandating institutions to report financial account information on citizens and legal entities from other participating jurisdictions. Similarly, the US Dodd–Frank regulations were cited as an impetus for the EU’s Accounting and Transparency Directives in 2013 (EC 2013). More recent unilateral reforms have been presented in similar terms. Most notable of these, the Trump administration’s Tax Cut and Jobs Act (TCJA), from 2017, includes a significant cut to the headline US corporate tax rate, an end to the often criticized deferral system, whereby US corporations can accumulate untaxed profits outside the US, and a general move towards a territorial corporate tax system. I included provisions to combat corporate tax avoidance using intangibles (GILTI) and deductible

payments (BEAT), that are central points of inspiration for present tax reform initiatives at the OECD and G-20 (OECD 2018, 2019).

The fiscal regime of the European Union has similarly undergone significant changes in relation to tax. A number of factors, including the absence of ‘political will’, weak institutional capacity, divergent tax competition strategies and lacking Member State consensus, has historically limited the development of the EU fiscal regime (Genschel and Jachtenfuchs 2011; Kemmerling and Seils 2009; Radaelli 1999). In contrast, the past decade has seen the EU take a leading role internationally, in political innovations and compression of the policy development, implementation and impact cycle (R. Christensen 2019). Notably, in the area of tax transparency, the EU’s Accounting and Transparency Directives and Capital Requirements Directives were the first to introduce mandatory public country-by-country reporting for EU corporations in the extractive and financial industries. In addition, in 2017, EU member states agreed to a common list of ‘non-cooperative tax jurisdictions’ to identify and sanction jurisdictions that do not ‘play fair’ on tax matters. This took place after years of stalemate, particularly at the OECD level. Finally, the EU has recently been the source of revolutionary proposals for special taxes on large digital firms, driving the international tax agenda on the issue of taxing the digital economy (Lips 2019).

In parallel with these regulatory developments, European Institutions have mobilized a series of policy tools with international implication, not least motivated by a perceived lack of ‘tax fairness’. In 2013 the European Commission set up a taskforce on Tax Planning Practices, which mobilized anti-trust/competition law to pursue ‘unfair’ tax practices of a multinational corporation based on preferential tax agreements. In 2015–16 the first in a number of ‘illegal state-aid’ cases were filed against Starbucks in the Netherlands, Fiat in Luxembourg and Apple in Ireland. The most conspicuous case has been the much publicized and criticized case against Apple, where the Commission found the Irish Revenue Commission to have issued favourable tax rulings providing selective tax advantages totalling €13bn—a case that has been appealed to the European Courts (Avi-Yonah and Mazzoni 2016; Che 2018; Jaeger 2017). Other institutions, such as the European Parliament, has ‘invented’ new methods to bring attention to tax avoidance and evasion. Examples are public interrogations of politicians and corporates involved in international tax affairs, novel activism in legislative processes, and a number of critical reports focusing on the limitations of current international tax policy (R. Christensen 2019).

Many of these changes have taken place in an environment marked, not least, by the UN focus on domestic resource mobilization in the financing for development agenda, consistent ‘global’ civil society mobilization and massive tax ‘leaks’ sparking intense public controversies. The UN’s work on the financing for development agenda has been part of linking the issues of global taxation with that of global inequality, particularly in the context of developing countries’

domestic resource mobilization. For example, during the third FFD Conference held in Addis Ababa 2015, after the adoption of the Sustainable Development Goals as the successor of the MDGs, tax issues were considered to be one of the most important and hotly debated issues; discussion lasted until the late-night (Anyangwe 2015). This put explicit pressure on the legitimacy of OECD/G-20 BEPS initiatives by calling for, but not achieving, an upgrade of the UN Tax Committee 'giving all countries a seat at the table'. A further example of increased issue attention, particularly to the potentially detrimental effects of BTTs for developing countries (that the gains in FDI do not outweigh the lost tax revenue), has been cancelling and renegotiation of existing BTTs' by several developing countries in recent years (Hearson 2018).

Furthermore, the international tax agenda, traditionally the domain of technical debates between experts in opaque international fora, has witnessed an increased mobilization and influence of non-state actors, particularly in alliances of organizations spanning civil society, IOs, the media, parliamentarians and others, mainstreaming tax debates (Forstater and Christensen 2017). Among the most significant, internationally coordinated, news stories have been the so-called 'LuxLeaks' in 2014, 'Panama Papers' in 2016 and 'Paradise Papers' in 2017, all published by the International Consortium for Investigative Journalists (ICIJ). While there is a long history of data leaks from 2007 onwards (van Koningsveld 2018), these leaks revealed 'sweetheart' tax agreements between Luxembourg and large corporations, data from Panama-based offshore service provider Mossack Fonesca detailing many corporations', wealthy individuals' and celebrities' tax planning activities, and finally similar data from the offshore service provider Appleby. Thus, they have contributed to the issues salience and resulting political momentum in the international tax ecology (Berg and Davidson 2017; Dover 2016; Oei and Ring 2018).

Within this changing/challenging environment, discussions have come a long way since the Harmful Tax Competition project, at the OECD level. Transformations have particularly taken place on the information exchange front (a key proposal in the HTC report). In 2013, following civil society pressure and political developments elsewhere, particularly the US FATCA and the EU Savings Tax Directive, the OECD developed and diffused a global standard for the exchange of tax information, the Common Reporting Standard (CRS). In many ways, the OECD built on the US model, generating momentum with more than 100 jurisdictions now committed to CRS (Ahrens and Bothner 2020; Hakelberg 2016; Lips 2018). The CRS multilateral convention amounts to a radical transformation of the international tax ecosystem. Where previously information was exchanged only on request, resulting in information opacity, regulators now have 'automatic' access to information on financial accounts held by 'natural persons' and other entities known to be used for tax avoidance, evasion and illicit activities.

On the issue of corporate tax transparency, the OECD has similarly made progress, although at a more moderate pace. Civil society activism has been mounting on the tax transparency agenda since the early 2000s, making it a salient political issue. Particularly the Tax Justice Network has been aggressively pushing the idea of country-by-country reporting (CbCR) (Seabrooke and Wigan 2015). The fundamental idea of CbCR was developed by Richard Murphy, a founding member of the TJN, in 2003, but initial attempt to push it through the International Accounting Standards Board and other forums largely failed (Seabrooke and Wigan 2016). Yet, with the transformation of corporate tax abuse from a cold to a hot political issue, and with pressure from the G-20, the OECD included CbCR in its BEPS project. In this way, the adoption of CbCR on the international political agenda illustrates one evolutionary pattern of policy development in the international tax ecology, starting outside of jurisdictions, governments or market actors in normative pressure driven by concrete actors with claims to moral authority and expert knowledge. Similar steps are afoot in efforts to link taxation to new thinking on monetary policy (Murphy 2019) and sustainable cost accounting (CAN 2019).

As outlined in this section, the international tax ecology has undergone unprecedented rapid and significant transformations during the past decade, building on longer-term developments. In Table 2.1 we summarize the main events in the global tax ecosystem from 2009 and onwards.

2.4 Conclusion

The purpose of this chapter is to establish how we can view taxation issues as existing in an international tax ecosystem. This ecosystem is a social space based on mutual recognition of sovereign jurisdictions and their legal systems, political mandates from states and intergovernmental organizations, markets interests from corporations and other private actors, and of normative agendas from activists and civil society. As documented above, the pace of change in the international tax ecosystem has been rapid, and we are certainly now in a situation characterized by regulatory complexity and legal indeterminacy (Picciotto 2015).

Given such complexity and indeterminacy identifying forms of actorhood and claims to authority are important to identify. This can be done from a range of approaches, and we have reviewed the key viewpoints from sociology, political science, and economics to highlight the importance of maintaining interdisciplinary insight. We have highlighted how actors can be understood as rational economic actors, rational political agents, and as bound to their normative environments. Concepts employed in the literature, such as bounded rationality, domination, and satisficing, are all means to understand how actors respond to stimuli within the international tax ecosystem. Indeed, as can be seen from the

Table 2.1 Major international tax events in the last decade (list of stylized facts)

Event and year	Implications
Foreign Accounts Tax Compliance Act (2010)	FATCA was introduced unilaterally by the US. It mandates that foreign financial institutions and some non-financial entities operating in the US have to automatically report financial account information on US citizens and legal entities to the IRS. Non-compliant or non-participating institutions are subject to a 30% withholding tax.
OECD Common Reporting Standard (2013)	Inspired by FATCA, the OECD responded to a request from the G-20 to design a Common Reporting Standard (CRS) for automatic exchange of foreign accounting information. CRS mandates institutions to report financial account information on citizens and legal entities from other participating jurisdictions. The multilateral agreement was presented in 2014, has been implemented since 2017, and more than 100 jurisdictions are signatories in 2019 (excl. the US).
OECD/G-20 Base Erosion and Profit Shifting project (2013)	On the initiative of the G-20, the BEPS project began as a comprehensive project to reform the global corporate tax system, combating tax avoidance and shoring up the erosion of national tax bases. Based around 15 action points, the project has resulted in a variety of multilateral reforms. The project has had a continual impact in the form of ‘the inclusive framework on BEPS’ and continued work on ‘Taxing the digital economy’.
European Union Accounting and Transparency Directives (2013)	Responding in part to the US Dodd-Frank Act (2010/12), requiring corporate disclosure of payments to governments, the EU Accounting and transparency directives introduced mandatory country-by-country reporting for extractive firms registered or listed in the EU. Similar to the EITI voluntary initiative.
LuxLeaks (2014)	LuxLeaks was the publication of Luxembourg’s almost 550 secret tax rulings from 2002 to 2010, facilitated by PwC, giving special tax deals to more than 340 multinational companies. The documents were published by the Consortium for Investigative Journalists (ICIJ), putting intense media spotlight on ‘sweetheart’ tax agreements between governments and large corporations.
European Commission decisions on illegal state aid (2015–16)	A result of the EC setting up a task force on Tax Planning Practices in 2013, a number of state aid investigations and rulings followed, amongst these against Luxembourg (Fiat) and the Netherlands (Starbucks) in 2015. In 2016, the EC found Apple liable to repay €13bn to the Irish government on account of its tax structure amounting to illegal state aid.

Continued

Table 2.1 *Continued*

Event and year	Implications
Panama Papers (2016)	This was the second major leak by the ICIJ, this time of secret documents from the Panama-based offshore legal service provider Mossack Fonseca. The leak implicated many wealthy individuals, politicians, world celebrities and financial institutions.
Paradise Papers (2017)	The third major leak by the ICIJ consisted of 13.4 million records from the offshore service provider Appleby, once again implicating multinational corporations, wealthy individuals and celebrities.
United States Tax Cut and Jobs Act (2017)	TCJA includes a significant cut to the headline US corporate tax rate, a move towards a territorial corporate tax system, and an end to the much-criticized ‘deferral’ system allowing US corporations to accumulate untaxed profits outside the US. It also included key provisions aimed at combating corporate tax avoidance using intangibles and deductible payments, which inspired international tax reform discussions.
European Union list of non-cooperative tax jurisdictions (2017)	After years of political stalemate, EU Member States agreed to a common list of ‘tax havens’ (or non-cooperative tax jurisdictions) to identify and sanction countries that did not ‘play fair’ on international tax matters.

evidence presented above, there are strong elements of bounded rationality, especially in what is viewed as acceptable in being on the international tax reform agenda. Activist groups have worked hard to change this, pushing normative environments to consider CbCR and more unitary forms of taxation. One can also see how domination looms large in the international tax ecosystem, most obviously with Great Power states imposing unilateral measures that affect all others, especially the US (Palan and Wigan 2014). As the international tax agenda has changed, there is also a great deal of satisficing going on. One can consider, for example, how Global Professional Service Firms and tax professionals are adjusting to a more regulatory interventionist agenda by finding opportunities in advisory services (Radcliffe et al. 2018; Christensen et al. 2020).

We have also discussed how the change in the international tax ecosystem comes from claims to authority. Again, these differ according to disciplinary assumptions, and we stress the importance of recognizing the bases for different claims. In economics, the most common form of authority claim comes from the

rule of law and the sanctity of contracts, as well as from market share. Political scientists typically consider authority as coming from formal mandates from public actors, although the contemporary view is that such actors now enable agreement rather than enforce rules (Genschel and Zangl 2014). In sociology and organization studies, there is a view of authority as constructed within normative environments. All claims to authority seek to influence the social system. Concepts such as path dependence, ‘common sense’ and ‘market markers’ link these three claims to authority and can be seen in the contemporary evolution of the international tax ecosystem. Path dependence is certainly present in what is viewed as possible for international tax reforms, with particular forms of taxation viewed as entrenched and some resistance to neoliberal taxation policies by the voting public in more corporatist polities (Swank 2016). ‘Common sense’ has prevailed through discourses like ‘harmful tax competition’ and the explicit development of blacklists from the OECD and the EU. Such activities have opened up authorities to claims of hypocrisy and dysfunction (Sharman 2010). Market making can be seen in the current international ecosystem through the continued proliferation of tax avoidance instruments despite the significant rise in regulatory activity (see Chapter 10). Indeed, despite highly progressive regulatory efforts of recent years, like this noted above, the use of ‘tax havens’ has been on the rise rather than decline (Leaver and Martin 2016; Murphy 2017; Saez and Zucman 2019). While recent efforts to combat fiscal fraud and empower regulators must be heeded, it is important to recognize that claims from regulators exist in an ecosystem where other claims to authority also exist in ways that perpetuate both indeterminacy and complexity.

2.5 References

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3

Sophisticated Financial Engineering and Tax Arbitrage

An Assessment of the European Fiscal Regime for Corporate Tax Mitigation

*Ronen Palan, Anastasia Nesvetailova, with Hannah Petersen
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The impact of the financial crisis of 2007/8, followed by a series of damaging leaks such as the Panama Papers, Paradise Papers, Lux Leaks and the like, has intensified efforts to reign in the more aggressive forms of tax planning perpetrated by the corporate sector (known as aggressive tax planning, or ATP in short).⁺ In the past decade, the OECD has launched its Base Erosion and Profit Shifting (BEPS) programme designed to identify and combat gaps and mismatches in tax rules that could be exploited by multinationals to erode the tax base (OECD 2013). In the US, the Tax Cuts and Jobs Act (TCJA) introduced in 2017 is anticipated to have important implications on business taxation worldwide (Avi-Yonah 2019; Dharmapala 2019; Kudrle 2019). A UK Parliamentary Committee on Public Accounts has specifically focused on the professional services enabling ATP practices (House of Commons 2015). Independent researchers have delivered a substantial amount of evidence that massive amounts of profit-shifting are taking place by the corporate sector through so-called conduit low-tax jurisdictions¹ (Cobham and Janský 2018; Dharmapala and Hines 2009; Garcia-Bernardo et al. 2017; Gumpert et al. 2016; Haberly and Wójcik 2015; Hines 1988; Hines and Rice 1994; McGuire et al. 2012; Palan et al. 2013; Phillips et al. 2020; Shaxson 2012).

+ The authors would like to thank Joras Ferwerda, Andre Guter-Sandu, Yuval Milo, Nikoforos Panourgias, Jean-Phillip Robé, Lucia Rossel Flores, and Brigitte Unger for their help, support, and comments on previous drafts of this chapter.

¹ Certain jurisdictions such as Ireland, the Netherlands or Singapore are increasingly used as regional gateways for foreign investment (Clausing 2016; Cobham and Janský 2019; Haberly and Wójcik 2015). Jack Mintz defined such countries as ‘conduit jurisdictions, having both large capital outflows and inflows (not just one or the other)’—see (Mintz 2004, p. 423; for discussion see Garcia-Bernardo et al. (2017).

There is no regulatory authority as concerned with ATP as the European Commission. Since 2013, the Competition department of the European Commission launched a number of investigations into the tax affairs of high-profile groups such as Apple Inc. (European Commission 2016), Fiat and Starbucks in the Netherlands (European Commission 2015a), as well as Belgian tax schemes (European Commission 2016), and Amazon. These investigations delivered, without exception, detrimental findings to the multinational enterprises (MNEs) under investigation. To the great consternation of specialist corporate lawyers (Giraud and Petit 2017; Lovdahl Gormsen 2016; Richard 2018; Traversa and Flamini 2015) and the US Department of the Treasury (US Department of the Treasury 2016) fines have been levied (European Commission 2016, 2015a, 2015b).² Away from the headlines, the EU commissioned on Taxation and Customs Union (TAXUD) launched a series of in-depth investigations into ATP practices (TAXUD, 2017). The European Commission introduced two powerful measures, the Common Consolidated Corporate Tax Base (CCCTB) Directive, widely recognized among the strongest measures available for dealing with abusive tax schemes by multinationals within the European Union (Dourado 2016; Morgan 2016; Seabrooke and Wigan 2016; Spengel et al. 2018). In addition, the commission launched an Anti-Tax Avoidance Directive (ATAD), a powerful suite of measures that aim to curb aggressive tax avoidance and introduce a series of ‘good governance’ principles impacting third country jurisdictions as well (Dourado 2016; Gregg 2019).

How successful have these measures been so far? Is the European fiscal regime better as a result of these initiatives? Is it fit for purpose? We consider fiscal regimes as ecosystems (see Chapter 2 for a detailed description of the tax ecosystem) that often respond to regulation by innovation and displacement. Considering that the demand for tax mitigation is unlikely to subside due to new regulations, one of the questions we asked in this project was whether the new rules might result in a so-called squeeze balloon effect. An area or set of practices that are being targeted by regulations would encourage the use of alternatives schemes, so that like a squeezed balloon, shape changes but the overall volume does not. Our concern from the outset had been to identify such potential displacement effects caused by the tightening European fiscal regime. We examined specifically two potential realms of systemic displacement: trade-related and financial oriented set of schemes. Most estimates of corporate tax avoidance focus on trade-related intra-firm transfers. Typically, estimates of rising or declining effective tax rates (ETRs) and profit shifting employ macro-economic financial data on foreign direct investment and portfolio investments, or other similar data

² Unlike other regulatory authorities, in the EU the commission for competitiveness rather than the department of taxation and custom Union (TAXUD) had taken the lead. This has skewed the discussion from tax towards state aid and competition, and left technical legal matters associated with taxation less well developed.

(Cobham and Janský 2019; Garcia-Bernardo et al. 2019; Haberly and Wójcik 2015). This important work provides a snapshot of estimates of profit shifting. We sought, in contrast, to delve deeper into the inner sanctum of corporate organization in order to find evidence of marked decline in the use of techniques of tax arbitrage, otherwise known as jurisdictional arbitrage (Nesvetailova and Palan 2014; Palan 2014). These techniques employ structures embedded in the group's ecology, or group of corporate entities organized in such way that they can exploit gaps, loopholes and blind spots in national regulations with the aim of lowering overall corporate taxation. The assumption is that assessing the intensity in the use of such techniques may provide better indication of the success, or not, of a fiscal regime in curbing trade-related tax mitigation. Our findings suggest that whereas such structures are rarely present in the US market, implying that the US Internal Revenue Service has been successful in curbing technique of tax arbitrage, they are very common throughout the European Union area.

We follow then with an analysis of the use of sophisticated financial instruments in tax mitigation technique to assess the impact of finance-oriented tax mitigation techniques. Our conclusion is not positive. It appears to us that in comparison with the US (and possibly China), the European fiscal regime failed to address a core political issue. The European market is a unique multi-entry, multi-exit single market fiscal regime. As a result, not only can foreign firms select locations of foreign investments by pitting one country against another, but in the case of the single market, firms can also select their legal entry point into what are still diverging national fiscal regime. These political conditions encourage, as we will see below, the use of those diverging rules and regulations one against the other and affect jurisdictional arbitrage with the overall aim of tax mitigation.

3.1 Corporate Taxation in a Global Economy

The standard approach to taxing MNEs is embedded in the broader firm/market dichotomy, which still serves as the building block of an economic analytical thinking (Demsetz 1988; Penrose 2009). The firm is considered 'a unit of planning' (Penrose, 2009) and coordinator of factors of production (Coase R. H. 2007), operating within decentralized self-equilibrating economic systems. The preoccupation of economists with the price system, notes Harold Demsetz gives 'serious consideration of the firm as a problem solving institution'(Demsetz 1988, p. 141). As a result, for a long time there was no theory of a firm to speak of. One implication of what became known as 'the law of diminishing returns to scale' was that most businesses would remain relatively small (Beck 2004). Firms were not simply neglected; they were not supposed to play an important role in economic life.

Clearly, this assumption proved wrong. The history of the twentieth century had been the history of the rise of large multinational corporate organizations. It

took decades until economists began to seriously address this purported anomaly (Boudreaux and Holcombe 1989; Coase R. H. 2007; Demsetz 1988). From about the late 1930s on, the very growth of firms, let alone the emergence of powerful multinational enterprises, has attracted growing attention (Buckley and Ghauri 1999; Jones 1988; Penrose 2009).

Equally puzzling from the standard economic perspective had been the issue of corporate taxation. The law of supply and demand in self-equilibrating markets was supposed to ensure that profits were paper-thin. Corporate taxation should not have been an issue of public concern because, firms should have remained on the whole very small businesses, and in any case, they should not be making a great deal of profits. It turned out that the second assumption was wrong as well; many large firms were highly profitable.

Economics had to live with these two puzzles. The puzzle of corporate growth was resolved of sorts by Ronald Coase and Frank Knight, with a sprinkling of the empirical work of Alfred Chandler. From Knight we have learned of the additional costs involved in handling risks and uncertainties, unlikely to be settled by small businesses (Boudreaux and Holcombe 1989). From Coase we have learned about a whole swathe of costs of productions, transaction costs, that are better handled within the firm (Coase R. H. 2007). From Chandler we have learned about the economies of scale and scope (Chandler et al. 2009). The logic of scale would be further advanced after the collapse of the Bretton Woods agreement in 1973. Exchange rate volatility, rising costs of insurance, and the development of hedging techniques, on the one hand, put pressure on monetary regulations (such as Basel I, II, and III, FATCA, and now MiFID I and MiFID II,) and money laundering regulations on the other, increasing the costs and complexity of compliance (see Chapter 13 on money laundering regulation). Large firms have increasingly responded by incorporating those treasury operations in-house (Polak et al. 2011).

The puzzle of corporate profitability, in contrast, was never truly resolved. Economists came up with two sets of theories that may explain excess profits, both predicated on the assumption that anything but paper-thin profits must be the result of temporary disequilibria in markets. One theory associated extra profits with monopoly (Fisher and McGowan 1983; Shepherd 1983)—and would presumably not be averse to tax. The other associated market temporary disequilibria with technical and technological innovation (Armour and Teece 1980). The implication of this theory was that corporate taxation was, in effect, a penalty on successful and innovative firms. Corporate taxation created perverse even-playing field, rewarding the less efficient and less innovative firms, discouraging innovation, and introducing unnecessary distortions to markets. Public discourse notwithstanding, many economists, and treasury departments that tend to follow mainstream economic approaches, were never wholly convinced by the concept of corporate taxation.

The political economic argument for corporate taxation does not address any of the above quandaries directly. The political economic argument for corporate taxation works more or less as follows: an economy is embedded in an institutional environment which, in turn, provides the political security, safety of contract, and other public goods such as good infrastructure, education, and the like (North 1990; Williamson 1999). The corporate world benefits from the provision of such public goods, and should help pay for it. The political economic argument for corporate taxation is couched, therefore, in normative terms, of legitimacy, fairness, and the rule of law (OECD 1998). That makes sense, but the problem with corporate taxation is that it introduces a new technique for temporary disequilibria and excess profits. The imposition of corporate tax raises the theoretical equilibrium point of marginal profitability, and changes the competitive dynamics among players. As a result, firms that are able to reduce their tax footprint benefit from a cushion of excess profitability in their competition with other firms in the sector. Considering the difficulties of generating market disequilibria through either monopolization or innovation, the temptation to invest in the third method, techniques of tax mitigation, must be considerable. Not surprisingly, considering the value of avoidance to group's survival in a competitive market, let alone success, resources are often shifted from one type of productive activities, such as R&D or infrastructural development to non-productive expenses on lawyers, accountants, and financiers coming up with ever more sophisticated tax shelters schemes (Bankman 2004). Taxation, therefore, is a market distortive mechanism which, in a competitive market, favours the tax avoider—another reason for economists to be critical of the system of corporate taxation.

There is some evidence that these distortive market mechanisms are out of control. Researchers at the IMF came up with the startling figures indicating that about 30 per cent of all foreign direct investments are phantom investments, operating through shell corporations (Damgaard et al. 2019). Whereas such phantom investments may benefit those firms, the societal effect of such behaviour is a waste of resources. These are the tell-tale signs of the rise of a non-productive industry devoted to tax avoidance. Indeed, a niche industry has emerged devoted to the development of techniques of tax shelters.³ Most shelters use domestically generated tax loopholes, but a good number would create international corporate structures traversing a number of jurisdictions (Bankman 2004; Department of the Treasury 1999; Graham and Tucker 2006; Robé 2011; Weisbach 2001). A UK parliamentary committee estimated the value

³ Tax shelters can be defined as products or structures developed either internally by the firm's legal and accounting departments, or by investment banks, small tax shelter shops, and the large accounting firms (Bankman 2004, p. 12).

of the global tax avoidance industry at about £25 billion annual income (HM Treasury 2014).

At this point in the narrative, or the narrative that we are familiar with, we end up with two powerful forces squaring to one another, the industry of tax avoidance and the regulators. But is this the case? We think the picture is more complicated. The economics of tax avoidance is one of *differential avoidance*. Whereas shareholders may be interested in maximizing post-tax profits, management has a somewhat different perspective. In competitive market conditions, the nominal figure for tax avoidance may be less important than differential avoidance within the sector. In other words, Volkswagen would be at a disadvantage if Ford or Toyota were able to mitigate tax more efficiently than they are able to. Mechanisms of corporate tax avoidance introduce, therefore, temporary disequilibria in the markets, and are highly prized by the corporate sector. At the same time, the techniques of tax avoidance themselves are subject to negative evolutionary processes. As with other techniques of market disruption, the key to success here is the advantage of the prime mover. After, for example, a new tax avoidance technique is invented, the first to use it is at an advantage compared to the rest in the market. Over time, the technique is emulated and spreads across the industry. Eventually, just as the regulators begin to pay attention to the new technique, the advantage of differential avoidance is eroded. The firm, however, is already establishing an edge with a new technique. With nearly 80 per cent of global trade being intra-firm, the temptation to affect transfers between different arms of the same group in order to move ‘taxable events’ to low or no tax jurisdictions is too powerful.

Considering the conflicting theories and motivation for corporate taxation, treasury departments of many countries have reached a kind of perverse compromise. They tend to insist on taxation at home, but are known broadly to be less concerned with tax avoidance by ‘their’ own firms abroad (Avi-Yonah 2005).⁴ These dynamics are not alien to the European Union. The complex interplay of 28 EU Member States—each competing with one another in support of not only ‘their’ MNEs but also competing over the privilege of serving as points of entry into the single market; each, with varying degree of sophistication and success—does not exactly bode well.

The European Union has, however, a centralized authority, the Commission, which further complicates these types of geopolitical calculations. On the one hand, the Commission seems to be engaged in a high-stake geopolitical game with the US. Not surprisingly perhaps, the US legal system has focused its attention on

⁴ Most governments, or at the very least the majority of treasury departments, are still working with an assumption that their role is to strengthen the domestic economy, and they seem to hold on to the somewhat anachronistic view that the ‘domestic’ economy consists of national businesses competing in the world market. The fact that the link between MNE and home nation is increasingly highly tenuous (Desai 2009) does not seem to interfere with geopolitical considerations.

the foreign banks, particularly European banks and their role in facilitating tax evasion, avoidance, and money laundering. No US banks were ever charged. The EU commission, in turn, responded by focusing attention largely on the US corporate sector, charging many MNEs for avoiding EU taxes. The commission, however, finds it much more difficult to engage with internal politics among members. The result, as we will see Section 3.2, is that the European fiscal regime is particularly vulnerable to arbitraging schemes, or schemes that are taking advantage of diverging national rules and regulations within the market.

3.2 Opportunity Spaces: Intra-Firm Arbitrage Techniques

As mentioned above, there has been a veritable explosion in the past decade of quantitative research of corporate tax avoidance and evasion. Researchers have developed sophisticated triangulation techniques of foreign direct investment, portfolio investment, combined with specific US corporate data to demonstrate that corporate subsidiaries in offshore financial centres (OFCs) record inordinate amount of profits (Clausing 2016; Cobham and Janský 2018; Dharmapala and Hines 2009; Garcia-Bernardo et al. 2017; Gumpert et al. 2016; Haberly and Wójcik 2015, 2015; Hines 1988; Hines and Rice 1994; McGuire et al. 2012; Shaxson 2012; Tørsløv et al. 2018; Zucman 2014). For instance, of the top nine locations of US multinational affiliates' gross profits, seven were in tax havens. The countries with effective tax rates of less than 5 per cent are: Netherlands, Ireland, Luxembourg, Bermuda, Switzerland, Singapore, and the UK Caribbean Islands, including the Caymans (Clausing 2016, p. 7). US firms alone are estimated to have amassed between US\$1.9 to 3 trillion in cash or near cash deposits 'trapped', as Reuven Avi-Yonah puts it, in OFCs (Atwood et al. 2012; Avi-Yonah 2019; Clausing 2016; Dowd et al. 2017; Dyreng and Lindsey 2009; Hines 1988; Kaye 2014; Miller 2011; Phillips et al. 2017; Tørsløv et al. 2018). Such data and analysis are broadly interpreted to imply that OFCs subsidiaries are employed by the corporate sector as part of their tax planning exercise and specifically are used for profit shifting purposes.

One of the key issue that complicates internal European politics is the number of European jurisdictions, such as the Netherlands, Ireland, Luxembourg, and the UK, that are among the most important entry points for corporate tax avoidance worldwide (Cobham and Janský 2018; Garcia-Bernardo et al. 2017; Haberly and Wójcik 2015). Cobhan and Janský show that the top three excess-profit and missing profits jurisdictions in the world are the Netherlands, with 30 per cent share of global excess profits, Ireland with 18 per cent and Luxembourg 18 per cent (Cobham and Janský 2019, p. 22). Recent analysis suggests that effective corporate tax rates have declined in the EU between 2005 and 2015 by 8.7 per cent, and domestic taxation has declined by US\$12.7 billion

euro, while foreign taxation has declined by US\$10.6 during the same period (Garcia-Bernardo et al. 2019).

In a sister project we have developed a novel comparative forensic technique of analysis of corporate legal structures.⁵ We employ the technique to measure the intensity of the use of tax arbitrating structures in the corporate ecologies of MNEs operating in Europe. Comparative forensic techniques have evolved in response to the fact that the majority of household named MNEs are highly complex multi-subsidiary, multi-jurisdictional organizations that often consist of hundreds, sometimes thousands, of corporate entities.⁶ The astonishing growth in complexity of corporate groups has been driven by a variety of factors, but it is generally agreed that tax is an important one (Bénassy-Quéré et al. 2005; Gordon 2016; Heider and Ljungqvist 2015; Hines 1988; Ljungqvist and Smolyansky 2014; OECD 2013; Polak et al. 2011; Weyzig 2013). Most of these tax mitigation techniques are legal in the sense that they employ techniques known as tax arbitrage. Such techniques of legal arbitrage are designed to exploit gaps, loopholes, or blind spots in national rules and regulations to affect a transfer of taxable events from high to low, or no tax jurisdictions. By ‘design’, we refer to the practice of embedding arbitrating structures in the ecology of the firm. Such arbitrating structures tend to consist of two or more entities, typically located in two or more jurisdictions, designed to operate in unison in order to arbitrate (that is undermine) third country (or countries’) rules and regulations (Palan 2014).⁷

The techniques of tax arbitrage take advantage of the complexity of the legal structure of modern firms (Robé 2011; UNCTAD 2016). The laws of most countries treat each corporate subsidiary of a group, each corporate entity, as an independent legal person (this is known as entity law; for discussion see: Adriano 2015; Blumberg 1993; Lambooy et al. 2013; Robé 2011). Strictly speaking, therefore, a corporation that is registered in one jurisdiction cannot be ‘multinational’. The parochial term ‘multinational enterprise’ refers to ‘a cluster of separate legal entities in several jurisdictions, which exist only if the laws of each jurisdiction recognize them as legal entities’ (Hadari 1973, p. 754) and the

⁵ The project entitled ‘Corporate Arbitrage and CPL Maps: Hidden Structures of Controls in the Global Economy’ (CORPLINK), Grant agreement ID: 694943.

⁶ One study found that half of US firms have adopted such complex organizational structure (Lewellen and Robinson 2013). A New York Fed study revealed that the number of subsidiaries and affiliates owned by some of the largest US banking holding companies rose to an average of 3,400 in 2012, up from about 1,000 in 1990 (Avraham et al. 2012).

⁷ These structures are designed with a view to arbitrate different jurisdictional rules. US-focused literature describes the domestic versions of arbitrating structures as ‘blockers’ or ‘stoppers.’ As Willard Taylor explains: ‘a blocker or stopper is an entity inserted in a structure to change the character of the underlying income or assets, or both, to address entity qualification issues, to change the method of reporting, or otherwise to get a result that would not be available without the use of more than one entity’ (Taylor 2010, 1). Blockers often use various tax-exempt entities in combination with others to achieve the desired outcome, stretching the legislature’s intentions (Brunson 2012; Gomtsian 2015; Hodasz 2017).

‘the usage of that term is presently found only in those fields’ (Hadari 1973, p. 754; Robé 2011, 2016).

The formal independence of each corporate entity in a group can be used, or in some cases abused, to affect transfer of taxable events from high to low tax jurisdictions. Often the MNE will establish a certain corporate structure of two or more corporate subsidiaries in different jurisdictions that can facilitate tax arbitrating, and will embed those in the complex corporate ecology. The beauty of such structures—if that is the right term—is that each entity in the structure in isolation would appear rather innocuous. The full effect of arbitrage can only be gauged when the structure is seen as a whole, combined with jurisdictional location and knowledge of the intricacies of diverging laws and regulations, and the financial statement of all the entities in such structures.

Such an arbitrating structure poses great difficulties for regulators and researchers alike for two related reasons. First, regulators generally do not have access to corporate organization of the complex ecologies of the modern firm,⁸ and secondly, even if they had, there are few indications of which assortment of subsidiaries in a corporate group, which often contain hundreds if not thousands of subsidiaries, has been created for arbitrating purposes. For those two reasons, it has been difficult until fairly recently to study the inner organization of firms. Nonetheless, and despite those difficulties, some of these arbitrating structures have become well known. They include the infamous Double Irish, Dutch Sandwich or Double Irish, and the Single Malt (Loomis 2011; Kelly 2015; Coyle 2017). Others, such as hybrid-mismatch arrangements revealed by the so-called Lux Leaks and in other studies, are known (Marian 2013; Johannesen 2014). The OECD BEPS project assembled an impressive array of generic case-studies of arbitrating structures (OECD 2012). In all of these cases, tax arbitrating appears to consist of mixtures of corporate entities registered in OFC jurisdictions.

One well-known example was revealed by a US Congressional Committee’s findings of Apple’s corporate dealings, and subsequently confirmed by a separate European Union investigation (European Commission 2016). The case against Ireland and Apple was focused on a chain of subsidiaries as highlighted in Figure 3.1, which provides a visual map of the Apple group taken in 2019. Each dot in this map represent a single corporate entity, or a legal person. The bigger dot in the centre of the cluster represents the parent, Apple Inc. registered in the US A corporate entity that controls a subsidiary (that is, it controls shares of 50.01 per cent and above in an entity), which, in turn, does not control any other entities in the group; the algorithm we use presents such entities as close to the

⁸ US and other countries controlled Foreign Company (CFC) rules often make demands for information on corporate legal organizations. But the rules diverge from one country to another, information is not made public and, in any case, often consist of so many loopholes to the point that the validity of the information is subject to debate.

Group structure of subsidiary holdings for Apple Inc. (c. Jan. 2020)

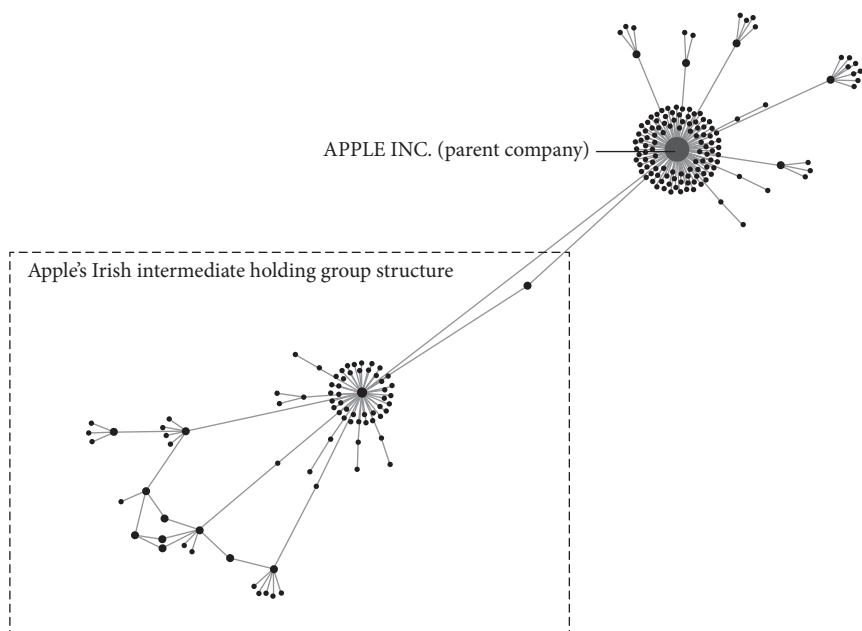


Figure 3.1 Equity holding map of Apple, highlighting the corporate chains managed through Irish SPVs.

owner. Since Apple Inc. maintains many such subsidiaries, the visual effect on our equity map is of clustering or corporate subsidiaries around the parent. Some Apple subsidiaries controlled by Apple Inc., control, in turn, other subsidiaries. Such holding patterns display on our chart in the form of a chain, where the more entities there are on a chain the longer it appears.

The case again Apple was centred on two Irish special purpose vehicles (SPVs). One of these SPVs, called Apple Operation International (AOI), is represented as the closest black dot owned by parent located within the box in Figure 3.1. This entity controlled other entities in Ireland, which in turn, controlled further entities down the chain in, among others, China, Hong Kong, Australia, and Singapore. Although registered in Ireland, and in receipt of considerable royalties from Apple sales to non-American markets, AOI did not reach the threshold necessary for tax residency in Ireland. Since it had no tax residency elsewhere, it did not need to pay tax at all! It was a case of a strategy that we described as ‘elsewhere, ideally nowhere’ (Nesvetailova and Palan 2014). The Levin Committee and the EU Commission both reached the conclusion that Apple’s complex arrangement with its Irish entities could be classified as a tax avoidance scheme (European Commission 2016; Levin 2012).

The chart of Apple was made possible, paradoxically, because of another implication of entity law, the treatment of each legal persons, corporations, or corporate subsidiary in a group as a separate and independent legal entity. Many countries require those supposedly independent legal persons to file annual financial reports. These reports provide information on equity holdings, the owner or owners of the corporate entity, and the corporate entities that are under the control of the reporting entity. The filings also contain information on the financial activities, including operating revenues, net income and the like. These filings have increasingly been made available to the public in the past few years. A number of data depositories such as OpenCorporate.Com or Bureau van Dijk (under the Orbis brand name) collate and verify the information in these filings. The CORPLINK project developed a technique for mapping and analysing the legal structure of firms. We call such charts equity maps (EM) and they tend to look like Figure 3.1, which is an EM of Apple. Such EMs allow us to locate (among others) OFC-registered subsidiaries within the overall ecology of modern firms. As we have access only to the corporate form, and to a lesser degree, financial accounting and not to the contractual arrangement that underpin them, it is impossible to prove whether profit shifting has taken place or not. We can work out, however, whether structures that are known to have been used for profit shifting in the past are found in those equity maps. The assumption is that the intensity of occurrence of such structures in the corporate ecology may signify an intent (or not) to affect profit shifting.

While offshore registered entities are implicated in all known cases of tax arbitrating structures, not all OFC entities are necessarily used for arbitrating purposes. We differentiate OFC entities into two broad categories based on their topological location on the corporate tree (see Figure 3.2). In type 1 holding, an

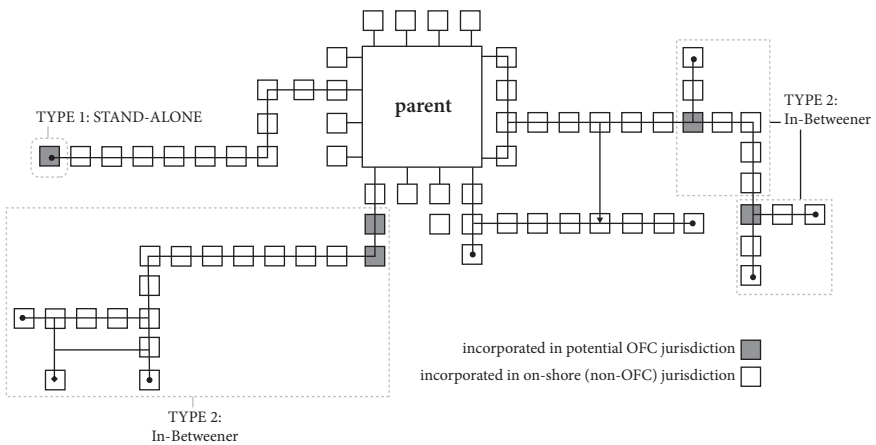


Figure 3.2 A stylized organization of affiliated groups, including two types of offshore entities.

offshore subsidiary will be controlled by a parent or a regional holding company, but would not control, in turn, any other subsidiary. These kinds of subsidiaries are end of chains, or 'stand-alone' OFC registered subsidiaries. Such subsidiaries are plentiful and it is known that the majority are designed for financial operations such as funding, hedging, currency trading, and the like (Chorafas 1992; Dizkırıcı 2012; Gregg and Gallanis 2002; Honk Kong Monetary Authority 2016). Type 2 holding patterns, in contrast, are reminiscent of the role of AOI played in the organization of Apple. These consist of offshore subsidiaries placed 'in-between' other subsidiaries on chains. The case against Apple, as indeed, similar studies of US software companies, suggests that they have been using type 2 holding patterns billed as 'operations centres' in Ireland or the Netherlands to arbitrate the United States' Controlled Foreign Company rules (CFC) (Coyle 2017; Loomis 2011). In fact, it appears that type 2 holding patterns are very common among tax arbitrating techniques. A leak from the Luxembourg branch of the accounting firm Price Waterhouse Coopers revealed that Luxembourg entities served in effect as type 2 holding patterns in financial structures intended to exploit jurisdictional tax mismatches through the use of so-called hybrid loans (Marian 2013). The Luxembourg entity or entities would be placed somewhere on a chain of subsidiaries 'in-between' parent and other parts of the group. The OECD BEPS report showed that Hybrid Mismatch arrangements were prevalent throughout the offshore world using similar type 2 structure of an OFC-registered entity located on a chain of corporate subsidiaries (Johannesen 2014; OECD 2012).

The CORPLINK project has produced EMs of the 100 largest non-financial firms in the world in terms of revenues in 2016. We re-examined the data for this project in order to quantify the of type 2 holding patterns in control of European subsidiaries. In our study, we found that these 100 non-financial firms maintained approximately 73,000 subsidiaries worldwide in 2016. Of these, 22,582 or about 31 per cent were incorporated in the European Union. In addition, of those 22,582 European subsidiaries, 6,208 were controlled via one or more OFC in-betweeners, or type 2 holding structure. In other words, roughly 27 per cent of all EU held subsidiaries of the 100 largest non-financial firms in the world were controlled through a type 2 holding pattern. More remarkably, non-Europeans firms have used these structures far more intensely in Europe than European companies have in their investment in EU countries (see Figure 3.3).

For control purposes, we re-examined the behaviour of US non-financial firms. An analysis of the ten largest US non-financial firms in our sample shows that, in contrast to the situation in Europe, that these firms employed 'in-betweeners' structures very sparingly in their own domestic US market. The same firms, however, had used such structures extensively for their rest of the worldwide investment (see Table 3.1). This suggests that US companies rarely use the most commonly known arbitrating structures in their home market, but are using such

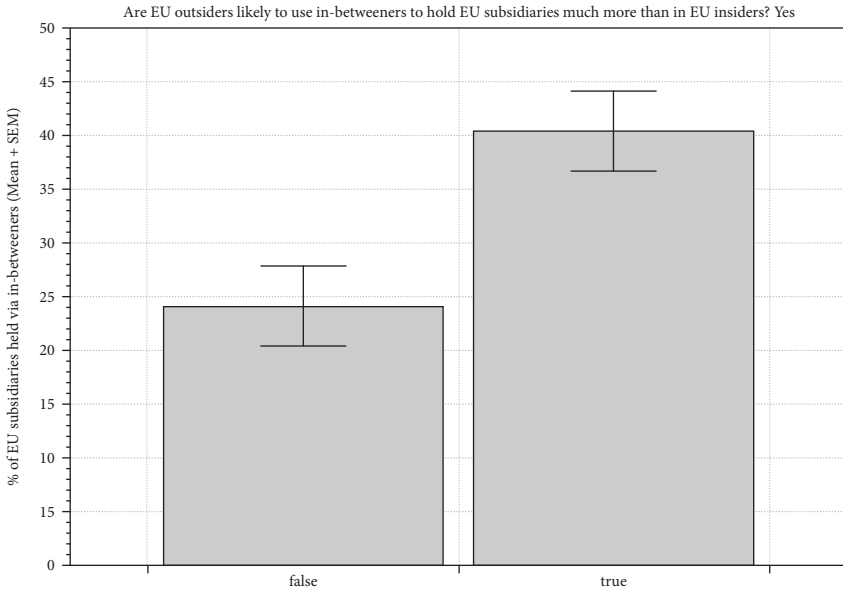


Figure 3.3 Use of ‘in-betweeners’, Europe and Rest of World.

Source: Author-made using data from the Orbis Database.

Table 3.1 The use of in-betweeners structures by ten largest US non-financial firms, home and abroad

Company	Total subsidiaries	% of subsidiaries controlled by ‘In-betweeners’: US market	% of subsidiaries controlled by ‘In-betweeners’: Rest of World
Alphabet	326	0	23.77%
Amerisourcebergen	146	0	63.33%
Apple	171	0	33.33%
Archer Daniels Midland	571	2.57%	63.87%
AT&T	1336	0	0
Cardinal Health	393	0	46.77%
Chevron	460	0	14.19
Cisco	571	2.98%	28.12%
COMCAST	1825	0	32.24%
COSTCO	161	0	0

Source: Author-made based on Orbis Database.

structures extensively in the rest of the world. In other words, the intensity of location of such in-between structures outside the US markets suggests that US firms are targeting, or at the very least set up opportunity spaces, that could potentially be used for tax arbitrating purposes in foreign markets.

We interpret the evidence for the lack of the use of ‘in-betweeners’ structures in the US to suggest that the US had been successful in curbing domestic source taxation abuse. American firms employ, in contrast, such structures extensively in the rest of the world. This provides additional evidence in support of the contention that American firms are engaged in extensive tax avoidance schemes abroad (Clausing 2016; Phillips et al. 2017). Both European and in particular non-European firms set up, however, such structures in control of a great deal of their investment in the EU. In other words, they set up structures that are known to have been used in the past for arbitrating purposes in control of a good portion of their investment in the EU. This suggests that despite recent regulations, European and in particular, non-European firms are still extensively engaged in tax avoidance schemes and tax arbitrage in Europe.

In the next section, we examine one of the least studied practices of tax avoidance schemes, the use of sophisticated financial instruments in tax mitigation technique. Our conclusion is that not unlike trade-related intra-firms transfers, the EU is still lagging far behind the US in tackling these sorts of abuses.

3.3 Financial Engineering and Balance Sheet Arbitrage

‘The 900-pound gorilla in all the corporate tax shelter discussion’, observed Lee Sheppard, a prominent American tax expert in 1999, ‘that practitioners do not want to talk about and the Treasury report mentions only obliquely—is derivatives. . . . Derivatives make a lot of this nonsense possible because they can be designed to produce a precise and predictable financial result, at a known level of risk. Derivatives allow planners to negate, extend, or expand the formal arrangements and results on which tax liability is based. Derivatives turbocharge tax shelters’ (Sheppard 1999, 231).

Financial derivatives fall within the highly technical set of problems of taxing financial instruments. In banking, practices of investment and wealth management, financial derivatives typically are embedded in the economic engagement of an asset, or a set of assets. Unlike in the non-financial realm, tax considerations, including aggressive tax planning, tend to emerge early, at the planning stage of a structure, and involve tax specialists from the very start. The problem began to be discussed only around the late 1990s, and when it did, it was almost exclusively in the context of the US tax shelter industry (Avi-Yonah 2005; CFA 1998; Jalilvand et al. 2000; Schizer 1999; Sheppard 1999). Furthermore, regulators up until the financial crisis of 2007–8 did not pick up these, and other, disparate studies on the

use of derivatives in tax shelters. Since then there have been a number of studies, still almost exclusively American in orientation, that sought to link financial innovation with regulatory arbitrage (Polillo 2011). Of these, best known is the work of Michael Donohoe of the US Federal Reserve Bank. Donohoe estimates that the amount of tax avoidance perpetrated by the use of sophisticated financial structures has reached \$100 billion a year in the US alone (Donohoe 2015).

In the wake of the 2007–09 crisis, new regulations have been announced and launched in the US, aimed to deal with some of the derivatives-enabled tax shelters practices. Especially after the implementation of new tax measures in 2015–17, the use of derivatives for gaming withholding taxes, as well as some aspects of income taxes, had become more complicated in the US. Unfortunately, there are no estimates of the scale of tax avoidance through financial engineering in Europe. Indeed, so far, we came across only one recent article that addresses the use of derivatives and tax avoidance in Europe (Clappers and Mac-Lean 2019)—strengthening the impression that Europe is lagging behind the US in these crucial matters. As part of the COFFERS project, we interviewed great many corporate lawyers, financial accountants and asset managers in London and New York (for further work on accountants’ perceptions see Chapter 12). An overwhelming majority took the view that sophisticated financial instruments are most probably the biggest ticket item of tax abuse in Europe, larger than trade-related abuse of the kind described in the previous section. Just as in many other areas of financial regulation, our interviewees were broadly of the opinion that US regulators have been faster, sharper, and more effective in identifying, targeting, and regulating aggressive tax planning schemes generally, and those that employ financial derivatives in particular. While there have been some attempts to follow suit in the UK and Switzerland, largely, Europe remains behind the curve. Indeed, some argue that important factor explaining the persistence of financially-enabled practices is the regulatory gap between the US and EU policy-makers.

In light of our interviews, we propose to differentiate between two types of financial-engineering driven forms of tax arbitrage. We call one set of financially driven arbitrage post-hoc manipulation of taxable events. These include various dimensions of transfer pricing, including thin financing and regulatory arbitrage. However, in the view of most of the people that we interviewed for this project on both sides of the Atlantic, at the core of financial tax mitigation practices lies what we would describe as balance sheet arbitrage, here financial engineering is used to affect the balance sheet or other accounting categories. Financial advisers, lawyers, and accountants are deployed, essentially, to add layers of sophistication upon known practices including cost inflation, balance set arbitrage, and manipulation of the economic impact of an asset held by the firm. The use of such instruments, in turn, is usually pre-determined by other factors, such as the firm’s operating markets, regulatory niches, and ability to pay for the financial instrument. Below we discuss the two types of practices.

3.4 Post-Hoc Manipulation of Taxable Events

The majority of existing studies of derivative-enabled tax schemes focus on what we call post-hoc manipulation of taxable events. The key to the use of derivatives and swaps arrangements in post-hoc tax planning is, first, that often the same business deal can be implemented with numerous forms, and second, economically comparable transactions are often taxed differently. For instance, in most countries, profits are subject to one set of nominal rate of corporate taxation, but a different rate of taxation is applied for capital gain tax or personal taxation. Such inconsistencies encourage taxpayers to try to choose structures that shift taxable events towards a preferred category of taxation. The practice, like many arbitrage techniques, is an industry's response to an inconsistent patchwork of rules that emphasize form over economic substance in the tax treatment of derivatives (GAO 2011). The phenomenon has warranted its own term and is known as the cubbyhole system.

The simple form of derivative can give taxpayers a timing option, highly valuable in manipulating the time of the recording taxable events. The simplest exercise of timing option would involve taxpayers deducting losses immediately, while deferring tax on gains to the future, sometimes indefinitely. Since wealthy people are more likely to have investments, and are often not pressed to realize their options at particular time, they can claim deduction at the outset of a transaction but then opt to delay or defer realization sometimes *ad infinitum*. Broadly, the option to defer creates distortive tax preference effect for assets that are subject to such realization rule.

Another typical use of post-hoc derivatives as tax mitigation techniques involves disassociation between ownership of asset and gains from changing the value of an asset. For instance, instead of buying an asset, say share or a bond, the taxpayer buys an option on an asset. In this case, the buyer obtains the economic gain from changes in the value of the asset, but does not pay capital gain tax because the buyer is only holding the financial derivative on the asset, and not the asset itself. This simple technique of disassociation between the ownership of an asset from the ownership of value related to the asset is something that most national systems of taxation have yet to come to grips with.

More sophisticated synthetic instruments—i.e., derivatives constructed out of other derivatives—are one example of a product that can evolve despite, or rather, in response to, the rollout of new regulations. Synthetic structures add an extra layer of opacity when it comes to evaluating the taxation approach needed, a process that is complex even when applied to most basic economic operations. In a classic example, a firm can create a synthetic bond out of stock by simultaneously buying a call option to buy the stock and a put option to sell the stock. If the market price of the stock goes above the strike price, the buyer can exercise the call

option and buy the security for the strike price. Conversely, if the market prices fall under, the buyer can exercise the put option and sell the security for the higher strike price. In either of these cases, the stock essentially operates like a zero-coupon bond. This has tax implications, given that stocks do not accrue interest payment taxes and, together with the options, they are taxed at the realization point.

One popular tool used in tax planning in Europe, as indeed has been historically in the US, is a derivative structure known as total return swaps (TRS). A TRS works by swapping a set rate for a payment based on the performance of an underlying asset. The asset, in turn, normally includes both the income it makes and the capital gain it accrues. From a tax perspective, a TRS enables a double whammy. First, parties to a TRS can claim that the money received constitutes capital gain rather than investment income, which typically results in a lower rate of taxation. In addition, the firm may round profits through offshore entities using TRS, in exchange for a fee, which in turn, can be tax deductible. Most recently, TRS has also been used to bypass advantage and funding restrictions.

The deployment of TRS structures has not gone unnoticed by the authorities (Dhaliwal et al. 2009; Rubinger 2003). Their use is now more heavily regulated in the US. In the UK, the problem is known but not necessarily regulated (Amin 2003). There has been at least one attempt to dispute a TRS tax scheme involving Swiss banks (Desax and Busenhart 2012). However, financial innovation is an evolving force, and global megabanks have been pioneering new uses of the instrument in response to the regulatory change. Today, with their use somewhat restricted in other markets, TRS have been growing in popularity in the European market for investment grade and high-yield corporate debt. It is estimated that the monthly trading volume for euro and dollar-denominated additional tier 1 (AT1) bonds—equity debt designed to take first loss in case of distress—has increased four-fold between 2013 and 2017 to \$12bn (Smith and Hale 2017). There are expectations that these instruments can also help avoid advantage and capital restrictions imposed on the financial institutions by the new regulations. Despite the global campaign against tax havens, certain jurisdictions maintain regimes that keep gains from securities disposal tax-free. We are now turning to a theme very well known among corporate accountants, which we call balance sheet arbitrage.

3.5 Balance Sheet Arbitrage

A company's income statement works on the principle of operating revenue minus cost incurred in generating those revenues. Taxes, in turn, are calculated based on net revenue. Financial derivatives can be used to move money away from

an income statement by playing the rules of the game of reporting, or as we call it, balance sheet arbitrage.

Let us take a hypothetical case of a firm X that owns £1 million worth of assets. The firm estimates the assets may drop in value to £900,000. The firm calculates the probability of this risk occurring at 1 per cent. The firm seeks insurance for the risk of £100,000 drop in the value of an asset. The cost of insurance is £50. This figure can enter as cost on the company's income statement. At this point, the firm buys a financial option to maximize the financial worth of the assets and minimize the impact of value losses. The option contract would allow the firm to regain £100,000 fully—and make sure the assets are actually worth £100,000. Given the estimated probability (1 per cent x 100,000), the actual cost of the option contract to the firm amounted to £1,000 pounds, even though the cost of insurance is only £50.

This simple technique allows the firm to improve its balance sheet, in this case by £1,000, and yet, at the same time, book a cost of £50 on its income statement. In this way, financial gains from derivative trading over-the-counter (OTC) transactions can be used to bolster the firm's balance sheet. But in the accounts, those income streams are treated not as an income stream, but as assets. This valuation can be used to buy more derivatives, or just keep them as derivatives on the balance sheet, and hence not place those income streams on the income statement. As a result, while the firm is benefiting financially from trading, as long as the operations are entered into the balance sheet but not as an income stream, the tax on these operations is not paid. These instruments are logged as an asset, and not as part of the company's income statement on which taxes are paid. The incentive to book as many operations as derivatives is obvious, particularly because those could be booked easily through subsidiaries in no-tax jurisdictions such as the Cayman Islands.

Another important use of derivative is for the purposes of income smoothing. Let us take a typical example involving large-ticket item purchase. For instance, a sale of five Airbus planes to a large airline, each at 110 million Euros. Typically, it takes more than a year to build those planes, but the sale of such a big-ticket item can inflate income at a particular quarter, pushing Airbus into higher bracket tax-band during that specific year. The purchase is typically organized through a payment from the airline to a SPV set up by Airbus. To smooth the flow in income for tax reporting purposes, the airline will loan the money to the SPV, which in turn will spread the payment to Airbus over five to ten years, ensuring that the income would be spread in such a way as to be logged under lower tax-band. Typically, Airbus would have less than 50 per cent ownership of the SPV, ensuring the SPV does not enter Airbus's balance sheet. This is a well-known and legal method of income smoothing and balance sheet arbitrage.

To put it more broadly. One of the core reasons for the deployment of derivatives includes what is known as tax function convexity and the debt tax

shield. Progressive tax rates generate expected tax liabilities that are a convex function of taxable income (i.e., pre-tax value), volatile income may lead to higher expected taxes (Smith and Stulz 1985). Therefore, reducing income volatility with derivatives—for instance, through effective hedging—can have the opposite effect (e.g., Graham and Smith (1999)). Likewise, by reducing the volatility of income and/or the probability of financial distress, hedging with derivatives increases debt capacity which, in turn, may reduce taxes by increasing deductible interest payments (Stulz 1996). Mayberry et al. find that ‘discretionary smoothness is associated with higher levels of future tax avoidance, consistent with managers smoothing taxable income as part of their tax avoidance strategy’ (Mayberry et al. 2015).

These are relatively classic and known schemes of the potential application of derivatives to tax planning. However, they do not capture the full rationale for derivatives deployment; nor do they touch upon the second and third layers identified by (Donohoe 2015) as key means by which financial derivatives enable tax avoidance. These second- and third-level means concern important factors of derivatives reporting and regulation.

3.6 Conclusion

The evidence presented in this chapter suggest that the evolving European fiscal regime for corporate avoidance still has a long way to go. With regards to the ‘900-pound gorilla’ in the room, the use of sophisticated financial instruments for tax avoidance, the EU has done very little so far. Our proxy measures of opportunity spaces for trade-related arbitrage suggests irrespective of recent spate of regulations, Europe remains the playground of tax arbitrage practices, used, in particular, by the non-EU corporate sector. Overall, our conclusions are that the European Commission has good reasons to be concerned about the degree and intensity of corporate tax avoidance taking place in Europe.

It is not difficult to explain the relative failure of the EU compared to the US. Most national tax regimes seek to advance many goals: income generation, transfer, and other economic and societal goals, and these may require conflicting, sometimes contradictory, rules and regulations. But most national fiscal regimes are a single entry, single exit territorial system operating under one sovereignty authority, the EU fiscal regime consists of multi-entry, multi-exit fragmented fiscal authorities operating under a single market regime. Furthermore, different fiscal authorities in Europe are seeking different national goals: some indeed are considered offshore financial centres. This ensures that the EU by its very nature is in a weaker position, particularly when it comes to battling modern techniques of tax and financial arbitrage. The European commission is responding to the challenge by developing pan-European knowledge and expertise in the techniques

of tax arbitrage. The EU is funding research such as COFFERS, while the department of taxation and custom union is funding separate research projects into tax evasion and avoidance. The EU benefits from the location of the OECD, an organization with a large department specializing in tax, in Paris. But at the core, the problem the EU faces is not technical but political—and that is something that does not appear to be nearing resolution any time soon.

3.7 References

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4

Reappraising the Tax Gap

Richard Murphy

4.1 Introduction

The ‘tax gap’ is widely thought to be the difference between the amount of tax that a revenue authority should collect within its jurisdiction based upon the laws it has in operation in an annual accounting period and the actual amount of tax paid during that same period. It would seem logical that any government would want to know what their tax gap might be and to control it. Despite this, and the fundamental role tax has in any economy, whether viewed from the perspective of being government income; a tool for the delivery of a government’s fiscal policy or as one of the largest likely overall components of spending for most people and organizations in that jurisdiction it is surprising how little attention is paid by many national governments to the tax gap. Recent surveys of the number of governments preparing tax gaps estimates (Murphy 2019) suggest, for example, that within the European Union only the United Kingdom prepares an annual tax gap estimate, which is a characteristic that also makes it unique in the world. In about half of all EU member states no local estimates of the tax gap are prepared, at all. In most others (Italy being the largest exception to this rule, bar the UK) the only tax gap usually considered is that for value added tax (VAT). This may be because the European Commission does itself consider this issue and publishes an annual report on the VAT gap, analysed by country for each EU member state (TAXUD 2018).

This chapter does, in light of this surprising situation, consider three issues. The first is a consideration of current methodologies for appraising tax gaps. This review suggests that the approaches used are very largely micro-economic. Second, it then considers whether this is the best approach to this type of analysis. The suggestion is made that any tax gap analysis should instead primarily be considered a tool for macro-economic management to suggest the scope for and effectiveness of fiscal economic management. Third, developing this idea the tax gap is reappraised within the context of national income accounting, assisted by tax spillover analysis (Baker and Murphy 2019). Using the resulting framework it is suggested that there are five potential levels, or tiers, at which the tax gap can be

explored. The consequence may be improved tax gap measurement for tax administrations, but more importantly, it should result in a better understanding of the potential role for fiscal macro-economic policy at a time when it is likely that monetary policy will remain of limited use for that purpose for some time to come.

4.2 The Tax Gap: The Current State of Play

There is largely consistent opinion across academic literature and amongst many national and regional tax authorities as to how the tax gap might be defined, although subtle and significant differences do remain. Mazur and Plumely (2007), for example, define the tax gap as the difference between the amount of tax that should be imposed by the tax code of a country and the amount that is actually reported and paid on timely filed returns. The UK's HM Revenue & Customs (HMRC) in similar vein defines the tax gap as 'the difference between the amount of tax that should, in theory, be collected by HMRC, against what is actually collected.' (HMRC 2016, p. 3). The US's Internal Revenue Service (IRS) adds a twist by defining the tax gap as 'the difference between the tax that taxpayers should pay and what they actually pay on a timely basis' (IRS 2006). The language is similar to the one adopted by the HMRC with a slight but important difference: the IRS introduces the notion of 'timely payment' as a factor in the consideration of the tax gap.

The International Monetary Fund's ('IMF') shares core aspects of the definitions above, but adds an important element to understanding by suggesting that the appraisal has to be within 'the current policy framework'. (IMF 2013, p. 11). In doing so the IMF suggests that there are two aspects to the tax gap requiring consideration. One is the effect of taxpayer-non-compliance on tax revenue, a notion that is captured in the other definitions noted. The other aspect is the impact that policy choices made by legislators and regulators might have had in reducing available tax revenues. These two different aspects of tax gap are labelled by the IMF as, firstly, the 'compliance gap' caused by non-payment that results from non-compliance with tax rules and, secondly, the 'policy gap', which refers to tax laws granting exemptions, tax liability deferrals or preferential tax rates (IMF 2013, p. 11).

The European Commission Taxation and Customs Union (TAXUD) who commissions the annual study of the EU's VAT gap (TAXUD 2018) explicitly embraces the IMF's concept of the 'tax policy gap', noting that:

[T]he Policy Gap captures the effects of applying multiple rates and exemptions on the theoretical revenue that could be levied in a given VAT system. In other words, the Policy Gap is an indicator of the additional VAT revenue that a

Member State could theoretically, i.e. in case of perfect tax compliance, generate if it applied a uniform VAT rate on all goods and services. (TAXUD 2016, p. 51)

TAXUD does prepare annual estimates of the policy gap with regard to VAT (TAXUD 2018). TAXUD also extends its work to the compliance gap for that tax. These two international institutions apart it would, however, appear that the issue of tax policy gaps is largely ignored: no national tax authority appears to appraise this issue in an effective way at present.

They may be discouraged from doing so by academic opinion on the worth of measuring tax gaps: Gemmell and Hasseldine (2012, p. 17) noted, for example, that ‘There are few, if any, reliable methods of measuring direct tax gaps as conventionally defined.’ The OECD when offering another succinct definition of the tax gap as ‘the difference between tax due and tax collected’ (OECD 2017, p. 182) appear to, at least in part, share this pessimistic view when saying:

While the tax gap has intuitive attraction for both the public and political representatives, it is a difficult concept to define precisely. Estimation is also difficult as much of the tax gap is either deliberately concealed from view and/or data may be difficult to find. The measurement and publishing of tax gaps should therefore be navigated and communicated carefully. Limitations of tax gap estimates mean they are not a good basis for explicit performance targets.

(OECD 2017, p. 181)

In so doing the OECD appears to endorse three opinions. The first is that tax gap appraisal is about the measurement of the efficiency of tax administrations. The second is that the ‘bottom-up’ approaches currently used by most tax authorities for this purpose mean that they are not especially suited to this task. The third is that tax gap methodology does not extend to policy gaps.

The difference between ‘bottom up’ and ‘top down’ methods of tax gap estimation is important. As the IMF has noted, the UK’s tax authority ‘follows a pattern of employing “bottom-up” based estimates for the direct tax gaps, and “top-down” estimates for the indirect tax gaps.’ (IMF 2013, p. 9). The OECD sees merit in both approaches:

The use of tax gap measurements is becoming more common, especially for VAT, as jurisdictions increasingly see the benefits of having high level estimates of non-compliance within the tax system. Top-down methodologies that use national accounts data represent a relatively low-cost means of producing such estimates. These approaches are often associated, though, with a fairly high degree of uncertainty and therefore are of limited operational use. Bottom-up methodologies that include information from random audits, on the other hand,

can provide a more accurate picture of lost revenue across segments and tax types. (OECD 2017, p. 62)

A top-down approach uses macro-economic data to estimate the potential tax base within an economy. Taking VAT as an example, on this basis the likely VAT due on each part of consumption within national income is estimated as if no allowances or reliefs are supplied to taxpayers. Allowance is then made for the items exempted from charge as a result of policy decisions. In addition, the cost of those allowances and reliefs granted either for reasons of administrative ease or to influence taxpayer behaviour is estimated. These two estimates constitute the VAT policy gap. The estimated tax due net of the VAT policy gap is then compared with the actual yield to suggest a compliance tax gap in a top down approach. The compliance gap represents tax lost as a result of taxpayer behaviour.

VAT gap analysis of this sort is dependent upon the existence of statistics of sufficient quality on the size of the tax base derived from sources other than taxpayer records (IMF 2017, p. 33). The IMF appears to be satisfied with the quality of statistics available in the UK but the fact that there have been concerns on this issue within the EU is apparent from the fact that TAXUD's VAT gap estimates excluded Cyprus until 2017 because of a lack of reliable national statistics (TAXUD 2017, p. 8).

In contrast to this top-down approach, a 'bottom-up' approach uses an audit sample of submitted tax returns to estimate errors found within them and then extrapolates this error rate across the whole population of submitted returns. The method does, however, leave this approach very vulnerable to estimates of tax not declared at all on tax returns not submitted by persons whose identity may not even be known. The methodology is also not good at capturing tax not paid by relatively small groups in society, such as the very wealthy. As Zucman et al. (2017) have noted, if such groups are predisposed to evasion then resulting tax gap estimates may be very vulnerable to error. For this reason, HMRC say in their note on 'bottom-up methodologies':

Different methods and data sources are used, depending on best available, to estimate how much tax is lost within each area. HMRC uses internal data and operational knowledge to identify areas of potential tax loss. (HMRC 2017, p. 13)

The IMF notes that there is room for improvement in this approach that would enhance HM Revenue & Customs' analysis of the tax gap, including the construction of bottom-up estimates for the VAT gap in order to compare results from top-down estimates (IMF 2013, p. 35). This is in part, at least, because the IMF has suggested that any tax gap estimate, and especially those based on bottom-up methods, should not be used as the sole basis for inference about taxpayer

compliance behaviour (IMF 2013, p. 44). In so doing the IMF endorses the two differing methodologies but suggests they should be used simultaneously and reconciled when possible, and not be considered in isolation. What the IMF added was that bottom-up approaches offer very limited explanation of tax policy gaps, whilst noting that ‘In general top-down models can be easily extended to estimate the policy gap.’ (IMF 2013, p. 48) As they added:

As top down models generally involve creating an estimate of potential revenue by modelling how the current tax applies to the tax base, modelling the policy gap would require replacing the current tax structure in the model with some normative version of the tax structure. (IMF 2013, p. 48)

This issue is referred to again later in this chapter.

This being noted, the IMF’s advice appears to have been ignored: although the tax gap reporting by the UK’s HMRC is the most comprehensive such exercise undertaken by any country in the world, ‘bottom-up’ methods of estimation are still relied on for all taxes but VAT and excise duties (HMRC 2019, p. 4). In addition, 19 of the 36 estimates made are reported on the basis of experimental methodologies (HMRC 2019, p. 4). If HMRC stands at the forefront of tax gap methodology, their present lack of appropriate methodologies to estimate tax avoidance and evasion in key taxes suggests there is still room for considerable progress, not least because the tax policy gap is completely ignored.

This is also the case within much academic literature on the subject. Some such literature fits firmly into the framework used by tax and regulatory authorities and seeks to improve the methodologies used by them; for example, Hamilton (2015) suggests there is a need to improve sample selection used in the bottom-up methods of tax gap estimation. Others are critical of specific methods of official tax gap estimation (Slemrod and Johns 2010), whilst still using them as a basis for analysis as they are the only ones available at present (Slemrod 2007). Yet others argue that all current and conventional tax gap estimates are unreliable as they omit behavioural responses: Gemmell and Hasseldine (2012), for example, make clear their lack of faith in current methodologies.

These approaches do, however, all consider tax gap data as part of a micro-economic appraisal of tax authority efficiency. The macro-economic significance of tax gap data is reflected in another body of literature that uses the concept of the shadow economy as the basis for the assessment of tax gaps (Christie and Holzner 2006; Murphy 2012; Williams and Nadin 2012; Murphy 2019). This work only appears to be replicated by the Finnish government amongst regulatory and tax agencies (FTA 2016). The Finnish tax authority’s use of shadow economy data in this way is sufficiently unusual to mean that neither the OECD nor the European Commission consider them in the list of those jurisdictions preparing tax gap estimates.

Civil society activists (for example, Henry 2012, Murphy 2006, 2008, 2011, 2012, 2014a, 2014b and 2019, and Cobham and Jansky 2015) have also been involved in estimating tax gaps, although most have focussed on international and not national dimensions of this issue. Zucman (2014, 2015) has done the same in academic literature. These civil society surveys do share in common with the estimates prepared by tax authorities a focus on tax lost as an issue in its own right.

The broader academic literature on the issue makes it clear that a wider macro-economic dimension to this issue exists, partly as a result of the high rate of non-compliance that are repeatedly found. Kleven et al. (2011) find that almost 45 per cent of those self-employed in Denmark routinely avoid taxes, broadly replicating the findings of Advani (2017, p. 2) who suggested, based on HMRC audit data, that 36 per cent of self-assessment taxpayers who were randomly audited included errors in their tax returns that resulted in an average underpayment of £2,320, a sum equivalent to 32 per cent of the average initial tax amount declared. Advani found that the rate of non-compliance did not vary greatly with income, but it is likely that a random audit programme would not reveal the behaviour of the wealthiest. This approach is, however, used to estimate the tax gap that they create (HMRC 2019, p. 4). That the ratio of aggregate misreported income to true income is generally higher with increasing income is found in several studies (Bishop et al. 2000; Johns and Slemrod 2010; Zucman et al. 2017). There are suggestions that this is partially the case because high incomes are often received in a form more prone to misreporting (Johns and Slemrod 2010). It has also been mooted that this trend may be more than just a coincidence and that in fact financial institutions, for example in Switzerland, could specifically cater to the tax management needs of higher earners (Zucman et al. 2017) and that they might in the process assist tax non-compliance by those using their services.

This issue of non-compliance is also addressed by Zucman (2013), who estimates that approximately 10 per cent of the global GDP is held in tax havens (Chapter 5 presents an overview of such estimations). Whilst some of this activity is perfectly legal, many instances are not: for example, two reports by the United States Senate in 2008 and in 2014 found that before 2009 between 85 and 95 per cent of accounts owned by US entities in Switzerland at Credit Suisse or UBS were left undeclared (Zucman et al. 2017).

Of significance for this chapter is that what this work on shadow economies, tax havens and international tax gaps all makes clear, in a way that adds to the suggestions of the IMF and TAXUD on tax policy gaps, is that tax gap data has a much greater purpose than simply assisting assessment of the efficiency of tax authorities. Tax gap data could assist policy-makers and economists when considering the distribution (and redistribution) of tax burden and the impact that this might have on inequality and overall economic performance. The IMF (2017, p. ix) appear to have embraced this argument:

Advanced economies with relatively low levels of progressivity in their personal income tax (PIT) may therefore have scope for raising the top marginal tax rates without hampering economic growth. Different types of wealth taxes can also be considered.

The implication is that the tax policy gap has a role in appraising macro-economic policy and that the tax compliance gap is a measure of the effectiveness of a government in delivering this policy. This chapter suggests that this is the way in which the tax gap might have greatest use in the future.

4.3 Potential Developments in Tax Gap Methodologies

If, as the IMF have noted, calculation of a tax policy gap assumes the existence of a normative version of the tax structure of a jurisdiction (IMF 2013, p. 48) questions are posed that are at the very heart of a government's capacity to engage through taxation with the economy that it seeks to manage through its fiscal policy. A normative structure of this type demands appraisal by a state of issues that most would seemingly rather avoid such as which of the available tax bases are to be subject to assessment, at what rates, and with what permissible variations delivered by way of higher and lower rates, allowances and reliefs. Issues at the heart of taxation policy do, as a result, move within the scope of tax gap analysis.

There are good reasons for suggesting this to be appropriate. First of all, the shortfall in tax revenues, and consequent deficits, that have been a feature of many national economies since the Global Financial Crisis suggests that reconsideration of this issue is now necessary, especially in the light of the failure of austerity policies to close those deficits and continuing attempts to do so, including by legal requirement in some countries, such as Germany. Secondly, after almost a decade of interest rates being at or near the zero bound in many economies around the world continued faith in monetary policy as a tool for effective macro-prudential regulation is also open to question, with fiscal policy being the only obvious alternative, the appraisal of which would be facilitated by an effective to-down tax gap appraisal. Thirdly, measures introduced by the OECD Base Erosion and Profits Shifting process (OECD 2015), such as automatic information exchange between states, have made taxation of income and wealth previously considered beyond the reach of national tax authorities well within their scope, opening new opportunities for taxation.

The IMF (2013, p. 46) appear to have appreciated at least some of these issues when suggesting that it may be possible to base top-down tax estimates of tax gaps for taxes other than VAT on national income accounting. It would now appear appropriate to reconsider this suggestion. When saying so it is explicitly suggested

that the tax gap is, whatever its functions within a tax authority might be, also a tool for appraising macro-economic policy management. It is in this context, in particular, that the whole range of tax gaps that can be calculated, including policy gaps, needs to be reappraised. To achieve that goal the tax gap has to be seen as part of the macro-prudential regulatory environment designed to mitigate systemic risk within a financial system. In that case the tax gap must be considered within the context of the intimate relationship that exists between money, tax and the stated goals of most governments that wish to deliver growth in GDP whilst constraining both inflation and their deficits.

It is the target of many that government spending is equal to taxation revenues (Blyth 2013). If this is to happen then, within the framework of national income accounting:

$$G = T,$$

where G is government spending, and T is tax paid (for example, Mitchell et al. 2019, p. 50 and following).

However, as is now widely recognized, there is no reason for this situation to arise. Governments can and do run surpluses or deficits. In that case, the issue of government borrowing has to be considered. As Mitchell et al. (2019, p. 322) suggest, if B is government borrowing then ΔB might be the change in government borrowing during a period, meaning that if any borrowing or loan repayment takes place during a period then this equation might be thought to hold true:

$$G = \Delta B + T.$$

But what is also true is that a government with its own central bank and currency also has the option of money creation to fund spending, whether via quantitative easing or otherwise. If M is the quantity of government-created money within an economy and ΔM the change in this variable within a period then taking this fact into account extends the already noted equations and this formulation holds true:

$$G = \Delta B + \Delta M + T.$$

This formula also has to be properly understood. In particular, in this equation T is tax actually collected i.e. it is a measure of cash flow. However, as the IMF has argued, this net cash sum collected is stated after two tax gaps have been deducted from total potential tax yields i.e.

$$T = T_t - T_f - T_c,$$

where T_t is the total potential tax due on the tax base,¹ T_f is the net tax foregone as a result of policy decisions and T_c is the tax compliance gap.

It is important to note that these expressions can, in turn, be expanded, so that in the normative typology of the tax base that the IMF suggests be used for estimation of tax policy gaps:

$$T_t = (T_b \times T_r),$$

where T_b is the tax base for a particular tax and T_r the standard tax rate for that tax base, and:

$$T_f = T_p + T_s,$$

where T_p represents the value of tax bases not taxed as a matter of policy (e.g. wealth) and T_s represents the value of allowances, reliefs, and varying tax rates granted within bases that are taxed to encourage varying taxpayer behaviours by way of tax spends, and:

$$T_c = T_e + T_a + T_u,$$

where T_e is the part of the tax compliance gap resulting from tax evasion; T_a is the part resulting from tax avoidance and T_u is the part of the tax compliance gap resulting from non-payment of tax debts, or unpaid taxes.

Substituting this understanding in the equation for G :

$$G = \Delta B + \Delta M + \left((T_b \times T_r) - T_p - T_s - T_e - T_a - T_u \right).$$

This expanded explanation for the financing of government spending (G) offers new bases for interpretation of both the tax gap and the role of fiscal policy within the macro-prudential regulatory framework by making clear the relationship between borrowing, changes in the government created money supply and the tax gap in all its aspects.

¹ The tax due on the tax base requires explanation. In this formulation it is assumed that there is a 'standard' rate of tax payable on a tax base. This is often the case, and is even described as such in many countries. Where there is a single rate of tax, e.g. as is commonplace in corporation tax, that also fulfils this role. The significance of this is that the decision to then charge higher or lower rates has a cost implication that is recorded within tax foregone (T_f). It should be stressed that in some cases tax foregone is in fact additional tax due e.g. in the case of progressive tax rates. The effect of this is to make clear just how expensive some of these decisions are: in the case of many European Union member states the tax foregone within the VAT system as a result of the granting of lower rates and exemptions from this tax amounts to as much as 50 per cent of the tax that might have been due but for those decisions having been made (TAXUD 2018).

What it does also suggest is that there are at least five potential levels, or tiers, at which the tax gap might be explored. These are:

1. The tax base gap, which refers to the cost of tax bases not taxed by choice e.g. wealth;
2. The tax rate gap, which refers to the costs (both positive and negative) of granting higher and lower rates of tax that vary from the norm or standard rate as well as the cost of all allowances and reliefs granted to taxpayers, for whatever the reason;
3. The cost of tax evasion;
4. The cost of tax avoidance;
5. The cost of bad debt i.e. declared sums owing but not actually paid.

Recognition of this broader range of gaps than is usually calculated would add to the quality of tax debate, whether at the macro- or micro-economic levels. For example, a calculation of the two components of the first two gaps would encourage discussion on issues such as inequality, management of the environment, and investment incentives. The important point is that this makes clear that tax is not just about raising revenue: it is also about redistribution, repricing market failure and the delivery of fiscal policy (Murphy 2015, p. 66).

Importantly, it would also change the focus of discussion on the third, fourth and fifth tax gaps that relate to tax evasion, avoidance and tax paid late or not at all. Estimates of each of these gaps are useful, but there are practical problems in distinguishing each of these gaps. For example, the boundary between tax evasion and avoidance is notoriously fluid (Quentin 2014). As importantly, informed discussion on these gaps would not just focus on their quantum, important as it is, but the cause for their having arisen. This would require that tax spillovers be taken into account in any such discussion.

A tax spillover is a loss arising within and between tax systems, whether domestic or international, as a result of one part of a tax system undermining the effectiveness of another part of the same tax system, or that of another state (Baker and Murphy 2019).

The importance of tax spillover methodology is that it makes clear that tax gaps are related to each other: in other words a tax loss arising in one tax might also indicate a loss in another tax. This will have an impact on the estimation process for losses from tax evasion because it suggests that they cannot be calculated by tax in isolation, as is commonplace at present. So, to use accounting logic, if the reporting of turnover is suppressed to evade declaration of a value added tax liability then it follows that, firstly, the suppressed income cannot be reintroduced into other tax declarations (such as those for corporation tax, personal income tax and social security charges) without the VAT under-declaration being apparent,

meaning, secondly, that under-declarations of those other taxes must follow. This understanding is key to correct estimation of tier three of the tax gap.

Tax avoidance is the focus of tier four risk. This results from a transaction that is deliberately undertaken in a fashion that the taxpayer knows may not be tax compliant, implying that the taxpayer is taking a calculated risk that the form in which the declaration takes place might be wrong but that the balance of probabilities suggests to them that this is a risk worth taking because the prospect of penalty in the form of additional liability is limited, even if the error might become apparent in a manner described by Quentin (2014). Tax spillover analysis suggests the likelihood of this happening: if there is a lax tax or company and trust administration in a jurisdiction the chance that any tax avoidance will be identified and challenged is low. This can then give rise to a probabilistic estimation of this tax gap.

Finally, Baker and Murphy's spillover methodology suggests a fifth tier of risk. Whilst, superficially, this fifth tier of the tax gap is simply about unpaid tax it should be much more broadly based if it is to be really useful. That is because whilst some non-payment of tax is due to genuine insolvency for reasons that have arisen beyond the taxpayer's control some also results from the design of the tax system itself, and from the level of administrative resources provided to it. In other words, unpaid tax can be seen as a metaphor for a broader issue of concern, which is the risk of spillover within both national and international tax systems arising from poor systemic tax design, whether that be because of the creation of undetected or unaddressed arbitrage risk within tax legislation and between that legislation and that regulating accounting, company or contract law; or because of risk resulting from the arbitrage of the tax system when tax rate differentials within and between states encourage that abuse. The suggestion is that this risk is measurable and expands the base for this tier of the tax gap beyond a simple consideration of unpaid tax.

This five-tier approach is different from that adopted by those EU countries addressing tax gap issues at present. The difference is essentially one of scope and ambition. HMRC typifies current thinking on this issue when it says that 'thinking about the tax gap helps the department to understand how non-compliance occurs and how the causes can be addressed' (2017, 3). This paper suggests that the tax gap can assist that process but is something substantially more significant and should be at the core of the whole process of macro-prudential regulation used by a state to assess the systemic risks that it faces both within and beyond its jurisdiction.

4.4 Conclusion

Evidence from across the European Union continues to suggest that the measurement of tax gaps is an exception, rather than the norm; that tax gap

methodology is diverse and developing rather than standardized; and that these two facts then limit the availability of data for appropriate macro-economic policy-making, in which tax gap analysis must play a part. In that case the five tiered approach to tax gap estimation that this chapter proposes is desirable. That tiered approach suggests that, important as existing tax gap estimates are, it may be appropriate that attention shift within tax debate towards the design and effectiveness of the overall tax system. Only then will tax really take its place within the macro-prudential financial regulatory system of states that is required to deliver an overall fiscally coherent economic policy. That approach then complements tax spillover analyses.

This is not to suggest that tackling the tiers of the tax gap that relate to abuse is inappropriate. Doing so is clearly necessary. However, the analysis offered in this chapter suggests that any tax authority should not restrict their thinking to this aspect of the tax gap and should in addition produce better information on the role tax, and tax gaps, play in a national economy. As a result, this chapter suggests that more attention be paid to a wider range of tax gap measures.

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How Big Are Illicit Financial Flows?

The Hot Phase of IFF Estimations

Joras Ferwerda and Brigitte Unger

5.1 Introduction

Wealthy people, for tax or criminal purposes, have been hiding their money from the authorities for a long time, but only recently has this attracted broad public attention. The financial crises, combined with the fiscal crisis, has put the focus on how the wealthy and criminals are abusing the globalized financial system to hide their assets. Journalists started to inform the public by uncovering some of the secrets, sometimes empowered by serious leaks, like the Panama Papers, the Swiss leaks, the Paradise Papers, and the Bahama Leaks. Such leaks gave the public a little insight into the peaks of the shadow side of the financial system. As can be seen in Table 5.1, these leaks have intensified in the last couple of years, though many of them stayed unnoticed by the wider public, and only a few have been catching media attention. They provide us important insights into how illicit money is hidden, in tax havens supposedly, out of reach from the authorities.

The attention to the problem of illicit finance combined with the diminishing tax revenues creates the momentum to enact policies to fight these practices and try to get money back into the coffers of the public sector. International organizations, the EU, and its Member States developed new tax policy regulations and anti-money laundering standards at the national and international level. These innovations constitute a major change in tax policy and fiscal regime, perhaps even a paradigm shift (Picciotto 2019) after a long drought of not being able to regulate tax policy at an international level (see Chapter 1). After a long period of sporadic ineffective tax policy reforms, we are now in the hot phase of tax regulation, where many regulations take place at the same time, indicating serious shocks to the tax ecosystem (see Boine et al. 2005; Seabrooke and Tsingou 2019).

This hot phase of international policy reforms has its effects not only on national policy-making, on corporations, tax experts and on enforcement agencies, but also seems to have attracted the attention of journalists and scholars. Table 5.1 indicates that we are now not only in a hot phase of regulation but also in a hot phase of international leaks. The amount of research on estimating illicit

Table 5.1 Overview of leaks since 2001 uncovering illicit financial flows

Year	Name of the leak	Source of the leak
2001	KBLux	Kredit Bank Luxembourg
2007	UBS	Bank Switzerland
2009	Anonymous	Rabobank SA Luxembourg
2013	Offshore Leaks	Two Trust and Company Service Providers from BVI and Asia
2014	Lux Leaks	Tax Advisor PWC in Luxembourg
2015	Swiss Leaks	HSBC bank in Switzerland
2016	Panama Papers	Trust and Company Service Provider Mossack & Fonseca
2016	Bahama Leaks	Company Registry Bahamas
2017	Football Leaks	Unknown
2017	Credit Suisse	Swiss bank
2017	Paradise Suisse	Offshore law firm Appleby Bermuda/Company registries
2017	Azerbaijani Laundromat	OCCRP/Danske Berlingske
2018	Dubai Leak	Property records land-registry Dubai
2019	Mauritius Leaks	Law firm Conyers Dill & Pearman
2019	Cayman bank Leaks	Daughter on Isle of Man
2019	29 Leaks	Company formation agent UK
2019	Troika Leak	Banks from Lithuania
2020	Luanda Leaks	unknown

Source: Jan van Koningsveld, updated version of the table in van Koningsveld (2018).

financial flows has also increased significantly recently and even got its own international abbreviation label, the ‘IFFs’. A Scopus search on the number of publications about estimating or forecasting illicit financial flows (or elements of it, like tax avoidance, tax evasion or money laundering) shows that there have been 394 studies done between 1982 and 2019. Publications increased from less than ten per year before the financial crisis, to more than fifty annually in the last decade (see Figure 5.1). We, therefore, can state that we are now not only in a hot phase of tax regulation and leaks but also in a hot phase of IFF estimations. But what have all these studies taught us? How big is the problem? And, what do they measure exactly? And how? This chapter focuses on the research on estimating the size of the problem and attempts to get an overview of what is happening in the world of IFF estimations.

5.2 Relevance of IFF Estimations

Properly estimating the amount of illicit financial flows is important for three reasons: Policy priority setting, policy evaluation, and scientific research.

Illicit financial flows are a problem because they threaten to erode welfare states and therefore need to be tackled. But governments face many challenges and

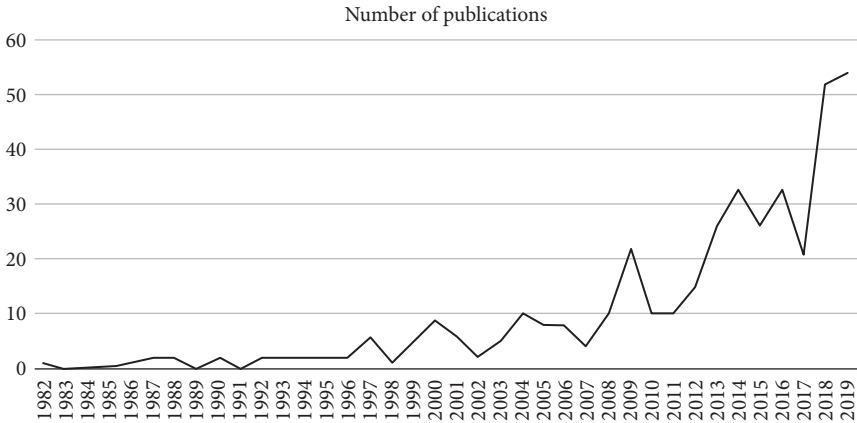


Figure 5.1 Scopus search on the number of publications about estimating illicit financial flows.

Source: Author-made based on a Scopus search. The used searched string in Scopus: TITLE-ABS-KEY (('estimate' OR 'estimation' OR 'forecast') AND ('tax evasion' OR 'tax avoidance' OR 'money laundering' OR 'money laundering' OR 'illicit financial')).

therefore have to make policy decisions. Politicians need to decide which problems will need to be tackled first and how much of their limited budget can be spent to deal with each issue. It is therefore important to know the size of the problem; to inform politicians and allow them to make a justified priority decision.

When policies are enacted to tackle the problem of illicit financial flows, the question quickly arises whether such policies are effective. Since ‘water always finds its way’ (Unger and den Hertog 2012), criminals and the wealthy will react to new policies and try to circumvent them. Just like species in an ecosystem that gets hit by a shock, new ways of survival are sought. Estimating the amount of illicit financial flows properly is important for evaluating ex-post whether the policies have been effective and efficient. Did the amount of illicit financial flows really decrease after the policy was introduced (effectiveness)? And was this worth the spending on the policy (efficiency)? It is even possible and better to evaluate beforehand whether a policy will be effective. This can be done with an agent-based model (see Chapter 14) and requires a proper understanding of the nature and scope of the problem.

Illicit financial flows can have all kinds of effects for societies, like inequality due to unpaid taxes, distorted statistics (which complicates policy-making), unwanted political pressures, corruption, and many more (see Reuter 2017 for a more complete overview and Ferwerda 2013 for an overview of the effects of money laundering in particular). Many of these effects can easily be mentioned and understood, but the empirical support for these effects is often lacking. (see e.g.

Unger et al. 2006) The empirical research on these effects, and especially the research on how big these effects are, is still in its infancy. Empirical research on the effects of illicit financial flows is complicated because the most important variable is so hard to measure: the size of illicit financial flows. This is yet another reason why we should care about how big the problem really is. To sum up: we need proper IFF estimations to get a better understanding of their effects.

5.3 How Big Are Illicit Financial Flows?

Global estimates of Illicit Financial Flows are generally in the billions or trillions. These estimates are so enormous that it can be hard to have any perception of how much money this really is. It might, therefore, be useful to relate such numbers to the amount of money that is needed to deal with some of the most serious global problems. The estimates of how much it would cost to end world hunger range between 7 and 265 billion USD a year (Fan et al. 2018). The annual global education finance gap is 39 billion USD (UNESCO 2016). Saving the planet's biodiversity may cost 100 billion USD per year.¹ When compared to IFF estimates, one can safely assume that the most serious problems of the world, stopping famine, filling the education gap and maintaining biodiversity, could be solved when recuperating even only parts of the illicit financial flows.

Table 5.2 gives an overview of relevant IFF estimations and shows that the global estimates range from 125 billion to 15 trillion USD.

The estimates in Table 5.2 vary significantly. These differences should not be interpreted directly as an indication of how imprecise these estimates are. There can be many different reasons why the estimations differ so much. First, as shown in the last column of Table 5.2, not all these estimations estimate the exact same thing. All the estimations relate to illicit financial flows, but often to different parts of it. The estimations are done with different estimation methods. To get a better understanding of the different estimation methods, the data used, and the relevant assumptions made, an in-depth analysis is needed.

5.4 More In-depth Analysis of Relevant Studies

It is clearly not possible to give an in-depth analysis of all the 394 studies on estimating illicit financial flows (or components of it) that are shown in Figure 5.1.

¹ The Economic Times (22 April 2019) Earth Day: Saving the planet may cost USD 100 billion per year. Accessed online at: <https://economictimes.indiatimes.com/news/science/earth-day-saving-the-planet-may-cost-usd-100-billion-per-year/articleshow/68991339.cms?from=mdr> (accessed on 9 February 2020).

Table 5.2 Selected estimations of illicit financial flows

Study	Estimation (billion USD)	Countries included	What is estimated?
Cobham and Janský (2017)	50–80	US	Tax gain US multinationals with profit shifting
Clausing (2016)	77–111	US	Tax gain US multinationals with profit shifting
Janský and Palanský (2019)	125	Global estimate	Lost tax revenues from FDI related profit shifting
Crivelli et al. (2015)	>200	developing countries	Revenue loss from tax avoidance
Crivelli et al. (2015)	>400	OECD countries	Revenue loss from tax avoidance
Cobham and Janský (2018)	500	Global estimate	Revenue loss from tax avoidance
Tørsløv et al. (2018)	>600	Global estimate	Shifted profits
Janský and Palanský (2019)	420	Global estimate	Shifted profits
Murphy (2019)	852–1,023 ²	EU-28	Tax gap
Ferwerda et al. (2020)	2,333	Global estimate	Money laundering
Walker (1999)	2,850	Global estimate	Money laundering
Zucman (2013)	5,878	Global estimate	Hidden wealth offshore
Van Koningsveld (2015)	5,900	Global estimate	Offshore financial assets
Zucman (2015)	7,600	Global estimate	Hidden wealth
Cobham et al. (2019)	9,561	Global estimate	Trade reporting gap
Damgaard et al. (2019)	15,000	Global estimate	Phantom FDI
Henry (2012)	>21,000–32,000	Global estimate	Private wealth invested virtually tax-free through offshore

Source: Made by the authors based on the reported studies. > indicates that the authors mentioned the estimate as a minimum. – indicates a range.

This chapter will, therefore, focus the more in-depth analysis on four recent estimations done by participants of the EU project COFFERS (Combating Fiscal Fraud and Empowering Regulators) which shows the diversity of approaches even within a small group which closely worked together for three years. All these estimations are top-down indirect estimation procedures that had an important impact on (inter)national organizations and are expected to be

² The estimate in Murphy (2019) is in Euro, namely 750–900 billion Euro per year. For consistency the estimate is converted to USD using the exchange rate in January 2019 (when the paper was published): 1 USD = 0.88 Euro.

decisive in the future. Our analysis does not include the often mentioned top-down indirect estimation procedures that are known as the World Bank Residual Method and the Hot Money Narrow Method. Nitsch (2016) provides an in-depth analysis of those estimation methods. We start with an overview of the different concepts that are estimated in the four studies we focus on and then go more into the details of the studies. It is not feasible to explain all the details of the four estimations of which this chapter focuses. This chapter will try to keep the descriptions of the estimation strategies used in all four studies as simple and brief as possible, focusing only on the main estimation and how this result has been found. The descriptions briefly mention the main potential limitations.

5.4.1 What Is Being Measured? Conceptual Framework for Illicit Financial Flows

Illicit financial flows include many different concepts, from tax avoidance and tax evasion to money laundering and corruption. Stocks of illicit wealth are clearly not flowing and therefore might not be classified directly as illicit financial flows, but since these stock are generally the direct result of illicit flows, its estimates are relevant in the overview of this chapter. Moreover, financial stocks can generate illicit flows, as a return for investment or saving or more indirectly because of unpaid (capital) taxes. Generally, the estimations define quite precisely what is being estimated, but also estimate only a part of the illicit financial flows. An all-encompassing estimate of illicit financial flows is absent.

Figure 5.2 gives an overview of relevant concepts that are part of the over-arching concept of illicit financial flows and estimated by the studies this chapter focuses on. Money laundering (as estimated by Ferwerda et al. 2020) is by definition illegal and seems to be mostly happening in the financial sector. Not all money laundering is part of the broad concept of tax gap (defined as unpaid taxes by Murphy 2019), because some criminals actually prefer to pay taxes in an attempt to give a more legitimate appearance to their criminal proceeds. Even though Murphy (2019) defines tax gaps as very broad (all unpaid taxes), his estimates are based on shadow economy estimations, which is a narrower concept that focuses on real economic activities that are not registered. FDI related profit shifting (as estimated by Janský and Palanský 2019) are financial transactions that reduce the tax payments of companies and are therefore completely part of the tax gap. Trade misreporting (as estimated by Cobham et al. 2019) can be used to reduce tax payments and is then part of the tax gap, but can also be perfectly legitimate (for instance a typing error which leads to more tax payments) and then falls completely outside the concept of tax gaps and even illicit financial flows. Trade misreporting can also be used to launder money, so-called trade-based money laundering (TBML) (see eg. FATF 2006; Ferwerda et al. 2013; Zdanowicz

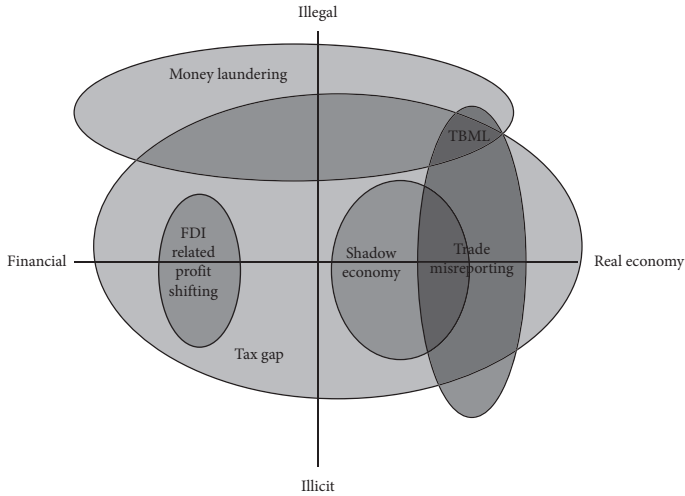


Figure 5.2 Visual representations of selected concepts within the over-arching concept of illicit financial flows.

Source: Author-made. Partly inspired by Cobham (2014).

2009). To give an example of how trade-based money laundering works: A drug dealer buys with his criminal proceeds some expensive watches. He then sets up a company abroad and imports his own watches for a (misreported) low price. If the criminal then sells these watches for the normal price in the country where he set up the company, it appears as if he bought the watches cheap (the misreported trade price) and sold them for more, making legitimate profits. He can then freely spend his ill-gotten gains because they appear legitimate; the goal of money laundering has been achieved. It is then discussable whether this is part of the tax gap. The criminal pays taxes on his profits from selling the watches, but import taxes are reduced due to the too low reported trade value.

5.4.2 Ferwerda et al. (2020)

Ferwerda et al. (2020) estimate the amount of global money laundering—making criminal proceeds appear legal—at 2,333 billion USD per year. The main data sources used for this estimation are the crime statistics of the UN and a confidential database of transactions suspicious of money laundering to and from the Netherlands. Multiplying the UN crime statistics with an estimate of the average proceeds per reported crime (based on Walker 1999) gives the amount of money that needs to be laundered in each country. The database of transactions

suspicious of money laundering makes it possible, for the first time, to empirically analyse why money laundering happens more between certain countries and less between other country pairs. Ferwerda et al. (2020) find with their panel data regression that money laundering flows follow the so-called gravity model. This model is related to the gravity equation in physics and shows that money laundering flows happen more between bigger countries (size attracts) and when countries are closer to each other (measured in kilometres or cultural, like common language and common religion). The uncovered logic of money laundering flows is then used—with an out-of-sample prediction—to simulate money laundering flows around the world. Adding up all the simulated flows gives a money laundering estimate per country, which can then be added up to have an estimate of the amount of money laundering worldwide.

Crucial for the estimation are the estimates of the average proceeds per recorded crime and the assumption that the logic of money laundering flows to and from the Netherlands represents the logic of money laundering flows worldwide.

5.4.3 Janský and Palanský (2019)

Janský and Palanský (2019) estimate that the global amount of lost tax revenues from profit shifting related to FDI is at least 125 billion USD per year. The idea of the paper, following the approach of UNCTAD (2015), is that profit shifting should show up in the statistics in the fact that the rate of return (of FDI) is lowered when profits are shifted (and therefore don't appear in the statistics). Their model identifies these shifted profits by comparing the bilateral rate of return for two non-tax haven countries with the bilateral rate of return involving a tax haven. The analysis indeed shows—with fixed effects panel data regressions—that when tax havens are involved, the rate of returns are lower, indicating that profits have been shifted. This makes it possible to estimate how much profits have been shifted and can then be used—by multiplying with the relevant tax rate—to estimate the amount of lost tax revenues from FDI related profit shifting. The paper also looks into the distributional effects of these shifted profits, but this chapter concentrates solely on the estimation procedure.

The estimation procedure could be biased when there are other reasons for a lower rate of return when a tax haven is involved, for instance, because tax havens are related to FDI in industries with lower rates of return. Another sensitivity is the tax haven classification, politically and for the estimation procedure. The paper uses three different tax havens lists which makes it not dependent on only one classification. Due to the estimation procedure, the paper cannot produce lost tax revenue estimates for tax havens themselves, since the tax haven related FDI is the comparison group.

5.4.4 Cobham, Janský, and Mareš (2019)

Cobham, Janský, and Mareš (2019) estimate the global trade reporting gap at 9,561 billion USD. The paper starts with identifying what the trade reporting gap consists of and develops strategies to estimate these components with the bilateral trade data of UN Comtrade. The components identified are country misalignment, product misalignment, true unmatched trade, abnormal prices, trade costs, and a residual category.

The first three happen when exports and imports cannot be matched in the database. It should be possible to match each export reported by A to B with the import reported by B from A. These cannot be matched when transit trade happens (products are moved from A to C via B, then A might report B as the destination, while C reports A as the origin), classified as country misalignment. It could also happen that the customs classify the product in the wrong category: product misalignment. All other unmatched trade is then labelled as true unmatched trade. For the trade flows that can be matched, we can again distinguish three categories: abnormal prices, trade costs, and a residual.

The paper has an identification strategy for each type of trade misreporting. Matching unmatched exports with unmatched imports identifies the transit trade, hence the country misclassification. Product misclassification is more likely to happen at the granular level than the broader level, thus giving an indication for product misclassification. Abnormal prices are identified when the price in a trade flow is two standard deviations away from the world average price. Trade costs are calculated with three different estimates of which percentage of the trade is expected to be trade costs. The true unmatched trade and the residual are the rest categories for all other discrepancies for unmatched and matched trade flows, respectively.

The six categories of trade misreporting are not all completely, and not in the same way, related to IFFs. Cobham, Janský, and Mareš (2019) therefore state that the estimations do not directly proxy the scale of IFFs.

5.4.5 Murphy (2019)

Murphy (2019) estimates the EU tax gap—the amount of tax loss due to unpaid taxes—between 750 and 900 billion Euro per year. The estimates are based on two data sources: estimates on the size of the shadow economy as a percentage of GDP and the official GDP statistics. The main question is then, whether the shadow economy is already included in the GDP statistics or not. This is why the estimate is a range. If the shadow economy would be included in the GDP statistics, the resulting size of the tax gap would be 20 per cent higher³ than when it is not.

³ $(900-750)/750=0.2$

Besides this unknown factor, the preciseness of the estimation directly depends on the preciseness of the shadow economy estimates that are used, namely those of the European Commission (EC DGT 2018), Medina and Schneider (2018) and Raczkowski (2015).⁴ The latter two are based on the MIMIC estimation method, critically discussed by Breusch (2005).

5.5 Comparative Analysis

We compare the estimations on which this chapter focuses along the following five relevant aspects: Conceptual (What is estimated?), Empirical (Which data is mainly used for the estimation?), Methodological (Which method is used?), Limitations (Which assumptions are needed? How sensitive are the results?) and the Results (What is the estimated amount?). Table 5.3 shows these five aspects for the four selected estimations.

Each of the estimations analysed here estimates a (very) different part of the illicit financial flows. Each estimation uses (very) different data sources and has its own estimation procedure, which leads to very different limitations. It is therefore not surprising that the estimates are very far apart. The highest estimate of 9,561 billion USD worldwide is almost 50 times larger than the lowest estimate of 125 billion USD.

5.6 Conclusion

Recent tax policies largely happened parallel and uncoordinated (see Chapter 1). The estimations of IFFs reflect a similar pattern. Each estimation has its own method, its own data source, and its own definition of what is measured. We now have many estimations—too many to draw insightful conclusions except for the fact that IFFs are big. It might be time to try and combine all the different insights to get a better overall view. An important first step might be to know what is exactly measured. The term ‘Illicit Financial Flows’ seems to have become a bit of a floating identifier, a term that is vague enough to be used for many different concepts, but it is, therefore, losing its meaning. The phenomenon illicit financial flow is a broad term in general. It might be time to disaggregate the term and specify what is measured exactly (see also Reuter 2017) and for which purpose it can be used.

The question is whether it is realistic that we can ever measure the size of these flows with precision since these flows are by definition hidden from authorities

⁴ The estimates of these three studies are averaged (with equal weight) to get the percentage on which the estimate of Murphy (2019) is based.

Table 5.3 Comparative table of COFFERS-related estimates

Study	Concept	Main data used	Methodology	Limitations	Result
Ferwerda et al. (2020)	Money Laundering	UN crime statistics and Dutch transactions suspicious of money laundering	Simulation with out-of-sample predictions based on money laundering logic uncovered with panel data regressions	Sensitivity of parameters taken from an earlier study and how representative the data of the Netherlands is	2,333 billion USD worldwide
Janský and Palanský (2019)	Lost tax revenues from FDI related profit shifting	Bilateral FDI stocks (incl. SPE related), FDI income, and three lists of tax havens	Fixed-effect panel data regressions to find how much lower the rate of returns are when FDI is related to a tax haven	Other reasons for lower rate of return, sensitivity of tax haven classification, model doesn't produce lost tax revenue estimates for tax havens	125 billion USD worldwide
Cobham, Janský, and Mareš (2019)	Trade misreporting	UN Comtrade	Match exports with imports and identify six different ways in which trade misreporting can happen (with an estimation strategy for each)	The six categories of trade misreporting are not completely, and not in the same way, related to IFFs, therefore the estimations do not directly proxy the scale of IFFs	9,561 billion USD worldwide
Murphy (2019)	Tax Gap	Shadow economy estimations and GDP statistics	Multiplying shadow economy estimates (as % of GDP) with (grossed up) GDP	Relies on estimates with limitations that transfer to this estimation	750–900 billion Euro for the EU

Source: Made by the authors. This summarizing table leaves out many details by definition.

and researchers and masked as other, legitimate, flows. Since the concepts contained within the container term of illicit financial flows are so different in nature, shape, and scale, it might also be unrealistic to think we will ever have one estimation model to estimate the whole phenomenon. However, this does not mean that different estimation procedures cannot learn from each other and that triangulation is not possible soon, after disaggregating what is estimated. In addition, estimates over time of the diverse approaches might give indications whether IFFs decline and tax policy has been effective.

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6

The Corporate Tax Haven Index

A New Geography of Profit Shifting

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6.1 The Emergence of a New Geography of Profit Shifting

In recent years, major data leaks from the Lux Leaks to the Paradise Papers have revealed the extent and systematic nature of the efforts of multinational corporations and their professional advisers to minimize their global tax payments. Central to these efforts are the deeply flawed international tax rules set by the Organization of Economic Co-operation and Development (OECD), and the role of individual jurisdictions that compete to attract the shifting of profits at the expense of the countries where multinationals' real economic activity takes place. But those leaks, and the limited accounting data that multinationals are required to publish, provide only the most partial basis to analyse the relative importance of profit shifting jurisdictions or corporate tax havens.

The OECD is currently, at the behest of the G-20 group of countries, engaged in further reform of the international tax rules. This follows the Base Erosion and Profit Shifting (BEPS) initiative, which ran from 2013 to 2015 and is widely seen to have failed to address the single, stated aim: to reduce the misalignment between the location of multinationals' real economic activity, and where the resulting profits are declared for tax purposes. The new process, sometimes referred to as BEPS 2.0, is premised on a more radical shift in tax rules.

In the 1920s and '30s, the League of Nations settled upon the separate entity approach as the basis for allocating taxing rights between member states. This approach rests on the assumption that profits can be determined for the individual entities within a multinational group, by assuming that each is individually profit-maximizing and then ensuring that transactions between group entities are priced as if they were conducted between unrelated parties, i.e. at arm's length (market) prices. This assumption is of course economically illogical, since if the entities would be trading at arm's length prices, there would be no rationale for multinationals to exist as it could purchase its inputs from unrelated parties in the market place.

Nonetheless, the separate entity approach went mostly unchallenged in the international tax sphere for many decades. The growing complexity of multinational groups, and their growing use of professional advisers and appetite to avoid paying tax, did lead to growing complexity in the tax rules to keep pace. Although lower-income countries may have found it hard to obtain tax revenues from multinational companies, no disquiet appeared to trouble the OECD group of rich countries.

A narrative persisted that multinationals avoiding tax were simply behaving smartly, acting in the interests of their headquarters countries as national champions, and/or meeting fiduciary duties to shareholders. The imagined geography of corporate tax havens was largely as a collection of small islands in the English Channel and the Caribbean. Any important revenue losses may have been thought to fall on OECD members, who perhaps choose to tolerate it through the combination of a desire to support ‘their’ multinationals, and/or a willingness to tolerate the naughtiness of current and former dependent territories.

Only after the global financial crisis that began in 2008, did a set of major, high-income economies experience the type of fiscal squeeze and political pressures to address corporate and other tax abuses that were more familiar to many lower-income countries. With this political pressure in the tax ecosystem (Chapter 2) there began a change in narratives also. Tax avoidance and evasion have come increasingly to be seen not as smart but as fundamentally anti-social, the identification of multinationals as national champions is rather more contested, and the idea of a fiduciary duty to minimize tax for shareholders has been largely debunked (Chaffee and Davis-Nozemack 2017).

The BEPS process initially appeared to open the door to moving beyond the arm’s length principle, but was refocused into a defence—patching up weaknesses rather than taking a more radical approach. While lower-income countries were invited into some parts of the discussion, they had little or no say on the final outcome. In exchange for signing up to the agreed BEPS package, however, they were invited to join a newly established ‘Inclusive Framework’, with the intention that this would negotiate any future reforms—although none were then anticipated.

The discontent at BEPS led rapidly to other changes for a range of actors in the tax ecosystem, however. The European Union’s (EU) interest was re-energized in the Common Consolidated Corporate Tax Base proposal, based on a single set of rules to calculate companies’ taxable profits in the EU and then share that profits between the Member States in which real economic activity takes place, using an apportionment formula (European Commission 2016). The United States passed a dramatic tax cut, the Tax Cut and Jobs Act with some key elements to limit avoidance that represent a clear break with the separate entity approach. The tax abuses of predominantly US-based digital companies were a particular source of concern, and a range of countries began to introduce unilateral tax measures to curtail these.

By 2018, the G-20 were debating the nature of a new mandate to require a much more substantial reform from the OECD, designed to ensure a coherent approach *in lieu* of a continuing divergence of potentially overlapping unilateral fixes. Specifically, the new reforms were said to go beyond the arm's length approach. A number of OECD members had taken up an approach long popular with the big four accounting firms: the residual profit split. Approaches of this type identify 'routine' profit in various ways, for example applying a fixed return to capital (tangible assets). The remaining profit, labelled 'residual' or 'non-routine' profit, is then assessed at the global level and apportioned between countries of operation on the basis of the location of real economic activity.

For the first time, too, lower-income countries have had a degree of meaningful representation in the process and responded to other actors and the pressure on the tax ecosystem. The G-24 group of countries tabled a proposal at the Inclusive Framework meeting in January 2019, which was carried forward as one of three to be considered, during the first part of the process. This proposal, for a 'fractional apportionment' that is a method using a formula to allocate a fraction of the profit to the market jurisdiction, differs from the main residual profit split in two main ways but also shares two essential common features (OECD 2019b). The differences are, first, that the G-24 approach emphasizes the importance of employment as a location factor (whereas the residual profit split measures have emphasized the location of sales), so the G-24 approach balances the role of production with that of consumption; and, second, that the G-24 approach apportions all profits on the basis of activity, instead of only some 'residual' element.

At the level of principle, the two common elements between the approaches are rather more important. First, both include an assessment of multinationals' profit at the global (group) level, rather than that of separate entities within the group. Second, this unitary approach is followed by a formulary apportionment: a distribution of that group profit between countries, as tax base, on the basis of factors of real economic activity. In this way, all the approaches under consideration as at October 2019 represent a fundamental break in principle with arm's length pricing, and a move towards unitary taxation and formulary apportionment in order to achieve the continuing goal of reducing the misalignment between profits and the location of real activity.

It remains uncertain to which extent, in practice, any agreed BEPS 2.0 reforms will deliver realignment of profits with activity. But the normalization of these new principles is already well underway—and has been in effect since the first BEPS process adopted the single goal of realignment that could not be delivered by arm's length pricing. This shift seems likely to guide future reforms too, with separate entity accounting increasingly left behind.

With this shift, the implied geography of profit shifting has also itself been evolving. Instead of small palmy islands being cleverly exploited by accountants, the outlines of this new geography reflect a view of states as deliberately seeking to

procure profit shifting at the expense of their global neighbours. This brings with it the opportunity to apply more rigorous criteria in order to provide a robust identification of corporate tax havens, for both research and policy purposes. This identification is the focus of this chapter.

Researchers have long shared an appetite for using binary tax haven lists with policy-makers. National tax haven blacklists were first applied in a context of national tax policy-making in Australia and France in 1975 (Gordon and United States Internal Revenue Service 1980; Meinzer 2016; *Taxation Administration Act* 1974; *Banking Act* 1974) and Japan in 1978 (Ishiyama 1980). Around the same time, academics started compiling and using such binary lists (Irish 1982), before finally starting to shape major international tax policy programmes with the OECD's harmful tax competition project 1998 (OECD 1998) and the first concomitant list published in 2000 (OECD 2000). The latest iterations of these listing exercises include the OECD 2009 black-grey-white list of jurisdictions that meet or fail to commit to the 'internationally agreed tax standard' (OECD 2009), and the 'EU list of non-cooperative jurisdictions for tax purposes' published for the first time in 2017 by the European Commission (Council of the European Union 2017).

These approaches to listings of tax havens are flawed to varying degrees because of two main reasons (Cobham et al. 2015). First, the listings pressure states directly into reforming their laws by dividing them up in two dichotomous categories, ignoring both nuances in their respective specialization and the degree to which countries have adopted undesired policy positions. Second, the definition of the criteria and the evaluation process to categorize countries have been criticized for lacking transparency and consistency, resulting in biases and preferential treatment of club members (Sharman 2006, 2010).

While recent international listing exercises have become marginally more transparent and replaced the binary with a three-tiered classification (black-grey-white), the fundamental problem remains that members and powerful jurisdictions appear to successfully ensure preferential treatment (Meinzer 2016; Lips and Cobham 2017; Knobel 2018a, 2018b). The resulting inconsistency in the lists not only undermines the effectiveness of policy measures to counter illicit financial flows, but can also distort and insert biases in academic research (Cobham et al. 2015).

To address these flaws, and as regards global financial secrecy driving illicit financial flows, the Financial Secrecy Index (FSI) has been published since 2009 (Chapter 8 analysis of financial secrecy and transparency). As an alternative to government-led listings, it provides a fully transparent analytical tool for comparative monitoring and ranking. Yet, neither tax abuse by multinational companies nor the contribution to the race to the bottom in corporate taxation have been fully captured by the FSI, as its indicators focus more on secrecy than on corporate tax, and on portfolio financial flows in lieu of foreign direct investment

(FDI) or corporate profits. The Corporate Tax Haven Index (CTHI), published for the first time in May 2019, fills this gap by measuring how intensely a jurisdiction abuses its autonomy over corporate income tax (CIT) rules to enable and incite tax spillovers that affect other jurisdictions' rule setting and tax mix autonomy; and how 'successful' a jurisdiction is in pursuing this corporate tax haven strategy.

In 2014, an International Monetary Fund (IMF) report established how a country's corporate tax system may generate macro-relevant effects on other countries via two channels: 'base spillovers' and 'strategic spillovers' (IMF 2014). The 'base spillover' concept includes changes in taxable profits 'in reflection of both real responses (through investment and the like) and profit-shifting responses (affecting, loosely speaking, only where profits are booked for tax purposes)' (IMF 2014, p. 13). The 'strategic spillover' effect refers to "tax competition" in its broadest sense—most obviously in the potential form of a "race to the bottom", as countries respond to lower CIT rates elsewhere by reducing their own rates' (IMF 2014, p. 13).

Tax spillovers not only lead to an erosion of the tax base in other countries, but also affect countries' democratic choices over the tax mix. Confronted with the exit threat of corporate players, tax policy-makers tend to respond by increasing the share of more regressive indirect taxes in the tax mix, and to steer the total tax mix away from progressive direct taxes. Over the last twenty years, the tax mix has shifted with corporate income taxes contributing less.¹

By employing different policies, jurisdictions unwillingly enable or wittingly incite tax spillovers from other countries. They may levy lower statutory corporate tax rates than other states, restrict the scope of or insert gaps and loopholes into corporate tax rules, push down withholding rates in double tax treaties, and dispense with anti-avoidance and transparency policies. In each of these policy areas, jurisdictions can choose to engage in more or less aggressive tax poaching policies. As a result, each jurisdiction's policies can be placed on a spectrum of corrosiveness of its corporate tax rules, resulting in a more nuanced picture than the established binary 'blacklists' of corporate tax havens. By placing each jurisdiction's corporate tax policies, the index takes into account that 'virtually any country might be a "haven" in relation to another', as Sol Picciotto famously put it (Picciotto 1992, p. 132).

The first ever study of its size and scope, the CTHI ranks countries according to objectively verifiable measures that evaluate their attempts to procure profit shifting from elsewhere. The index achieves this by combining a haven score

¹ According to Oxfam, between 2007 and 2015 in an unweighted sample of 35 OECD countries and 43 non-OECD countries, corporate income taxes decreased by an average of 0.4 per cent points of Gross Domestic Product (GDP), while payroll taxes and taxes on goods and services increased by 0.6 and 0.3 per cent points of GDP, respectively (Lawson et al. 2019). VAT and other consumption taxes represent currently 39 per cent of tax revenues in the group of 78 countries while corporate income taxes represent 11 per cent (Lawson et al. 2019).

(assessing tax systems based on the degree to which they enable corporate tax avoidance) with a measure of the scale of multinational corporate activity, to create a comparable measure of the risk of tax avoidance posed by each country.

The CTHI confirms some crucial existing findings on the key players in profit shifting, but also reveals for the first time the global geography of the phenomenon. The new geography confirms the critical role of a range of OECD members to construct niches for their continued extraction of rents and evolution in the tax ecosystem, shedding new light in turn on that organization's failure thus far to address the problem of tax abuse. Rather than being the (more or less willing) victims, as suggested by the previously understood geography of profit shifting, OECD members are among the key perpetrators and also act as important proponents of others' corporate tax havenry.

In the next section, we present the methodology of the CTHI. Section 6.3 lays out the resulting scores and rankings: the new geography of profit shifting. A final section concludes by discussing how these findings, as they contrast with the implied geography of the international policy debate, are likely to shape that debate and the future governance of this policy space.

6.2 The Corporate Tax Haven Index: Methodology

The CTHI focuses on the corporate income tax rules and practices applicable to (large) multinational enterprises' profits (including capital gains).² The Index is a combination of two components: the Haven Score (HS), which is a qualitative component derived from data collected for 20 indicators based on laws, regulations and documented administrative practices in the jurisdictions; and the Global Scale Weight (GSW), which measures the relevance of each jurisdiction for cross-border direct corporate investment. The HS and the GSW are then combined to produce the CTHI value, which determines the ranking.

The HS measures the potential risk for a jurisdiction to become a profit shifting destination, that erodes tax bases elsewhere, and to create spillovers effects into other jurisdictions' tax base and policies; thereby leading a race to the bottom in corporate taxation. The combination of the HS with the GSW results in the actual risk (or what social scientists label 'impact propensity') for a jurisdiction to have these effects. By combining the two components, we aim to capture the actual risk, in a ranking of the jurisdictions that contribute most to (i) the global race to the bottom in corporate taxation; (ii) the erosion of corporate income taxes globally; and (iii) constraining the tax policy space elsewhere.

² This section has been taken from an already published report: (Tax Justice Network 2019a). The authors and the publisher of the original report kindly gave their permission for reuse of the text in this chapter. We are grateful for valuable comments on this section by Frederik Heitmüller.

6.2.1 Haven Score

Table 6.1 provides an overview of the components of a jurisdiction's overall HS. It is constructed as the average of five category HSs, out of a total of twenty haven indicators. Each indicator is given a score between zero (no risk, zero corporate

Table 6.1 Haven indicators, categories, and overlaps with OECD, IMF, and EU initiatives

HI #	Haven indicator category	Haven indicator	OECD BEPS ³	IMF spillover	EU/state aid	
1	Lowest available corporate income tax rate (LACIT)	LACIT		X	X	
2	Loopholes and gaps	Foreign investment		X		
3		Income treatment				
4		Loss utilization				
5		Capital gains taxation			X	
6		Sectoral exemptions	X			
7		Tax holidays and economic zones	X			
8		Patent boxes	X			
9		Transparency	Fictional interest deduction			
10	Public company accounts					
11	Country by country reporting				X	
12	Local filing of country by country reporting		X			
13	Tax rulings and extractive contracts		X		X	
14	Reporting of tax avoidance schemes				X	
15	Tax court secrecy					
16	Anti-avoidance		Deduction limitation for interest	X	X	X
17			Deduction limitation for royalties		X	
18			Deduction limitation for service payments		X	
19		Dividend withholding taxes				
20	Double tax treaty aggressiveness	Controlled foreign company rules	X	X	X	
		Double tax treaty aggressiveness		X		

³ Among others, Action Plan 5 relates to Haven Indicators 5 (Sectoral exemptions), 6 (Economic zones and tax holidays), 7 (Patent boxes) and 12 (Unilateral cross-border tax rulings).

tax haven attributes) and 100 (high risk, full corporate tax haven attributes). Jurisdictions with no CIT regime or with zero statutory corporate income tax rate⁴ are defined, by default, as having the highest HSs for four of the five categories, except for ‘transparency’, where an analysis was still carried out to determine the level of secrecy/transparency.

The HS is the arithmetic average of the five category scores, as follows:

$$\text{Haven Score}_i = \frac{[LACIT]_i + [Loopholes \ \& \ Gaps]_i + [Transparency]_i + [Anti - Avoidance]_i + [Treaty Aggressiveness]_i}{5}$$

The first category, comprised of one indicator, is the ‘Lowest Available Corporate Income Tax rate’ (LACIT). We take the widely used ‘highest statutory CIT rate’ only as a starting point for our legal analysis to derive the lowest rate for active business income available to subsidiaries of large multinationals. The process of deriving the LACIT from standard statutory CIT rate datasets entails up to three corrections and four adjustments to determine the LACIT rate. A key principle is to treat as equivalent low tax rates and tax base reductions available to subsidiaries of multinational companies.⁵ Each of the steps is separately documented and publicly explained based on sources from OECD BEPS Action Plan documents and peer reviews; European state aid investigations; reports from big four accounting firms; the International Bureau of Fiscal Documentation’s (IBFD) tax research platform and original legal analysis. The HS for LACIT is calculated by linearly scaling the LACIT of each jurisdiction against a Spillover Risk Reference Rate (SRRR), which is the highest observable CIT rate of a democracy (35 per cent in India as of April 2019). A hallmark of a functioning democracy is the right of citizens and the electorate of a jurisdiction to determine the tax mix of that jurisdiction. A jurisdiction’s decision for a high share of CIT in the tax mix and a high CIT rate is particularly vulnerable to being undermined by any other jurisdiction that implements lower rates. This is because under the current conditions of free investment flows and the arm’s length principle, profit shifting from high tax to low tax jurisdictions cannot be prevented. Therefore, all CIT rates applied by jurisdictions are scaled against that highest observable CIT rate of a democracy in order to determine the extent of tax avoidance risks which undermine democratic choices elsewhere.

⁴ According to OECD Stats (OECD 2019a). For jurisdictions not covered by OECD data, we relied on (KPMG 2019) or (IBFD 2019). The ten relevant jurisdictions are available here by filtering the data column for ‘0’: <https://www.corporatetaxhavenindex.org/ExcelUploadIDs/Id505.xlsx>; 17.9.2019.

⁵ For example, Malta, with a statutory CIT ordinarily reported at 35 per cent, operates a full imputation system. This system ensures that generally, six-sevenths of the tax paid is refunded upon distribution of profits and thus a much lower CIT rate applies. As a result of Malta’s imputation system, we set Malta’s LACIT at 5 per cent and not at the often reported statutory rate of 35 per cent (Tax Justice Network 2019a).

The second category ‘Loopholes and Gaps’ comprises seven indicators, analysing whether preferential tax regimes are available or if there are significant CIT base exceptions or rate concessions, including for specific sectors, or through tax holidays or economic zones. The loopholes and gaps score is the arithmetic average of the seven indicators. Haven Indicator 2 reviews if a country applies a unilateral tax credit, or if instead it excludes foreign investment income (dividends, interest, royalties) from the corporate income tax base, or if it exerts pressure on other jurisdictions to lower their tax rates. Haven Indicator 3 analyses if a country uses loss carry forward or unrestricted loss carry forward to enable multinationals to book huge losses for eliminating profits for tax purposes in the future, including profit shifted inwards from abroad.⁶ Haven Indicator 4 analyses the lowest available tax rate applicable to capital gains on domestic and foreign financial securities. While this tax rate might equal the LACIT rate in countries which have integrated capital gains taxation into their ordinary CIT base, other countries’ standalone capital gains taxation is analysed separately. Haven Indicator 5 reviews profit based tax incentives for particular economic sectors and activities, which are not time bound nor confined to economic zones (these are dealt with in Haven Indicator 6). Indicator 5 considers full or partial exemptions in both the investment sector (financial and/or real estate investment) and thirteen active business income sectors derived from the United Nations Statistics Division and from Eurostat, with data predominantly from the IBFD tax research platform (IBFD 2019) and accounting firm reports. Indicator 6 on tax holidays and economic zones reviews the existence of any profit-based partial or full exemptions available temporarily (tax holidays up to ten years) and/or in a geographically confined area (economic zones) to subsidiaries of multinational companies. Haven indicators 7 and 8 review the availability of standardized preferential tax treatment of royalty income (‘patent boxes’) or equity capital (fictional interest deduction).

The third category ‘Transparency’ consists of six indicators and considers if the jurisdiction implements robust transparency mechanisms to allow not only for public accountability of multinational companies’ financial and tax affairs, but also of tax administrations and tax courts. The transparency score is the arithmetic average of the 6 indicators. Haven indicator 9 analyses if all domestic types of companies with limited liability are required to publish annual financial statements online. Haven Indicator 10 reviews if companies incorporated in the jurisdiction or listed on local stock exchanges are required to publish worldwide

⁶ For example, the use of loss carry forward to minimize tax has been an element of Apple’s tax strategy in Ireland. In 2015, the inflation of debt and a multibillion-dollar purchase of Apple’s own intellectual property generated billions in recognized losses for Apple’s subsidiary in Ireland which were then written against profits from sales in Europe to reduce tax payments (Clancy and Christensen 2018; Seamus 2018).

financial statements on a country by country basis. This indicator is complemented by indicator 11, which checks if the legislation for accessing country by country reports (as required by OECD BEPS Action 13 (OECD 2015)) enables the domestic tax administration to directly access the reports from local subsidiaries of a multinational company. Haven Indicator 12 assesses if all relevant unilateral tax rulings and extractive industries contracts are published online. Haven Indicator 13 reviews the rules for mandatory reporting of tax avoidance schemes and uncertain tax positions, and if both taxpayers and advisers are obliged to report. Haven Indicator 14 analyses the openness of both civil and criminal tax courts and the online availability of judgements.

The fourth category, 'Anti-Avoidance' includes five indicators and analyses the extent to which jurisdictions enact robust rules constraining tax avoidance and profit shifting, e.g. by controlled foreign company rules (Indicator 19), by constraining the deductibility of intra-group outward payments (interest, royalties and certain service payments, Indicators 14, 15, and 16, respectively) and by levying a domestic withholding tax on outward dividend payments. The anti-avoidance score is the arithmetic average of the five indicator scores.

The fifth category, 'Double Tax Treaties Aggressiveness', comprises one indicator which considers the impact of a jurisdiction's network of Double Taxation Agreements on the Withholding Tax (WHT) rates in interest, dividend and royalties in treaty partner jurisdictions. It measures how aggressive a jurisdiction treaty network is on average in pushing down WHT rates in partner jurisdictions (by comparing the analysed jurisdiction's WHT rates with each treaty partner's total treaty network average WHT rates).

The 20 haven indicators are chosen and designed in order to measure the intensity of a jurisdiction's potential to poach the tax base of others, as enshrined in its laws, regulations and documented administrative practices. The following criteria have been taken into account in shaping the indicators: measuring the risk for tax avoidance, base erosion and profit shifting, profit misalignment, and race to the bottom in corporate income taxation; reflecting impact on the policy space over the domestic tax mix⁷ of jurisdictions elsewhere; protecting source country taxation rights (Musgrave and Musgrave 1972; Brooks 2008); allowing robust and valid comparative research findings with the limited resources and data available; ensuring in-principle-compatibility of the indicators with unitary taxation and formulary apportionment (Langbein 1986; Sikka and Murphy 2015; Picciotto 2017; Cobham and Nelson 2019).

⁷ Including on the tax mix of those democracies with the highest CIT, CGT, and WHT rates.

6.2.2 Global Scale Weight

The second component of the CTHI is the GSW defined as the share of each jurisdiction's FDI on the total global amount of FDI. The GSW thus represents a measure of the volume at stake in each country when assessing the risks associated with it being a corporate tax haven. In this section we describe in detail how we construct the GSWs for the CTHI.

We source the data on FDI from the IMF's Coordinated Direct Investment Survey (CDIS) which includes bilateral data on FDI using the so-called directional approach which requires reporting data on both inward and outward FDI in contrast to only reporting on aggregate inward FDI stocks. An important advantage of the directional approach is that it allows the derivation of inward (outward) FDI positions even for countries that do not report that data in the survey, simply by summing the values of outward (inward) FDI that other countries report for relationships with the non-reporting countries. In the CDIS, variables constructed in this way are called derived variables. We make use of this increased availability of data by using derived data where there is no reported data.

The CDIS⁸ contains a total of 137 483 bilateral observations of inward FDI stocks and 97 586 for outward FDI stocks, spanning over the time period 2008–17 (IMF 2019). For stocks of inward FDI, we use the variable called 'Inward Direct Investment Positions, US Dollars (IIW_BP6_USD)', and for stocks of outward FDI, we use the variable 'Outward Direct Investment Positions, US Dollars (IOW_BP6_USD)'. This data is recorded for the immediate counterpart economy; it thus does not capture information on the ultimate investor country. This means that some investment is counted multiple times in the data. For the purposes of the CTHI, this is an advantage, as we are interested also in investment that only flows through a jurisdiction, as these schemes can also be used to avoid corporate income taxation.

A total of 64 jurisdictions are considered in the CTHI, and we naturally need data on FDI for all these countries to be able to construct their GSWs and ultimately their final CTHI values. With a combination of reported and derived data, the CDIS covers all jurisdictions included in the CTHI.

To construct the GSW from IMF CDIS data, we proceed in four steps. First, for each bilateral (country-pair) relationship and separately for inward and outward data, we take the maximum of three values: reported FDI stock, derived FDI stock, and zero. We do this because the most likely explanation for different values of reported and derived data is under-reporting by the jurisdiction, as discussed in the CDIS Guide 2015. By using the higher of the two we aim to lower the risk of underreporting without running much risk of including values that are much

⁸ The version of the CDIS that we use for the CTHI was accessed at <http://data.imf.org/CDIS> in January 2019.

higher than reality. If both the reported and the derived value is negative (23 cases for inward data and 23 cases for outward data), we use zero, since negative values would decrease the country's total sum of FDI stock. More formally, for each country i and partner jurisdiction j , we derive the inward and outward FDI positions as:

$$\text{inward FDI position}_{ij} = \max(\text{reported inward FDI}_{ij}, \text{derived inward FDI}_{ij}, 0)$$

$$\text{outward FDI position}_{ij} = \max(\text{reported outward FDI}_{ij}, \text{derived outward FDI}_{ij}, 0)$$

Second, using these FDI positions, we sum the value of all N bilateral FDI stock positions of each country to calculate the total global inward and outward FDI stock positions of country i as:

$$\text{inward FDI position}_i = \sum_{j=1}^N \text{inward FDI position}_{ij}$$

$$\text{outward FDI position}_i = \sum_{j=1}^N \text{outward FDI position}_{ij}$$

Third, for each country i , we calculate the arithmetic average of its inward and outward FDI stock as:

$$\text{average FDI position}_i = \frac{\text{inward FDI position}_i + \text{outward FDI position}_i}{2}$$

Fourth, for each country, we take the share of this averaged value on the global total of averaged values to derive the GSW of jurisdiction i as:

$$\text{GSW}_i = \frac{\text{average FDI position}_i}{\sum_{i=1}^M \text{average FDI position}_i}$$

where M is the number of jurisdictions for which data is available.

In total, data on average FDI position in 2017 is available for 245 jurisdictions, out of which 64 are included in the CTHI. We find that the 64 jurisdictions considered in the CTHI together account for 84.9 per cent of all global FDI. The United States has the largest recorded share of global FDI with 12.9 per cent, followed by the Netherlands with 12.8 per cent and Luxembourg with 10.5 per cent.

6.2.3 Combining Haven Scores and Global Scale Weights

The final step in the creation of the CTHI is combining the GSWs with the HSs to generate a single number by which jurisdictions can be ranked, reflecting the

potential global harm done by each jurisdiction. To construct the CTHI, we combine GSWs with Haven Scores using the following cube/cubed-root formula:

$$CTHI_i = (HS_i^3 * \sqrt[3]{GSW_i}) / 100$$

In constructing the CTHI, we choose this formula because it fits well the objective of the CTHI—to measure a jurisdiction’s contribution to the global problem of corporate tax havens while highlighting harmful regulations of tax havens. In particular, we prefer this formula mainly due to two of its essential characteristics.

First, the formula ensures that both of the components of the CTHI play an important role in the final CTHI value. Due to the different empirical distributions of the two variables, a simple multiplication formula would make the CTHI ranking over-reliant on GSW and only marginally reliant on HS. Figure 6.1 shows the histograms of the two distributions. We observe that the distribution of the GSW is heavily skewed to the left, leaving little space for the heterogeneity in haven scores to be reflected in a simple multiplicative formula. Indeed, using a simple multiplication, the correlation between GSWs and CTHI values is 0.967 (and only 0.129 between HSs and CTHI values). Cubing HSs and taking a cube root of GSWs ensures that the role of the two variables is more balanced—in our final CTHI, the correlation between CTHI values and GSW is 0.484 (and 0.686 between CTHI values and HS). In this way, the formula highlights the role of harmful regulations of tax havens.

The second main advantage of the cube/cubed-root formula is that it is consistent with the FSI. While there are other formulas which would also achieve the objective of highlighting harmful regulations of tax havens (and we have explored and carefully considered a number of such options), the cube/cubed-root formula ensures that the CTHI can be directly compared to the results of the FSI.

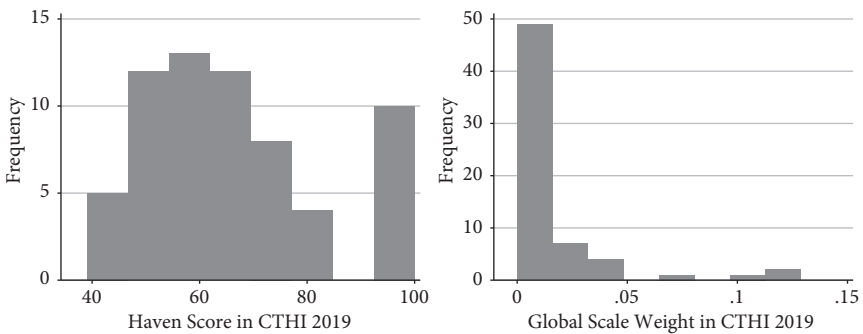


Figure 6.1 Histograms of haven scores and global scale weights of the CTHI.

Source: Author-made.

We proceed with one additional step to arrive at the final number that measures a jurisdiction's contribution to the global problem of corporate tax havens. We take the share of each jurisdiction's CTHI in the total sum of CTHI scores for all jurisdictions. Assuming that the sum of CTHI scores for all 64 jurisdictions can be considered as the total global contribution to the problem of corporate tax havens, the constructed shares will represent each jurisdiction's contribution, in percentage terms, to the global problem of corporate tax havens. This contribution of jurisdiction i is thus defined as follows:

$$\text{Contribution to global tax havenry}_i = \frac{CTHI_i}{\sum_{j=1}^{64} CTHI_j} * 100\%$$

We present the results of the CTHI 2019 in four parts: HSs, GSWs, CTHI value, and contribution to the global problem of corporate tax havens. The full results for all 64 jurisdictions are reported in Annex A.

6.3 Data Analysis and Key Findings

6.3.1 Data Analysis

The CTHI is a ranking of jurisdictions based on how much they contribute to the global problem of corporate tax havens. Figure 6.2 illustrates the patterns of HSs and GSWs that underpins the ranking.⁹ Note the preponderance of jurisdictions in the northwest of the diagram, with high haven scores but very low scale—a group we might label 'unsuccessful procurers'. To the northeast of the figure we find a small number of states with major GSWs *and* high HSs: not the near-total haven aggressiveness of the northwest corner, but a much more globally significant due to the success in attracting multinational capital flows.

The index reflects both haven aggressiveness and scale, including states in the northeast corner and northwest quadrant of Figure 6.2. Table 6.2 shows the results for the top fifteen corporate tax havens. The top ten jurisdictions alone are responsible for over half (52 per cent) of the world's corporate tax avoidance risks as measured by the CTHI. Over two-fifths of global FDI¹⁰ reported by the

⁹ This section draws on passages from an already published article: (Tax Justice Network 2019b). The author and the publisher of the original article kindly gave their permission for reuse of the text in this chapter.

¹⁰ We use foreign direct investment data from the IMF that are recorded for the immediate counterpart economy only, implying that we are not able to capture information on ultimate investor or host country, nor to capture round-tripping and other similar phenomena. On this topic, important new research by Daniel Haberly at the University of Sussex (launched at the Tax Justice Network annual conference at City University, London on 2 July, 2019) demonstrates how much new methods and data combinations can add to our understanding of the global foreign direct investment distribution.

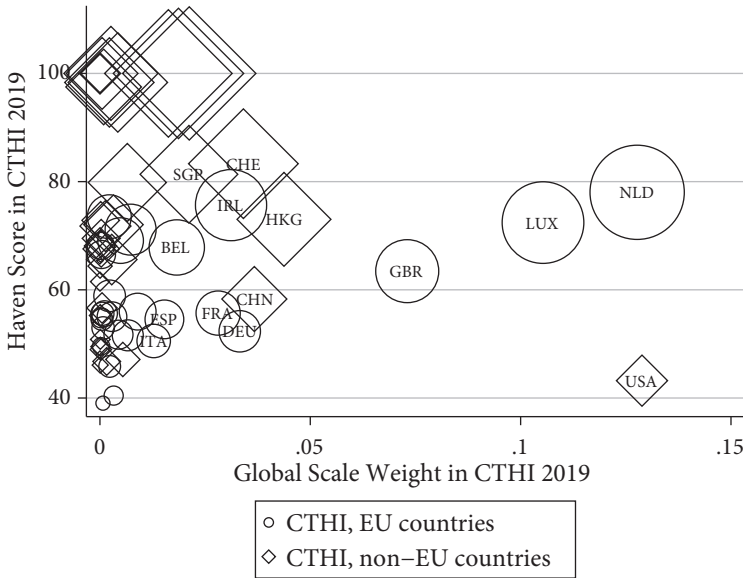


Figure 6.2 Haven scores, global scale weights, and the resulting CTHI values.
 Source: Author-made. Country names in ISO-3 codes. Size of circles equals contribution to global tax havenry as expressed by the CTHI value, see Table 6.2, column 5.

Table 6.2 Top 15 CTHI jurisdictions

Rank	Country	Haven score	Global scale weight (%)	CTHI	Contribution (%)
1	British Virgin Islands	100	2.12	2769.1	7.29
2	Bermuda	100	1.87	2653.0	6.98
3	Cayman Islands	100	1.63	2534.1	6.67
4	Netherlands	78	12.77	2390.9	6.29
5	Switzerland	83.3	3.41	1875.3	4.94
6	Luxembourg	72.4	10.53	1794.9	4.73
7	Jersey	98.3	0.43	1541.5	4.06
8	Singapore	81.4	2.12	1489.2	3.92
9	Bahamas	100	0.26	1377.8	3.63
10	Hong Kong	73	4.38	1372.4	3.61
11	Ireland	75.7	3.12	1363.4	3.59
12	United Arab Emirates	98.3	0.22	1244.8	3.28
13	United Kingdom	63.5	7.30	1067.9	2.81
14	Mauritius	79.8	0.65	950.1	2.50
15	Guernsey	97.5	0.09	890.8	2.35

Source: Author-made.

IMF is booked in these ten countries, where the LACITs averaged 0.54 per cent. The top three ranked jurisdictions are part of the British-controlled network of satellite jurisdictions to which the United Kingdom (UK) has outsourced some of its corporate tax havenry.

The leading jurisdictions pose a double threat to the international corporate tax system. First, the scale at which these jurisdictions have enabled corporate tax avoidance, in order to woo multinational corporations, has made other countries' statutory corporate tax rates increasingly irrelevant in determining the effective tax rate on actual profits. Second, the jurisdictions are key players in promoting a 'race to the bottom' that further depletes tax revenues. Countries desperate to maintain or attract (genuine) foreign investment engage in the pursuit of a false 'tax competitiveness' and increase their complicity in corporate tax havenry. Figure 6.3 shows both the broad relationship between haven scores and the volume of FDI booked through each jurisdiction, but also that there can be large variations. Some very aggressive jurisdictions have largely failed to capture FDI; while at some levels of FDI intensity, jurisdictions covering almost the entire range of haven scores are observed. The picture is complicated by available FDI

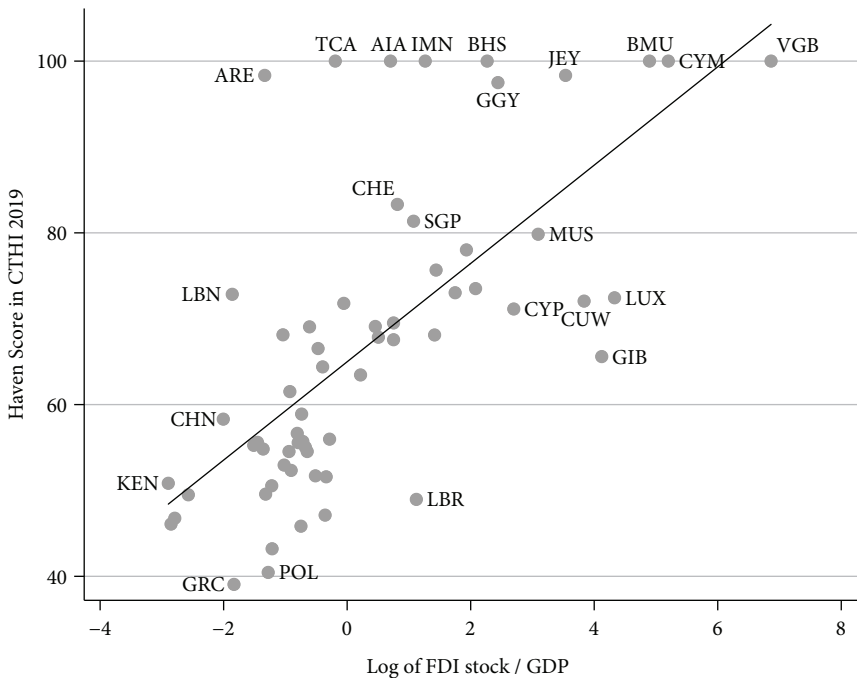


Figure 6.3 Haven scores and volume of foreign direct investment.

Source: Authors. Country names in ISO-3 codes. The relationship between Haven Scores and FDI/GDP is statistically significant at the 1% level.

data being characterized by difficulties in distinguishing between genuine productive investment and the simple booking on paper of conduit investment.

The corporate tax avoidance risks and corrosive lose-lose outcomes documented by the new index illustrate that what is often referred to as ‘tax competition’ may be more aptly described as ‘tax war.’ The combination of eroded fiscal sovereignty, and pressure to exert remaining sovereignty in a downward direction only, is a potent threat.

Figure 6.4 highlights a particular result of the research: namely the pattern of discrepancies between statutory tax rates and the LACIT. The discrepancies range from zero, both for jurisdictions such as British Virgin Islands that openly advertise the absence of corporate tax and those strong performers on the index that do not seek to procure profit shifting; to the EU havens, which often exceed a discrepancy of 20 per cent points due to the constructed divergence of their statutory rates and the largely hidden LACIT rates.

In the remainder of this section, we explore the findings in respect of the UK’s dominant responsibility for corporate tax avoidance risks; and the colonial roots of many exploitative double tax treaties.

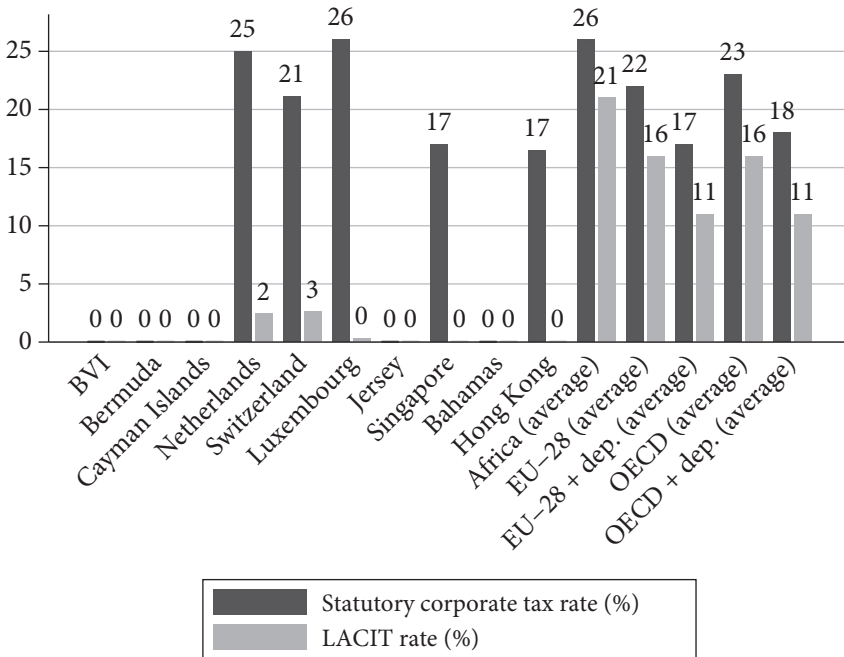


Figure 6.4 LACIT and discrepancy to statutory tax rates for top ten CTHI countries and regions.

6.3.2 Key Findings: UK Role and Responsibility

The CTHI documents a corrosive corporate tax war waged by the UK against the ordinary citizens of rich and poor countries through a network of satellite jurisdictions to which the UK has outsourced some of its corporate tax havenry. While the UK ranks 13th on the index, its Overseas Territories and Crown Dependencies dominate the top of index. The British Virgin Islands, Bermuda, the Cayman Islands and Jersey ranked first, second, third and seventh respectively. Bahamas, a British Commonwealth territory, ranks in ninth.

The UK with its corporate tax haven network is by far the world's greatest enabler of corporate tax avoidance and has single-handedly done the most to break down the global corporate tax system, accounting for over a third of the world's corporate tax avoidance risks as measured by the CTHI. That's four times more than the next greatest contributor of corporate tax avoidance risks, The Netherlands, which accounts for less than 7 per cent.

Nearly 14 per cent of foreign direct investment reported by the IMF—over \$6 trillion—is booked in the UK network, where the LACIT averaged 1.73 per cent.

Of the ten jurisdictions whose tax systems received the highest corporate tax haven scores for enabling corporate tax avoidance, eight are part of the UK network: the British Virgin Islands, Bermuda, the Cayman Islands, the Isle of Man, Turks and Caicos, Anguilla, Jersey, and Guernsey.

6.3.3 Key Findings: Double Tax Treaties—Colonial Roots

The CTHI has revealed an aggressive dispossession of low income countries' tax rights spearheaded by the United Arab Emirates, the UK and France. Out of all double tax treaties negotiated by jurisdictions ranked by the CTHI with low income and lower-middle income countries, 75 per cent secured reduced withholding tax rates from low- and lower-middle income countries that were below the average withholding tax rates those countries offered. Thus, the reduced treaty withholding rates enabled those jurisdictions to strip away poorer countries' few defences against illicit financial flows. The double whammy of corporate tax avoidance risks and reduced withholding rates makes it incredibly difficult for low income countries to stop the syphoning of tax revenues from their economies.

The world's most aggressive countries in terms of driving down other countries' withholding tax rates through treaties are:

1. United Arab Emirates
2. United Kingdom
3. France
4. Switzerland

5. Netherlands
6. Sweden
7. Ireland
8. Spain
9. Cyprus
10. Austria

Among OECD countries ranked by the CTHI, 72 per cent of treaties negotiated with low- and lower-middle income countries secured reductions in withholding tax rates to below the average withholding tax rates offered by those low- and lower-middle income countries. Moreover, the OECD countries on average were 41 per cent more aggressive towards low- and lower-middle income countries than were non-OECD countries.

Former colonial empires France and the UK are the most aggressive among OECD countries towards low- and lower-middle income countries. The reduced withholding tax rates that France negotiated with low- and lower-middle income countries were on average 8 per cent points below the average withholding tax rates offered by those countries. The reduced withholding tax rates that the UK negotiated with low- and lower-middle income countries were on average 7 per cent points below the average withholding tax rates offered by those countries. France secured the greatest average withholding tax reductions from Uzbekistan (18 per cent points), Niger (15 per cent points) and Togo (15 per cent points)—whose combined GDP is 50 times poorer than that of France. The UK secured the greatest average withholding tax reductions from Ukraine (19 per cent points), Myanmar (18 per cent points) and Kosovo (16 per cent points)—whose combined GDP is 14 times poorer than that of the UK.

The United Arab Emirates and Mauritius are the most aggressive countries ranked by the CTHI towards African countries. The United Arab Emirates secured the greatest average withholding tax reductions from Mozambique (25 per cent points), Kenya (24 per cent points) and Sudan (2 per cent points). Mauritius secured the greatest average withholding tax reductions from Senegal (35 per cent points), the Republic of Congo (28 per cent points) and Tunisia (25 per cent points).

6.4 Conclusions

The evolution of debate on the international tax rules has focused attention on the now-agreed goal of reducing misalignment between the location of multinationals' real economic activity, and where their profits are declared for tax purposes. This, in turn, has contributed to greater clarity about the behaviour of jurisdictions in procuring profit shifting from one another, with the damage to tax

sovereignty this implies. The CTHI builds on this clarity to construct a ranking, based on transparent and objectively verifiable criteria for the aggressiveness with which jurisdictions seek to procure profit shifting, and their importance in global FDI flows. The combination of the two components allows the index to rank the overall risk that jurisdictions pose by promoting corporate tax abuse.

The construction of the index for its initial (2019) edition has generated a number of insights. Central to these is the idea of a new geography of profit shifting, characterized by three key facts. First, while the image of small islands as significant players is confirmed, they are joined by equally important havens among EU member states. Second, the global dominance of the UK network of secrecy jurisdictions that the FSI reveals, finds a parallel in the dominance of the UK's corporate tax abuse network. Third, we show that patterns of colonial exploitation remain central to the widespread existence of double tax treaties with former colonial powers that systematically disadvantage low- and lower-income countries.

The political implications of this new geography and the associated narrative shifts may eventually be powerful. At the level of the tax rules themselves, it seems likely that there will be a continuing growth of interest in unitary tax approaches and formulary apportionment, due in part to the relative simplicity of the proposal but also to the transparent way in which the approach can deliver greater alignment between multinationals' economic activity and taxable profits.

At the level of the global governance of tax, the index poses further problems for the OECD group of countries. The clearer becomes the role of major OECD members in driving the problem of profit shifting, the greater the pressure will be for policy-making to be fully opened up to lower-income countries. A crucial question will be whether the OECD is capable of delivering this opening itself—that is, whether leading OECD members are ultimately willing to cede some power in order to maintain the institution's preeminent role in providing a common basis for international tax rules. The most obvious alternatives, not mutually exclusive over different time periods, are for a splintering of the international rules into unilateralism, with the potential for substantial double taxation to emerge; and for a shift to a policy forum in the United Nations, to provide the greater transparency and accountability that the OECD has thus far resisted.

A further question relates to the future role of data in the debate. The OECD planned publication of aggregate statistics on multinationals' country-by-country reporting may come to allow ongoing, direct scrutiny of misalignment. Moves to require publication of company-level country-by-country reporting, for example in legislative initiatives at the EU and also in soft law through the forthcoming tax standard of the Global Reporting Initiative, would further accelerate this scrutiny and likely policy responses. In addition, the CTHI may become established as a

regular reminder of the distribution of responsibilities, the aggressiveness of individual jurisdictions in undermining their global neighbours, and indeed of the new geography of profit shifting.

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Capital Taxation and International Cooperation

The Causes and Consequences of Automatic Exchange of Information

Leo Ahrens, Fabio Bothner, Lukas Hakelberg, and Thomas Rixen

7.1 Introduction

Internationally mobile capital is hard to tax. Wealthy individuals can evade taxes by investing in secretive tax havens and (illegally) failing to report their capital income to their home tax administrations. Multinational corporations can avoid paying taxes by (legally) shifting their (paper) profits to low tax countries. Public scandals such as the Panama Papers, Paradise Papers, and Lux Leaks, combined with significant deficits in public budgets in the aftermath of the financial crisis, have raised the political salience of these practices. Enjoying a significant boost due to increased public pressure, the OECD, coordinating the international community's actions against international tax flight since the 1960s, (re)launched two policy processes. First, it revived the OECD Harmful Tax Competition initiative, first launched in 1998 (OECD 1998) that aims at improved financial transparency to fight international tax evasion of (mostly personal) portfolio capital. Second, it launched a new policy process against 'base erosion and profit shifting (BEPS)' in 2012 (OECD 2013) that aims at international tax avoidance by multinational corporations (MNC). The first policy process culminated in the adoption of automatic exchange of taxpayer information (AEI). In 2014, 51 countries adopted the so-called common reporting standard (CRS) by multilateral agreement (OECD 2014), and a further 58 have joined since, including all countries formerly notorious for their financial secrecy.¹ This agreement was widely hailed as a breakthrough in the fight against international tax evasion (Christensen and Hearson 2019). According to most observers, however, the BEPS project has so

¹ OECD (2019a).

far failed to deliver substantial progress in the fight against (legal) tax avoidance (Büttner and Thiemann 2017; Lips 2019).²

These developments raise interesting questions of high policy relevance. In this contribution, we provide an overview of the questions and the answers we found in our research and in that of other international tax scholars. First, how can we explain the different outcomes of the initiatives against tax evasion and tax avoidance? Why was the international campaign against tax evasion successful, whereas the campaign against avoidance failed? We argue that the difference is explained by domestic politics in the hegemonic state (USA), enabling credible sanction threats against governments providing financial secrecy, but not against governments abetting corporate profit shifting.

Second, having investigated the causes of these policy outputs, we focus on their consequences and effectiveness. In the ecosystem metaphor of the ‘Combatting Fiscal Fraud and Empowering Regulators (COFFERS)’ project (Chapter 2), we analyse the impact of a Darwinian shock on national jurisdictions. Has AEI really made a difference for nation states? Specifically, has AEI led to changes in the pattern of international investment? Have tax evaders shifted their investments out of tax havens?³ There is a small body of literature addressing the impact of various instruments of information exchange on investment flows. We review this literature and describe our contribution to this debate. We find that AEI did indeed lead to the expected shifts in international portfolio investments. We also investigate to what extent potential loopholes in the AEI regime identified by critics, have been used by tax evaders. We find scattered evidence for their increasing relevance, suggesting that loopholes should be closed swiftly before they begin to undermine the regime (see e.g. Meinzer 2017).

Going beyond the impact on investment flows, we improve upon existing literature by investigating an indirect effect of the Darwinian shock of AEI on national jurisdictions. We ask: Does AEI impact domestic tax policies? The hypothesis we investigate is that AEI removes the pressure of international tax competition and thus enables governments to regain ‘room to manoeuvre’, allowing them to increase taxes on internationally mobile capital. Indeed the data suggest that tax hikes on portfolio capital income have recently occurred across OECD countries. Can we attribute these domestic tax policy changes to AEI? How does AEI relate to or interact with other factors—most importantly, domestic political factors—that influence tax policy decisions? Leveraging the differential

² Recognizing the shortcomings of the BEPS project, the OECD has initiated a further policy process, often referred to as BEPS 2.0. Proposals include far-reaching reforms of the international tax system. At the time of writing this chapter, it is too early to tell whether BEPS 2.0 will bring significant reform or not.

³ Chapter 14 sees this shock through an agent based model.

success of cooperation against evasion and avoidance as a quasi-experiment, we find that the average tax rate on dividends in OECD countries is 4.5 percentage points higher in 2017 than it would have been absent international tax cooperation. Further, the results of a panel regression show that financial transparency, in conjunction with budget deficits, leads governments to increase taxes on dividends. These findings lend support to the notion that international tax cooperation increases the domestic policy space of governments under conditions of economic globalization.

The rest of the chapter is structured as follows: We first provide a brief primer on the international taxation of capital income and how tax evasion, avoidance and competition work (Section 7.2). In Section 7.3, we address the question of the differential success of the campaigns against evasion and avoidance. After that, we address the link between AEI and international investment (Section 7.4) and domestic tax policy (Section 7.5). Section 7.6 concludes the chapter and derives policy recommendations.

7.2 A Primer on International Capital Taxation and Its Deficiencies

According to the principles of international taxation enshrined in the OECD's model tax convention (MTC), passive income from cross-border investment can be taxed where the investment is made (source country) and where the investor resides (residence country) (OECD 2017, Art. 10 and 11). To avoid double taxation, governments enter into bilateral tax treaties (BTTs) in which they agree on lower or zero withholding taxes applicable to investors from the partner country. Most OECD countries grant tax relief for taxes paid abroad but assert the right to tax households on their worldwide receipts of passive income (OECD 2018b, p. 24ff.). Otherwise, the government would advantage the recipients of foreign income over the recipients of domestic income, thereby violating the equal treatment and ability to pay principles underpinning most income tax systems (Scheve and Stasavage 2016, pp. 25–40).

Owing to the financial secrecy offered by tax havens, this is precisely what happened in practice. While households are legally obliged to include their worldwide capital income in their income tax statement, tax authorities traditionally had a hard time detecting underreporting. If at all, BTTs provided for information exchange upon request, which conditioned the dissemination of account data on prior evidence for tax evasion and the domestic availability of requested information (Rixen 2008, p. 75ff.). Even if a foreign tax authority provided the required evidence, tax havens could refuse to share data by referring

to domestic banking secrecy provisions. As a result, foreign account holders paid no or very little tax on unreported capital income.⁴

The available evidence suggests many made use of the opportunity to evade taxes. According to the most conservative estimate, 8 per cent of global household financial wealth was held unrecorded in tax havens between 2001 and 2008 (Zucman 2013, p. 1323). Further, tax evasion contributes massively to income and wealth inequality as it is mostly the very rich engaging in such activity (Alstadsæter et al. 2019). Tax evasion on this scale does not only cause immediate revenue losses and distributive concerns, but it also creates indirect losses by pressuring residence countries into tax competition. In the absence of meaningful tax cooperation, most OECD countries chose to cut taxes on capital income to prevent capital flight to tax havens (Ganghof 2006; Genschel and Schwarz 2013). Peer Steinbrück, the former German minister of finance, summarized the general logic when introducing a special tax rebate for personal capital income in 2006. From his perspective, ‘25% of X [was] still better than 42% of nothing’ (Handelsblatt 2006). With a lower premium on tax evasion, he hoped, fewer taxpayers would risk criminal charges for underreporting returns to their foreign accounts.

In contrast to passive income, the MTC assigns the exclusive right to tax the business profits of a foreign-owned enterprise to the source country. In principle, the branch of a multinational group is thus taxable by the state in which it is permanently established (OECD 2017, Art. 7). Since the activities of MNCs are spread across related entities in many countries, the headquarter can exploit its control over the group’s integrated production and wealth chains to channel taxable income from branches across the world to related holding companies in tax havens (Seabrooke and Wigan 2017). For example, MNCs may manipulate the transfer prices for transactions between their branches. Their tax haven holding may overcharge its sister subsidiaries for the use of the group’s intellectual property (IP), thereby siphoning off their local profits through inflated royalty payments. According to the arm’s length standard (ALS), tax authorities can revalue controlled transactions if they are not priced as similar transactions between independent firms. However, since the IP of MNCs is often unique, tax examiners lack the necessary comparable for a post-hoc correction of manipulated transfer prices (Picciotto 1992, 2015).

By sticking to a representation of MNCs as networks of separate entities and prescribing an outdated procedure for the valuation of controlled transactions,

⁴ They only paid tax, if they invested in countries with which their tax haven of choice had not negotiated a waiver of withholding taxes. In turn, low or zero treaty withholding rates provided committed tax evaders with an opportunity for round-tripping. By investing through a tax haven, which had struck a generous BTT with their home country, they could also strip the return on their domestic investment from its tax burden (Hanlon et al. 2015).

current international tax law enables corporations to avoid tax payments of between \$500 and 650 billion every year (Cobham and Janský 2018; Crivelli et al. 2016). Again, direct losses are exacerbated by competitive pressure, which depresses future revenue from corporate taxation. Many OECD countries have lowered the statutory corporate tax rate, which is the decisive rate to attract paper profits (Devereux et al. 2008), to guard themselves against excessive outflows of taxable income. It was cut from an average of 46 per cent in 1983 to 22 per cent in 2017 (see Figure 7.1).

The ability of governments to engage in tax competition is due to an important feature of the international tax system—its sovereignty preserving character. The rules of international taxation merely seek to disentangle overlapping national tax systems resulting from domestic, politically salient choices. They operate only on the interfaces of national tax systems and do not interfere with them. Governments retain full formal authority over designing the main components of their tax law—namely, the tax base, tax rate, and system of taxation—independently from other governments. This allows them to use their tax policies to compete with other governments for investment and profits. While the resulting competition, as we will see, significantly constrains governments’ policy choices, i.e. their de facto sovereignty, it is based precisely on their de jure sovereignty that is left mostly untouched by the rules of international taxation (Rixen 2011).⁵

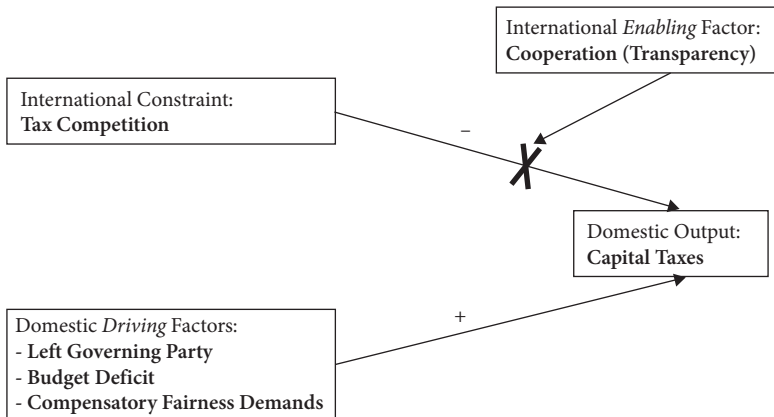


Figure 7.1 Determinants of capital tax rates.

⁵ Tax competition in the real world is different from the basic Tiebout model, which expects shifts of tangible factors of production in response to tax differentials (Tiebout 1956). While real competition for foreign direct investment and taxpayer residences exists, virtual competition for financial wealth and reported (‘paper’) profits is more intense (Genschel and Schwarz 2011, pp. 349–51). That is, nation-states do not primarily compete for production sites and blue-collar jobs. They compete for the deposits and portfolios of wealthy individuals, who evade taxation at their primary residence, and for the profits of MNCs, which avoid taxation where they develop, manufacture and sell their products.

Overall, this shows two things: First, the system is indeed in need of repair, as it can be gamed by international taxpayers who have ample opportunity for tax evasion and tax avoidance. Second, beyond immediate revenue losses, tax evasion and avoidance also have an indirect effect that is potentially even more important—they create tax competition among governments. Such competition does not only involve tax havens but also draws in big countries, which feel compelled to adapt to aggressive tax policies.⁶

Given these adverse effects, governments have tried to establish effective cooperation against tax evasion and avoidance. It is to the politics of these efforts and their outcomes that we turn next.

7.3 Fighting Evasion and Avoidance: Why the Difference?

Over the past decade, a series of scandals have raised the political salience of international tax policy. Some of these scandals, including the Panama and Paradise Papers, uncovered how rich households exploited financial secrecy offered by tax havens to hide income from the tax office. Others like the Luxembourg Leaks focused on the profit-shifting strategies of multinational firms, in some cases minimizing the tax payments of highly profitable companies to zero. Irrespective of their specific focus, both types of scandal uncovered how the most potent taxpayers shirked their fiscal responsibilities at a time of austerity. By creating widespread popular indignation, the scandals thus pushed governments in the Group of 20 (G-20) into action. The G-20 tasked the OECD to develop countermeasures to tax evasion and tax avoidance. The organization responded with a CRS for the multilateral and automatic exchange of information on bank accounts held by non-residents and a major overhaul of international corporate tax law intended to curb base erosion and profit-shifting (BEPS) (Lips 2019; Hakelberg 2020).

Despite the existence of potential workarounds, most analysts consider the introduction of the CRS a significant breakthrough (Eccleston and Gray 2014; Emmenegger 2015; Palan and Wigan 2014). At the time of writing, all traditional secrecy jurisdictions had begun to regularly report the account balances and capital income of non-residents to their respective home countries (Ahrens and Bothner 2020). To this end, the governments of countries like Austria, Luxembourg, or Switzerland had to overcome considerable domestic opposition to the dismantling of banking secrecy provisions that had provided their private banking sectors with a crucial competitive advantage and had become essential

⁶ In this respect, international tax policy follows the maxim voiced by Margaret Thatcher on the occasion of the establishment of International Banking Facilities in London: ‘If you can’t beat them, join them’ (Eden 1998, p. 659).

elements of national identity (Eggenberger and Emmenegger 2015; Hakelberg 2015). Assessments of the BEPS project are less euphoric. Analysts acknowledge the underlying ambition and complexity of the task, but stress that the fundamental legal principles enabling profit-shifting remain in place (Büttner and Thiemann 2017; Picciotto 2015). Why have OECD governments not reduced the scope for corporate tax avoidance to the same extent they have for tax evasion by households with offshore accounts?

In contrast to previous accounts, emphasizing distinctive balances of power in international negotiations over countermeasures to tax evasion and avoidance (Grinberg 2015; Lips 2019), our research shows that the US government dominated negotiations over the CRS and the BEPS project's final recommendations. Owing to the country's unique combination of internal market size and centralized regulatory authority, the Obama administration could credibly link market access to compliance with its tax policy demands. Instead of the power balance between states, differences in the discursive and structural power of affected interest groups in the United States provide the decisive explanation for progress in the fight against tax evasion and stasis in the fight against tax avoidance (Hakelberg 2020). Discursive power refers to an interest group's ability to shape the interests and perceptions of policy-makers and the general public by linking its demands to established norms and ideas (Fuchs and Lederer 2007). Structural power is based on an interest group's ability to make credible threats of disinvestment (Hacker and Pierson 2002).

When entering office, the Obama administration was committed to fighting tax evasion by households with offshore accounts and tax avoidance by multinationals artificially shifting profits to tax havens (Office of the Press Secretary 2009). In the wake of the UBS scandal, which revealed how the bank and its US clients had circumvented preexisting reporting requirements, the administration's proposals for the removal of corresponding loopholes faced little political opposition. Households break the law when they underreport foreign capital income in their tax return. Hence, they face the difficult task of raising political support for crime when trying to prevent countermeasures. Moreover, they play a negligible direct role in job creation, and their wealth and income usually result from their embeddedness in a network of social ties that make relocation difficult (Young 2017).

Against this background, congress adopted the centrepiece of the Obama administration's anti-evasion efforts in March 2010. The Foreign Account Tax Compliance Act (FATCA) obliges foreign banks to automatically report US taxpayers' foreign income to the Internal Revenue Service (IRS) (Hakelberg 2015, 2016). The act draws its force from a built-in threat of sanctions that makes foreign banks, which do not comply with reporting requirements, subject to a 30 per cent withholding tax on payments from US sources. Because of the dominant role of the American financial market, no international bank could

afford this penalty. Instead, they lobbied their home governments to repeal secrecy legislation that prevented their compliance with FATCA (Grinberg 2012; Emmenegger 2017). The exchange relations were codified in bilateral intergovernmental agreements (FATCA IGAs) with foreign jurisdictions. Virtually all important tax havens entered into such agreements (Eccleston and Gray 2014).

By forcing tax havens to abolish secrecy provisions, the US government enabled the EU and OECD to request equivalent cooperation from these countries and multilateralize the AEI (Hakelberg 2015). In the EU, large member states and the Commission invoked a most-favoured-nation clause contained in the Directive on Administrative Cooperation to break Austrian and Luxembourgish opposition to an automatic information exchange of bank account data in the union (Hakelberg 2015). Likewise, the OECD developed its automatic information exchange policy with the support of the G-20. In 2014, the common reporting standard (CRS) was adopted on a multilateral basis (OECD 2014). However, it contained a significant exception. Since the US financial industry, which musters considerable discursive and structural power over the political process, opposed additional reporting requirements for US banks, the IRS still does not reciprocate the AEI, providing wealth managers in secretive US states such as Nevada or South Dakota with a comparative advantage in the attraction of hidden wealth (Hakelberg and Schaub 2018).

Similarly, the Obama administration's efforts to curb profit-shifting by multinational cooperation faced fierce opposition from affected industries. In response to its initiatives, multinationals invoked the legality of tax planning, blaming legislators for the drafting of incoherent tax codes. Besides, they claimed to serve the public good by stressing their obligation to maximize profits on behalf of shareholders, and by linking a lower tax burden to more investment and jobs (Elbra and Mikler 2017). With these arguments, multinational corporations convinced enough members of Congress to block proposals from the Obama administration that would have forced them to repatriate foreign profits they had hitherto hoarded in tax havens to avoid tax payments in the United States. As a result, the Obama administration lacked a national regulatory model when Germany and the United Kingdom put corporate tax avoidance on the G-20's agenda (Hakelberg 2020).

Although the US Treasury hoped at the beginning that the BEPS project would exert additional pressure on US multinationals, concern over the redistributive consequences of countermeasures proposed by European governments soon became the central issue. Contentious proposals included greater leeway for tax examiners in the recharacterization of controlled transactions between branches of the same group, an extension of the permanent establishment definition, determining when a government has the right to tax a company operating on its territory, and the reporting of information on profits, payroll, and intra-firm payments on a country-by-country basis. From the US perspective, all of these

proposals threatened to redistribute taxing rights away from a company's country of residence and towards source countries where it produces or sells its goods and services. Ultimately, the Obama administration preferred a low foreign tax burden of US multinationals to the taxation of their foreign profits by EU countries. Its negotiators significantly pared back each of the contentious proposals, thereby essentially defending the international tax system's status quo (Hakelberg 2020).

7.4 Information Exchange and Investment

Tax evasion is facilitated by the financial secrecy that tax havens offer to foreign customers. The previous section made clear that credible sanction threats from the US government led to significant progress in the fight against tax evasion. However, how effective is the automatic exchange of information relative to previous attempts at information exchange? This section embeds our corresponding findings in the relevant literature.

In the 2000s, countries negotiated a large number of information-on-request (IOR) treaties. They allow treaty partners to request information about capital holdings of individuals in partner jurisdictions. However, IOR treaties suffer from several vital shortcomings. Firstly, information requests require reasonable suspicion, which is difficult to come by considering the secrecy tax havens offer to their customers. Secondly, international investment networks were covered insufficiently by IOR treaties so that tax evaders could move their assets to non-compliant jurisdictions. IOR treaties, therefore, proved to be ineffective overall. Johannesen and Zucman (2014) find that they caused a modest reduction of assets in tax havens, but funds were merely relocated to non-compliant havens, 'leaving roughly unchanged the funds globally held in tax havens' (p. 75). Further analyses show that they also reduced inbound investments, i.e. by tax havens in non-haven jurisdictions (Hanlon et al. 2015; Menkhoff and Miethe 2019). However, Menkhoff and Miethe (2019) find that the effects of IOR treaties on both inbound and outbound investments dissipated over time. Overall, IOR treaties were thus ineffective in the fight against tax evasion.

Verdicts on another key policy initiative, the EU's Savings Tax Directive (STD), are similar. The STD implemented a system under which information about foreign accounts was transmitted on an automatic basis, which implies that no reasonable suspicion is required. It covered 27 EU countries as well as several third countries and dependent territories. However, policy-makers were not able to resolve the pitfalls of previous efforts. Firstly, the STD allowed participating countries to levy withholding taxes on the capital incomes of foreign investors instead of disclosing their identity under automatic information exchange, effectively preserving banking secrecy. Most tax havens opted for this model (see Rixen and Schwarz 2012, p. 156). Secondly, the STD had an incomplete coverage of

capital forms, allowing evaders to shift their holdings from debt to equity portfolios to evade reporting. Lastly, not all jurisdictions offering financial secrecy participated, allowing evaders to shift funds to non-compliant havens. Empirical assessments show that the STD did affect cross-border investments, but it did not lead to a reduction of tax evasion overall (Caruana-Galizia and Caruana-Galizia 2016; Johannesen 2014; Rixen and Schwarz 2012).

The failure of past efforts led experts to call for international cooperation of unprecedented scale (Palan et al. 2010). To increase effectiveness, information should not be exchanged upon request but automatically. The FATCA and CRS have a comprehensive coverage of jurisdictions and capital forms and require financial institutions in participating countries to identify beneficial owners of financial assets. There seems to be limited opportunity to dodge information exchange like in the past. To assess whether the treaties are truly effective, Ahrens and Bothner (2020) analyse the Bank for International Settlements' (BIS) Locational Banking Statistics (LBS), which cover information on foreign bank deposits and debentures held in 47 countries. A difference-in-difference analysis, which under plausible assumptions identifies the causal effect of the FATCA and CRS, shows that the treaties were successful overall. Investments in tax havens are estimated to be 67 per cent below where they would have been without the treaties. However, this estimate pertains solely to assets not successfully hidden behind corporate identities or trusts. Replication analyses using data from the International Monetary Fund's Coordinated Portfolio Investment Survey (CPIS) corroborate the results.

Supplemental analyses show that unlike in past international cooperation, there is little evidence for treaty circumvention by deposit shifting or the use of shell corporations. Evaders do not seem to have moved funds to non-compliant jurisdictions, including both traditional tax havens and the US, which does not reciprocate information sharing. Furthermore, assets attributed to jurisdictions that traditionally host shell corporations did not increase. Although these results are cursory, the FATCA and CRS seem to be more effective than previous IOR treaties and the STD. For the time being, they have led to a reduction of cross-border tax evasion. However, it is crucial that policy-makers stay on their toes because significant loopholes remain, and new secrecy jurisdictions may emerge.

Most importantly, some jurisdictions have begun to offer tax residence and citizenship to foreign investors wishing to circumvent the reporting of their assets to their home countries. By obtaining a so-called golden passport or residence permit, a tax evader can document residence in a secrecy jurisdiction vis-à-vis the bank managing her accounts. As a result, the bank will no longer send information on her capital income to her former home country but to the tax haven that provided the submitted documents. Although the tax evader may spend most of her time in her country of origin, information on her foreign accounts may thus never reach the tax office at her place of primary residence. Our research shows

that portfolio investment from jurisdictions with golden passport schemes into the Eurozone increased relative to investment from jurisdictions without such schemes after the adoption of the CRS. However, there is no comparable effect on portfolio investment into the United States and the United Kingdom, and no effect whatsoever on internationally held deposits (Ahrens et al. 2020b).

The reason for this discrepancy might be the legal recognition of the Anglo-Saxon trust in common law countries. Here, trust arrangements enable wealthy households to obtain considerable legal tax benefits. In contrast, civil law countries do not recognize trusts, taxing the beneficial owners currently on the return to the portfolio held in trust (Harrington 2016). Therefore, golden passport schemes may be more attractive to wealthy European households seeking to benefit from similar reductions in wealth and income tax. At least, our secondary finding points in this direction. Similar to the primary result, we find that portfolio investment from jurisdictions with opaque or non-existent trust and company registers into the Eurozone also increased while there is no corresponding effect on portfolio investment in the United Kingdom and United States or deposits in general (Ahrens et al. 2020b). Next to a golden passport scheme, opaque trusts and shell companies may thus be a vital selling point for wealth managers in secrecy jurisdictions. Overall, however, there is only scattered evidence for AEI circumvention via golden visa or passport schemes and lax beneficial ownership registration.

7.5 Automatic Information Exchange and Domestic Tax Policy

The previous section has shown that AEI did have the expected effects on international portfolio flows: tax evaders shift their portfolios out of tax havens. But does international cooperation in the form of AEI also curb the pressures of tax competition? If residence countries receive full and high-quality information on their taxpayers' foreign funds, the threat of capital flight, which led them to lower their tax rates in the past, disappears. Will this effect reverse the trend of ever-lower (portfolio) capital tax rates, which has marked the era of neoliberalism over the last 35 years (Swank 2006)? Researching the effects of AEI on domestic tax policy has not previously been undertaken. Our research on this issue charts into new territory.

Our theoretical argument is the following: once governments are freed from competitive pressure through AEI, they should be free to raise taxes in accordance with domestic political demands again. For example, left governments are generally in favour of higher taxes on capital (e.g. Basinger and Hallerberg 2004) and could seize the opportunity offered by financial transparency. Similarly, heavy budget deficits (e.g. Liese and Seelkopf 2016) or voter demand for compensatory

fairness (Limberg 2019; Scheve and Stasavage 2016) could lead governments to increase taxes on portfolio capital. Figure 7.1 illustrates our argument.

To submit this argument to an empirical test, we pursue two different strategies. In a first step, we leverage the differential success of the fight against tax evasion and avoidance described in Section 7.3 in a quasi-experiment. While there is adequate cooperation against portfolio capital tax evasion, avoidance of corporate profits taxes by MNCs mostly continues unhinged. Since the relevant domestic political determinants of tax rates are identical for business profits and portfolio capital, the difference in the effectiveness of cooperation should lead to a divergence in the respective tax rates.

Indeed, comparing the development of average tax rates in OECD countries on dividends at the shareholder level, an appropriate indicator for taxes on portfolio capital, with the statutory tax rate on retained corporate profits provides initial evidence for this theory (see Figure 7.2). Whereas dividend taxes increase after 2009, the year the G-20 countries credibly committed that ‘the era of banking secrecy is over’ (G-20 2009), corporate profits taxes continue to decrease. In a comprehensive difference-in-difference analysis, we estimate the average tax rate on dividends in OECD countries to be 4.5 percentage points higher in 2017 than it would have been absent international tax cooperation (Hakelberg and Rixen 2020).⁷

There is, however, substantial variation around this trend. Belgium, for instance, raised the tax rate on dividend payments from 15 per cent in 2008 to 30 per cent in 2018, Hungary lowered it from 35 per cent to 15 per cent and Sweden kept it constant at 30 per cent. This cannot be explained by financial secrecy alone. Furthermore, the binary approach of the diff-in-diff analysis disregards that some countries were subjected to a more significant increase in financial transparency than others. The US, for example, does not reciprocate information sharing, which implies that jurisdictions for whom financial services provided by the US are pivotal saw a lesser increase in transparency.

Therefore, our second empirical strategy aimed at investigating the variation across countries in more detail. In Ahrens et al. (2020a), and in line with the general theoretical model presented above, we argue that the variation in countries’ reactions to increased transparency depends on domestic factors. Transparency alone is not sufficient to motivate governments to increase tax rates. Transparency instead is an *enabler* because it complicates tax evasion by households, effectively giving governments leeway to increase tax rates as they see fit. However, governments may or may not use this leeway depending on domestic factors such as the ideological colour of governments, absence or presence of compensatory fairness arguments among voters as well as budget constraints.

⁷ We control for important potential confounders—like the occurrence of a financial crisis that may affect tax rates on dividends differently from tax rates on profits, and the top rate on personal income that may be linked to dividend taxes but not corporate taxes.

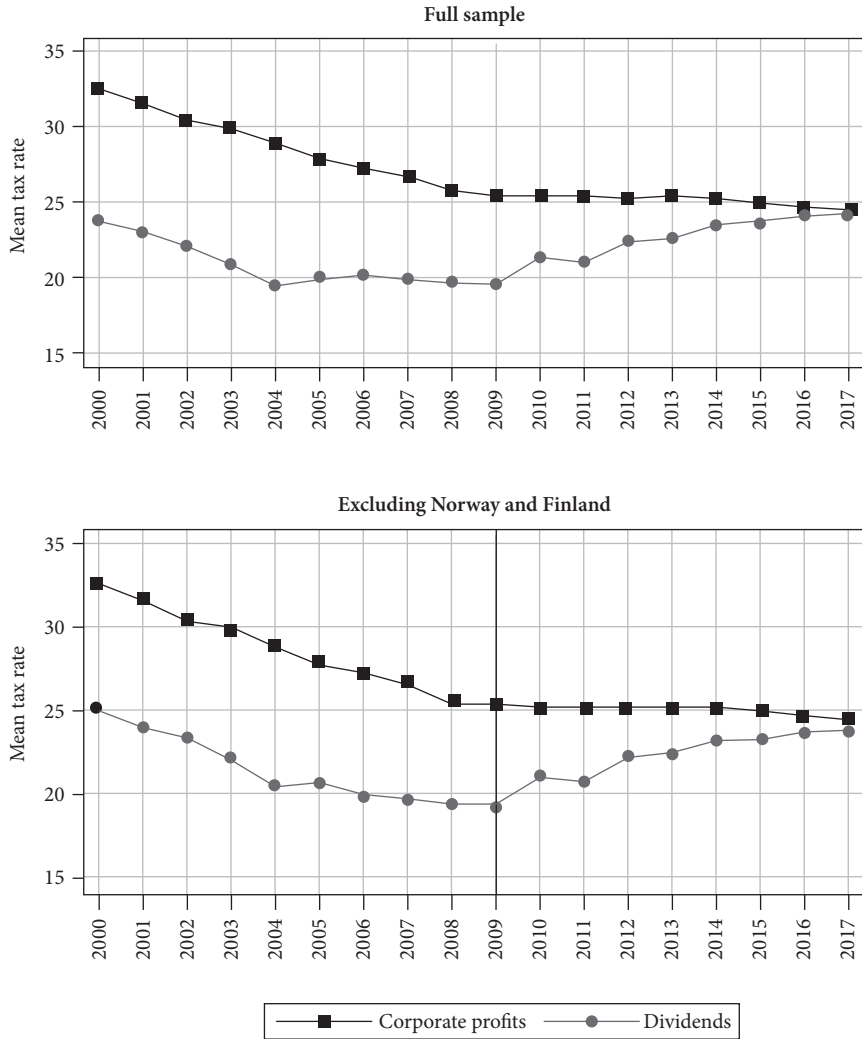


Figure 7.2 Average tax rates imposed on dividends and corporate profits in OECD countries (% of taxable income).

Note: Data is from OECD (2019b). Specifically, we obtain data on corporation taxes from the OECD tax database's table II.1, where we use the indicator 'combined corporate income tax rate,' which compiles member states' 'combined central and sub-central (statutory) corporate income tax rate given by the central government rate (less deductions for sub-national taxes) plus the sub-central rate.' Data on dividend taxes comes from the database's table II.4, where we use the item 'net personal tax,' which 'shows the net top statutory rate to be paid at the shareholder level, taking account of all types of reliefs and gross-up provisions at the shareholder level'. We excluded Norway and Finland in the empirical analysis. Due to the peculiarities of the dual income tax their tax policies during the 2000s included very extreme policy shifts. Nevertheless, our results hold if both countries are included. See Hakelberg and Rixen (2019) for details.

Such domestic factors are the *drivers* of tax policy decisions. Our main argument is that primarily those governments who experience domestic pressure to increase rates use the room to manoeuvre introduced by financial transparency.

The most critical domestic factor that drives tax increases is the budgetary situation of a government (Lierse and Seelkopf 2016). Financial transparency makes it more likely that higher taxes on capital income actually lead to higher tax revenue because evasion is less likely. Governments facing budget constraints should thus have an incentive to increase taxes on capital income when their investment environments become more transparent. Ahrens et al. (2020a) therefore expect an effect of budget constraints, on dividend tax rates, that depends on the level of financial transparency. In the same vein, we expect conditional effects of government partisanship, compensatory fairness demands (Limberg 2019; Plümper et al. 2009) and the mismatch between the taxation of labour and capital (Ganghof 2006).

To test the argument, Ahrens et al. (2020a) first develop a novel financial transparency indicator, which measures financial transparency in the investment networks of 35 OECD countries between 2001 and 2018. The resulting Investment Network Transparency Score (INTS) reveals a strong upward trend in transparency, reflecting the gradual replacement of banking secrecy with increasingly effective methods of information exchange. We use this indicator in multiple regression analyses to determine its conditional impact on tax rate reforms.

The results show that financial transparency does not have an independent effect on the taxation of dividends. As expected, the effect of transparency is conditional on a domestic factor, namely the budget balance. There is a significant interaction between financial transparency and budget balance. Negative budget balance in combination with high transparency motivates cabinets to increase taxes on dividends, which confirms the expectations. For the other domestic factors, there are no significant independent or interaction effects. The absence of an interaction between transparency and fairness concerns comes as a theoretically interesting surprise. However, the main results fit with our theoretical arguments. No government raises dividend tax rates just because of an increase in financial transparency. It seems that high financial transparency gives national governments the room to raise taxes on portfolio capital if they need revenue because of budget constraints.

7.6 Conclusion and Policy Implications

Unlike efforts to curb tax avoidance by corporations, international cooperation against tax evasion proved to be successful. As a result, governments regained manoeuvring room to democratically set domestic tax policies that had previously

been lost to the constraints of tax competition. However, pressing challenges remain.

First, there are remaining loopholes that plague the AEI regime. As our research shows, one problem is golden passport schemes that allow tax evaders to become citizens of countries that they never lived in. The OECD already put such schemes on its agenda and compiled a blacklist of jurisdictions providing golden passports (OECD 2018a). Governments must continue to apply pressure on countries offering golden passports to abstain from this practice. The second problem is that while the coverage of the AEI regime is high, several jurisdictions are still reluctant to join threatening its future success. Most importantly, the United States do not share information with foreign jurisdictions. This is especially worrisome because the US is the largest financial centre in the world. It has both an incentive and the possibility to develop tax haven operations in the future. States such as Delaware, Nevada, and South Dakota already allow foreign investors to establish shell corporations that do not require identity verification. The EU should pressure the US into participating in reciprocal AEI in the future. While the US is the most important financial centre of the world, the European market is certainly big enough to leverage economic power. However, in order to make its sanction threats credible, the EU would need to speak with one voice. This requires overcoming internal dissent. Abandoning the unanimity principle in EU tax policy in favour of simple or qualified majority voting would be a step in the right direction.

Second, a return to a truly progressive tax system hinges on effective cooperation in the area of business taxation. However, to date, no comparable breakthrough to AEI has been achieved. Political pressure to move forward on this front should be upheld. Replacing separate entity accounting and the ALS with unitary taxation, as currently proposed by the European Commission in its proposal for a common consolidated corporate tax base (CCCTB), seems to be the most ambitious but also the most promising way forward.

Third, and more generally, our findings bear on current debates about the role of international cooperation in the fight against growing income inequality and populism. While discussions of income inequality and taxation are often limited to national institutions and policies only (but see Piketty 2014), we show that the creation of enabling international institutions and policies are a necessary precondition for progress. If policy-makers aim to end the neoliberal and regressive tax policies that have characterized recent decades, they need to strengthen international cooperation. In contrast to assertions by nationalists, international cooperation does not constrain national policy choices. Instead, it expands the domestic policy space. Rather than being pressured by tax competition to lower taxes on portfolio capital, under AEI governments have real discretion over the applicable rate. In other words, while tax cooperation requires governments to give up some of their *de jure* sovereignty, they regain

de facto sovereignty, i.e. actual democratic control over their tax policy. International tax cooperation is an essential and necessary element of the normative vision of ‘sensible globalization’ that could end the current trajectory of unregulated ‘hyper globalization’, which is unsustainable because it puts all states into a ‘golden straitjacket’ that makes it impossible to compensate the losers of globalization at the national level (Rodrik 2011). In the face of rising nationalist and protectionist tendencies, it is high time for internationalists and international institutions to act on this insight and push for more effective tax cooperation.

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Country-by-Country Reporting and Other Financial Transparency Measures Affecting the European Union

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8.1 Introduction

Financial secrecy supplied by secrecy jurisdictions enables individuals and companies to escape their home country's regulations and legislation, thereby undermining the ecosystems in which these agents generate their income and wealth (Chapter 2). More specifically, secrecy jurisdictions allow the existence of cross-border illicit financial flows (IFFs)—illegal movements of money or capital related to, among others, corruption, money laundering, tax evasion, tax avoidance, and the financing of terrorism. Recent leaks of confidential documents have provided a glimpse of the world behind the veil of secrecy and highlight the magnitude of use of secrecy jurisdictions for illegal purposes. Tackling financial secrecy—or, in other words, improving financial transparency—is thus of great importance.

Actors involved or benefitting from the veil of secrecy attempt to exploit it on various levels and to various extent. In this chapter, we build on the Tax Justice Network's Financial Secrecy Index, which ranks each jurisdiction's contribution to global financial secrecy, and its bilateral extension, the Bilateral Secrecy Financial Index (BFSI), as developed by Janský et al. (2018). The BFSI identifies the largest suppliers of financial secrecy for each specific country, rather than at the global level. We use the BFSI in this chapter to achieve two objectives. First, we estimate which secrecy jurisdictions supply the most secrecy to the EU Member States. Second, we evaluate the progress of two recent policy efforts to increase financial transparency: automatic country-by-country reporting information exchange (CbCRIE) and the blacklist and greylist of non-cooperative jurisdictions published by the European Commission. We compare how well-aligned these policies are with our estimates of the importance of individual secrecy jurisdictions.

We report that more than one-third of the financial secrecy faced by the EU is supplied by other EU Member States and, together with the EU's overseas territories, almost half of all secrecy can be attributed to the EU countries themselves. The largest suppliers of secrecy from within the EU are the Netherlands and Luxembourg. The secrecy faced by the EU and supplied from elsewhere is mainly from the United States, followed by Switzerland and the Cayman Islands.

Using the results of the BFSI to assess the progress of the automatic exchange of CbC reports, we find that around 79 per cent of the secrecy faced by the EU is now covered by active CbCRIE relationships, and this number has increased from 71 per cent between January 2018 and September 2019 due to new treaties coming into force in this period. Importantly, we find that there is considerable heterogeneity in the share of secrecy that is covered by CbCRIE across the individual EU Member States, pointing to the potential to better aim the efforts of policy-makers in identifying the most important secrecy jurisdictions for individual countries. We report that the jurisdictions that supply the most uncovered secrecy are the British Virgin Islands and the United States, followed by Curacao and the United Arab Emirates.

We find that the blacklist and greylist of non-cooperative jurisdictions published by the European Commission overlap with our results for most of the critical jurisdictions, with the significant exception of the United States.

Based on our analysis in this chapter, we provide two concrete policy recommendations: First, country-by-country reporting data collected from individual multinationals should be made publicly available by all jurisdictions to enable effective tracking of economic activity of multinational corporations by all tax authorities, as well as by researchers, and the public who would then be able to hold both multinationals and authorities to account. Second, we encourage countries to require local subsidiaries of multinational corporations to file CbCR directly with local authorities in case the relevant CbCR is not yet public or if local authorities cannot obtain it via automatic exchanges regardless of the reason.

The rest of the chapter is structured in the following way: Section 8.2 provides a brief overview of relevant literature and explains the initiative behind country-by-country reporting. Section 8.3 presents the data and summarizes the methodology related to BFSI and its use in policy evaluation. In Section 8.4, we estimate which jurisdictions are the largest suppliers of secrecy to EU Member States, while Section 8.5 aims to assess the EU's policy efforts to enhance financial transparency with a particular focus on automatic CbCRIE. Section 8.6 concludes with policy recommendations.

8.2 Why Country-by-Country Reporting and Financial Transparency Matters

Many countries today serve as secrecy jurisdictions, yet systematic analyses of the world of financial secrecy from the point of view of individual countries that face

this secrecy are relatively scarce. In this chapter, we aim to contribute to three related strands of literature.

The first is the research on financial secrecy. Starting in 2009, the Tax Justice Network has been publishing the biannual Financial Secrecy Index, ranking the world's largest contributors to financial secrecy. As explained by Cobham et al. (2015), who present the conceptual framework of the index, the FSI places jurisdictions on a spectrum of secrecy, rather than using arbitrary criteria and thresholds to classify such countries (as done in most previous influential research, such as Hines and Rice (1994), Dharmapala and Hines (2009), or Zucman (2013)). Thereby, the FSI sheds light on the fact that different jurisdictions can act as secrecy jurisdictions¹ in specific areas and to varying extents. The FSI also puts the spotlight on the role of large developed economies (as opposed to small Caribbean islands) acting as major players in the world of financial secrecy.

There is a wide range of research documenting the adverse effects of financial secrecy, from the literature on money laundering (Schwarz 2011; Unger et al. 2013; Unger 2017) and international political economy (Hakelberg and Schaub 2018; Rixen 2008; Seabrooke and Wigan 2014) to that on illicit financial flows (Cobham and Janský 2017; 2020). While we do not aim to estimate or discuss the adverse effects of secrecy, we build on this literature in our conceptual framework, methodology, and policy recommendations.

With significant improvements in financial transparency in the form of the European Union Savings Directive, the OECD's Common Reporting Standards for automatic exchange of information, or CbCR requirements for large multinational corporations, the first evidence on the effects of financial secrecy has started to emerge. In a case study on large MNCs in the extractive industries (which were the first to introduce the CbCR requirements), Johannesen and Larsen (2016) find that the policy was associated with significant decreases in the affected firms' value. Zucman (2015) argues that the EU's Savings Directive was mostly ineffective when compared to other measures such as the US Foreign Account Tax Compliance Act, and similar results stem from a case study on four European countries by Rixen and Schwarz (2011). The new initiatives, some of which were voluntary, created some public pressure on firms that did not comply straight away, but the effects were, as expected, not overwhelming (Dyreng et al. 2016). The post-crisis initiative towards the exchange of bank information from some of the most significant tax havens was celebrated as the end of bank secrecy, but as Johannesen and Zucman (2014) show, bank deposits have been merely relocated to other tax havens that did not join the information-sharing network.

¹ While the FSI was the first systematic effort to quantify the level of secrecy in each jurisdiction, the term 'secrecy jurisdiction' itself had been used before—among the firsts to do so were the United States House of Representatives (1970) and Peet and Dickson (1979).

The second strand of literature we add to is that on identifying secrecy jurisdictions that are important to specific countries or groups of countries. In particular, we review the Bilateral Financial Secrecy Index, explained in more detail in Section 8.3.2, as recently introduced by Janský, Meinzer, and Palanský (2018), and explore its results for the European Union as a whole as well as for the individual Member States. While the Financial Secrecy Index provides a *global* perspective, it may not necessarily identify the jurisdictions representing the highest secrecy risks from the perspective of each specific country or group of countries (e.g., while Mauritius may pose relatively low risk on the global scale, ranking 49th on the FSI in 2018, it is a very important supplier of secrecy to some countries, including India for which it ranks second on the BFSI). A number of researchers focused on individual country case studies and identify which secrecy jurisdictions are most important for them (such as Janský and Prats (2015) on India or Ledyeva et al. (2015) on Russia), the BFSI represents the most systematic effort to track the heterogeneity in where the secrecy faced by individual countries is supplied from.

We compare these results to the EU's list of non-cooperative jurisdictions, which was published for the first time in December 2017 (European Commission 2017). The list is based on a continuous assessment of several criteria, and we review this effort in more detail in Section 8.3.3.1. Countries that do not pass the assessment but make a commitment to implement changes to their legislation regarding cooperation with the EU are placed on a greylist, and their commitments are regularly reviewed. While many of the drawbacks of a dichotomous approach to identifying tax havens remain and some of the choices within the process seem to be, as we argue below, at least partly politically motivated, the blacklisting exercise has already had some success, as documented by several jurisdictions being delisted as updates to the list are published.

The third important literature we contribute to is the one on automatic exchange of information. In this chapter, we focus on one type of information exchange in particular—country-by-country reporting data. The Base Erosion and Profit Shifting (BEPS) Project, led by the OECD, aims to tackle international tax avoidance by high-profile multinationals, improve the coherence of international tax rules and ensure a more transparent tax environment. There are 15 BEPS Actions that are currently being considered, and over 130 countries and jurisdictions are collaborating on their implementation. In this chapter, we focus on BEPS Action 13, country-by-country reporting (CbCR), which aims to establish a common minimum standard on the reporting of profits of multinational corporations.

Under BEPS Action 13, a multinational corporation whose combined turnover exceeds the threshold of 750 million Euro has to fill an annual confidential report that breaks down key elements of the financial statements for each tax jurisdiction in which the group operates. This confidential Country-by-Country Report promises local tax authorities easy access to data on the global allocation of income,

profit, tax paid and accrued, retained earnings, tangible assets, and economic activity across jurisdictions (OECD 2013). Thus, confidential CbCR strives to help tax administrations to assess transfer pricing risks. Prior to the OECD BEPS Action Plan, CbCR has been under discussion for over 30 years as a public financial reporting standard (Cobham, Janský, and Meinzer 2018). Public CbCR has been introduced in the European banking sector in 2013 and has been shown to significantly curb profit shifting by banks with tax haven operations (Overesch and Wolff 2019). In 2016, when the filing of confidential CbCR was required for the first time, 58 jurisdictions participated. As of October 2019, over 80 jurisdictions have implemented confidential CbCR within their individual legal frameworks. Existing research, while scarce so far, suggests that financial transparency created at least by public CbCR is a potentially powerful tool to curb abnormal rents of firms that have avoided tax through profit shifting (Johannesen and Larsen 2016; Overesch and Wolff 2019).

The essence of confidential CbCR information exchange is to share the collected data and to enhance the cooperation of tax administrations across countries. As of September 2019, over 2 400 bilateral exchange relationships, most of them reciprocal, are activated for sharing CbC reports between tax authorities of different jurisdictions with the first automatic exchanges of CbC reports taking place in June 2018. Such extensive international cooperation indicates that basically all multinationals with consolidated turnover over the threshold of 750 million Euro are already required to file a CbC report and that the number of reporting companies is converging to the actual number of existing large multinationals primarily targeted by the CbCR initiative (OECD 2013). In this chapter, we use the BFSI to assess this development of the CbCR information-exchange network.

8.3 Methodology and Data

In this section, we first describe how the Financial Secrecy Index is constructed and why and how its bilateral extension is defined. We also detail which data sources are used in the two indices. Finally, we outline two recent policy efforts that we later assess for the EU Member States using the Bilateral Financial Secrecy Index: the country-by-country reporting information exchange (CbCRIE) framework led by the OECD and the blacklist and greylist of non-cooperative jurisdictions published by the European Commission.

8.3.1 Financial Secrecy Index

The Financial Secrecy Index (FSI) is a single ranking that estimates which jurisdictions most contribute to the global problem of financial secrecy. It was

developed by the Tax Justice Network and consists of two parts—secrecy scores (SS) and global scale weights (GSW). Tax Justice Network has published the index biannually since 2009. In this chapter, we build on the edition published in 2018 that covers 112 jurisdictions.

The secrecy score for each country represents a qualitative measure of financial secrecy and is composed of 20 indicators that cover various areas of financial secrecy: banking secrecy, trusts and foundations register, recorded company ownership, limited partnership transparency, public company ownership, country by country reporting, corporate tax disclosure, tax administration capacity, consistency of personal income tax regime, automatic information exchange, bilateral treaties, international legal cooperation, and so on. These 20 secrecy indicators can be grouped into four broad dimensions of secrecy: (1) ownership registration; (2) legal entity transparency; (3) integrity of the tax and financial regulation; and (4) international standards and cooperation (Tax Justice Network 2018).

The SS of a jurisdiction is calculated as the arithmetic average of the 20 indicators, with values ranging between 0 (full transparency) and 100 (full secrecy). The secrecy score involves an analysis of the legal framework of each jurisdiction: its laws, regulations, and enforcement. However, a high secrecy score does not in itself indicate that a jurisdiction poses a risk for other countries, i.e. whether any foreign individual or company actually exploits the jurisdiction's secretive legal framework or not.

The second part of the FSI, the global scale weights, represents a quantitative measure and serves as a proxy for the actual use of jurisdiction's secretive legal framework by individuals or companies. Specifically, the GSW measures each jurisdiction's market share (percentage) of exports of offshore financial services (financial services offered to non-residents).

The Financial Secrecy Index (FSI) combines both measures, the qualitative and the quantitative, into one value, which reflects the potential global harm done by each country. For the 2018 FSI edition, the Tax Justice Network uses the same formula as in the previous editions: for jurisdiction i , the FSI is defined as follows.

$$FSI_i = Secrecy\ Score_i^3 * \sqrt[3]{Global\ Scale\ Weight_i}$$

The applied method reflects the FSI's core objective: highlighting the importance of harmful secrecy regulations in contributing to global financial secrecy. The FSI ranks jurisdictions with respect to their secrecy and the scale of their offshore financial activities; however, the value of the index itself does not represent a quantity that could be translated into economic terms. Table 8.1 presents the top ten jurisdictions with the highest FSI values in 2018.

Table 8.1 Results of the Financial Secrecy Index 2018

Rank	Jurisdiction	FSI Value	Secrecy score	Global scale weight
1	Switzerland	1589.6	76.5	4.5%
2	USA	1298.5	59.8	22.3%
3	Cayman Islands	1267.7	72.3	3.8%
4	Hong Kong	1243.7	71.1	4.2%
5	Singapore	1082	67.1	4.6%
6	Luxembourg	975.9	58.2	12.1%
7	Germany	769	59.1	5.2%
8	Taiwan	743.4	75.8	0.5%
9	United Arab Emirates	661.2	83.9	0.1%
10	Guernsey	658.9	72.5	0.5%

Source: FSI results from the Tax Justice Network (2018).

8.3.2 The Bilateral Financial Secrecy Index

The Bilateral Financial Secrecy Index (BFSI) is a direct extension of the FSI developed by Janský et al. (2018). It estimates the importance of secrecy jurisdictions for each specific country individually rather than globally. To maintain consistency, the BFSI follows the FSI methodology as closely as possible. It employs the same indicators for the secrecy score; however, it adjusts the scores for the relationships within the EU. In particular, adjustments were made in the secrecy score of the last three indicators (Automatic information exchange, Bilateral treaties, and International legal cooperation) vis-à-vis other EU Member States (Tax Justice Network 2018).

Regarding the quantitative part of FSI, the global scale weight, the BFSI uses a different source of data than the GSW in the FSI—while the FSI uses data on exports of financial services from the IMF’s Balance of Payments Statistics which are only available at the unilateral level, the BFSI requires data on a bilateral level. Janský et al. (2018) thus use data on cross-border portfolio investment, namely assets, from the IMF’s 2015 Coordinated Portfolio Investment Survey (CPIS) to construct the so-called bilateral scale weights (BSW). While there are other sources of bilateral data that could be relevant to use to construct the BSW (such as foreign direct investment), as Janský et al. (2018) argue, portfolio assets are likely to capture well the economic activity that may make the best use of financially secretive regulations in secrecy jurisdictions. The BSW is then defined analogously to GSW as the share of portfolio investment assets between country *i* and jurisdiction *j* on the total global value of cross-border portfolio investment.

The BFSI combines the secrecy score of secrecy jurisdiction *j* with the BSW of country *i* with respect to secrecy jurisdiction *j*:

$$BFSI_{ij} = \text{Secrecy Score}_j^3 * \sqrt[3]{\text{Bilateral Scale Weight}_{ij}}$$

This approach aims to capture the relative intensity of the economic relationship of the country's residents with different secrecy jurisdictions and the interaction of this activity with the secrecy offered by secrecy jurisdictions. The BFSI is derived for 86 countries which face financial secrecy supplied to them by up to 110 jurisdictions.

8.3.3 Assessing the EU's Policy Measures Using BFSI

We use the BFSI to evaluate the success of two recent EU's policy measures. First, we compare the BFSI with the EU lists of non-cooperative jurisdictions for tax purposes to observe whether these measures coincide. Second, to evaluate the development of CbCRIE relationships, we study the extent to which countries have so far covered the secrecy they face by having activated CbCRIE with their secrecy suppliers.

8.3.3.1 EU Lists of Tax Havens

In December 2017, Finance Ministers of EU Member States agreed for the first time on a list of non-cooperative jurisdictions for tax purposes. The initial blacklist consisted of 17 countries that failed to meet the agreed standards. Also, 47 countries have committed to addressing deficiencies in their tax systems, and to meet the required criteria by the end of 2018, or 2019 for developing countries without financial centres, to avoid being listed (European Commission 2017). To ensure compliance of these countries, EU Member States agreed to monitor them by the Code of Conduct Group and the Commission. The EU blacklist was the result of extensive screening of 92 jurisdictions, using internationally recognized good governance standards in three areas: transparency, fair taxation and anti-BEPS measures (European Commission 2017).

Since December 2017, both the EU blacklist and greylist have been adjusted several times with the last update (as of this writing) on 12 March 2019. As of that update, the blacklist consisted of 15 countries. Of those, five have taken no actions concerning deficiencies in their tax systems since the first issue of the EU list of non-cooperative jurisdictions in 2017 (American Samoa, Guam, Samoa, Trinidad and Tobago, and US Virgin Islands). Three others (Barbados, United Arab Emirates and the Marshall Islands) were on the 2017 list; in 2018, they were moved to the greylist; and in 2019, they were blacklisted again as they have not taken any additional commitments since. For the same reasons, seven countries were moved from the greylist to the blacklist (Aruba, Belize, Bermuda, Fiji, Oman, Vanuatu, and Dominica). The Commission will continue to monitor 34 countries that are now on the greylist.

8.3.3.2 Country-by-Country Reporting Information Exchange Relationships

This section describes the data on bilateral exchange relationships that are currently in place for the automatic exchange of CbC reports between tax authorities

in different countries. Each observation in our dataset represents a one-way exchange relationship between jurisdiction i and jurisdiction j . As described by OECD (2019): ‘The observations include exchanges between the eighty signatories to the CbC Multilateral Competent Authority Agreement, between EU Member States under EU Council Directive 2016/881/EU, and between signatories to bilateral competent authority agreements for exchanges under Double Tax Conventions or Tax Information Exchange Agreements, including forty bilateral agreements with the United States.’ The EU Member States, in particular, have activated information exchange relationships with many countries—most of them are exchanging CbCR data with approximately 60 countries.

In order to analyse the spread of the bilateral exchange relationship network over time, we compare the network’s extent at two points in time: January 2018 and September 2019. While by January 2018, about 2,800 bilateral exchange relationships had been activated, by September 2019, this number increased to over 4 100 activated relationships. This includes over 1 700 reciprocal information exchange relationships (amounting to over 3,400 one-sided relationships). The remaining 700 are only one-sided, i.e. information is shared by a country with another country but not the other way around.

To assess CbCRIE in light of financial secrecy, we compare it with the BFSI results and study whether the most important suppliers of secrecy to specific countries are covered by CbCRIE relationships. To do so, we calculate the share of secrecy faced by country i (as measured by the BFSI) that is covered by active CbCRIE relationships. More formally, we define this share as follows:

$$\text{Share of received/supplied BFSI covered by CbCR IE}_i = \frac{\sum_{j=1}^k \text{BFSI}_{ij}}{\sum_{l=1}^m \text{BFSI}_{il}}$$

where k is the number of jurisdictions j with which country i has an activated CbCRIE relationship, and m is the number of jurisdictions l for which the BFSI is estimated for country i . In addition, in a similar way, we calculate the share of secrecy supplied by each jurisdiction to all other countries that is covered by CbCRIE.

8.4 Who Supplies Secrecy to EU Member Countries?

In this section, we use the BFSI to estimate which jurisdictions are the largest suppliers of secrecy to EU countries. Table 8.2 shows the top 15 suppliers of secrecy along with their secrecy scores and information on how many EU States the jurisdictions have an active CbCRIE relationship. We observe that the largest supplier of secrecy is the United States which exchange CbCR data with only 23 of the EU Member States. We examine the network of information exchanges in

Table 8.2 Top 15 suppliers of financial secrecy to EU-28, the number of EU-28 countries that receive CbCR information from them, and the number of EU-28 countries that send CbCR information to them

Rank	Country	BFSI supplied to EU-28	Secrecy score	No. of EU countries receiving CbCR information from jurisdiction	No. of EU countries sending CbCR information to jurisdiction
1	United States	5519.6	59.8	23	23
2	Netherlands	4728.5	64.7	27	27
3	Luxembourg	4471.8	57.5	27	27
4	Switzerland	4318.9	72.6	25	28
5	Cayman Islands	4013.8	72.3	25	0
6	Germany	3901.8	58.2	27	27
7	Japan	2661.5	60.5	25	28
8	France	2646.9	51.0	27	27
9	United Arab Emirates	2503.5	83.8	24	0
10	Hong Kong	2455.6	71.1	25	28
11	Turkey	2350.3	68.0	0	0
12	Bermuda	2317.5	73.1	25	1
13	Jersey	2222.5	65.4	25	28
14	Taiwan	2205.9	75.8	0	0
15	Guernsey	2202.6	72.4	25	28

Source: Author-made, results of BFSI from Janský, Meinzer and Palanský (2018), secrecy scores from Tax Justice Network (2018), data on CbCR information exchange from OECD (2019).

more detail in Section 8.5. We also report that within the top 15 suppliers of secrecy, four countries are from within the EU²—the Netherlands, Luxembourg, Germany, and France. As per the EU treaties, all of these countries exchange both types of information with all other Member States.

Indeed, as reported in Figure 8.1, we find that more than one-third of all secrecy faced by EU Member States comes from within the EU, with an additional 13 per cent coming from EU countries' overseas countries and territories—mainly from the Cayman Islands, Bermuda, Jersey, and Guernsey, all of which are among the top 15 suppliers of secrecy to the EU 28.

² In the future, however, the financial secrecy stemming from within the EU may be reduced if EU countries decide to properly implement the EU Anti-Money Laundering Directive of 2015 (AMLD 4) as amended in 2018 (AMLD 5). In this case, part of their secrecy score related to registration and publication of beneficial ownership information for companies, partnerships, and foundations should improve. If EU Member States decide to go beyond AMLD 5 and subject all (instead of some) trusts to beneficial ownership registration and disclosure, then the secrecy score of EU countries would improve even more. However, the financial secrecy affecting the EU from within will stay the same, if EU countries fail to properly implement the AMLD 5 (as it happened with Germany, the UK or Denmark with regard to AMLD 4) or to do it within the required time.

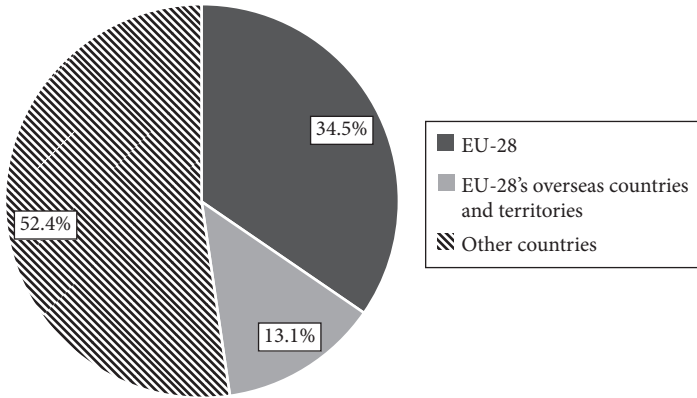


Figure 8.1 Distribution of suppliers of secrecy to EU-28 countries by political groups.

Source: Author-made based on the results of the BFSI (Janský, Meinzer, and Palanský 2018).

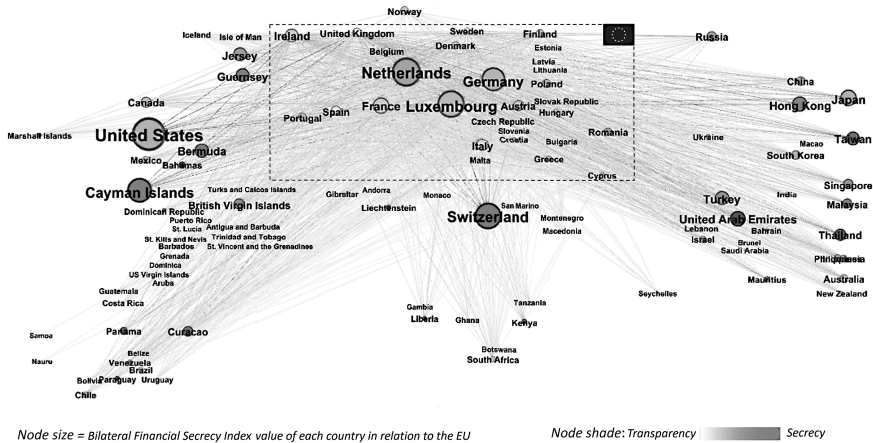


Figure 8.2 Financial secrecy affecting the EU, network map.

Source: Author-made, based on Mapbox and OpenStreetMap. © Mapbox, © OpenStreetMap.

Figure 8.2 shows the network of financial secrecy faced by the EU, illustrating the financial secrecy risks (BFSI value) created by each jurisdiction against all EU countries (size of bubble and number of links) and the secrecy score of these jurisdictions (bubble colour). Out of the total of 111 secrecy jurisdictions that supply financial secrecy to EU countries (located in the dashed-rectangle), the chart shows that the biggest bubbles (countries creating the most financial secrecy faced by EU countries) include many countries inside the EU (e.g. the Netherlands, Luxembourg, Germany, and France). Other important secrecy jurisdictions include the United States, Switzerland, and the Cayman Islands. The

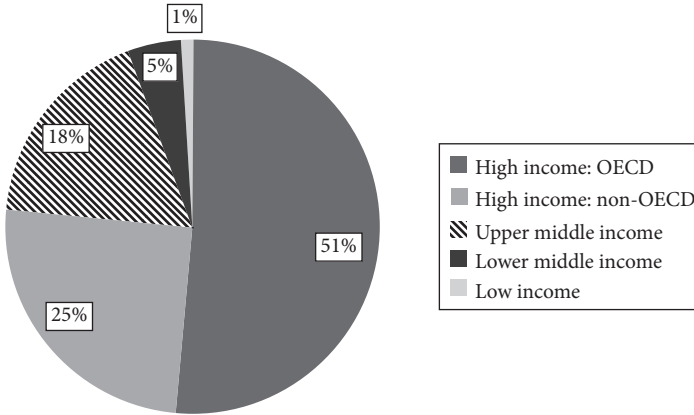


Figure 8.3 Distribution of suppliers of secrecy to EU-28 countries, by income group.

Source: Author-made based on the results of the BFSI (Janský, Meinzer, and Palanský 2018).

darker tone of the bubble indicates that the jurisdictions creating financial secrecy faced by EU countries are rather secretive (e.g., the United Arab Emirates, Taiwan, Switzerland, and the Cayman Islands). Importantly, jurisdictions currently black-listed by the EU (e.g., Samoa, US Virgin Islands, or Aruba) have very small bubbles, reflecting that they are not among the largest financial secrecy suppliers.

When breaking down the origins of financial secrecy faced by EU countries by income level, we observe in Figure 8.3 that high-income countries supply 76 per cent. More than half of all secrecy that the EU faces comes from OECD countries and only 6 per cent originates from low and lower-middle-income countries. Upper-middle-income countries supply the remaining 18 per cent.

8.5 Assessing the EU’s Policy Efforts Using BFSI

Two recent policy efforts have been undertaken at the international level, aiming at bringing more financial transparency. First, the automatic exchange of information in several areas is now relatively widespread. As we show in this section, the BFSI is a tool that can be used to assess the progress of these efforts, and we do so here for one specific type of information to be exchanged: country-by-country reporting by large multinational corporations. Second, we compare the results of the BFSI with the blacklist and greylist of non-cooperative jurisdictions of the European Commission.

Automatic exchange of CbCR information is one of the aims of the OECD’s BEPS framework. Figure 8.4 shows a map of the current state (as of September 2019) of the international network of exchanging jurisdictions with the size of the

circle representing each country’s population. Most major jurisdictions are now part of the network. However, some important players that have not yet joined, including many high-secrecy jurisdictions in the Caribbean.

In Figure 8.5, we show the share of secrecy that is faced by EU-28 countries and is covered by active CbCRIE relationships. As of September 2019, this share is 79 per cent, where 8 per cent were added by exchanges activated between January 2018 and September 2019.

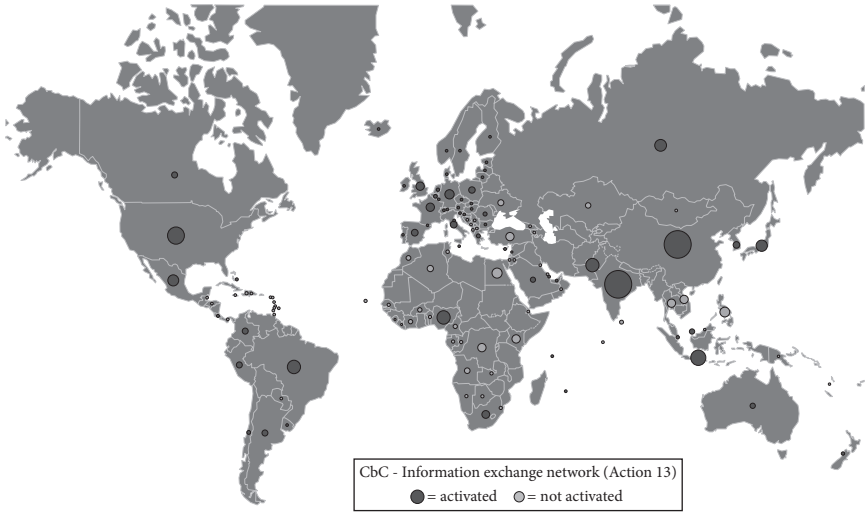


Figure 8.4 Map of the CbCR information exchange network.

Source: OECD (2019).

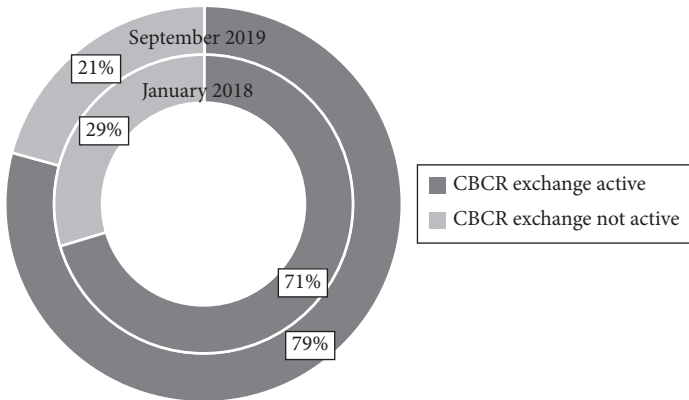


Figure 8.5 CbCR information exchange coverage of secrecy faced by the EU-28.

Source: Author-made.

In this period, most EU 28 countries activated around 10–15 new bilateral relationships, as documented in Figure 8.6. Among the exceptions to this trend are Bulgaria, Cyprus, and Romania, where no progress was made. These countries only receive CbCR information from the rest of EU 28 (although they do send CbCR information to around 35 third-party countries). Most jurisdictions now receive CbCR information from around 70 jurisdictions, and most of these relationships are reciprocated by EU Member States.

It is important to note that the approach we take here to calculate the number of CbCRIE relationships underestimates the real number of jurisdictions from which countries receive CbCR data. The reason for this is that we only consider bilateral exchange relationships that are currently in place for the automatic exchange of CbC reports between tax authorities as part of the OECD framework. However, there are two other ways in which an authority from country A might be able to obtain data from CbCR filed by multinationals that are headquartered in a jurisdiction not exchanging CbCR with country A on an automatic basis. The first is called surrogate filing, a scenario in which a multinational has a subsidiary in a

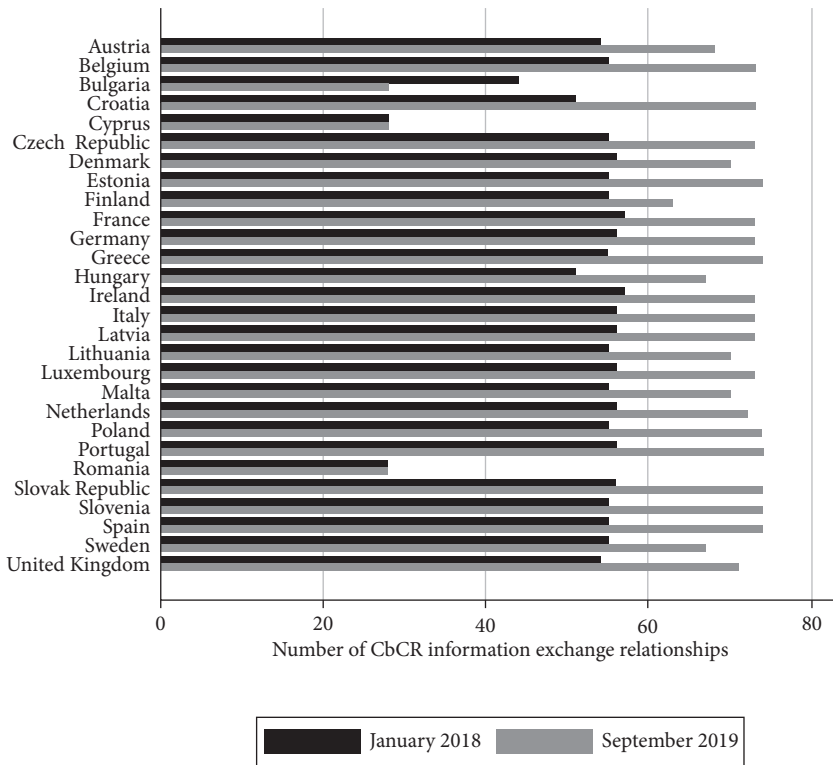


Figure 8.6 Number of active CbCR information exchange relationships.

Source: Author-made.

country that does exchange information with country A, and it appoints this subsidiary to file the CbCR. This data then would be exchanged automatically. The second method is local filing, where the local authority of country A asks the local subsidiary of the multinational to file the CbCR. In our analysis, we do not consider these two ways, and we discuss the reasons for this in Section 8.6.

Despite similar numbers of activated CbCRIE relationships with third countries, the share of BFSI that is covered by these treaties varies substantially among EU countries, since different countries supply secrecy to the EU Member States to different extents. As shown in Figure 8.7, the Czech Republic, for example, receives CbCR information from 73 countries and thereby covers 91 per cent of the secrecy it faces, while Luxembourg, having activated the same amount of treaties, only covers 73.5 per cent. The BFSI then easily allows to identify, for each country, the jurisdictions that are not yet covered by information exchange treaties and at the same time supply large amounts of secrecy. For Luxembourg, establishing CbCRIE with just five more countries—Taiwan, Thailand, British

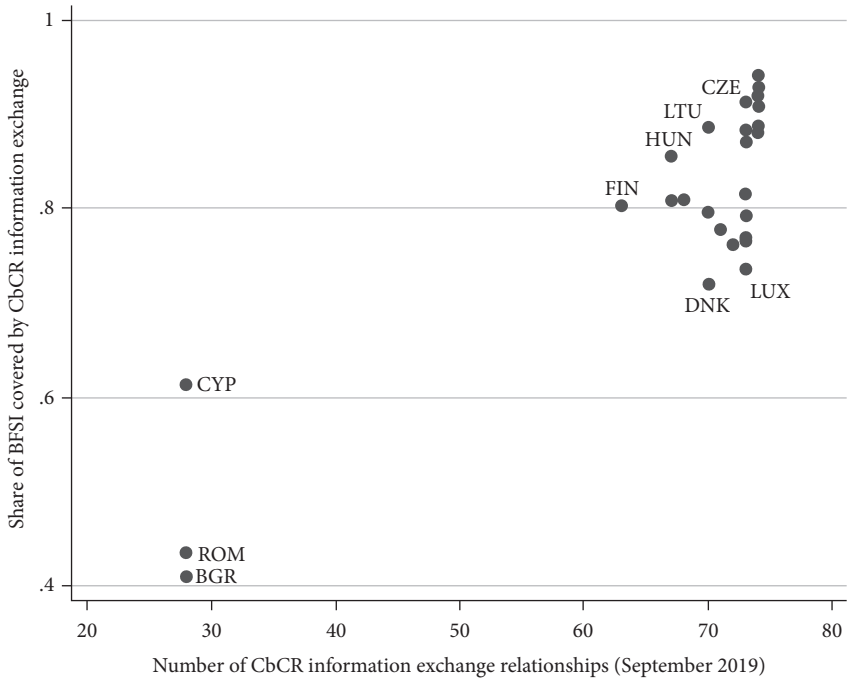


Figure 8.7 Share of BFSI covered by active CbCR information exchange relationships vs the number of active CbCR information exchange relationships as of September 2019.

Source: Author-made.

Table 8.3 Top suppliers of secrecy that is uncovered by CbCR information exchange relationships with EU-28 countries

Rank	Country	BFSI supplied to EU-28	Share of BFSI uncovered by CbCRIE	BFSI uncovered by CbCRIE	EU list, 03/2019
1	British Virgin Islands	1733.6	59.5%	1030.8	
2	United States	5519.6	16.8%	925.2	
3	Curacao	1679.5	11.0%	185.0	
4	United Arab Emirates	2503.5	5.6%	140.5	
5	Russia	1620.3	7.3%	118.2	
6	Switzerland	4318.9	1.8%	76.7	
7	Cayman Islands	4013.8	1.8%	71.2	
8	Seychelles	226.4	27.9%	63.2	
9	Bermuda	2317.5	2.7%	61.7	
10	Guernsey	2202.6	2.7%	59.9	
11	Jersey	2222.5	2.3%	50.4	
12	Canada	1724.3	2.3%	40.3	
13	Japan	2661.5	1.4%	36.0	
14	Isle of Man	583.6	5.9%	34.1	
15	Norway	1296.2	2.4%	30.8	

Source: Author-made.

Virgin Islands, Turkey, and the Bahamas—would increase the share of BFSI covered by CbCRIE to 83 per cent.

In Table 8.3, we show which jurisdictions supply the most BFSI uncovered by CbCRIE to EU Member States. The British Virgin Islands, which are only the 20th-largest supplier of secrecy to the EU as a whole, do not share CbCR information with 15 of the EU 28 Member States. However, 59 per cent of the secrecy they supply to the EU as a whole, goes to those 15 countries. At the same time, the British Virgin Islands notoriously act as a corporate tax haven, ranking at the top of the recently published Corporate Tax Haven Index (see Tax Justice Network, 2019 and Chapter 6). The jurisdictions that face most secrecy from the British Virgin Islands, and at the same time do not receive CbCR information from them, are Luxembourg, the United Kingdom, and Ireland.

The second country in the ranking of Table 8.3 is the United States, which does not share CbCR information with five EU countries: Cyprus, Romania, Bulgaria, and, importantly, Germany and France (with the latter two accounting for the bulk of the amount of 925.2 of uncovered BFSI). Interestingly, for Curacao, which is at the third place of the ranking of jurisdictions with the most uncovered secrecy, most of this uncovered BFSI is directed towards the Netherlands, which does not receive CbCR information from Curacao despite being part of the same Kingdom.

We also compare these results with a recent effort of the European Commission to blacklist non-cooperative jurisdictions. We observe that, out of the top 15 largest suppliers of secrecy to the EU (as listed in Table 8.2), the blacklist and greylist have successfully identified all but the United States, Canada, and Japan. Of the top 15 jurisdictions that supply the most BFSI that is uncovered by CbCRIE treaties, the lists miss five countries. The two lists are continually updated and jurisdictions monitored—Bermuda, for example, appeared on the blacklist for a short period between March and June 2019, then moved back to the greylist following its commitment to address the European Commission’s concerns until the end of 2019 (similarly to the Bahamas, British Virgin Islands, and the Cayman Islands). As of September 2019, out of the jurisdictions listed in Table 8.3, only the United Arab Emirates are included on the blacklist.

One of the flaws of the EU’s blacklisting exercise is its heavy reliance on the OECD tax standards, whose criteria are often very lenient and sometimes bent in favour of dominant players, and whose evaluating assessments are also sometimes biased. For example, the EU blacklist’s sub-criterion 1.2 of criterion 1 on tax transparency requires a jurisdiction to obtain at least a ‘largely compliant’ rating by the OECD’s Global Forum peer review concerning its Exchange of Information on Request (EOIR) standard (Lips and Cobham 2018). To understand how irrelevant this criterion should be, consider that, as of July 2018, out of 119 reviewed jurisdictions by the Global Forum, the only jurisdictions that have failed to have at least a ‘largely compliant’ rating are: Trinidad & Tobago (‘not compliant’), Anguilla, Curacao, Ghana, Kazakhstan, Sint Maarten, Turkey (‘partially compliant’), and the Marshall Islands (‘provisionally partially compliant’). This implies that jurisdictions such as Panama, the United Arab Emirates, the British Virgin Islands, Switzerland, USA, and every other financial centre, are considered at least ‘largely compliant’.

As for the bending of the criteria, consider the OECD’s recent moves to ‘update’ the criteria for compliance with automatic information exchange. A change in the criteria has allowed the USA to tick the box of compliance while refraining from participating in automatic information exchange (Knobel 2018a). Furthermore, the Global Forum in July of 2018 arrived at a biased assessment of the US’ legal framework for the availability of company ownership information. The Global Forum rated the US as largely compliant, although the US cannot guarantee access to legal ownership information (Knobel 2018c). By relying on OECD standards and evaluations for a large part of the black and greylisting exercise, the EU partially imports OECD’s biases against low- and medium-income countries, in favour of the largest, most powerful country(ies) in the world. The power of a jurisdiction, expressed in terms of absolute GDP, appears thus to have largely driven the blacklisting exercise (Lips and Cobham 2018).

8.6 Conclusion and Policy Recommendations

The European Union faces large amounts of financial secrecy supplied to it by a number of secrecy jurisdictions around the world. To explore the patterns of this phenomenon, in this chapter, we used the Bilateral Financial Secrecy Index (BFSI) developed by Janský et al. (2018) to estimate which jurisdictions supply most secrecy to the EU Member States. We then used the BFSI to assess the progress of two recent EU policy efforts to tackle financial secrecy: automatic exchange of country-by-country reporting data and the blacklist and greylist published by the European Commission.

We find that 34 per cent of the financial secrecy the EU is facing is supplied by other EU Member States and a further 13 per cent comes from the Member States' overseas countries and territories, mainly from the UK's Cayman Islands, Bermuda, and Guernsey. More than 75 per cent of financial secrecy faced by the EU comes from high-income countries, and only 6 per cent comes from low and lower-middle-income countries. The largest supplier of financial secrecy to the EU, according to the BFSI, are the United States, followed by the Netherlands, Luxembourg, Switzerland, and the Cayman Islands.

The results suggest that around 79 per cent of the secrecy faced by the EU Member States is now covered by active CbCRIE relationships, a number that has increased by 8 percentage points between January 2018 and September 2019. Most countries in the EU now receive CbCR information from around seventy countries, except for Bulgaria, Cyprus, and Romania, which lag in this respect. We further compared the number of active CbCRIE relationships with the share of the secrecy that is covered by them, as estimated by the BFSI. We find that there is relatively high heterogeneity in the covered share of secrecy—countries that have signed a similar number of treaties have covered between seventy and 94 per cent of the secrecy they face. We argue that the BFSI can be used to identify the jurisdictions that do not yet automatically share information with EU Member States but at the same time are important suppliers of financial secrecy. The jurisdictions that supply the most uncovered secrecy to the EU Member States are the British Virgin Islands and the United States, followed by Curacao and the United Arab Emirates.

Assessing how well-aligned the blacklist and greylist published by the European Commission are with the results of the BFSI for EU Member States, we find that the lists do identify most of the EU's largest secrecy suppliers, with an important exception of the United States. At the same time, most of the large secrecy suppliers are now on the greylist, awaiting further assessment, and it remains to be seen whether they will implement the required measures to be removed from the list. We also argue that the criteria for the assessment of jurisdictions for the blacklisting exercise rely heavily on the OECD tax standards, whose criteria are

often very lenient and sometimes bent in favour of powerful players, and whose evaluating assessments are also sometimes biased.

We provide two concrete policy recommendations that stem from our analysis in this chapter. First, we recommend that the country-by-country reporting data collected from individual multinationals should be made publicly available by all countries to facilitate a proper analysis of the scale of international corporate profit shifting, to enable effective public control of suspicious activity of multinational corporations, and to provide individual jurisdictions with the data necessary to correctly calculate corporate tax due by each multinational. This would also allow researchers, journalists and civil society organizations to hold multinational companies as well as authorities to account. This system would completely replace the current system of CbCRIE, freeing many resources and reducing costs for tax authorities—no information would need to be exchanged as it would all be publicly available. Second, until CbCR are made publicly available by multinationals, we encourage countries to require the local subsidiaries of multinational corporations to file a CbC report with local authorities in case their authorities cannot obtain this report via automatic information exchange, regardless of the reason.

8.6.1 Public Disclosure of CbCR Data

One of the purposes of CbCR is to enable reliable tracking of the economic activity of multinational companies. One could argue that the CbCR does not involve confidential information. This explains why the European Union already requires banks and some extractive companies to publish this data, and some companies such as Vodafone have proposed to make their CbCR public (Knobel 2018b). However, the current OECD reporting requirements do not make essential information from the CbC reports publicly available—rather, the reports are shared via bilateral information exchange relationships. Therefore, data on the activity of a multinational corporation headquartered in country A, that is collected through CbCR, can be accessed only by selected authorities in specific countries where the multinational operates, and only if those countries meet all the OECD requirements described below. This cumbersome approach is non-transparent as it does not allow public accountability. It is not enough to know that a country has the applicable framework and that it is actually receiving the CbC report. It is just as important to know that they are actually using it to detect tax avoidance, on which some authorities have a bad track record. For example, the EU Commission published statistics on the Directive of Administrative Cooperation on automatic exchange of financial account data (DAC 2), revealing that some countries were not using the received information at all: ‘during the first year of DAC2 exchanges, . . . Bulgaria, Slovakia and Malta, reported not having

opened the files received...Nine states reported not using the information received via DAC2.' (European Commission 2018) The same could happen with CbC reports.

This cumbersome OECD approach also introduces a bias against some countries, often developing ones, which have not yet established their network of information exchange (Knobel and Cobham 2016).

The relevant literature recognizes three critical channels of profit shifting in multinational corporations: (1) debt shifting, (2) strategic relocation of intangible assets, and (3) strategic transfer pricing, i.e., manipulating intra-group exports and import prices. Currently, according to financial reporting standards, multinationals consolidate these intra-group transactions with regular third-party trade in the annual financial statements. Therefore, possible purposeful mispricing and other aggressive tax planning strategies stay hidden from the public. The current OECD framework for CbCRIE thus blocks access to reliable information already collected about multinationals for trading partners, possible investors, consumers as well as financial regulators, and tax authorities in many cases.

Our key policy recommendation is to require public disclosure by all countries of firm-level CbCR data collected from individual multinationals. In principle, any jurisdiction can require all multinational companies incorporated and operating under its laws (including subsidiaries, branches, and holding companies) to publish financial information in their accounts on their global activity on a country-by-country basis. Appropriate reporting requirements can be implemented either through regulations issued by the stock exchange or by a legal or regulatory provision enacted by the competent regulatory or legislative body (Tax Justice Network 2018). Effectively, public disclosure of country-by-country reports would mean that the current system of information exchange would become redundant as all data would be publicly available. This new framework would bring several advantages. If public country-by-country information were available, investors and other market players would be better able to evaluate if a given corporation is exposed to reputational tax risks by relying on complex networks of subsidiaries in secrecy jurisdictions and tax havens, or whether it is heavily engaged in conflict-ridden countries. Tax authorities and audit institutions would be better able to make risk assessments of particular sectors or companies to guide their audit activity by comparing profit levels or tax payments to sales, assets, and labour employed (Tax Justice Network 2018). It would further enhance additional control by the public and researchers, reduce bias towards more developed countries (which is present with the current system of information exchange, as discussed above), and eliminate gaps and loopholes which are present in the current rules (Knobel and Meinzer 2014).

In the ongoing first stage, the current threshold (of 750 million EUR in turnover) for companies that are required to file CbCR does have its merit—it prevents smaller companies from incurring losses due to higher reporting costs.

However, once the system is well established and standards are developed, it would be desirable to impose CbCR requirements on smaller firms as well. In less developed countries, the firms generally reach lower values of turnover, and these countries would thus be prevented from benefiting from CbCR to a large extent. Instead, countries could set their own thresholds that would be lower than those set by other countries. The existing research (e.g., Janský and Palanský 2019, Cobham and Janský 2018) shows that low and lower-middle-income countries incur higher (as compared to more developed countries) tax revenue losses relative to their GDP as a result of international profit shifting. These countries could greatly benefit from using the lost tax revenue to develop local infrastructure more quickly and fund social programs that are required to accelerate economic growth. Thus, making CbCR data publicly available even for smaller multinationals could effectively lead to faster development in low- and lower-middle-income countries.

The form of the reporting to be made publicly available would be, in an ideal scenario, more comprehensive than the current reporting requirements. In particular, we recommend following the proposal of the Global Reporting Initiative (GRI), a leading sustainability reporting standard setter. GRI has published a tax reporting standard comprising full public disclosure of comprehensive CbCR in December 2019 (Global Reporting Initiative 2019). This standard would ensure that comprehensive information on multinational corporate activities is available in the public domain for use by different stakeholders (Bou Mansour 2019). However, as a voluntary standard, it will not be possible to address all loopholes and to ensure a level playing field. Therefore, multinational corporations of all sectors, listed and non-listed, should be required through an international binding convention to disclose critical information in their annual financial statements for each country in which they operate. This information should comprise their financial performance, including sales, purchases, and financing costs, all split by an intra-group and third party, pre-tax profit, labour costs, and the number of employees. Besides, the cost and net book value of its physical fixed assets, the gross and net assets, the tax charged, actual tax payments, tax liabilities, and deferred tax liabilities would be published on a country-by-country basis. Importantly, any standard should require, as is the case with the GRI tax standard mentioned above, and in contrast to the confidential OECD CbCR rules, that the CbCR reconciles with the multinational companies' consolidated financial statements. It is worth noting that small- and medium-sized enterprises that operate in only one country are required by the nature of their business activity to report information in their annual financial statements that we propose here for multinational companies. The present rules of the game, therefore, disadvantage smaller enterprises relative to multinational corporations (Tax Justice Network 2018).

At the time of this writing, in January 2020, the OECD had planned to be already publishing aggregate statistics on CbCR collected from all countries that

participate in the framework. However, the publication of this data has been postponed, and the United States thus remains the only country in the world to publish these aggregate statistics (with Germany planning to join soon, Tax Justice Network 2020).

8.6.2 Robust Local Filing Requirements

One could argue that the number of relationships to exchange CbCR automatically is irrelevant because local authorities would still be able to receive the CbCR data through two other ways allowed by the OECD. However, deliberate decisions by some countries such as choosing voluntary secrecy (to send but not to receive CbC reports) suggest that the other available means to access the CbCR will not always be pursued.

The existing OECD framework for the exchange of CbCR data requires as a condition *sine qua non* to have an international agreement between the local authority where the multinational operates and the country where the multinational is headquartered. This international agreement may be based on multilateral and bilateral agreements: (1) The Multilateral Convention on Administrative Assistance in Tax Matters, (2) Double Tax Agreement, or (3) Tax Information Exchange Agreements (OECD 2019). If this first condition of having an international agreement is met, there are three possibilities for a local authority to access the CbCR of a multinational operating there. First, if there is also a competent authority agreement (CAA) such as the Multilateral Competent Authority Agreement (MCAA) in force between both countries, the CbCR will be sent automatically by the headquarters' jurisdiction to the local authority. Second, if there is no CAA between both countries, then the multinational may appoint a subsidiary in a different country to file the CbCR, so that this second country will automatically send the CbCR to the local authority (assuming that this second country does have a CAA with the local authority's country). This is called surrogate filing. The third case refers to local filing. If none of the other two options are available (and the local authority is not refusing to sign an agreement with the headquarters' country), then the local authority may request 'local filing', requesting the local subsidiary of the multinational to file the CbCR (this third case involves no international exchange of information). All of these three options necessitate a binding international agreement between the local authority's jurisdiction and the jurisdiction where the multinational has its headquarters.

In addition to having all the agreements mentioned above, the OECD requires countries to comply with more conditions, including confidentiality provisions and rules for appropriate use of the received CbCR data to be able to keep receiving CbCR data, either internationally or locally. One of the key constraints of the OECD conditions relates to this: 'the information in the Country-by-Country Report

should not be used as a substitute for a detailed transfer pricing analysis of individual transactions and prices based on a full functional analysis and a full comparability analysis. The information in the Country-by-Country Report on its own does not constitute conclusive evidence that transfer prices are or are not appropriate. It should not be used by tax administrations to propose transfer pricing adjustments based on a global formulary apportionment of income. . . . Jurisdictions should not propose adjustments to the income of any taxpayer on the basis of an income allocation formula based on the data from the Country-by-Country Report' (OECD 2017). These constraints prevent jurisdictions from efficiently countering illicit financial flows through tax adjustments that are based on determining misaligned profits of large multinationals in a simplified manner, and instead reinforces the jurisdiction's commitment to the OECD authorized transfer pricing approaches, which work largely to the detriment of lower-income countries (Picciotto 2018, 44).

As described above, the OECD approach is cumbersome, complex, and limits the use of the CbCR data by local authorities. In line with Tax Justice Network (2018), our second policy recommendation is that countries require local filing (the third method to access the CbCR data mentioned above), not according to the OECD conditions, but whenever the local authorities cannot receive the CbCR from another country, for whatever reason (regardless of whether there is an international agreement or not with the headquarters' jurisdiction). This is referred to as 'robust' local filing because it ensures that the CbCR will always be accessed by a local authority: either through automatic exchanges or from a local subsidiary.

In 2018, the Financial Secrecy Index revealed, as part of its Key Financial Secrecy Indicator 9, that 19 jurisdictions were implementing robust local filing: Australia, Austria, Belgium, Canada, China, Denmark, France, Germany, Gibraltar, Hong Kong, Iceland, India, Ireland, Italy, Jersey, South Korea, Spain, United Kingdom, and Uruguay. This conclusion was reached based on a legal analysis of individual countries' legislations. However, further decisions by many of these countries to amend their legislation to comply with the OECD suggest that their original domestic laws establishing robust local filing may have been interpreted as such, merely because of poor legal wording, rather than an intention to apply robust local filing. An alternative explanation could be that the pressure by the Global Forum's peer reviews has resulted in countries adjusting their laws to avoid getting bad marks in the peer review assessment. In 2020 the Financial Secrecy Index revealed that only nine countries still have robust local filing: France, Germany, Gibraltar, India, Russia, Spain, Taiwan, Uruguay, and Vietnam.

These countries applying robust local filing will be able to obtain the CbCR even if they do not have an international agreement with the headquarters' country. However, it will be up to each country to decide to request either surrogate filing, local filing or robust filing, and if they access the information,

to use it effectively to address tax abuse. In any of these cases, the public will have no access to the CbCR nor to know whether authorities are using it effectively. For this reason, not even robust local filing is a good replacement for our first policy recommendation—public disclosure of CbCR data at firm-level.

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Identification Infrastructures and the Capitalization of Data in the Development of Data-Driven Regulation

The Case of the Global Legal Entity Identifier System

Yuval Millo, Nikiforos Panourgias, and Markos Zachariadis

9.1 Introduction

The collapse of Lehman Brothers during the financial crisis of 2008 revealed an important blind spot in the ability of financial markets regulators to foresee a potentially risky concentration of liabilities by a small number of systemically important financial institutions. Information on such concentration risk would be critical in deciding what regulatory action to take to prevent further contagion among market participants. In addition, it would help to resolve more quickly disputes regarding the ownership of assets and liabilities in the aftermath of a failure of a market entity (Fleming and Sarkar 2014; Jenkinson and Leonova 2013; Lai and Mordel 2012).

This regulatory blind spot highlighted a broader problem, which is the inability of regulators to trace how legal entities are identified and how they relate to one another. It also revealed that the quality of the existing identification data was uncertain, suffering from duplications resulting from the use of many variants or spellings of a company name and a plethora of different identifiers used in different organizational activities (e.g. FDIC Certificate ID, SEC CIK SWIFT ID, and various systems vendor-proprietary IDs).

Regulators decided to address this problem through the instigation of a new market-wide and cross-jurisdictional identification standard. This standard would allow uncontested and unambiguous identification of legal entities engaged in financial market transactions (Financial Stability Board 2012). This identification system based around a new standardized identifier was envisaged to be at the heart of a new system of data-driven regulation that would govern

financial markets through the reporting and monitoring of transactional data with the inclusion of the proposed identifier (Financial Stability Board 2012). The two critical prerequisites identified for this data-driven regulation were the accurate and reliable identification of entities engaged in market activities and the ability to trace the transactional and corporate relations of these entities. This chapter draws on an empirical study of the efforts by regulators, policy-makers, and market participants to develop and put in place such a regulatory system for identification. The case in the chapter brings to the fore a core element of the COFFERS project, particularly around the importance of information to beneficial relationships among different actors in the financial ecosystem.

We analyse the case of the Legal Entity Identifier (LEI) standard as an illustration of infrastructure-making. We define infrastructure-making as the process through which acceptance is reached and maintained with regard to common generalized routines whereby such routines are used, in turn, as a basis for more particular routines. For example, infrastructure-making may bring about a standard for identifying all financial institutions and this standard is used later for identifying a diversity of such institutions. The particular case of infrastructure-making we examine leads to the creation of an identification infrastructure (hereafter IDI), as this particular infrastructure is used for identifying financial entities. By examining the emergence of an IDI, therefore, we explore the dynamics through which reference data and calculative routines that delineate the identities of commercial entities are justified and implemented. We find that the establishment of an IDI is dependent on validating and certifying the quality of the identification data underpinning the IDI. The case illustrates how data is made valuable in terms of supporting more effective decision-making among commercial, financial actors, and regulators.

Conceptually, our analysis owes much to the concept of ‘thinking infrastructures’ (Kornberger et al. 2019). In addition to presenting insights about a ‘thinking infrastructure’ ‘in the making’ (Callon 1987; MacKenzie 2009) this chapter also addresses the broader growing interest in the big data and analytics literature (Abbasi et al. 2016; Agarwal and Dhar 2014) and the dynamics of ‘data capitalization’ (Langley and Leyshon 2017; Thrift and Leyshon 2007; Millo et al. 2019), i.e., the processes through which the value of data or the ‘information value-chain’ is captured and realized in terms of future economic gains (Abbasi et al. 2016; Doganova and Muniesa 2015; Najjar and Kettinger 2013). It also illuminates the practical challenges involved in developing solutions suggested in both the academic literature (Hu et al. 2012) and among practitioners (Davies 2019; van Steenis 2019) for the use of ‘Big Data’ in the regulation of increasingly digitized and global financial activities and services and which Davies (2019) refers to as ‘regtech’.

9.2 Background to the Establishment of the GLEIS

Among the regulatory problems exposed in the aftermath of the financial crisis of 2008–9, the collapse of Lehman Brothers highlighted problems with the identification of market participants as legal entities (Fleming and Sarkar 2014; Jenkinson and Leonova 2013; Lai and Mordel 2012). The lack of a unique identifier for legal entities engaged in financial markets transactions and an inability to see how legal entities related to one another in terms of ownership of assets and liabilities had denied regulators the ability to foresee any concentration of liabilities via subsidiaries that a consolidating entity might be accumulating.

Even when such a risk to a significant market participant became apparent, what course of action to take was hindered by not knowing what consequences this may have in terms of contagion among market participants with exposures to the entity at risk (Fleming and Sarkar 2014; Jenkinson and Leonova 2013; Lai and Mordel 2012). This made it impossible to decide whether it was better to allow an entity such as Lehman Brothers to fail or opt instead for some state-sponsored bail-out.

Finally, the long time it took for the resolution of the failed entity due to difficulties in establishing—in an uncontested way—the assets and liabilities of that entity and which of these were attributable to clients and which to Lehman Brothers owned entities, prolonged market disruption and generated risks and uncertainty for clients and counterparties of the failed entity (Fleming and Sarkar 2014; Jenkinson and Leonova 2013; Lai and Mordel 2012).

The response of financial markets regulators, led by the US market authorities and channelled initially through the G-20 and then the Financial Stability Board (FSB), was to propose the institution of a ‘new market-wide and cross-jurisdictional identification standard for the uncontested and unambiguous identification of legal entities engaged in any financial markets transactions across asset classes and trading venues’ (Millo et al. 2019). This global identification infrastructure was seen as a way to put in place a new data-driven regulatory regime that could be pro-active rather than reactive to a market crisis after it has occurred and support more effective corrective action to protect market integrity, both during and after a crisis (Legal Entity Identifier Regulatory Oversight Committee 2015; Financial Stability Board 2012).

The first step towards the development of this new regulatory regime involved the design of a standard identifier format in conjunction with the International Standards Organization (ISO) (International Standards Organization 2012; Legal Entity Identifier Regulatory Oversight Committee 2015). This would then be followed by the mandating, through regulations and other legal instruments, of the use of the identifier in the reporting of financial markets transactions (Legal Entity Identifier Regulatory Oversight Committee 2015). Finally, an organizational structure would be put in place for the issuance of LEIs and the maintenance of the entity data linked to the identifier. Together with governance arrangements around

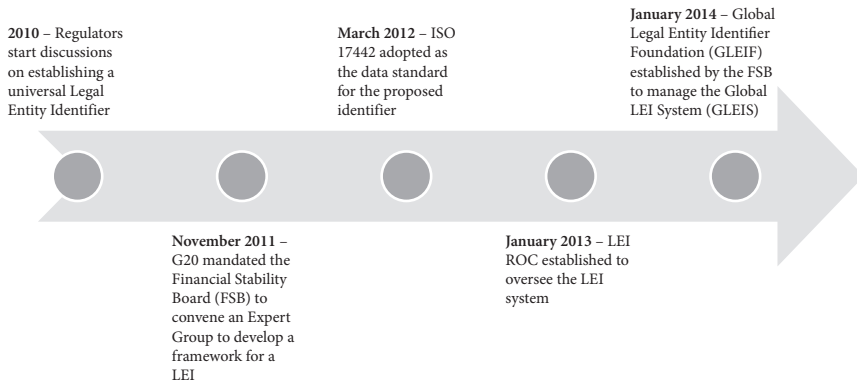


Figure 9.1 Key events in the establishment of the Global Legal Entity Identifier System.

an executive body the Global Legal Entity Foundation (GLEIF) and a Regulatory Oversight Committee (ROC), this would collectively form what is now referred to as the Global Legal Entity Identifier System (GLEIS) (see Figure 9.1 for a chronology).

The LEI itself would initially link basic data (referred to as Level 1 or ‘*who is who*’ data) with entities (e.g. legal name; legal form; previous legal names; address; date of next certification). Later (May 2017) Level 2 (‘*who owns whom*’) data about the ultimate and immediate owner of the entity being identified would also be included.

At the centre of the GLEIS is GLEIF, a not-for-profit organization that oversees the operation of the system. Among other things, GLEIF oversees the issuing and validating of LEI identifiers to those who apply for them through LEI Operating Units (LOUs) around the world.

Through several regulations (DFA, EMIR, AIFMD, MIFID 2, MIFIR, Solvency 2, SFTR), primarily in jurisdictions with more developed financial markets, the use of LEIs has been mandated for the reporting of transactions in derivatives and securities to regulators and central banks. The use of LEIs is also considered in the reporting of balance of payments transactions, AML (anti-money laundering), CFT (combating the financing of terrorism) and sanction regimes compliance, the Automatic Exchange of Information in the tax reporting of financial corporations (OECD, 2014), collateral management by central banks, and public procurement.

GLEIF’s business model for the LEI IDI is premised on the free use of an ostensibly open infrastructure through a cost-recovery model via the LOUs and their charges whereby the promoters of the infrastructure (LOUs, GLEIF) justify their strategic positioning as guardians of the accuracy and integrity of the data and charge accordingly, through the costs that are recovered, for their service.

9.3 Existing Literature on Identification and Infrastructure-Making

In this chapter, we build on the conception of infrastructures that was proposed by Star (1999) that sees infrastructures as dynamic organizing mechanisms that connect people and artefacts through time and space. In doing so, they offer new ways of collaborating and generating possibilities for action across organizational and disciplinary boundaries. Infrastructures, thus, ‘sort out’ things (Bowker and Star 1999) and arrange knowledge by defining what counts and how to count (Kornberger et al. 2019).

This conceptualization of infrastructure also underpins the literature on information infrastructures that enable the exchanging, collecting, storing and management of data (Star and Ruhleder 1996; Hanseth and Braa 2000; Ciborra and Hanseth 1998; Monteiro and Hanseth 1996; Hanseth and Braa 2000; Hanseth 2002). A specific type of information infrastructures is identification infrastructures (IDIs) with the specific aim of establishing a recognized identification of a particular actor, such as—in this case—a legal entity, by associating them with a set of specific characteristics. These typically incorporate a unique identifier that is matched to a reference dataset and in doing so helps to establish a link between an entity’s long-lived temporal attributes and the various occasions and contexts in which the entity is involved (e.g. financial transactions with other entities) (Beynon-Davies 2016; Eriksson and Agerfalk 2010; Otjacques et al. 2007; Whitley et al. 2014).

Existing approaches to IDIs pay attention to the components necessary for the IDI to be established and describe successful identification once it is achieved, but they do not address the dynamic interplay of interests associated with how identification-relevant information is collected, compiled, associated with reference data, and linked effectively with entities on an on-going basis (Millo et al. 2019).

Identification infrastructures also differ from other information infrastructures because of the degree of dependency an infrastructure participant and other infrastructures may have on the identification infrastructure. As a corollary, such dependency makes it difficult to put in place or change, once in place, elements of the infrastructure. We consider this characteristic of identification infrastructures through two related conceptual dimensions, which we term *pivotality* and *linkability*. The degree of dependency of other information infrastructures on IDIs gives IDIs—if adopted—both power and transparency (or *invisibility* as per Star (1999)), but also creates difficulties and costs relating to its adoption and embedding into existing practices (Star 1999). Pivotality is important in the case of identification infrastructures as such infrastructures tend to have a high degree of pivotality because they play a crucial role in establishing relations between different sets of data that describe an entity and

which may have significant operational implications for the entity. This, in turn, has important implications in terms of the acceptance among users necessary for infrastructure to be established (Star 1999).

IDs are also expensive—in terms of cost/effort—to replace (Whitley et al. 2014; Eriksson and Agerfalk 2010) because they are vital for the day-to-day operation of the organizations that participate in such an infrastructure and hence cannot be replaced or changed without an operational ‘backup’ in place (Whitley et al. 2014).

The degree of pivotality of informational objects (Power 2015) that are part of an identification infrastructure such as a business identifier (e.g. name, address, and owner), is also dependent on the ubiquity (use across many infrastructures or in other informational objects) of the identifier, but also on the diversity of other informational items attached to it (e.g. reference data). Pivotal information items demand many organizational systems and practices also to change when the format or content of such items changes (Millo et al. 2019). For example, in a change in a unit of measurement (e.g. switching from Imperial weight and distance measures to Metric ones, or moving from national currencies to the Euro), much other information and its processing are affected/impacted by this change (Millo et al. 2019). As a result, pivotality is important firstly, in the establishment, and subsequent control and management of an IDI through network effects and irreversibility/path-dependency; secondly, as a point of resistance in the attitude of adopters towards a particular infrastructure relating to the costs of adoption. These costs may relate to the adapting of existing systems and practices to the new infrastructure and future lock-ins and dependences. The strategic value of the pivotality of an IDI is both in the irreversibility it can create and the implications this has in terms of lock-ins for infrastructure participants (Arthur 1989; Cantarelli et al. 2010; David 1985; Edwards et al. 2007; Ribes and Finholt 2009).

Because of the high pivotality and linkability of IDs, the quality of the data being associated with the IDI is crucial (Millo et al. 2019). ‘Identification’ (Clarke 1994), therefore, is a complex process that results from the assembling of technological, political, legislative, organizational as well as purely data-related factors which will be presented in more detail in this chapter.

Discussion around data-quality challenges in the existing literature is related to big data and analytics literature and in connection to the veracity of the data which can vary in nature and take different shapes or forms (Fox et al. 1994; Nagle et al. 2017; Park et al. 2012; Redman, 1995, 2013, 2016; Rubin and Lukoianova 2013; Zeng et al. 2010). Data veracity is defined as ‘the level of reliability associated with certain types of data’ including ‘truthfulness, accuracy or precision, correctness’ (Rubin and Lukoianova 2013, p. 7). Data Veracity, in turn, is related to the credibility assigned to the data, which is a function of the trust the data source has with regards to a potential (or a concrete) user of such data (Rubin and Lukoianova 2013). In the context of identification data, credibility also relates to

the perceived quality of the systems responsible for producing and maintaining the data. For example, an information infrastructure can suffer from semantic inconsistencies, lack of structure, conflicting evidence, multiple entries, and inaccuracies (Zeng et al. 2010). Many of these issues can be exacerbated when the data held by the infrastructure are user-generated. In such a context, ensuring high veracity of data sources can be a ‘major challenge’ (Zeng et al. 2010). It is clear that the credibility and usefulness of the information infrastructure largely depend on the quality of the data (i.e. garbage in/garbage out) and it will affect the value it provides to the entire ecosystem (see Chapter 2 for a description of the tax ecosystem) within which the infrastructure will operate. As we will see below, this is particularly important when infrastructure is highly embedded and linked to other infrastructures and practices.

Consequently, maintaining high veracity can be seen as a cost that needs to be accounted for when evaluating the effectiveness and overall benefits (e.g. return-on-investment) of the infrastructure. When treating data as a primary asset, one can also assess the benefits from other critical characteristics of data such as volume and variety and measure them against the cost for veracity. Overall, the importance of data quality in information infrastructures is paramount and can be associated with the success of data-related regulatory initiatives such as the one associated with the establishment of the GLEIS.

Underpinning the framing of identification infrastructures, we attempt above is a view of infrastructure not only as a nexus of material devices and affordances, but also as an achievement of an on-going alignment of the dynamic interests, incentives, and preferences of all relevant stakeholders (Millo et al. 2019).

Considering these points, we propose, as a guide for our examination of LEI, a definition of IDIs as ‘a nexus of practices and on-going efforts made to establish these practices, which are aimed at enabling and framing the attribution of entities’ identification through an association with other data’ (Millo et al. 2019). The emphasis in this definition is on the dynamics that surround the practices rather than only on the outcomes—the emergence and establishment of infrastructure. The infrastructure-building we examine in more detail below is an example of how the LEI identifier and associated identification protocols which incorporate a core of open-access data and design practices through which differential access to legitimacy, are performed.

There is one final dimension in information and identification infrastructures that has been neglected by extant studies and that we seek to incorporate into our analysis and which is how something intangible such as data gains value as part of an infrastructure and the significance of the definition and assessment of data quality in creating this value for the infrastructure.

Following the arguments above, we suggest that there are two crucial conditions for arriving at a working identification infrastructure: (1) having an agreement on

the selection of a single identifier over all possible others to be associated with identified data items that may change over time and (2) decide on a process to maintain the quality of the reference data held by the infrastructure and identify what elements of data-quality issues are more critical to address. Thus, the establishment of an infrastructure for reference data, such as identification data, calls for intermediated exertion of influence between two or more actors through the development of domain-wide rules that govern how references are to be associated with identification items and how high veracity of data can be ensured.

To examine this phenomenon, we focused on the specific actors who have sought to promote, develop and control the LEI IDI and how they went about trying to realize a role for themselves as gatekeepers to the arenas where identification data is trusted to be valid. The actions of such actors, we propose, are aimed at establishing control over how legitimacy is given to identification data and, as the infrastructure of such control is established, how such actors aim to position themselves as obligatory points of passage (Callon 1984; Latour 1987) among users of the infrastructure. We suggest that this control is attempted through a number of strategies, that have in common the fact that they are based on generating and maintaining a dynamic tension between the quality of data achieved and expected higher quality in the future. That is, the designers and controllers of the IDIs promote the use of a universally applicable protocol of identification encoding but at the same time also add to the design measurable and validity-related qualifiers (primarily, measures related to data quality). Achieving a dynamic balance between standardization and variance, we propose, plays a critical role in calculating and coding identification information over which the promoters and designers of IDIs do not have direct ownership and control, but based on which they can make a legitimacy claim. This claim, in turn, will contribute to generating reputational and knowledge capital for the designers, the development of additional services and, ultimately, will contribute to the establishment of a positive network effect around the value of the IDI as a whole.

From the above review of the relevant literature, three key research questions emerge:

1. How are data made usable, useful, and ultimately capitalized when establishing an identification infrastructure?
2. What implications does this have concerning the reconciliation of the different rationalities/logics that need to be resolved when establishing an identification infrastructure?
3. How does data capitalization relate to the establishment of a 'Thinking Infrastructure' for the data-driven regulation of financial markets?

9.4 Empirical Account

9.4.1 The Data Quality Controversy

Our examination of the development of the LEI IDI used interviews with key actors involved in the process and an analysis of documents relating to the development of the LEI and the documentation relating to the establishment of the Global Legal Entity Identifier System (GLEIS) from the sponsors of the GLEIF identification infrastructure such as the Regulatory Oversight Committee (ROC), the Commodities and Futures Trading Commission (CFTC), the Securities and Exchanges Commission (SEC), the Financial Stability Board (FSB), the G-20, and the Global Legal Entity Identifier Foundation (GLEIF). In addition to interviews and documents, the authors also undertook a day of participant observations at one of the LOUs responsible for issuing LEIs to entities applying for an identification number in order to understand better and at first-hand the issuing, verification, and validation process associated with the LEI.

The analytical framework used relies on the identification and tracing of key controversies (Marres 2004; Panourgias 2015) that arise during the development of regulatory regimes. In this chapter, we focus on the controversy revolving around the quality of the data.

Having identified this controversy as key to understanding the development of LEI, we grouped relevant issues raised by the actors regarding that controversy. Among the central issues that relate to data quality were debates regarding the cost of adoption of the LEI, costs of its continued use and maintenance, the relative lack of incentives to use LEI by commercial actors and concerns about the effectiveness of the regulatory action that would be enabled by the use of the LEI in the reporting of financial markets transactions.

9.4.2 Data Quality and the Evolution of the GLEIS

In the global LEI system, anyone can apply to become a LEI Operating Unit (LOU), which issues LEIs, subject to approval by the LEI foundation and compliance with the foundation's master and service-level agreements (Millo et al. 2019). Once approved and operational, the LEI Operating Unit aims to verify the accuracy and validity of the data that applicants provide (illustrated in Figure 9.2) against the records of at least one local authoritative source, typically, the relevant business register of the applicant entity's jurisdiction.

Once the data has been verified by the LOU and a LEI number has been issued, there still remains the critical task of ensuring that the data provided remains current and also that any inaccuracies that may exist in the records of the local authoritative sources (e.g. a national corporate register) are picked-up and

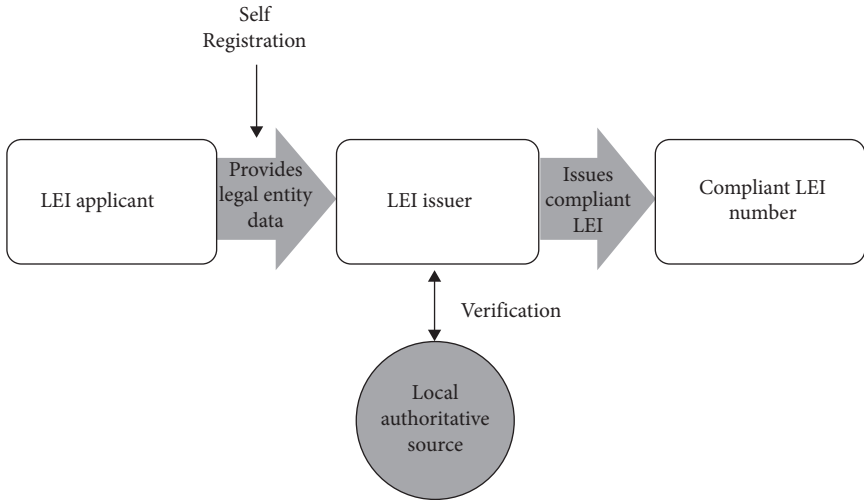


Figure 9.2 The LEI issuing process.

Source: GLEIF.

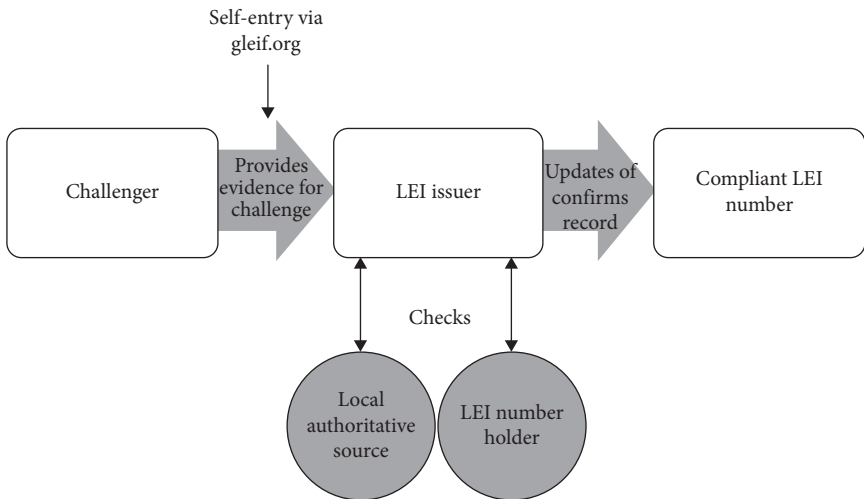


Figure 9.3 Improving data accuracy through the LEI challenge function.

Source: GLEIF.

corrected. This is done through a challenge process (illustrated in Figure 9.3) through which a challenger—usually another party (intermediary or counterpart) in a transaction—submits a challenge to the published LEI data of an entity by providing evidence for the challenge to the LOU and which the LOU is then obliged to investigate and then if the investigation upholds the challenge, the original data is amended as necessary.

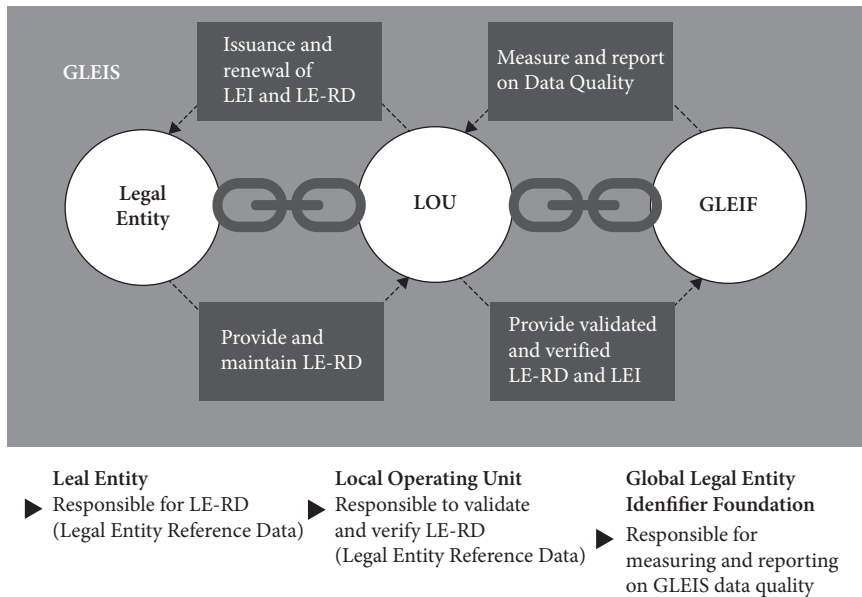


Figure 9.4 Data quality control process.

Source: GLEIF.

Both the initial quality verification of data and the challenge process depend on a chain of relations between the entity applying for a LEI, the LEI Operating Unit, and the GLEIF, which oversees the overall process. These relations are illustrated in Figure 9.4, and are a key aspect of the process by which the usefulness and value LEI data is increased. Crucially, these are dependent on the GLEIF and its view of quality.

A key element in this process is the way data quality is defined across the different groups of actors who take part in the infrastructure. Participants we interviewed held differing views of what constituted ‘data quality’, how this quality may or may not be measured, and what implications the lack of quality might have. These differing views constituted a challenge to the GLEIF, motivating it to develop and propose a unified methodology for assessing data quality, to overcome the different views.

The methodology developed by the GLEIF for measuring the quality of the identification data associated with the LEIs issued provides for different criteria of data quality (see Table 9.1). Underpinning each of these criteria are numerous checks (more than 200 in total) that measure different aspects of the data. Critically, the criteria are also associated with thresholds each LEI Operating Units has to meet so that the LEIs that it manages would be considered of sufficient quality. Besides, the data quality scores for the LEI Operating Units are published monthly on GLEIF’s website.

The data quality assessment is tied to legal agreements the Foundations has with the LEI Operating Units. These arrangements, in effect, make the LEI

Table 9.1 Data quality criteria, adapted from GLEIF's documents (2017)

Data quality criteria	Description
Accuracy	Data is free of identifiable errors and conforms with an authoritative source; represents correctly real-world objects
Accessibility	Ease and legality of access
Completeness	All required occurrences are populated
Comprehensiveness	All required data items are included, and all possible scope of the data is collected
Consistency	Unique piece of data holds the same value across multiple data sets
Currency	Data are up to date
Integrity	Conforms to defined data relationship rules
Provenance	Pedigree of a data property value
Representation	Fit of format of data to its intended use
Timeliness	Data is available when it is required
Uniqueness	Distinct values of data elements appear only once
Validity	Data value conforming to its domain value

Operating Units responsible for both the performance of the LEI applicants in terms of the maintenance of their company data and, indirectly, of the underlying authoritative sources they use in order to verify the data. In this way, the influence of the Foundation extends beyond its immediate relations to reach throughout the entire infrastructure and even beyond. For example, the business registers, which are not part of the infrastructure but provide the first authoritative source against which an applicant's data is checked, have come under pressure to improve the quality of their data as the LEI challenge facility reveals problems and inconsistencies in the data they hold on companies. Furthermore, through some forward-looking features of the data quality methodology such as 'Quality Maturity Level' the Foundation also directs future action of the LEI Operating Units towards attaining further desirable data quality criteria. The overall impact of integrating data quality measures into the IDI contributes to making GLEIF the sole arbiter of the performance of the LEI Operating Units in terms of the quality of the data they collect during the LEI issuing process.

9.4.3 Evolution of the Data Quality Controversy: The Construction of Data Quality

To understand how GLEIF incorporated its definitions of data quality into the IDI, we examine the process historically (Figure 9.5).

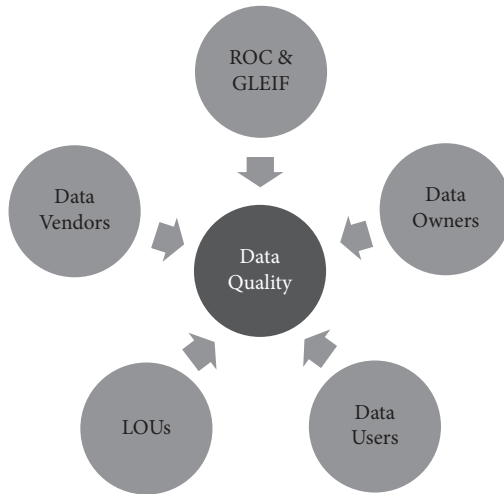


Figure 9.5 Different views and understandings of data quality among IDI participants.

Our interviewees indicated that many of the actors involved in developing the LEI presumed that concerning entity identification, data quality was a ‘non-issue’. That is, it was assumed that existing commercial and business registry company data was accurate and well-maintained, as the entities themselves have a keen interest in maintaining their identification data updated ‘for business purposes’. Moreover, it was expected that the owners of entity identification data (the entities applying for a LEI) could be compelled by regulators to maintain the quality of their data to a high standard through regulatory mandates.

As the GLEIS developed, however, it soon became apparent that high data quality could not be assumed to be a given. Identification data differs from other commercial data as it belongs to the entity that needs to be identified but needs to be distributed widely and freely in order to be useful.

With many financial organizations controlling a dizzying number of entities (one of the banks researched maintains more than 25,000 such entities), it is difficult for an organization to know who knows what concerning the identification data it must report, and it is expensive to update both this organizational knowledge and the data itself in order to report it (Chapter 3 provides an analysis of sophisticated financial engineering).

Most key commercial infrastructure participants and users would rely on commercial data vendors for maintaining accurate and updated identification data, both for their clients and counterparties as well as their own.

For-profit commercial data vendors, however, follow a ‘demand-driven’ model for managing data quality, so that data with high demand is verified frequently and kept at high quality, while in contrast data that is less sought-after is seldom

updated and therefore of low quality. This problem with commercial legal entity data introduced potential risks to any system-wide usage of such data, including automated exchange of financial data, because when making a query to a for-profit run database for legal entity data one has no indication about the data quality and if this data is high-demand and high-quality data or is low-demand and low-quality data. Moreover, data vendors have little incentive to develop and provide data quality measures, as this does not support their business model and may well undermine the credibility and value of their service.

As the tracing of the controversy unfolded, it became clear that the regulatory approach whereby owners of entity identification data could be forced to maintain the quality of data also had problems. Data quality became a ‘compliance issue’ in organizations and as such, was treated as a cost centre, with implications in terms of resistances to adopting and using the new IDI and in terms of the thoroughness of the reporting. That is, organizations aim to minimize costs and comply minimally with stated requirements. As no revenue-making activities are related directly to data quality, the area is demoted and lacks political power and visibility within the organization.

From its side, GLEIF considered ‘quality of data’ central to building a reliable and widely accepted identification infrastructure, particularly as the ‘pivotality’ of identification data makes accuracy paramount. The key elements of GLEIF’s approach to resolving the controversy around data quality described above were to provide (a) a definition of data quality, (b) methodologies/processes to measure, monitor, and improve the quality of the reference data associated with the LEIs issued by the LOUs, and (c) to control tightly the performance of the LOUs through highly prescriptive Master Agreement and Service Level Agreements.

The GLEIF approach to data quality was developed to address some of these problems by shifting the onus for maintaining a high quality of data from the owners of the data to the registration centres (Local Operation Units—LOUs) that are bound by agreements with GLEIF.

9.5 GLEIF’s Data Quality Strategy: Making Public Data Valuable through Certification

The definition of data quality and the putting in place of a method for assessing and measuring it by GLEIF, replaced the competing views of the various infrastructure participants with an apparently ‘objective’ one, but one that, nonetheless, framed the quality-related concerns of infrastructure participants in terms set out by GLEIF. In doing so, it cultivates an intersubjective understanding among infrastructure participants of what data quality is through this particular framing.

The definition of data quality through the GLEIF quality criteria (Table 9.1) and the putting in place of a quality assurance process through which the performance

of the LOUs could be assessed, compared, and managed also provides a way of giving value to the basic business data owned by those being identified through the new IDI. Even if substantially the same, the entity data that is certified through the GLEIS is more valuable than the raw company data outside the GLEIS.

Furthermore, having in place the GLEIF quality criteria and the GLEIF quality control process, makes it possible for GLEIF to control the evolution of the infrastructure by adjusting the criteria and/or the quality control and certification processes. Besides, the definition and measurement of data quality within the GLEIS also establish a yardstick against which the data quality of other existing financial and regulatory IDIs can be judged. Given the lack of alternative definitions and quality assurance methodologies in these related IDIs, the result is that those of GLEIF for GLEIS are adopted and against which the GLEIS is better placed to score better in comparison. As a result, either the LEI IDI is adopted directly, or the GLEIS criteria and accompanying quality assurance methodology are adapted for use to improve data quality in other adjacent IDIs. Either way, this enables both the linking of GLEIS with other related informational infrastructures, increasing further the value of GLEIS-certified entity data in the process, but also the spreading of the influence of GLEIF beyond the confines of the GLEIS, with GLEIF's role expanding from an identifier and IDI developer to data, quality certifier, to a financial and regulatory identification data quality arbiter.

9.6 Insights from the GLEIS case for the Development of Data-Driven Regulation

The way the GLEIF approached the issue of 'quality of data' in the development of the LEI IDI provides several useful insights into the making of 'thinking infrastructures' such as the 'regtech' approaches proposed by regulators (Davies 2019; van Steenis 2019).

9.6.1 Much Sociotechnical Work Is Needed to Make Data Valuable

The GLEIS data quality controversy highlights the complex, messy, and material work involved in establishing a 'regtech' data-driven regulatory regime. The presence of vast amounts of transactional data and legal entity data is not enough in itself to put such a regulatory approach into practice. This data has to be given some value first. The case of GLEIS raises, in particular, the importance for data-driven regulatory initiatives of the socio-technical practices and arrangements through which primary data of indeterminate quality can be made valuable

through material and institutional processes that enable the capitalization of data in terms of both usefulness and commercial potential.

The key aspects of this approach involved the definition of data quality and its inscription into a material and institutional process for assessing/measuring, such as that proposed by GLEIF. This not only made GLEIF an indispensable part of the infrastructure, what is referred to as an ‘obligatory point of passage’ (Callon 1984, 1987; Latour 1987), but also framed the quality-related concerns of the various LEI IDI participants in terms set out by GLEIF. In turn, an intersubjective understanding among infrastructure participants of what data quality is along the lines of this particular framing favoured by GLEIF, was established.

It also provided a way of giving value to the basic business data owned by those being certified by the LEI IDI. Furthermore, it made it possible for GLEIF to affect the activities of infrastructure participants beyond its direct remit if these had an impact on the data quality of the IDI and also to have a key role in the linking of the GLEIS with other informational infrastructures and the key objects and datasets of these infrastructures with a potential to expand the value of the LEI and the role as ‘obligatory point of passage’ of GLEIF.

9.6.2 The Importance of IDIs to Understanding Infrastructures

Whether in relation to the development of the concept of Thinking Infrastructures (Kornberger et al. 2019) that support decision-making, or concerning calls in both academic literature (Hu et al. 2012) and among practitioners (Davies 2019; van Steenis 2019) for the use of ‘Big Data’ or ‘regtech’ to regulate increasingly digitized financial activities, the empirical case presented demonstrates the importance of IDIs to the making of such infrastructures and consequently the importance of understanding the dynamics of IDI-making to the construction of such cognitive infrastructures.

9.7 Insights from the GLEIS Case for Combating Fiscal Fraud and Empowering Regulators

The case of GLEIs and its development provides an excellent real-life example of the practical challenges and how they may be addressed when establishing a data-driven regulatory regime and the importance an accurate and incontestable identification infrastructure plays in this.

9.7.1 The Importance of Data Quality in Entity Identification

More specifically in relation to combating fiscal fraud and empowering regulators in this area, the institution of the GLEIS and adoption of LEIs and their use in

financial markets transaction reporting represents a valuable first step in the direction of providing regulators and enforcement agencies aiming to combat fiscal fraud with a critical building block for the development of new tools to support entity identification and the tracing of transactional and ownership relations among legal entities. At the same time, the importance of high data quality that the case reveals raises the issue of the quality of entity identification data among other regulatory and reporting information infrastructures (e.g. corporate registries, Business Identification Codes (BICs)) and the need for more harmonization and integration of such data. In this direction, moves for the use of LEIs for the reporting of every leg of correspondent banking transactions from the BIS (Committee on Payments and Market Infrastructures 2015) and proposals from the OECD for the use of LEIs for AEOI among tax authorities (OECD 2014) are all developments that can support such moves. Furthermore, following the abuses of the tax system resulting from the cum-ex and cum-cum scandals in several EU jurisdictions (Germany, Denmark, France and others), consideration should be given to how the reporting of transactions using LEIs which has been mandated through MIFID 1 and 2, MIFIR, and the Securities Financing Transaction Regulation (SFTR) can be used in practice to identify such suspicious transactions, but also whether the use of LEIs in the paying of dividends to and from legal entities should also be mandated in future regulations.

9.7.2 Tech Tools for Identifying Abusive Corporate Structures

The GLEIS can provide a useful component for big data and regtech tools for the mapping by regulators, tax authorities (but also academics), of corporate structures and corporate relations and the tracing of cash flows within them. Such capability may provide a way of identifying potentially abusive corporate structures and relations which can be crucial to combating tax evasion, tax fraud, but also money laundering, and the financing of terrorism and organized crime. Additionally, this may be particularly effective if the BIS proposals for correspondent banking transactions reporting with LEIs are adopted (Committee on Payments and Market Infrastructures 2015).

9.7.3 Tech-Enabling AEOI

Other research conducted as part of the COFFERS project by the Tax Justice Network on ‘Tax administrations’ capacity in preventing tax evasion and tax avoidance’, has identified a lack of staff at tax authorities that deal with incoming and outgoing AEOI requests. With the volume and complexity of AEOI data likely to be on an upward path and staffing costs under pressure, it will become

increasingly important to develop IT solutions for such activities by tax authorities. For this to happen, it will be crucial to ensure the standardization of data and data formats and the interoperability of AEOI IT systems among tax authorities. The utilization of an IT-enabled identification standard such as the LEI may be an important component in fostering this more technological exchange of information and its processing using algorithms and machine learning to identify suspicious activities that may merit closer investigation.

9.8 Conclusion

The 2008 financial crisis revealed problems with market regulation relating to legal entity identification and legal entity transactional and ownership relations (Fleming and Sarkar 2014; Jenkinson and Leonova 2013; Lai and Mordel 2012).

This led to the development of a standardized global LEI which would be at the centre of a new data-driven model for the micro and macro-prudential regulation of financial markets and ensure financial market stability and integrity by providing an early warning system for the identification of the accumulation of losses by financial market participants and guiding action in the case of providing support to affected market participants or the resolution of complex financial entities that fail (Financial Stability Board 2012; Fleming and Sarkar 2014; Jenkinson and Leonova 2013; Lai and Mordel 2012),

The establishment of the GLEIS, and more generally ‘regtech’ data-driven regulation initiatives, is as an example of what Kornberger et al (2019) refer to as ‘Thinking Infrastructures’ which enable planning, strategizing, decision-making, sense-making, and other forms of cognition.

The case of GLEIS discussed in this chapter illustrates how identification data quality is a key issue in the establishment of such infrastructures as it is a way of making raw data into useful and valuable assets through a process of ‘Capitalization through Certification’ which is described in the chapter. Furthermore, such processes of imparting value to raw data involve complex and often onerous socio-technical work, even if data is plentiful and freely available.

Data quality certification through the definition of criteria and a process through which the meeting of these criteria is assessed and managed also provides a way of controlling the resulting infrastructure and its evolution through the definition, measurement, and enforcement of data quality criteria. Furthermore, in the absence of such criteria and processes in related areas of activities, an IDI which is developed with a clear data quality regime in place can gain a prominence among other related IDIs and promote the use of the quality assurance regime it is based on as the ‘gold standard’ for other IDIs to be judged against.

The above points raise some interesting questions with regards to other attempts to put in place ‘regtech’ data-driven regulation initiatives such as the

possibility that this nascent legal entity identification infrastructure might be utilized in other ‘regtech’ systems to empower regulators in the areas of fiscal fraud, tax evasion, and anti-money laundering, and if so, how could this be done and what would be the main obstacles. What is becoming more evident is that all these areas of regulation could benefit from techno-institutional investigative tools for the tracing of corporate structure and legal entity transactional and ownership relations to support the efforts of regulators, other enforcement agencies, and even academics involved in these areas.

The GLEIS case also raises some exciting possibilities regarding spillovers that might result from the new knowledge that the establishment of this identification infrastructure has generated. Already, the development of the GLEIS and the data quality assurance processes built into it is shining a light on the problematic nature of business data recorded by corporate registries and is putting significant pressure on these registries, via the LOUs, for improvements.

It is still too early in the development of the GLEIS to know how successful it will be ultimately and how effective the data-driven regulatory initiative will be in protecting the global financial system from the events that led to the collapse of Lehman Brothers. What is clear, however, is that, regardless of this outcome, the development of the GLEIS provides excellent insights into the complex socio-technical challenges associated with establishing data-driven regulatory systems.

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10

The Emergence of New Corporations

Free Zones and the Swiss Value Storage Houses

Oddný Helgadóttir

10.1 Introduction

This chapter introduces the concept of a ‘Luxury Freeport’, positioning such tax- and duty-free storage sites as new players in the ever-evolving ecosystem of the offshore world. To date, Luxury Freeports have largely passed under the radar of academic research and they represent an important lacuna in the academic scholarship on offshore activity. In his state of the art on offshores, *The Hidden Wealth of Nations*, economist Gabriel Zucman makes this point explicitly, noting that most current estimates of offshore wealth do not extend to non-financial wealth kept in tax havens:

This includes yachts registered in the Cayman Islands, as well as works of art, jewelry, and gold stashed in freeports—warehouses that serve as repositories for valuables. Geneva, Luxembourg, and Singapore all have one: in these places, great paintings can be kept and traded tax-free—no customs duty or value-added tax is owed—and anonymously, without ever seeing the light of day. (2015, pp. 44–5)

There are no reliable estimates of the value of goods stored in Luxury Freeports.¹ A recent *New York Times* article reports that art dealers and insurers believe that the works of art contained in the Geneva Freeport, a pioneer in the Luxury Freeport business, would be enough ‘to create one of the world’s great museums’. Similarly, a London-based insurer concludes that there isn’t ‘a piece of paper wide enough to write down all the zeros’ needed to capture the value of wealth stored in Geneva (Segal 2012). Though evocative, such statements are impossible to verify due to the inherent secrecy of Luxury Freeports and the lack of public data. This chapter will therefore not attempt to estimate the value of the items kept in these

¹ Several sources mention the sum of CHF100 billion in relation to the Geneva Freeport, but the sources and basis of that figure are unclear.

storage arrangements. Nevertheless, a number of data points beyond the anecdotal suggest that the stock of wealth stored in Luxury Offshores is both substantial and increasing.

The growing value of the high-end art market is one indication of this. While most industries suffered in the aftermath of the global financial crisis of 2008, it barely registered in the art world. In fact, an auction of Damien Hirst's work fetched a record-breaking £111 million at auction on the day that Lehman Brothers went under, foretelling the surprising resilience of the art market. Since then, the estimated annual turnover of the art market has reached record levels time and again and prices for individual works of art continue to soar to unprecedented heights. Not all art sales are publicly reported, but before the crisis the highest known price for a work of art was \$140 million for a Jackson Pollock painting sold in 2006. Since the crisis, that record has been broken at least fourteen times, most recently in 2017, when a member of the Saudi royal family bought a painting believed to be by Leonardo da Vinci for over \$450 million (Jacobs 2019). Recently, Deloitte estimated that US\$1.62 trillion of high net worth individuals' (HNWI) wealth was allocated to art and collectibles and projected that this figure would reach US\$2.7 trillion by 2026 (Deloitte 2017).²

The rapid spread of the Luxury Freeport model itself also suggests a strong demand for the services provided by these sites. In 2010, there were 46,722 square meters of dedicated art storage in Luxury Freeports compared to at least 178,800 square meters today.³ All in all, then, the value of non-financial private wealth kept in Luxury Freeports may add significantly to the \$7.6 trillion that Zucman estimates is kept in financial offshores (Zucman 2015).⁴

This chapter contributes to the state of knowledge on offshore activity by honing in on the conditions that permitted the emergence of this novel form of offshore. It stresses two necessary if not sufficient conditions for the rise of Luxury Offshores in particular: first, the competitive 'push' from Open Customs Warehouses (OCWs), which spread rapidly at the turn of the twenty-first century, and second, the investment 'pull' of large pools of money needing new investment outlets in the wake of the recent multilateral effort to clamp down on banking secrecy. Spillover effects between different kinds offshores are, in other words, key to understanding the present day evolution of the global nebula of tax havens.⁵

² Since the bulk of art transactions are not publicly reported, any estimate of the overall value of the art market should be taken with a grain of salt. Nevertheless the growth trend is a point of consensus. Economist Nouriel Roubini estimates market capitalization of \$1tn (Roubini 2015). Clare McAndrew, until recently an economist for the European Fine Art Fair, estimates that the total level of art market transactions in 2017 was close to \$64bn (McAndrew 2017).

³ Clare McAndrew has surveyed both dealers and collectors and estimates that private unreported sales account for about 70 per cent of all art transactions. It is likely that some of these unreported sales take place in the showrooms of Luxury Freeports, where they are exempt from taxes and duties.

⁴ For other higher estimates—some of them much higher—see e.g. Henry 2012; Palan et al. 2010; Christensen and Murphy 2012.

⁵ For a different take on spillover effects between offshores see Christensen et al. 2016.

10.2 Defining Luxury Freeports

The term ‘offshore world’ refers to designated legal spaces that offer low tax rates and which, as a result, attract a disproportionate amount of the world’s capital stock. Ronan Palan argues that the offshore world emerged in the nineteenth century, when the tension between mobile capital on the one hand and the increasingly robust system of juridically discrete sovereign states on the other incentivized the rise of offshores as extra-territorial spaces of manoeuvre (Palan 1998; 2003). Offering a similar analysis from the standpoint of international law, Sol Picciotto sees the concept of the offshore as a malleable ‘legal fiction’ that is the mirror image of the legal fiction of ‘the state’ as an objective and geographically bounded entity. The plastic nature of these abstract concepts was conducive to the kind of legal and fiscal manipulations that are the bread and butter of the offshore world (Picciotto 1992, 1999).

In order to understand the phenomenon of Luxury Freeports and to persuasively position these sites as new entrants in the offshore world, it is important to differentiate between Luxury Freeports on the one hand and traditional freeports on the other. Traditional freeports have a long history. In modern times they have served as crucial infrastructure for international supply chains, preempting multiple taxation of goods in transit. Luxury Freeports, by contrast, are high-security storage spaces where, by virtue of special legal exemptions, art and other luxury goods can both stored for *unlimited periods of time* and *traded* without tax and duty payments (Zarobell 2017; Weeks 2018; Adam 2018; Segal 2012). In other words, though Luxury Freeports emerged on the basis of the regulatory exemptions that make traditional freeports possible, they are a very different kind of entity, the key function of which is to store wealth in tax-free conditions. In other words, Luxury Freeports have hollowed out and transformed the older freeport model in ways that have allowed them to emerge as new players in the complex and evolving global ecosystem of tax evasion taking place in specially designated regulatory spaces.

The emergence of Luxury Freeports represents just one recent shift in the mutable relationship between global wealth and tax avoidance. In response to growing capital mobility and the dramatic rise of offshore activity in the post-1970s, ease of collection was accepted as rational grounds to turn away from progressive equity-oriented taxation (e.g. personal income taxes; corporate taxes) and toward more regressive efficiency-oriented taxation (e.g. consumption taxes, including value-added tax (VAT); payroll taxes) (Wilensky 2002; Kato 2010; Swank and Steinmo 2002; Genschel and Schwarz 2011). But for UHNWIs, Luxury Freeports are pushing tax avoidance to new frontiers by making it possible to trade high-end goods like art without paying VAT, which ranges from 5 to 15 per cent in

many countries.⁶ Therefore, even this presumed mainstay tax might now be added to the list of taxes that high net worth individuals (HNWIs) can already sidestep (e.g. capital tax, income tax, inheritance tax, and, where applicable, wealth tax) (Zucman 2015).

10.3 Competition from Open Customs Warehouses

Freeports have long been an established part of the commercial landscape of Switzerland—the Geneva Freeport, for example, dates from 1888—and in 1970 there were ca. 40 freeports in various parts of the country (SFAO 2014). The late 1990s, however, proved challenging for the traditional Swiss freeport model. As part of the founding of the WTO in 1995, Open Customs Warehouses, a new kind of tax and duty-free storage site, were promoted with the aim of facilitating free trade and harmonizing trade practices across borders. OCWs quickly spread all over Europe, including in Switzerland, where they were in direct competition with the traditional freeports (SFAO 2014; author’s interview).

A number of differences in the operating environment of freeports and OCWs stacked the cards in favour of the latter (see summary in Table 10.1). Key amongst them was the fact that while freeports were legally extra-territorial, OCWs were not. As a result, freeports were only allowed to operate alongside customs offices and were bound by the official operating hours of Swiss Customs. OCWs, by contrast, faced no such limitations and could operate around the clock—an important asset in the twenty-four-hour business of modern freight and haulage. OCWs also had the late-mover advantage of being built and located to suit the technological requirements of freight and logistics.

The price of the flexibility afforded to OCWs was that licensing practices were stricter than for freeports. For example, OCWs were required to keep inventories of all goods, while freeports were not. The procedure for opening up a new OCW also more stringent than it was for freeports, for which the process was less strict, but also largely discretionary and not standardized. By contrast, the procedure for opening a OCW was standardized and transparent enough not hamper the diffusion of this new storage model, even if it was more demanding. (Loi sur les douanes 2005; SFAO 2014; author’s interviews).

The upshot of this was that freeports quickly found themselves on the backfoot, with most folding, while OCWs spread very quickly. Currently there are around

⁶ Here it should be noted that VAT is due when a dealer who is registered as a trader sells art, but not when an individual who is trading it as part of a private collection does. Moreover, in many cases VAT is due only on the margin between the purchase price and the sales prices as well as the services rendered as part of the trade. However, these can be very significant amounts, especially as prices at the high end of the art market rise very quickly as they have in recent years.

Table 10.1 Comparison of open customs warehouses and freeports

	Open customs warehouses	Freeports
Licensing requirements	<p>Standardized and thorough. Application forms are available online.</p> <p>Licenses are granted for five years. Customs is responsible for ensuring that requirements on inventories, accounting and guarantees and official procedures are met.</p> <p>Licenses can be revoked if OCWs fail to meet a defined set of criteria (though this does not always happen in practice).</p>	<p>Discretionary.</p> <p>Licenses granted without a time limit. Customs is responsible for ensuring formal compliance only when goods enter and exit the premises.</p> <p>Conditions that might lead to a license being revoked are not specified.</p>
Inventory requirements	<p>Yes, for all stock.</p>	<p>None until changes to Swiss Customs Law took force in 2007.</p> <p>Under current legislation only stock defined as 'sensitive' must be inventoried. This includes i.e. art, alcohol, tobacco, weapons, medical supplies, military wares and precious metals and stones.</p> <p>Inventory requirements are not retroactive.</p>
Goods can change hands?	<p>Technically, but a number of factors make it difficult: visits from third parties are forbidden and the exhibition of goods is expressly forbidden. A number of goods cannot be manipulated in any way without special permits. I.e. medication can only be repackaged if Swissmedic grants permission to do so.</p>	<p>Yes. Payment of taxes and duties is suspended for deals carried out on free port premises.</p> <p>The Geneva Freeport is equipped with showrooms where deals can be made. It also offers a range of other services including gallery facilities, restoration and expert valuation.</p>
Access	<p>Only OCW staff is permitted on premises.</p> <p>All stock is kept in the name of the warehouse keeper even if it actually belongs to a third party.</p>	<p>Clients and service providers can enter during office hours.</p> <p>Spaces can be let out to tenants. This is reflected in storage structure, which consists of discrete and anonymous storage spaces.</p>
Legal liability	<p>Warehouse keeper is responsible for meeting all laws and standards.</p>	<p>Legal liability is shared between warehouse keeper and tenants.</p> <p>The warehouse keeper has a legal responsibility to draw a tenant's attention to applicable laws and regulations but is not responsible for the tenant's compliance.</p> <p>Tenants are not required to provide information or insurance guarantees to Customs.</p>
Customs presence	<p>No regular presence but the possibility of irregular checks.</p>	<p>An on-site customs office is a licensing requirement.</p>

250 OCWs all over Switzerland, many of them close to commercial and logistics hubs (SFAO 2014; author's interviews).

It was in this new situation of greater competition with OCWs that the Geneva Freeport made a decisive pivot away from traditional freeport operations and towards luxury services. This was not grasped out of thin air: the Geneva Freeport was unusual in that, stimulated by Geneva's market niche as a purveyor of art and luxury, it had already begun cultivating a specialization in storing all manner of luxury goods prior to the rise of OCWs (Jaccard and Guex 2011). The blueprint for embracing this role more fully in the 1990s and 2000s came from international art dealer Yves Bouvier, sometimes dubbed the 'freeport king' for his role in developing and spreading the Luxury Freeport model. While the Canton of Geneva is the freeport's majority shareholder, owning 87 per cent, Bouvier owned 7 per cent and his art services and logistics company, Natural Le Coultre, rented almost a quarter of the freeport's space for its business (SFAO 2014; Report on inquiry into money laundering... (2017/2013(INI))).

The reinvention of the freeport drew on Bouvier's experience as a dealer in high-end art, while also capitalizing on the differences between freeports and OCWs, transforming freeports' competitive weaknesses into strengths. Most importantly, the Geneva Freeport seized on the fact that goods can easily be bought and sold in freeports but not in OCWs. To leverage this, the Geneva Freeport was redone with art showrooms and offered a range of services explicitly supporting the tax-free trade of art.

Other differences between freeports and OCWs also lent momentum to the makeover of the Freeport. For example, for the purpose of storing luxury goods for long periods of time, the on-site presence of Swiss Customs is not an impediment but a selling point, contributing to secure storage without adding costs to be passed down to customers. Another important selling point was that until Swiss customs law was changed in 2005 freeports, unlike OCWs, were not required to keep inventories.⁷

In short, Swiss freeports may not have been as well adapted to the fast-paced world of logistics as OCWs were, but they could facilitate tax and duty-free trade in luxury goods while also providing a good measure of secrecy and anonymity, making them an ideal partner in the art trade, which thrives on confidentiality. However, while competition between traditional freeports and OCWs helps explain why traditional freeports reinvented themselves as Luxury Freeports, it does not explain growing demand for the services that these sites offer. The backdrop of growing economic inequality, an international post-crisis turn to

⁷ Following the 2014 publication of an SFAO report on freeports and OCWs, the Swiss Parliament harmonized legislation governing the two kinds of storage sites. By that point, however, the bifurcation of roles had already been established. Though there is now some overlap, with certain OCWs acting much like Luxury Freeports, path dependencies remain (author's interviews).

quantitative easing and low yields on traditional financial assets are necessary preconditions, but they do not suffice to explain why this particular kind of offshore has spread so quickly in recent years. The following section makes the case that here, again, spillover effects between different kinds of offshores are a key factor.

10.4 A New Kind of Haven for Funds Fleeing a Regulatory Crackdown

Given the secrecy with which freeports operate, a ‘smoking gun,’ establishing a clear link between itinerant financial wealth in Switzerland and the growth of the Geneva Freeport is unlikely to appear. Thinking in terms of a ‘hoop test’, however, we can see that the necessary if not sufficient conditions for making that connection are in place (Mahoney 2012): In recent years, there has been a renewed multilateral effort to crack down on offshores and offshore secrecy practices and in 2009 the G-20 optimistically proclaimed that new practices would lead to the ‘end of banking secrecy.’⁸ Even so, money continues to pour into Switzerland (Zucman 2013, 2015; Sharman 2012). Zucman (2015) finds that between 2009 and 2015, foreign wealth held in Switzerland increased by 18 per cent, reaching \$2.3 trillion. In other words, then, the Geneva Freeport has flourished in tandem with the combination of an international clamp down on banking secrecy and growing inflows of funds into Switzerland.⁹ It is therefore not unreasonable to conclude that the freeport may be a key mechanism allowing the co-occurrence of these seemingly conflicting trends. The fact that a range of luxury goods, including the kind that are the bread and butter of Luxury Freeports, have risen in value over the same time period is also suggestive.

Putting together the different parts of the puzzle it is easy to conclude, as does a recent report commissioned by the European Parliament, that new regulation is spurring investment in tangible assets and, by extension, the growing use of freeports. More specifically, the report finds that:

...growing demand for free ports has been attributed in part to the increasing crackdown by governments on bank secrecy and tax evasion. The introduction of the Foreign Account Tax Compliance Act (FATCA) in the USA (2010) and the commitment of OECD members to the OECD’s 2014 Common Reporting Standards (CRS) – in the EU transposed via the Directive on Administrative

⁸ For the offshore world as a whole the figure is even higher, at 25 per cent.

⁹ This, in turn, is likely a function of rising wealth inequality and a growing pool of UHNWIs (World Inequality Report 2018; Piketty 2014). See Fuller et al. 2019 for an interesting discussion of the challenges of assessing wealth vs. income inequality.

Cooperation (DAC) – make it hard for individuals to escape taxation on proceeds of funds held in bank accounts. High net worth individuals have started looking for alternatives and many have substituted their ‘bank account money’ with replacement goods such as art, diamonds, antiques, wine or bank notes.

(Korver 2018, pp. 13–14)

The pattern of diffusion of Luxury Freeports also supports the conclusion that they have grown as a function of investors’ desire for substitute or supplemental ways to evade taxes as more established financial methods become more difficult to pursue. Thus, over the course of the last few years new Luxury Freeports have emerged alongside known financial hubs and/or tax havens such as Singapore (2010), Monaco (2013), Luxembourg (2014), Beijing (2014), Delaware (2014), and New York City (2018).

10.5 The Limits of the Luxury Freeport Model?

While the Luxury Freeport model has been successful in recent years, freeports also face serious challenges that may signal the limits of the model. For one thing, Luxury Freeports have been plagued by a series of scandals. This pattern took hold before the Geneva Freeport made a decisive pivot to luxury services but has not abated since. Thus, in 1995, Italian and Swiss police raided the Geneva Freeport and found over 3000 invaluable artworks, stashed there by an international circle of antique smugglers (Felch and Frammolino 2011).¹⁰ A few years later, in 2003, Swiss Customs uncovered 200 stolen ancient Egyptian artifacts, including two mummies, sarcophagi, masks, and statues, on the premises. Some of the items had reportedly been painted in garish colours so they could be presented as cheap souvenirs (Segal 2012). In 2010, a Roman sarcophagus, pilfered from an archaeological site in Turkey, was also discovered in the freeport. Most recently, in 2016 Roman and Etruscan artifacts looted from Italy were found in the freeport (Korver 2018; Bernstein 2017). In other words, then, smuggling scandals and the trade of illegally sourced art have tarnished the image of the Geneva Freeport for decades.

Though of a different nature, the so-called ‘Bouvier affair’ also took a reputational toll. This scandal, which sent shock waves through the art world, erupted in 2015 when billionaire art collector Dmitry Rybolovlev sued ‘freeport king’ Yves Bouvier for fraud, claiming that he had sold him art at artificially inflated prices over the course of a decade. The margins Bouvier charged were very high

¹⁰ An investigative journalist that has worked on art crime for decades notes that ‘Medici [the ringleader of the smuggling circle] felt so safe in Geneva[’s freeport], that he kept extensive records and photographs of all the objects.’ <https://www.swissinfo.ch/eng/free-port-problemclosing-in-on-the-archaeological-underworld/33088854>

indeed—Rybolovlev’s lawyers claim that Bouvier’s profit totalled over \$1 billion¹¹—but Bouvier has countered that Rybolovlev was under no pressure to purchase the works on offer and that the high mark ups were just a routine part of ‘a commercial game’ (Knight 2016). While it remains to be seen whether Bouvier’s methods will be found criminal, the case has underscored the opacity, information asymmetry, subjective valuations and potential for conflicts of interest that characterize the art world—all of which can be conducive to fraud and abuse.

In 2016, information contained in the Panama Papers brought on another round of scandal. At its heart was a painting by renowned Italian expressionist Amadeo Modigliani, which Nazis stole from Jewish art dealer Oscar Stettiner during the Second World War. The painting resurfaced at a Christie’s auction in 1996, where it was bought for \$3.2 million by a company called International Art Center (IAC). In 2011, Stettiner’s heirs filed for restitution but hit a legal impasse since the ultimate beneficial ownership (UBO) of IAC could not be established. The company was rumoured to belong to the Nahmad family of international art dealers but the family denied any connection. It was only five years after the case was first filed that the Panama Papers revealed that the company, which was registered by Panama law firm Mossack Fonseca, did in fact belong to the Nahmads and that the Modigliani had been stored in the Geneva Freeport (Bernstein 2016, 2017; Korver 2018). This case highlighted the fact that artwork kept in the freeport could be registered through shell companies or other intermediaries, making it difficult to trace UBO. This is another known risk factor in fraud, money laundering, and tax evasion.

These scandals have been consequential for the Luxury Freeport in a variety of ways. One is that they have drawn attention, presumably very much unwanted, to an industry that relies on confidentiality and anonymity. Thus, over the course of the last few years, a number of media outlets, including the *New York Times*, *Economist*, *BBC*, *New Yorker*, *Süddeutsche Zeitung*, *Le Temps*, *Swissinfo*, *Le Figaro* and *L’Express* have trained their critical focus on these offshore sites.

International organization, governmental agencies and non-governmental organizations have also started paying attention. In a report from 2010, the Financial Action Task Force (FATF) concluded that free trade zones (FTZs), which include freeports, offer ‘opportunities for money laundering and the financing of terrorism (p. 4).’ In 2014, the SFAO published a report on customs activities in Swiss freeports and OCWs, noting that the former in particular could be staging grounds for tax evasion and money laundering. Moreover, that there was ‘a lack of awareness within the Confederation of the political and

¹¹ Or, as Rybolovlev reportedly put it to Bouvier: ‘But, Yves, these markups are worth a Boeing.’ (<https://www.newyorker.com/magazine/2016/02/08/the-bouvier-affair>).

economic stakes' and 'reputational risk' that could 'make Switzerland the target of foreign fiscal and tax authorities (p. 21).'¹² A UNESCO report (2016) on freeports for art stressed that they could be used for illicit trafficking of cultural property¹³ and the independent advocacy group Tax Justice Network has added the presence of FTZs and freeports to the list indicators covered by its Financial Secrecy Index and now includes a discussion of freeports in its qualitative country reports.¹⁴ The 2017 final report of the European Parliament's Committee of Inquiry into Money laundering, tax avoidance and tax evasion (PANA) similarly concluded that freeports 'may constitute offshore storage facilities, enabling money laundering and untaxed trade in valuables' (p. 11).¹⁵ Most recently, the Directorate-General for Parliamentary Research Services of the Secretariat of the European Parliament (2018) published a report dedicated entirely to the risk of money laundering and tax evasion in freeports.

In response, both Luxembourgish authorities and Le Freeport's management tried to distance themselves from the scandal. As was the case in Geneva, these efforts centred on a definition of the problem as one of money laundering and illicit trafficking. The topic of taxation, by contrast, was not broached. Thus, in the immediate wake of the scandal, the government carried out an analysis of money laundering risks in Le Freeport and then, in July 2015, went on to implement elements of the EU's fifth Anti-Money Laundering Directive (AMLD5), five years ahead of time (the directive will take full force everywhere in 2020).¹⁶ The freeport's management has publicly embraced the directive, framing the early implementation of anti-money laundering measures in Luxembourg as both a competitive advantage and a safeguard against illicit activity, setting Luxembourg apart from scandal-ridden Geneva.¹⁷

The new directive broadens the scope of earlier directives to encompass a number of new actors, including freeports and art traders. Under AMLD5, freeports are required to report suspicious activity to national financial intelligence units, to carry out customer due diligence and to keep records of ultimate beneficial ownership. At first glance it may seem like these changes should fundamentally undermine the Luxury Freeport model. However, since AMLD5 does not classify freeports as 'financial institutions' but rather as obligated 'non-financial institutions' it does *not* require them to engage in automatic exchange of

¹² Author's translation.

¹³ http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CLT/pdf/2_FC_free_port_working_document_Final_EN_revclean.pdf

¹⁴ <https://www.financialsecrecyindex.com/introduction/fsi-2018-results>

¹⁵ http://www.europarl.europa.eu/cmsdata/134368/A8-0357_2017_EN.pdf

¹⁶ [http://www.europarl.europa.eu/cmsdata/124822/A\(2017\)7777_Gramegna%20Reply.pdf](http://www.europarl.europa.eu/cmsdata/124822/A(2017)7777_Gramegna%20Reply.pdf); Korver 2018. See Tsingou 2010 for the complex origins of the international AML regime. See Roth 2015 for money laundering in the art trade.

¹⁷ Author's translation of Dauvergne's letter declining to attend a hearing of the EU's PANA committee: <http://www.europarl.europa.eu/cmsdata/155705/6%20-%20007%20-%20Letter%20and%20contribution%20from%20Philippe%20Dauvergne%20freeport%20Lux.pdf>.

information between tax authorities as laid out under the EU's DAC6, the OECD's Common Reporting Standards (CRS) or the US Foreign Account Tax Compliance Act (FATCA). Moreover, 'fishing' in information from non-financial entities is expressly prohibited. Under AMLD5, information from freeports will therefore only be exchanged upon request and where there is prior suspicion of misdeeds. Since confidentiality and discretion is key to the art trade, the effects of the new legislation may therefore be very limited in practice. The impact of AMLD5 will also be nearly impossible to assess, as freeports are under no obligation to report on whatever information they do exchange (Korver 2018).

This strategy hinges on a clear distinction between money laundering on the one hand and tax evasion on the other. Yet this distinction may become difficult to maintain as more regulatory and surveillance bodies acknowledge the overlap between tax dodging and money laundering. Thus, in 2017, the EU made tax evasion and tax fraud predicate crimes for money laundering (Directive (EU) 2015/849), following 2012 recommendations from the FATF.¹⁸ What is more, some actors, notably German MEP Wolf Klinz, are beginning to openly ask why Luxury Freeports, which unlike their traditional predecessors have low stock turnover and no clear role in GVCs, should be granted any special tax provisions at all (Shaw 2019a). If this critique makes it way into policy, it could put an end to the Luxury Freeport model. However, for now this seems an unlikely outcome. In response to Klinz's inquiries about Le Freeport Luxembourg, the European commissioner for economic and financial affairs has reinforced the distinction between tax avoidance and criminality that the Luxury Freeport model relies on, stating that they are 'useful to simplify commercial operations' and that there is no evidence that they 'are systematically used to commit fraud' (Shaw 2019b).

10.6 Conclusions

This chapter has introduced the concept of a *Luxury Freeport* to describe a novel form of non-financial offshore where art and other material goods can be stored indefinitely without tax and duty-payments. It makes the case that the recent emergence and diffusion of this phenomenon can be traced back to meso-level developments within the broader ecosystem of offshores and tax havens. More specifically, it argues that the Luxury Freeport model, which evolved from traditional freeports, was spurred by the combination of competition from Open Customs Warehouses and the search for alternative tax-free investment outlets in the wake of an international clampdown on banking secrecy.

¹⁸ https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:JOL_2015_141_R_0003&from=ES

However, the ongoing legitimacy of Luxury Freeports hinges on a differentiation between money laundering and tax avoidance that is coming under pressure as more actors come to define tax fraud as a predicate crime for money laundering. It also skirts the question of why suspension of VAT, which was originally meant to promote trade, should be extended to the quasi-permanent storage of luxury objects. If criticism of this kind comes to be reflected in policy, i.e. by defining Luxury Freeports as ‘financial institutions’ that are subject to automatic information exchange between tax authorities, this could spell an end to this new kind of offshore. This would likely set off another round of meso-level spillover effects in the offshore world, as wealth currently stored in Luxury Freeports would seek new havens. It could also have a serious impact on trade in high-end art, which is closely entangled with the rapid growth in Luxury Freeports.

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Uber Global Wealth Chains

Duncan Wigan

11.1 Introduction

Information asymmetries between regulators, suppliers, and clients in global wealth chains are extenuated by conceptual uncertainty and legal indeterminacy. This chapter explores the impact of this uncertainty and indeterminacy in the digital economy where a concept-regulation-corporate form gap obstructs tax traction.¹ Firms such as Amazon, Airbnb, Facebook, Google, and Uber operate platforms to host services enabling consumers and businesses to connect and exchange. The chapter examines the platform economy as it intersects with urban transport to impact on fiscal sustainability. It focuses on business models where regulatory arbitrage is integral (see Chapter 3 for more on regulatory arbitrage). The immediate fiscal impact arises from a growth strategy that systematically generates tax assets, a mode of service delivery that circumvents the sales tax and an employment relation that removes social security obligations for the platform based multinational company. Regulatory contestation of the new corporate form is on-going, where widespread legal adjudication that Uber is a transport company and its drivers, employees would confound growth strategy, levy sales tax on the service and bestow a range of employment rights on drivers.

Despite recognition of the significance of the digital economy and the wealth it generates, measurement is rife with uncertainty (Bukht and Heeks 2017). ‘There are no agreed definitions of digital sector, products or transactions, let alone the digital economy’ with incomplete coverage of online platforms (such as Google), and platform enabled services (such as Uber) not explicitly covered in the International Standard Industrial Classification and Central Product Classification (IMF 2018, p. 7). Delineating a ‘digital economy’ from other sectors meets the challenge that digitalization is integrated across sectors. Discussion of the impact of digitalization on productivity and gross domestic product continues, with the question of whether mismeasurement of digital assets and activities can explain significant drops in output and productivity levels since the global

¹ The concept-regulation-corporate form (C-R-C) gaps denotes when corporate organization and business model escapes regulatory traction because regulation builds on a conceptual apparatus inadequate to that organization and model.

financial crisis debated (Ahmad et al. 2017). Fundamental conceptual issues point to the wider disruptive content of the digital economy. While digital business models have radically impacted on mature markets and market incumbents, the digital economy has disrupted regulatory apparatuses built for an economy revolving around atoms not bites.

The analysis here follows this process of disruption tracking the conflict between new corporate forms in the digital economy and underlying principles guiding the design of tax systems, and demonstrating how this conflict plays out in policy incoherence. The chapter then focuses on the urban transport sector and Uber. Taxing the digital economy has raised issues of extenuated profit shifting on the back of the strategic instrumentalization of intangible assets (Bryan et al. 2017). Further issues are raised by corporations providing platform enabled services. Firms such as Uber are positioned to utilize the mismatch between an intangible economy and tax systems designed for less mobile and material forms of capital, and so allocate income streams in ‘tax optimal’ ways. This possibility, however, has not yet been central to the competitive advantage of Uber. Despite its high valuation and rapid expansion Uber has to date not posted a profit. Ostensibly, Uber is not yet of interest for tax researchers. The firm does not generate profits on which tax authorities are able to make a claim. The business model does, however, raise significant tax issues. First, Uber can be conceptualized as a tax asset generator. An aggressive market and revenue maximization strategy converts to assets held against future tax bills. Second, the business model relies on ‘gig economy’ employment that shifts risks and burdens onto the state and in turn alternate taxpayers. Third, that Uber upholds it provides an information economy, not transport, service, and drivers are independent contractors, not employees, removes the activity from sales tax. Average earnings place driver income below sales tax thresholds. Consequently, no sales tax revenue is generated either from Uber or its ‘independent contractors’.

The global wealth chains (GWC) framework captures a turn to law, finance and accounting in corporate strategy (Seabrooke and Wigan 2014, 2017). Firms providing platform enabled services sit at the forefront of this turn. This chapter’s title points to an ‘uber wealth chain’, where ‘uber’ denotes an outstanding example of a kind. Uber’s business model is essentially a legal artefact. It does not own cars, it purports not to provide transport services, and it does not have employees. On the face of it, Uber is not involved in the value creating provision of a service. Instead it provides a matching service, bringing together customers in search of a ride and drivers positioned to provide one. Legally, Uber could hardly be further removed from the value creating service it indirectly furnishes. The distance between value and wealth here creates ample opportunity space for legal arbitrage. The business model and sharp legal differentiation of Uber from regulated taxi providers allows for a novel employment relation, an advantaged tax position, and competitive differentiation. If the task of global wealth chain analysis is tracking

where capital is most experimental and ingenious, and pointing to where it is heading, then the analysis of firms that have fleeting relationships to the territories and value creating process from which wealth is sourced is paramount. At the same time, as this book promotes an evolutionary perspective on the development of the tax ecosystem (Chapter 2), a GWC analysis of the platform economy provides a window on a destabilization of the ecosystem, where agents and structure are in flux.

The chapter is structured as follows. Section 11.2 addresses the issues that have driven rising controversy over the decreasing tax footprints of multinational corporations in the digital economy. Here the concept-regulation-corporate form gap is central. A mismatch between the rise of a ‘knowledge economy’ with firms composed of large volumes of intangible assets and tax systems designed for an earlier era where capital was less liquid and less internationalized sits at the forefront of this gap. The gap is evident across global economic activity but acute in the digital economy. Section 11.3 outlines the Uber growth model, highlighting a path to market domination that eschews profitability in favour of rapid expansion on the back of largescale borrowing and funding. Section 11.4 explores Uber’s approach to human resources. The question of whether or not Uber drivers are workers, employees or self-employed is of critical importance to the success of the firm. To the degree that national regulators determine that Uber drivers fall into the second category the source of Uber’s market domination is eroded, and the promise of future profits cast into doubt. To the degree that Uber is able to maintain the status of Uber drivers as contractors or self-employed the burden of welfare funding embodied in social security contributions falls on the driver, and if that fails, the state. As far as Uber is able to maintain that it merely provides a booking service for third party drivers, it is not liable to sales taxes. It may be that platform economy firms such as Uber rely less on cutting edge and socially useful innovation than ‘fiscal burden shirking and shifting’.

11.2 Taxing the Digital Economy

The OECD’s Base Erosion and Profit Shifting (BEPS) initiative arose in part as a result of recognition that forms of international corporate capital had evolved so that the purchase of national tax systems had been undermined. The first OECD BEPS report, ‘Addressing BEPS’ points to a conflict between domestic rules and international standards and norms established in an era of lower levels of global economic integration, and a situation, ‘characterized by the increasing importance of IP as a value driver and by constant developments of information and communication technologies’ (OECD 2013a, p. 5). The report emphasized ‘fundamental questions as to how enterprises in the digital economy add value and make their profits, and how the digital economy relates to concepts of source and

residence or the characterization of income for tax purposes' (OECD 2013b, p. 10). The proposal for a Council Directive on a digital services tax provided this rationale for legislation:

policy makers are currently struggling to find solutions which can ensure a fair and effective taxation as the digital transformation of the economy accelerates, given that existing corporate taxation rules are outdated and do not capture this evolution. In particular, the current rules no longer fit the present context where online trading across borders with no physical presence has been facilitated, where businesses largely rely on hard-to-value intangible assets, and where user generated content and data collection have become core activities for the value creation of digital business. (European Commission 2018, p. 1)

A foundational concept in internationally shared tax rules is a country's right to tax activity considered to take place within its borders. This concept assumes a geographic symmetry between the state and the economic activity. The concept has been transcended. Digital products and services can be delivered at distance. Servers hosting markets, generating product or delivering services can be located strategically so the activity assumed to underlie value creation is located in low or no tax jurisdictions, while revenue that produces (mobile) profits arises in high tax jurisdictions. Tax jurisdiction is determined according to the OECD's Model Tax Convention, legalized in bi-lateral tax treaties dividing taxing rights between home and host states on the basis of concepts of source and residence (Rixen 2011). Residence denotes investing entity home country. Source denotes where economic activity is considered to take place or sales made. The division of taxing rights between residence and source is partly determined on the basis of the concept of permanent residence, or the substantive physical presence of the tax paying entity. Given that companies operating highly digitalized business models often do not require substantive physical presence to sell product in a country, this principle is under considerable strain. Digital firms have structured sales activities in source countries as auxiliary and preparatory so that these activities do not trigger permanent establishment status. In the United Kingdom, Amazon argued in court that its UK subsidiary operated fulfilment centres, as a result of direction by a Luxembourg resident Amazon company, did not meet the criteria to be a permanent establishment (Quentin 2017, pp. 24–6).

The digital economy is undermining the geographical conceptions of economic activity that inform tax regulation. In consequence firms enjoy the tax benefits of operating at 'scale without mass'. The digital economy is also subverting the rationale underlying conceptions of value production that inform taxing rights (Henfridsson et al. 2018). This rationale depicts an economic process running from production to delivery through retail to final consumption, with each stage in the process distinct. Producers are conceived as the source of value creation.

Consumers at the receiving end make choices based on an informed calculation of the marginal utility embodied in a range of consumption choices. In the digital economy a clear demarcation between production and consumption collapses. Firms in the digital economy sell advertising on the basis of information garnered from user search history and search patterns. Content, for example details of everyday lives made available on platforms such as Facebook, Instagram or Snapchat, is uploaded by consumers. User participation in data production obscures the location of value creation, even while the network effects of user participation are capitalized in burgeoning market valuations. Numerous countries have reacted in piecemeal fashion variously proposing and implementing taxes on multinational corporations, or digital firms in particular, based on revenue generated within a jurisdiction or sales. These ad hoc reactions threaten the integrity of concepts of value creation which undergird extant tax norms and law.

The taxation of intangible assets (such as goodwill, brands, patents, trademarks, and copyrights) poses substantial challenges and manifests similar concept-regulation-corporate form mismatches. For many high-tech firms intangible capital now represents more than 90 per cent of firm value and in some countries, such as the United States and the United Kingdom, investment in intangibles has long outstripped investment in tangible assets (Corrado et al. 2012). Given the recognized significance of intangible capital to economic growth and performance, the challenge of measuring intangible assets is urgent and on-going (Bryan et al. 2017). Despite urgency, the System of National Accounts (SNA) has been updated only incrementally and partially. Products of research and development consumed internally and not produced for transfer are not recognized by the SNA, just as assets such as organizational capital and brands remain outside of national accounts (Uppenberg 2009). At the level of the firm, the International Accounting Standards Board and the US Financial Accounting Standards Board threw in the towel some time ago, giving up on efforts to incorporate intangibles in measures of firm value (IASB 2007). The OECD concluded in 2006 ‘that there was only limited possibility to recognize intangible capital in the financial accounts’ and that the recording of intangible assets ‘best be dealt with through narrative financial reporting’ (OECD 2006, p. 5). When intangible capital can’t be measured, it is hard to assess for regulatory purposes.

Where the majority of world trade occurs within multinational corporations opportunities for profit shifting are extenuated. Intangible assets are not only difficult to value, providing space for opportunistic valuations, they are easy to move. While machinery can only be in one place at one time, intangible assets can in one jurisdiction for legal protection purposes, another to register revenue streams and another for tax purposes. Transfer pricing, despite efforts at the OECD to update pricing methodologies, remains governed by the Arms Length Principle (ALP). Stipulating that internal prices for transfers within the

multinational corporation should mirror ‘uncontrolled comparable’ prices paid between unrelated entities, the ALP proceeds on the often mythical basis that there exists a market price for intangible assets, and, where this is not easily identified, a market price might be easily construed. For this reason, firms that are dominant in the digital economy have been at the forefront in exploiting legal geography for the purposes of profit shifting (Bryan et al. 2017; Grubert 2012).

In functional terms, double taxation and double non-taxation means tax as an issue in global economic governance is likely to be characterized by high levels of cooperation and convergence (Hearson and Prichard 2018). This is notwithstanding apparent incentives for small states to defect on shared norms and international agreements. Recent policy developments have confounded this likelihood as numerous and varied policy solutions have been debated and adopted. Absent policy coordination is symptomatic of the incompatibility of current regulation with corporate form, an incompatibility that is a measure of the concept-regulation-corporate form gap in the digital economy. While the OECD’s BEPS process is complete, with conclusions on action points made in 2015, the issue of taxing the digital economy remains unresolved. In the lieu of consensus, the final report on Action 1 on the digital economy concluded unenthusiastically, ‘Countries could, however, introduce any of the options (to create a significant economic presence test, withholding tax, or equalization levy) in their domestic law as a further safeguard against BEPS...’ (OECD 2015).

The OECD’s Task Force on the Digital Economy continues to work with final recommendations due to be delivered in early 2020. Delay reflects the fundamental challenge to the extant conceptual framework. Divergent national policies reflect this. The United Kingdom’s Diverted Profit Tax has since 2015 levied a 25 per cent tax on profits considered to have been artificially diverted out of the country (Cockfield 2018, p. 1337). Hungary and France have imposed taxes on advertising sales. India since 2016 has levied an equalization tax on business-to-business advertising services. Other countries have expanded their definition of royalties subject to withholding tax. Greece and the Philippines include payments for software in this expansion, and Malaysia payments for ‘visual images or sounds’ (Cockfield 2018, pp. 1335–7). Spain, following the faltering of the European Commission proposal for a Directive on the taxation of digital services, imposes a 3 per cent tax on digital services that rely on user generated data for firms with turnover above a €750 million threshold (Squire Patton and Boggs 2018, p. 7).

Uncoordinated responses to tax challenges that arise from the operations of the digital economy demonstrate that the legal framework used to guide the taxation of multinational companies has been transcended. While attention has understandably focused on profit shifting in the digital economy, both because it is pronounced and because it is symptomatic of a fundamental tension between national tax systems and multinational corporations more broadly, there is

another side to the tax implications of the digital economy that remains relatively neglected. The ride-hailing firm provides a window on this, showing the links between tax, digital business model, competition, labour relations, and corporate form.

11.3 Grow Fast, Fix It Later

Founded in 2009 by Travis Kalanick, Oscar Salazar, and Garret Camp, Uber set out to disrupt the urban transport market. With a forecasted market value on the eve of its 2019 Initial Public Offering (IPO) of \$100–120 billion it was then the largest privately held start up in the world. Founded as Uber Technologies Inc. in 2009 the firm initially provided a luxury black-car service. By 2012, the success of Lyft's peer-to-peer ride-hailing service led Uber to expand and provide taxi services in various jurisdictions. Within three years there were around half as many Uber and Lyft drivers as taxi and limo drivers in the US (Cramer and Krueger 2016; Zwick 2018). As part of the sharing economy the business rests on the provision of car rides by self-employed drivers using their own vehicles. The Uber app allows consumers to submit a request for a ride that is routed to, and crowd sourced from third party drivers. Full fares are paid to Uber BV in the Netherlands with the company retaining approximately 25 per cent of each fare.

Uber competes successfully with existing taxi services on the basis of lower prices. It has in consequence experienced meteoric growth. The San Francisco headquartered firm operates in 65 countries worldwide. Three million people are engaged as Uber drivers, 750 000 of whom are in the United States. As of March 2018, Uber had 41.8 million users in the United States and 75 million in the rest of the world. The second biggest market is Brazil with 17 million users and the biggest in Europe is London with 3.5 million users. In India there were five million weekly riders as of August 2017; 15 million Uber trips are completed each day and more than 5 billion trips have been completed worldwide (Iqbal 2019). Beyond ride-hailing, Uber also operates meal-delivery service Uber Eats and shipping service Uber Freight.

Uber is dominant worldwide. Its nearest rival is the Chinese company Didi which controls 90 per cent of the Chinese market, and claims it has 21 million drivers worldwide, 505 million users, and 30 million daily rides. Uber exited the Chinese market in 2016 with the sale of its Chinese business to Didi for \$35 billion and a stake in the company. The sale put an end to a subsidy war between the firms which had generated losses on both sides. Since, Didi has begun to look for opportunities outside China, expanding to Japan and Latin America. In South-east Asia Uber's main rival is Grab, with 36 million riders, 2.6 million drivers and 4 million rides per day. Uber struck a deal with Grab in March 2018, selling its Southeast Asian business to the Singapore-based firm for an undisclosed sum and

a 27.5 per cent share in the company. Uber and Lyft operate a virtual duopoly in the United States. Founded in 2012, Lyft operate in over 300 Unites States cities and two Canadian. Lyft has 23 million issuers and 1.4 million drivers who account for one million rides a day (Carson 2018; Iqbal 2019). The firm executed its IPO in April 2019 with a market valuation of \$24 billion and a share price of \$72. Within two weeks Lyft's share price has slid 11 per cent to \$60.12 (Franklin and Randall 2019). Comparison between Lyft and Uber demonstrates the extent of Uber's market dominance. IPO filings (Uber filed in April 2019 quick on the heels of its rival) show Uber operates in more than 700 cities globally. Lyft operates in more than 300 in Canada and the United States. Booking revenue from ride hailing for 2018 stands at \$41.5 billion (Uber) and \$8.1 billion (Lyft), users in the same year stood at 91 million and 30.7, drivers at 3.9 million and 1.9 and total rides at 5.2 billion and 619 million (Abril 2019).

Uber's rapid expansion relies on its capacity to raise large volumes of private funding. Figure 11.1 shows that up to its IPO Uber had raised \$25 billion in private markets. This is without having shown a profit. In so far as Uber is able to establish a dominant position in the urban transport market, on the basis of this

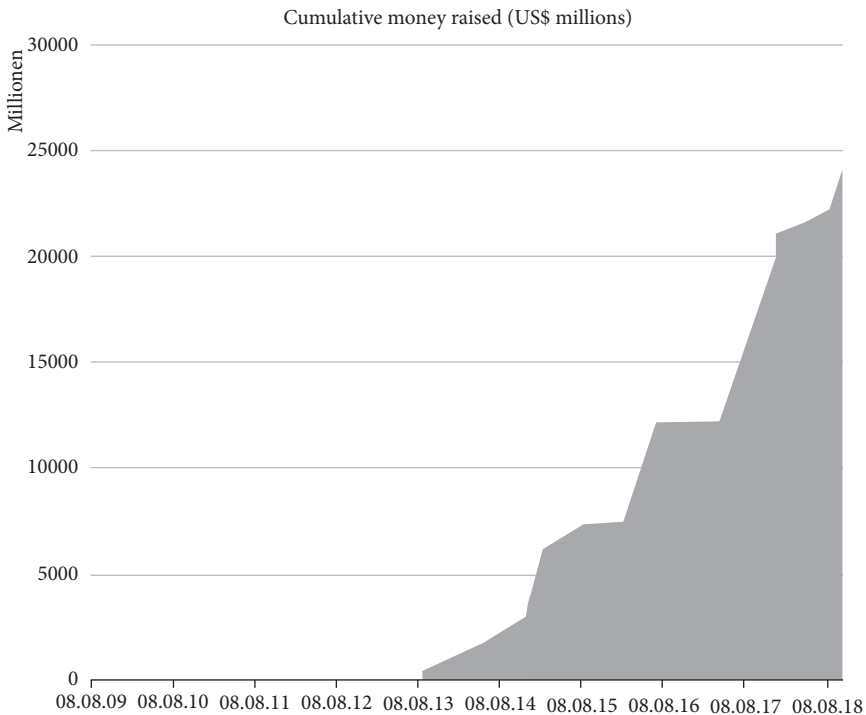


Figure 11.1 Cumulative money raised by Uber.

Source: Author-made based on Crunchbase Pro data.

dominance it may be able to increase prices and generate profits. Uber can exploit the network effects associated with two sided markets. In a two-sided marketplace, each additional user on the supply side makes the product more valuable on the demand side, and vice versa. Ebay increases market share on the basis of both buyers and sellers enjoying increased efficiencies as far as the number of buyers and sellers using the site increases. However, for Uber, adding more drivers after a point may decrease network effects for drivers who will attract fewer customers. Both customers and drivers are easily able to switch to an alternative by using more than one app. The advantage for customers of adding more drivers diminishes if being picked up after three minutes rather than four is of marginal benefit. Scaling the business on the back of ample funding so that Uber is everywhere and integral to urban transport systems is a core strategy. The tolerance of consistent and large losses enables Uber to expand and undercut competition so consumer utility may make it 'too big to ban' (Wohlsen 2014).

The strategy of scale before profit generates a significant impact on the urban transport market. Certify provides analysis of the business travel market in the United States. In 2014, when Certify began monitoring the market, Uber accounted for 26 per cent of business expenses on ground transportation with taxis accounting for 74 per cent and Lyft for less than 1 per cent. According to Certify's 2018 year in review, the figures now stand at 8 per cent for taxis, 19 per cent for Lyft and 73 per cent for Uber (SpendSmart 2018). In New York, the home of the iconic yellow taxi, Uber became the most popular form of private hire transport in terms of rides per day in September 2017. As of August 2018, 436,000 Uber rides took place per day, compared to 275,000 taxi rides, and 122,000 Lyft rides. One reason Uber is able to command this lead is the considerably larger size of its fleet. Around 63,000 Uber vehicles were available to New Yorkers in August 2018, compared to 34,000 Lyft vehicles and 16,000 yellow cabs (Iqbal 2019). Data drawn from the New York City Taxi and Limousine Commission shows that ride hailing apps accounted for 701,180 rides per day in comparison with yellow taxis 263,609 (Schneider 2019).

Soaring revenues and consistent large operating losses have accompanied meteoric growth. Net losses are more volatile as one-off divestitures will dent operating losses. Operating losses provide a more reliable picture of the firm's cumulative economic health. Net losses provide a more reliable picture of the firm's year-end tax position. Uber posted a positive net income in 2018. The company noted that \$3.2 billion was gained from divestiture in 2018. Absent the sale of Russian and Southeast Asian businesses to Yandex and Grab, the company would have posted a net loss of \$2.2 billion, a 45 per cent improvement from the year prior, but still not near profitability (Dowling et al. 2019)

The data for 2016–18 draws from figures provided by Uber in their recently filed S-1 form in preparation for an IPO. Pre-2016 figures have not been issued by Uber, but are based on comments, leaks and estimates reported in news sources

such as Business Insider, Business Insider Nordic, Fortune, The Information and Tech Crunch. These sources often do not fully specify the exact metric reported, and how it was reached. Triangulation suggests the figures are reasonable. Dashed lines divide the data according to confidence levels.

Figures 11.2 and 11.3 suggest Uber is a heavily loss-making firm. Losses translate into tax assets. ‘Loss carry forward’ is an accounting technique whereby operating losses accrued in one year are set against taxes on gains and income in the following years, sometimes indefinitely or until the loss is exhausted. In theory perfect intertemporal loss offsets are a condition for the neutrality of corporate taxation across investment projects with different risk profiles. Mine exploration and construction will incur large upfront losses, some business models will be more prone to cyclical supply and demand conditions than others. As such loss carry forward reflects the economic continuum that firms are subject to as opposed to the artificial divisions imposed by reporting periods. In economic theory indefinite and unlimited loss carry forwards indexed to inflation provide for a symmetric tax system where corporate taxation is neutral as to investment decision choices. National rules pertaining to the treatment of loss carry forwards differ. In the United States losses can be carried forward for twenty years. In 26 of 34 (mainly OECD) countries surveyed in 2015, eight did not provide for indefinite loss carry forwards. Limits to the deduction of losses in the same group of countries range from 50 per cent of taxable income per year to 100 per cent

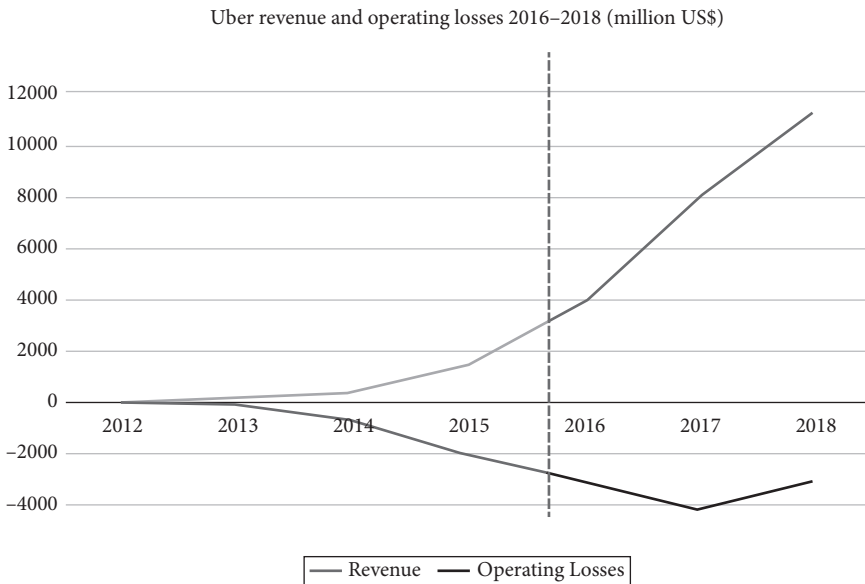


Figure 11.2 Uber revenue and operating losses 2016–2018 (in million US\$).

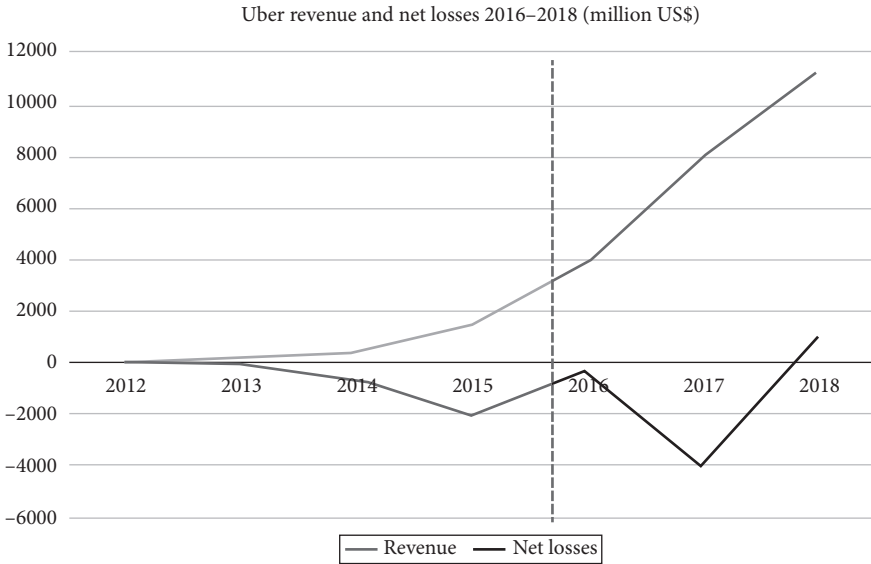


Figure 11.3 Uber revenue and net losses 2016–2018 (in million US\$).

Sources: 2016–2018 Uber IPA S-1, pre-2016 various news sources, including Business Insider, Business Insider Nordic, Fortune, The Information and Tech Crunch.

(Hanappi 2018, p. 16). There is national variation between rules governing the deployment of loss carry forwards.

Uber reported total deferred tax assets, gross, of \$2.24 billion as of 31 December 2018. The total net deferred tax asset, allowing for a valuation allowance reflecting a heavy discount, stood at \$1.294 billion. Notes to the table state less than clearly, ‘Based on available evidence, management believes it is not more-likely-than-not that the net U.S., Singapore, India, and Netherlands deferred tax assets will be fully realizable. In these jurisdictions, the Company has recorded a valuation allowance against net deferred tax assets. The Company regularly reviews the deferred tax assets for recoverability based on historical taxable income, projected future taxable income, the expected timing of the reversals of existing taxable temporary differences and tax planning strategies by jurisdiction’ (Uber S-1 2019: F-24). ‘As of December 31, 2018, we had net operating loss carry forwards for U.S. federal income tax purposes and state income tax purposes of \$5.1 billion and \$4.4 billion, respectively, available to offset future taxable income’ (Uber S-1 2019, p. 51). Placing these assets in tax preferred jurisdictions (those in this case where taxes are high and future profits made) relies on tax effective transfer pricing or the formation of a fiscal unity. For the Netherlands Deloitte report, ‘Provided certain conditions are satisfied, a parent company may form a fiscal unity with one or more of its subsidiaries, under which the losses of one company may be offset against the profits of another company and fixed assets of one company may be

transferred to another company without corporate income tax consequences. To qualify for fiscal unity status, the parent company must have at least 95 per cent of the economic and legal ownership of the shares of the subsidiary and the parent company and the subsidiaries must have the same financial year. In certain cases, a Dutch PE of a foreign company may be included in a fiscal unity' (2020, p. 3).

The accumulation of large and on-going operational losses is crucial to the strategy of 'scale without mass'. In turn, the stock piling of large deferred tax assets buttresses Uber's strategy of rapid revenue growth and market penetration ('grow fast, fix it later'). Many analyses of the tax implications of the digital economy focus on the relationship between profit shifting and intangible capital and business infrastructures. Uber's (profit) tax structure is reasonably straightforward in the United States. Internationally, it is more complex and opaque. This complexity and opacity is the norm for multinational firms, the subsidiaries of which often run into the thousands and are used to organize economic activity, optimize internal credit allocation, manage liability, and reduce net tax exposures. Taxes are allocated to where the firm is subject to low or no tax and costs and losses to high tax jurisdictions. Transfer prices, credit relations, and royalty payments are often the mechanisms creating this distributive effect.

In May 2013, Uber established a Dutch holding company, Uber International C.V. which took on ownership of many of the firm's international subsidiaries and shared ownership with the United States parent of the firm's intellectual property. The holding company has no employees and is headquartered in Bermuda. A second Dutch subsidiary, Uber B.V collects 100 per cent of the ride fare received by its drivers, sending 80 per cent back the drivers and retaining 20 per cent. An intellectual property licensing agreement between the B.V. and the C.V. means that 99 per cent of the revenue (minus costs) from drivers is passed onto the C.V. as royalty payments. Royalty payments are not taxable in Holland. For the United States Internal Revenue Service Uber C.V. is a Dutch business, even if it is a subsidiary of a US company. For the Dutch, Uber C.V. is a U.S. controlled company headquartered in Bermuda, where there is no corporation tax. For Uber an intellectual property cost sharing agreement is placed between Uber C.V in the Netherlands and Uber Technologies, Inc. in the US ensuring that any future profits will be shielded from US taxation via a double Dutch through which profits ultimately flow to no corporate tax Bermuda (O'Keefe and Jones 2015).

This structure has become untenable in the face of regulatory upgrading from the Organization for Economic Cooperation and Development and the European Union that requires multinational companies to justify the business purpose of offshore operations, with low tax countries such as Ireland, Singapore and the Netherlands now preferred to no tax Caribbean havens such as Bermuda. Prior to its May 2019 IPO Uber revalued upward its intellectual property and shifted it between its subsidiaries. When an intangible asset increases in value so too do the

deductions that come with its use over time. Uber's creation a \$6.1 billion tax deduction means the company will not pay taxes on profits for the foreseeable future (Browning and Newcomer 2019).

The analysis here suggests focus on the scaffolding for a business model that relies on large amounts of private funding, growing revenue fast and exponentially, consistently posting losses and becoming 'too big to ban'. Attention has been drawn to the strategic creation of 'tax asset war chests' to guard against incoming fiscal liabilities. Section 11.4 below outlines how Uber removes urban transport activities from the sales tax net and shifts the burden of welfare provision onto drivers, and ultimately the state. This is a strategy of fiscal risk shirking and shifting.

11.4 No Sales, No Employees

In the digital economy locational and related legal ambiguity is readily available to be instrumentalized for a variety of purposes. One such purpose is the workforce relation. Maintaining the status of Uber drivers as independent contractors is critical for business success. The recent S-I filing notes as a risk factor that, 'Our business would be adversely affected if drivers were classified as employees instead of independent contractors' (Uber S-1 2019, p. 29). Spending on employee benefits and taxes pushes back prospects of profitability. Uber insists that its drivers are freelancers for whom the company provides the chargeable service of connecting to customers. Uber users in hailing a ride through the app agree that:

The Services constitute a technology platform that enables users of Uber's mobile applications or websites provided as part of the Services (each, an 'Application') to arrange and schedule transportation and/or logistics services with third party providers of such services, including independent third party transportation providers and third party logistics providers under agreement with Uber or certain of Uber's affiliates ("Third Party Providers"). Unless otherwise agreed by Uber in a separate written agreement with you, the Services are made available solely for your personal, non-commercial use. You acknowledge that Uber does not provide transportation or logistics services or function as a transportation carrier . . . Uber's services may be used by you to request and schedule transportation, goods, or logistics services with third party providers, but you agree that Uber has no liability to you related to any transportation, good or logistics services provided to you by third party providers

Driver income is subject to taxation in the country of operation though whether due tax is collected depends on accurate reporting by drivers. That Uber's drivers are independent contractors means that Uber is not subject to costs associated

with maintaining the workforce. For instance, drivers should self-insure against sickness, there is no holiday pay, and drivers, so far as they are deemed independent contractors, do not qualify for minimum wage protection. More significantly, the company is not bound to make social security contributions on behalf of its workforce. The replacement of a company with employees by a platform using a self-employed workforce results in much lower or even no income from social security payments and removes the company's obligations in collecting these taxes. The asymmetry between self-employed social security payments and those of the employed is usually not mirrored in an equivalent asymmetry in terms of rights to benefits. In consequence the rise of the gig economy shifts costs and reduces fiscal capacity to meet them.

With 50,000 drivers in the UK this cost shifting places a significant burden on the UK exchequer. In November 2010, a London tribunal upheld an earlier ruling that Uber drivers were 'workers' on the basis that the company exercised sufficient control over the drivers for this relationship to be held to be in place. 'The ET ultimately ruled that: (1) Any driver who (i) had the Uber App switched on; (ii) was within the territory in which he was authorized to work; and (iii) was able and willing to accept assignments, was, for so long as those conditions were satisfied, a worker' (OPBP 2017, p. 11). The decision means that Uber drivers can access worker rights such as minimum pay. It is under appeal. In Ontario, and in contrast, the Supreme Court rejected a class action lawsuit against Uber seeking minimum wages, overtime and vacation pay. The rejection was on the basis that the arbitration clause found in Uber drivers' contracts, which declares that all employment disputes are to be arbitrated in the Netherlands, does not breach the province's Employment Standards Act. The employment lawyer representing drivers commented, 'There is a real risk now that Ontario's workers' fundamental rights as provided by the Employment Standards Act can be completely bypassed. It would be virtually impossible for most drivers in Ontario to pursue their rights 6,000 km away in the Netherlands. If other companies follow suit, any employer in the province can decide to bind an employee to an arbitration in any part of the world they choose. This means that employee rights in this province are a thing of the past.

The 2017 Oxford Pro Bono Publico survey lists numerous duties that a determination that Uber drivers are employees might, depending on jurisdiction, impose on the employer. These include payment of wage and sometimes a minimum wage; working time rules; leave; holiday pay; flexible working; non-discrimination; health and safety at work; tax and security obligations; maternity, paternity and parental leave; protection from unfair dismissal; rules regarding transfer of undertakings; collective labour law obligation. There is variation between national employment law with some jurisdictions, such as Switzerland, generous and others, such as Texas, less. As far as Uber is able to maintain the position of its drivers as self-employed or independent contractors the costs

associated with the benefits listed fall directly on the driver and the state. This points to the firm's role in risk shifting and the centrality of risk shifting to its ability to out compete incumbent taxi companies. Risk shifting and shirking is equally evident in terms of sales taxation.

In the United States 84 per cent of Uber drivers earn less than \$500 per month, with mean earnings at \$364 and median earnings at \$155 (Ernest 2017). The thresholds at which traders must pay sales tax vary by country. In the United Kingdom the threshold is \$119,167, Australia \$50,951, Belgium \$37,457, Canada \$23,976, France \$103,913, Finland \$11,062, Portugal \$16,886. The OECD average threshold is \$51,151 (OECD 2018). Ernest reports that only 2 per cent of US Uber drivers earn between \$1500 and \$1,7999, with 0 per cent earning above \$2,000. In the United States sales tax is set at the state level and in most states sales tax does not apply to services, which taxi rides fall under. However, traditional taxi firms will pay medallion or hack licence fees. Some states have witnessed legal action on the sales tax issue. For the vast majority of Uber drivers low monthly earnings put them below the sales tax threshold. Whereas traditional taxi firms would levy sales tax on rides, substituting self-employed Uber drivers for taxi firm employees shifts the service out of the sales tax net.

Jolyon Maugham, UK barrister and Director of the Good Law Project, is pursuing legal action against Uber for the right to claim a receipt for value added tax payments (the UK sales tax). The case centres on an Uber journey Maugham took in March 2017, which cost £6 and 34 pence. He pursues a court declaration that Uber should give him a VAT invoice for £1 and 6 pence for the journey. The invoice would allow him to reclaim the sales tax as the trip was for business purposes. Anyone registered for VAT who receives services that VAT is charged on has a legal right to claim a VAT invoice. Uber could owe as much as \$1.3 billion if the case is successful and be liable for \$261 million per year. Uber holds the position that as a technology platform it is not liable for sales tax on the rides provided by its independent contractor drivers. Maugham's case rests on the 2016 employment tribunal judgement and a recent decision at the European Court of Justice (OPBP 2017). That the tribunal defined Uber drivers as workers rather than self-employed implies the Uber is liable to sales tax as the provider of the service (Maugham 2016). Maugham's ability to pursue the case has been hampered by the rejection of an application to limit his costs if he loses the case. Margaret Hodge, former Chair of the UK Public Accounts Committee, commented on the case, 'It's plain common sense that HMRC should be investigating the VAT issue and other tax issues in relation to Uber. If Uber fails to pay its proper VAT bill, that only means other taxpayers have to pay more or more public services have to face even deeper cuts' (Marriage and Murgia 2017). The UK currently implements its VAT laws based on the 28-member EU bloc's VAT Directive, which sets the standard rate of VAT at 15 per cent and requires UK courts and tribunals to apply VAT in accordance with the directive and EU case

law. If Uber loses its case in the UK, it may face similar claims from other member EU states.

Uber began operating in Taiwan in 2013. In mid-2016, the government said that Uber had to pay sales tax amounting to \$6.4 million. ‘Uber has not previously been liable for sales tax since it set up shop in Taiwan in 2013. But the government is overhauling the tax regime it imposes on global online service providers, arguing Uber owes back taxes. “As long as they provide services in Taiwan, they have to pay sales taxes,” said Wu Ting-yang, auditor of the National Taxation Bureau of Taipei’ (Reuters 2016). In 2017, a case brought by the Directorate-General of Highways (DGH) regarding a ban on unlicensed operators of transportation services led to Uber shutting down operations for two months. Coinciding with the halting of Uber’s services in Taiwan, a new cross-border e-commerce VAT bill was introduced. It required foreign companies to register and pay a 5 per cent value added tax on digital services and products sold in Taiwan. A Partner at PwC Taiwan commented, ‘Before Taiwan revises more tax laws, which are applied to foreign cross-border e-commerce firms, to deal with sales and income taxes issues, Uber will have to set up a local taxi company here and pay all kinds of taxes in accordance with the existing laws, if it wants to stay’ (Bloomberg 2017). Uber in 2018 returned to Taiwan with a new business model. This involved partnering with car rental companies and using licensed commercial drivers working for these car rental companies, rather than private drivers.

In Australia, most businesses register to pay sales tax of 10 per cent only when they earn more than A\$75,000. However, taxi drivers pay sales tax no matter how much they earn. The arrangement is designed to avoid distortions that would otherwise arise if only some drivers paid the tax. Uber launched proceedings against the Australian Tax Office in 2015 seeking to distinguish its ‘driver partners’ from drivers of taxis. Uber noted that its drivers’ vehicles aren’t identified as taxis, don’t have ‘for hire’ signs, aren’t painted in specified colours, don’t wait at pre-selected spots and don’t have a taximeter fitted. The Federal Court ruled that Uber provides a taxi service and all its drivers must therefore register to pay goods and services taxes (Hurst 2015).

This selection of disputes over Uber’s liability to sales tax goes to the heart of the firm’s business strategy. In essence, Uber is a legal entrepreneur at the interface between finance, employment and taxation. It seeks to penetrate markets and undercut incumbents on the basis of legally differentiating itself from regulated taxi services. As a technology platform Uber is able to leverage locational ambiguity and argue that national subsidiaries avoid permanent establishment status, merely fulfilling auxiliary and preparatory functions. As far as Uber is able to maintain its status as a technology platform it serves as a booking agent for the independent contractors that use its app. As such, it is not liable for social security payments on behalf of Uber drivers, it skirts employment law, and avoids obligations city and national regulators place on regulated taxi services such as vehicle

checks and driver background checks. The firm's ability to continue to operate in this way is uncertain.

A Spanish taxi drivers' association (Asociación Profesional Élite Taxi) argued that Uber represented unfair competition, claiming it was a transport service company that did not comply with regulations, in particular in terms of chauffeurs' licences. The case was referred to the Luxembourg-based European Court of Justice by a Spanish judge. He asked whether Uber should be considered as a transport service, which would require 'prior administrative authorization' to operate, or an information society service, which would release the firm from the obligation to comply with varied regulations across Europe. To be regulated under the directive on electronic commerce or the directive on services in the internal market Uber must be defined as an 'information society service'. The directive allows for the freedom to provide services across European member states, without national obstacle or local restriction. The case was decided at the European Court of Justice in December 2017. On the basis that the Uber app is indispensable for both drivers and customers, and that Uber exercises decisive influence over the conditions under which drivers provide the service, the Court found 'that intermediation service must be regarded as forming an integral part of an overall service whose main component is a transport service and, accordingly, must be classified not as an "information society service" but as "a service in the field of transport"' (ECJ 2017). In September 2019, Californian legislators approved a bill that requires companies like Uber to treat its independent contractors as employees. It is estimated that doing so will raise costs by 20 to 30 per cent (Conger and Scheiber 2019).

11.5 Conclusion

Uber's economic performance relies heavily on a series of legal ambiguities, the contestation of which is on-going. Expectations of Uber's market capitalization before its IPO ranged between \$100 and \$120 billion. Uber priced its IPO at \$45, a market capitalization of \$82.4 billion. On 9 October 2019 Uber's shares traded at \$29.28, with a market capitalization of \$49.78 billion. To date Uber had not posted a profit. It maintains a vision of the firm as an asset light digital platform. Legal ambiguity as to the employment status of 'partners' troubles this vision. In so far as partners are deemed workers or employees room for manoeuvre on tax, employer obligations, industry regulation, and worker rights is restricted. The firm's relationship to drivers is potentially an anchor on its growth and profit strategies. The heavy reliance of firms on fragile legal contingencies renders them vulnerable and unstable and in consequence, an issue of concern.

The vulnerability of the firm however should not detract attention from the longer term significance of the digital economy, platform enabled services, and

multinational corporate form for research focused on fiscal sustainability. Digital economic processes are confounding extant tax rules and norms pointing to a profound concept-regulation-corporate form gap, where the conceptual architecture informing the design of tax systems has been transcended by developments in corporate form. In consequence of the increasing digitalization of corporate capital, multinationals are increasingly able to escape the fiscal net, or heavily reduce its purchase upon them. This chapter addresses these issues but explores in greater depth parts of the digital economy where profits, and therefore profit taxes, are not in immediate play. In the platform economy, rapid market expansion aiming at market dominance generates outsized operating losses and a war chest against future tax obligations in the eventuality of the firm reaching profitability. Eventual profitability in turn relies in large part on the capacity to maintain a workforce that is independent of the firm and an industrial classification that maintains the firm operates in the information service economy. That independence and classification reduces the fiscal burden facing the firm and allows it to undercut market incumbents.

11.6 References

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Tax Experts' Response to Regulatory and Institutional Triggers

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12.1 Introduction

Tax is an area in which professional expertise intersects very obviously with both the common good and the public interest. Tax funds the input of government and private actors into the common good, creates the financial support for it and shapes how it will be realized in a particular jurisdiction. Tax avoidance and evasion therefore both pose well-documented risks to public welfare (Sikka 2010), depleting the public coffers, reducing the capacity of government to provide essential services, and exacerbating inequality by stripping resources away from services to the poor and vulnerable. On an international level, tax avoidance and evasion tend to limit the ability of developing countries to mobilize domestic revenue, thereby increasing aid-dependence and contributing to instability in government spending. Tax evasion is more easily defined than tax avoidance, referring to tax arrangements or the lack thereof which are clearly illegal. Tax avoidance is a more problematized term, but incorporates aggressive or innovative arrangements designed to significantly reduce tax while remaining within the letter of the law. The focus of this chapter is on a set of activities that may be construed as tax avoidance rather than evasion, the legal actions of tax professionals as they move towards extending the boundary of the law, through subjective interpretation of grey areas within tax legislation. We include within our scope tax experts working as professional advisors as well as those working in the public or corporate sectors. The aim of this research is to empower regulators by identifying some key circumstances which are associated with increased risk of the work of tax experts moving towards tax avoidance. As tax experts are crucial actors in the tax ecosystem, their position as the mediators of tax practice and as the conduit between tax payer and tax regulator reflects the importance of critical research in this area.

The role of professionals, and particularly accountants in society, has received attention in the critical accounting literature over several decades. Questions

addressed in the literature include: does the accounting profession represent the public interest or their own private interest? (Parker 1994; Lee 1995); how do professional claims on the primacy of their expertise withstand public scrutiny? (Robson et al. 1994; Collins and Evans 2002; Canning and O'Dwyer 2013; O'Regan and Killian 2014); how should the professions be regulated? (Robson et al. 1994; Sikka and Willmott 1995). The contrast between the public interest mandate of the profession and the damaging impact of tax avoidance makes an examination of the work of tax professionals particularly important. More recently, Carter et al. (2015, p. 1198) have observed that given the changing nature of the accounting profession, as well as a 'rediscovery of the agency of professionals in broader social processes (Arnold 2005)', a focus on expert workers may be more appropriate given the risks posed by the work of tax experts. As has been documented in the past by civil society actors such as the Tax Justice Network (TJN) as well as development NGOs including Christian Aid, Action Aid, and Oxfam, these include not only reduced public services and increased inequality within countries, but also, on an international level, a potentially widening gap between nations. International tax arrangements can also impact on the sustainability of domestically centred firms which don't have access to international tax strategies, potentially widening an already significant competitive advantage enjoyed by multinationals. Aggressive tax planning for high net worth individuals can also perpetuate and extend existing inequalities as the more wealthy can afford to retain expert tax advisory services to reduce their overall tax contribution.

Overly contentious tax arrangements also impact on the reputation of the profession as a whole. The current focus on tax avoidance has opened public debate to a wider than usual range of actors on how the tax system might serve the public interest. The question of corporate tax avoidance has moved from a technical issue discussed only in boardrooms to one which features in senate hearings, parliament debates, street protests, and popular media. In light of the increased societal and political spotlight, national and international regulation has struggled to respond to the increasingly labyrinthine tax avoidance schemes adopted by private firms and high net worth individuals. In crisis, the field has opened to include new actors with a societal focus, bringing a different perspective and seeking to engage in order to bring about change. In exploring technocratic and societal perspectives in this context, we address a call in Gracia and Oats (2012, p. 319) for 'broader, more situated research, that explores "tax in action" and examines the linkages and relationships between tax, accounting and regulatory practices, and the influence of the wider contexts in which these practices operate.' We examine the circumstances that lead to aggressive or innovative tax decisions in the context of a tax crisis of significant global societal impact (Sikka 2010, 2013; Sikka and Willmott 2010, 2013). This addresses the call in Carter et al. (2015) for work critically examining the role of expertise in crises, globalization

and 'the position of different expert groups in relation to societal elites' (Carter et al. 2015, p. 1198).

Considerable work has been done in the critical accounting literature on taxation focusing on tax compliance, avoidance, and evasion (Morales 1998; Braithwaite 2003, 2013; Kirchler et al. 2008; Sikka and Willmott 2010; Cooper et al. 2013); on the role of the profession in facilitating tax avoidance (Sikka and Hampton 2005; Doyle et al. 2013); on taxation as an element of corporate social responsibility (Sikka 2010; Lanis and Richardson 2012a; Lanis and Richardson 2012b; Hasseldine and Morris 2013; Dowling 2014); on tax competition, (Killian 2006; Otusanya 2011) and on lobbying by tax professionals and their internal relationships (Mulligan and Oats 2016). However, despite calls for broader and more contextualized critical research on taxation (Boden et al. 2010; Gracia and Oats 2012), relatively little attention has been directed towards the organizational and individual circumstances that foster tax aggression or innovation, as two ends of the continuum on the deviation from normal tax behaviour. In this chapter, we contribute to our understanding of tax risk by focusing at a micro-level on the situations in which tax experts themselves feel that they are more likely to take an aggressive or innovative tax position. The object of our study is the self-reported perception of tax experts on the circumstances which might influence them in taking such a position. Our research is not embedded in any particular tax jurisdiction and so we do not specify what those positions might be. Rather, we address the environments in which tax experts feel enabled or compelled to act in a more aggressive or innovative way. This is important because it is in those small decisions that tax precedents are set, and case law established, shifting the overall landscape of tax regulation as the boundaries of the original legislation are stretched in unforeseen ways.

The risks posed to civil society and government coffers by tax expert networks are to a large extent centred on this stretching of interpretation, based on case law or the interaction of national rules to create a form of tax arbitrage. Both the OECD Base Erosion and Profit Shifting (BEPS) process and the EU Common Consolidated Corporate Tax Base (CCCTB) initiative, aim to eliminate such arbitrage opportunities, seeking to identify specific international mismatches and to better align them. This research complements and informs such efforts by highlighting the micro-triggers within a firm or throughout the daily work of a tax expert which make tax aggression or innovation more likely to occur. An 'economic Cyclopaedia of technoscientific rationality' (Beck 1992, p. 60) can blind experts and professionals to the scale of the problems facing them, seeing a crisis such as the current tax avoidance issue as something that 'until now was unthinkable' (Beck 2012, p. 68). This gives them an 'exceptionally strong tendency to cast even the most severe and unexpected problems as amenable to be solved by an incremental modification of existing best practices' (Porter and Ronit 2006, p. 51).

In responding to an issue of global concern, that of tax avoidance and its impact on society, for instance, experts may not see their role as addressing broader issues, but rather as preserving the system. They may be less 'concerned with attaining something 'good', but rather with *preventing* the worst' (Beck 1992, p. 49). Arguably, the OECD BEPS process can be seen as such an incremental modification of the system, rather than a reform. This research approaches the problem from another perspective, gathering the self-perceptions of tax experts of the situations which make tax avoidance more likely to occur, providing a grass-roots view of issues that could be addressed. The aim is to produce a perspective that challenges, informs and complements existing international initiatives to tackle tax avoidance.

A note on language is timely at this point. In framing this study, we were guided by the ideas of Pierre Bourdieu. Bourdieu is useful in seeing how professional experts may have an understanding of their own role that differs from that of actors who are socialized through, for example, their involvement in civil society groups. They have a *habitus*, or sense of self, derived at least in part from their professional training, perhaps (Ponemon 1992; Spence and Carter 2014), and may have a different understanding of the *doxa*, or unwritten rules, of tax practice (Bourdieu 1982, 1990a, 1990b, 1998, 1999, 2000, 2005; Bourdieu and Passeron 1990). With this focus in mind, by means of an international survey of tax experts, we gathered data on tax professionals' own impressions on the triggers to tax aggression or innovation in their daily work. This is a deliberately personal and subjective approach, aiming to shed light on the conditions under which the experts themselves feel pressure, motivation or perhaps the regulatory freedom to stretch the boundaries of tax law. The kinds of tax decisions that push the envelope of regulation may be seen as aggressive by some, or in a less pejorative way, as innovative by others. For this reason, we use both of these terms in our survey, conscious that while the value implications of their use may vary, the outcome of the actions they each describe is the same. Bourdieu is also invaluable in facilitating an appreciation of how the different understandings of agents in a field can shape the field itself, while also being shaped by it. This helps us to understand the role of peer pressure and the role of competitors in setting norms for the behaviour of tax professionals.

The rest of this chapter is set out as follows. Section 12.2 positions our work within the relevant literature on professional expertise and taxation in the context of global developments in tax, and describes the main theoretical concepts from Bourdieu which are used, as well as outlining the circumstances which might foster the kinds of tax decisions that could lead to tax avoidance. Section 12.3 outlines our data and method. Section 12.4 presents and discusses the key findings; Section 12.5 concludes with some recommendations arising from the study.

12.2 Tax Risk and Triggers for Avoidance

In recent years, public perception of tax avoidance has shifted from being seen as a dry, technical issue to one of immediate relevance to questions of inequality and the funding of public services. Tax avoidance by multinational firms has led to executives being questioned in the US Senate and the UK House of Commons. Tax protests, particularly in the UK and across Europe, have led to an increased focus on the issue internationally. The work of Prem Sikka and others has identified tax avoidance and evasion as an international crisis (Sikka 2010, 2013; Sikka and Willmott 2010, 2013). ‘Tax and the avoidance of it, probably for the first time in a generation, was being framed as a moral issue in the UK’ (Carter et al. 2015, p. 1202). Taxation can be seen as serving the common good by translating societal values into financial or quantifiable terms, making unambiguous and effective the intent of government. Taxes dictate wealth distribution and concentration; they incentivize some activities while penalizing others; they recognize and privilege some forms of economic activity, and by excluding others, affect the balance of how society operates. Taxes set limits on the ability of the State to raise revenue for public services, social welfare, and business supports. They promote activities which are considered to be useful through tax breaks or subsidies, and deter those considered harmful through Pigouvian taxes and levies. As such, a well-functioning tax system is an instrument of power with immediate and traceable societal effect, and a matter of fundamental public interest.

Tax avoidance and aggressive tax planning can, in that light, be seen as contrary to the public interest or the common good. The perception that the means of avoiding taxes are more available to large international corporates or high net worth individuals who can afford tax advice adds to the perception of unfairness. Public criticism of tax avoidance extends not only to the behaviour of companies or individual taxpayers in aggressive tax planning, but also of the structures, experts and networks that facilitate this practice. The public critics bring a different perspective to bear on the issue. As the perception grows that tax avoidance is a crisis, ‘what had been considered unpolitical became political... suddenly public opinion and politics govern the most intimate areas of operational management’ (Beck 1988, p. 89). One conspicuous outcome of the public concern has been the decision by the OECD, later involving the G-20, to initiate a programme of international tax reform. The Base Erosion and Profit Shifting (BEPS) project addresses issues of the digital economy, transfer pricing, tax treaties, hybrid mismatches and a range of other anomalies in the international system. This primarily aims to address both the risk of tax loss and the risk of a loss of tax morale leading to further tax avoidance, and to restore the efficiency and clarity of a system affected by tax avoidance which was ‘blurring our picture of the basic geography of wealth’ (Piketty 2014, p. 467). The BEPS process has grown in significance with the recognition that tax avoidance and evasion is

impoverishing the global south and creating inequality within and between countries. In parallel, the EU has taken action under fair competition regulations, and in developing the Common Consolidated Corporate Tax Base (CCCTB) initiative to address mismatches across the EU.

At the same time, tax can be seen, not least by tax professionals, as primarily a technical issue of compliance with—or stretching of—the law. Even at the point of taking tax positions that influence or stretch tax policy, it can be framed as an issue of the economic rather than the social: 'Policy makers find that it is efficient and comfortable to define decisions as technical rather than political' (Nelkin 1975 p. 36). This can create a situation in which experts feel that they operate on a primarily technical field, 'protected by an institutional web of social and technological practices' (Irwin et al. 2000, p. 83). This echoes the idea of accounting in Cooper (1992, p. 24) as 'the dominant conceptual system' which deprioritizes complex social issues in favour of that which is measurable: 'through accounting, almost anything in our society is reducible to some kind of binary opposite . . . we feel safe with accounting' (Cooper 1992, p. 25).

Tax practice may fall, then, at the intersection of relationships between expert professionals, the state and wider society. In a comment redolent of Bourdieu's conception of *doxa* as the unwritten rules of the game, Picciotto (2016) observes that tax 'is a complex game, in which both companies and tax authorities are reinterpreting the rules as play continues. The audience has to guess what rules the players think they are following, but can only suspect that this is just shadow-boxing.' In categorizing interested parties as players or otherwise, the state plays a key role. The state privileges professional experts in return for a tacit commitment to deliver on the public interest (Robson et al. 1994; Gunningham and Rees 1997). To a large extent that public interest mandate is expected to be delivered by deploying expertise for the common good at a level that could not be attained by the state alone (Ogus 1995). In a tax context and with a focus on the actions of the Big Four accounting firms, Addison and Mueller (2015) describe framings through which the Big Four describe their expert work as tax advisors as serving the public interest by virtue of deploying a form of disinterested expertise. The disinterested element is significant, and as a claim may be open to scrutiny (Mulligan and Oats 2016). In this chapter, we focus less on the big four as a group, but rather on the broad field of tax professionals and experts in all their diversity. As one factor within the tax ecosystem we engage with subjective attitudes of tax professionals and experts who come from a range of disciplinary backgrounds and working in a variety of contexts (see Chapter 2 on actors in the tax ecosystem). We aim to complement work elsewhere in this book that focuses on other areas of the ecosystem, namely; the macro issues of policy and of problematic tax structures or corporate forms. We address the micro, seeking to explore tax experts' own self-perceptions of the circumstances that may trigger actions that trend towards tax avoidance.

The range of issues which might lead a tax professional to make an innovative or aggressive tax decision is wide and under-researched. As well as drawing on relevant literature to develop our expectations of the factors that might be influential, we also draw on the tax practice experience of some members of the research team who have worked as tax advisors in the past. From this personal experience, we expect that a major factor which triggers innovation or aggression is the level of ambiguity in the tax rules (see Chapter 13 for research on tax law). If the regulations are very clear, there is little scope for creative interpretation. However, ambiguity may arise from the language used in regulations, or the relationship between different statutes, or from case law that can be interpreted to alter the effect of legislation. This opens a door for a tax position to be taken which is within the letter of the law, but outside of the spirit or intent of tax policy. Where these positions are taken and successfully defended, they create precedent, becoming known as loopholes which remain viable for other taxpayers until closed by reactive legislation. This in turn, opens a gulf between the intent of policy—the manifestation of the public interest—and tax practice. The drift from a public interest logic in the accounting profession towards a more commercial imperative for those working in big-four advisory firms has been documented by Spence and Carter (2014) and Spence et al. (2016). This may well also apply to accountants and other tax professionals working in other institutional environments. In a taxation context, for instance, the devising of innovative tax processes or practices that reduce the tax liability of a corporate employer or a client, while not aligning with the public interest, could translate to career progression and promotion for the individual tax expert involved. This creates an incentive for ambitious individuals to push the envelope of the law as a means to reduce tax. We therefore include personal ambition as one of the factors that might lead to a more innovative or aggressive tax decision.

On the other hand and as noted above, the near crisis of tax avoidance has resulted in an unprecedented level of public involvement and concern about tax practices. To an extent, this impacts on the relationship between the state or other public regulatory bodies and expert groupings. In crisis, this relationship may become strained (Canning and O'Dwyer 2013) in part because of public perceptions that the profession no longer acts exclusively in the public interest, or that its way of operating no longer unambiguously serves the common good. 'A comfortable reliance by government on the professional norms of accountancy bodies is suddenly insufficient in the face of Beck's *'civilizational risk'* in the form of fraud or tax evasion, and a consequent lack of public trust in the profession' (O'Regan and Killian 2014, p. 629). Regulators, the state, and media may seek to open the debate to a wider range of stakeholders. The multiplicity of voices becoming involved in public discourse on taxation is described by Mulligan and Oats (2016, p. 1) as 'the current cacophony,' creating a context described by Collins and Evans (2002, p. 236) as particularly challenging to those who rely on their

expertise, when risks or scandals in which their peer group may have been implicated acquire 'visible relevance to the public'. For this reason, we anticipate that while personal ambition might be an influence on the work of tax professionals, the potential for international exposure of the outcome of their work might have a dampening impact on the degree of innovation or aggression. In a similar vein, and informed by work such as Kirchler et al. (2008), we expect the likelihood of inspection or audit by the tax authority to have a restraining impact, as well as the scale of the transaction in financial terms, which affects the scale of public response in the event of the transactions becoming public.

The Bourdieusian concept of *habitus* is also relevant. Bourdieu's idea is of an instinct which either facilitates or impairs a player in a particular situation, a 'feel for the game' which is not clearly articulated, but rather 'goes hand in glove with vagueness and indeterminacy' (Bourdieu 1990a, p. 77). In this sense, the habitus of expert professionals gives them a sense of what is expected of them which might not be overtly articulated, but which will give them an advantage, a sense of their own ability to 'move in their world as fish in water' without being conscious of how they are doing so. This maps closely to the sense of competence acquired through professional training (Spence and Carter 2014), and we hypothesize that management expectations will therefore be an influence on the decisions of tax professionals. Also relating to management expectations and drawing on the experience of some of the research team in working in tax and accounting practices, we are acutely aware of the pressure of timesheet billing, which creates a considerable level of time pressure in working on some clients. For this reason, we include time pressure as a potential factor that might impact on the nature of tax decisions in practice.

Because taxation is a broad field with many sub-specialisms, the technical ability of tax workers can become very focused and narrow. For example, Value Added Tax (VAT) is a major but niche area of planning, which has little in common with for example, Transfer Pricing (TP). A VAT expert would not necessarily feel confident addressing an issue of intra-group pricing, while an expert in TP or in capital taxes would not in general address VAT issues. For this reason, we expect that the nature of the transaction in question might emerge as influences on the propensity for tax aggression and innovation.

Bourdieu's work on the field and how it is defined by the agents acting on it is useful in helping us to understand why the self-perception of significant agents acting in the field matters, and how a perspective shared by a range of actors can become so dominant as to shape the field itself. The field in which a group operates 'is to a large extent what the agents make of it, at each moment'. Bourdieu stresses the need to understand 'the position occupied, the struggle over the power of knowledge, for power through knowledge, for the monopoly of legitimate symbolic violence, by each of the agents or groups of agents who are involved in it, whether they be ordinary individuals, exposed to the vicissitudes of

the everyday symbolic struggle, or authorized (and full-time) professionals' (Bourdieu 1985, p. 734). Informed by this, we recognize that the actions of competitors can shape the field in which professionals work.

The issue of transparency around the decisions of tax experts and the visibility of their positions to others in the field is a complex one. In general, a lack of transparency and oversight is thought to exacerbate moral hazard in agency relationships (Jensen and Meckling 1976). On the other hand, Gupta and Van Asselt (2019) have found that in the context of multilateral climate politics, the level of transparency may '*reflect* (rather than necessarily reduce) broader conflicts over who should be held to account to whom and about what' (p. 18). It is not necessarily a straightforward causal relationship, with more transparency leading to more accountability and better behaviour. However, the issue of opacity and the hazards it induces have been long noted by bodies such as Transparency International. In the field of tax work, transparency is recognized as a key issue by actors ranging from the Tax Justice Network (Cobham et al. 2015) to the OECD (OECD 2019). Tax experts working in situations of high secrecy may have a different response to the potential triggers for novel or extreme tax positions. This is an important area of research for regulators.

Based on these considerations, we devised an international survey of tax professionals aimed at gathering their subjective impressions on the degree to which the factors identified above might impact on the likelihood of their making an innovative or aggressive tax decision. We consider how the factors rank in aggregate, and also compare responses from jurisdictions with high or low levels of financial secrecy. The next section describes our method and data.

12.3 Method and Data

Our data comes from an international survey of tax experts working in 59 countries, in a range of environments including large and small firms, the public, private, and professional advisory sector, and coming from a broad range of levels of seniority and age. We selected nine potential factors which might contribute to the likelihood of tax avoidance based on the ideas outlined in the previous section, and, using a five-point Likert scale, asked respondents to rate the degree to which each might influence them in taking an innovative or aggressive tax position. The survey was piloted among a small group of tax workers before being rolled out internationally. The survey was delivered online, with key verification questions included to ensure internal validity. To source respondents, we drew on the extended network of our research team with three different professional bodies. Several international and national tax advisory firms and professional bodies rolled out the survey internally to their employees and members. Some of the research team also attended practice-facing conferences, and delivered the survey there.

Table 12.1 Response rate on factors

Factor	n	Min	Max	Rationale
Personal ambition	1,008	1	5	Potential for promotion for tax innovation
Opportunity for international exposure	957	1	5	Concerns for confidentiality balanced with ambition
Likelihood of audit	1,006	1	5	Dampening impact on aggressive tax positions
Ambiguity in tax rules	1,023	1	5	Potential to exploit novel interpretations
Amount of money involved	1,013	1	5	Increased risk for taxpayer or client
Time pressure	1,014	1	5	Potential for pressurized decisions
Management expectations	1,008	1	5	Potential for firms to moderate positions taken
Nature of transaction	1,014	1	5	Links to ambiguity and oversight
Competitors' aggressive tax planning	996	1	5	Potential to benchmark from peers, and for ambition

After eliminating spurious, incomplete, and invalid responses, our final sample comprises over a thousand valid responses. It is well-balanced by gender and jurisdiction, and includes respondents from 59 countries. Table 12.1 below outlines the factors we identified, the rationale and the number of valid responses for each.

The survey deliberately elicits subjective responses, an approach which complements other work using an experimental approach. Since our respondents are in the disciplines of both accounting and law, our findings transcend the boundaries of a single profession and extend the idea of professional socialization beyond the experience of accountants in their training, to the impact on their habitus of participating as professional experts in a highly technical field. Our findings are therefore relevant to other regulatory spaces as well as to the changing accounting profession.

In order to make comparisons across jurisdictions with high or low levels of financial secrecy, we sorted our responses by reference to the Financial Secrecy Index (FSI) developed by the Tax Justice Network and described in Cobham et al. (2015). The methodology for the index is described in Cobham et al. (2015). We isolated responses coming from countries which were positioned in the top and the bottom quintile of the FSI, a total of 497 usable responses of which 282 came from countries with high financial secrecy, and 215 came from countries with low financial secrecy. Because our data consists of Likert scores and is not normally distributed, we use non-parametric Mann-Whitney tests to compare

the distribution of responses for each factor coming from jurisdictions with high or low levels of financial secrecy.

In the next section, we look initially at how the factors are spread overall in terms of the level of risk the present of a tax position being taken that is innovative or aggressive. We then look across jurisdictions of high or low financial secrecy, testing for differences in the degree to which the factor might influence the respondents.

12.4 Results and Discussion

As previously noted, respondents were asked to rate the influence level of each factor on a five-point Likert scale, where 5 was high influence and 1 was low influence. Table 12.2 below presents the Likert scores for the nine factors.

The most interesting results are those reported as having a relatively high or low influence. The tests indicate that the single most significant factor that might lead a tax professional towards tax avoidance is ambiguity in tax rules. It also has the lowest variation in response, indicating that the high rating given to this factor is pervasive in the field. This is a strong pointer to regulators that one efficient means of reducing tax avoidance would be more careful drafting of legislation, perhaps with a broader range of input from practice. Ambiguity on an international level is more challenging to address. While a national government can improve the clarity and certainty of domestic legislation, the way in which tax law from different countries intersects is more equivocal. International endeavours including the OECD BEPS process and the EU CCCTB initiative go some way towards addressing this.

The specifics of the tax situation, the nature of the transaction is also reported as influential. This again is a useful pointer for regulators, in that attention is best spent on those areas where avoidance is most prevalent. Respondents were invited, although not required, to elaborate on what they understood by ‘nature of the transaction’. Several respondents added brief comments on this, most citing a range of factors to be considered: ‘the potential issue would require consideration “in the round”, including precisely what was planned, on what legally tenable basis, at what cost for what benefit plus the risk of “adverse headlines” if it were to prove “inappropriate”’; ‘transparency, complexity, uniqueness’.

For some, the nature of the transaction was related directly to their personal technical ability: ‘depends on the domain or handling that I have of the transaction’; ‘depends on the level of complexity’. Other respondents reiterated here the idea of ambiguity: ‘if the tax treatment of the transaction is uncertain and no indication (not even implicitly) were given by Italian tax courts or Italian tax administration, it’s more likely that the tax Advisor will suggest an aggressive tax planning scheme’; ‘if the transaction is in a grey area, being innovative or

Table 12.2 Descriptive statistics on Likert scores

Factor	n	Mean	Median	Mode	Variance	Percentiles			Risk level
						25	50	75	
Competitors' aggressive tax planning	996	2.83	3.00	3	1.532	2.00	3.00	4.00	Low
Opportunity for international exposure	957	2.85	3.00	3	1.785	2.00	3.00	4.00	Low
Personal ambition	1008	2.97	3.00	3	1.626	2.00	3.00	4.00	Neutral
Time pressure	1014	3.07	3.00	3	1.536	2.00	3.00	4.00	Neutral
Management expectations	1008	3.42	4.00	4	1.352	3.00	4.00	4.00	Medium
Amount of money involved	1013	3.49	4.00	4	1.380	3.00	4.00	4.00	Medium
Likelihood of audit	1006	3.58	4.00	4	1.363	3.00	4.00	4.00	Medium
Nature of transaction	1014	3.81	4.00	4	1.050	3.00	4.00	5.00	High
Ambiguity in tax rules	1023	3.84	4.00	4	0.960	3.00	4.00	5.00	High

aggressive can be a bit safer than clear cut, black and white'. Interestingly this is expressed in terms of risk to the tax expert themselves—when it is 'safe' to be aggressive or innovative, an idea echoed by other respondents: 'different transactions hold different risks. Writing off fuel is standard, writing off a trip to Hawaii is not. Need to evaluate the nature of the transaction to determine the risk.'

This risk was sometimes related to the direct oversight of the taxing authority, or connected to confidentiality or secrecy: 'the extent to which the transaction is visible by Revenue Authorities; whether the transaction is high profile for company; level of benefit sought; values involved and potential exposure'; 'whether the transaction would be publicized or advertised on media'. Other respondents related this to ethical or professional values and legal compliance, often with a mention of the need to respect substance over form rules: 'having due regard to substance and form, and the possibility of transactions to be classified as schemes or otherwise not in public interest'. Some respondents, however, noted that they would be more inclined to take an aggressive or innovative position if the client expected this, or if the client was important to the firm: 'it is important to determine what the client requires as part of our engagement'; 'if I am getting paid a lot by this client I will be influenced to work harder'.

The likelihood of audit, in line with Kirchler et al. (2008) is shown as influential, although perhaps less influential than postulated in previous work. Management expectations and the amount of money involved—both internal pressures in a sense—also come through as presenting a medium level of risk. It seems likely that this becomes embodied in management expectations. In a Bourdieusian sense, this would be seen as part of the unarticulated doxa of the firm. As a whole, they are felt by tax experts as a medium level influence.

Time pressure is perceived as having a neutral impact on the work of tax experts in terms of tax innovation or aggression. This is a particularly interesting finding, countering the perception of hasty decisions being more tax aggressive. This may indicate the possibility of some innate conservatism among tax professionals. Nevertheless, there is a tension, as noted by Spence et al. (2015), between the commercial imperative of devising new tax schemes which result in savings for employers or clients, and the professional imperative of acting in the public interest and remaining independent. It is difficult to imagine individual tax experts or even individual advisory firms making significant inroads in the absence of a consensus across the profession. To a large extent, the means to address this tension is in soft law, guidance and codes of conduct producing a new social norm. This could be achieved by the large advisory firms if they were to act in concert, or more significantly, the professional bodies.

At the other end of the scale, factors that loosely relate to ambition including the desire to obtain an advantage on competitors; the opportunity for international exposure and personal ambition are reported by tax experts as having relatively little influence towards tax avoidance. This self-perception is interesting.

It is certainly possible that it may not translate directly to reality: it may be that ambition and the actions of competitors do indeed spur professionals on towards more aggressive or innovative tax positions. However, the fact that tax experts report this as a relatively low influence indicates that such competitive behaviour is not part of the *habitus* of tax professionals insofar as this translates to their understanding of their own role. This may be indicative of a sea-change, perhaps brought about by the public outcry on tax evasion as well as avoidance. In particular, the result on international exposure may reflect an increased wariness about publicity due to the campaigning work of tax-based civil society groups.

As a next phase of analysis, we test for differences in the responses coming from countries with high or low levels of financial secrecy.¹ Tables 12.3 and 12.4 present descriptive statistics on the Likert scores for low and high secrecy levels, respectively.

The responses in Table 12.3 (which represent countries with low financial secrecy) broadly follow the pattern described above, with the level of risk rather lower than the overall sample.

The responses in Table 12.4 (which represent countries with high financial secrecy) show a markedly higher level of risk overall from some of the factors. In all cases, ambiguity in tax rules and the nature of the transaction emerge as the most significant potential triggers.

Table 12.5 gives the results of Mann–Whitney tests for differences on all nine factors between respondents from high and low secrecy locations.

These tests show that, in the opinion of the tax experts themselves, many factors are more likely to lead to an innovative or aggressive tax position in countries with high levels of financial secrecy than in more open jurisdictions. The exceptions are the opportunity for international exposure, which remains consistently low risk, and ambiguity in tax rules, which is high across both types of regulatory environments. Among the more marked differences are factors relating to the specifics of the tax decision, including the amount of money involved and the nature of the transaction, which is scored as a far higher influence in jurisdictions of high secrecy. This may be due to the nature of tax work in such countries, where more complex or international transactions may be underway. On the other hand it may be an indicator of specialism in different fields of tax work. The impact of ambition-related factors such as the actions of competitors and personal ambition, as well as management expectations are all felt more keenly in secrecy locations.

¹ Note that the countries with high and low financial secrecy are not all EU countries. However, the findings are relevant to EU tax policy due to the international nature of global tax planning, and the widespread use of conduit countries documented in other chapter in this book. The countries included in this part of the analysis are Australia, Belgium, Botswana, Brazil, Chile, Costa Rica, Czech Republic, Denmark, Ghana, Greece, Hungary, Iceland, Indonesia, Italy, Mexico, Monaco, New Zealand, Norway, Portugal, Romania, Slovakia, South Africa, Spain, Sweden, Switzerland, Tanzania, United States, and Uruguay.

Table 12.3 Likert scores from respondents in countries of low financial secrecy

Factor	n	Mean	Median	Mode	Variance	Percentiles			Risk level
						25	50	75	
Competitors aggressive tax planning	209	2.59	3.00	3	1.367	2.00	3.00	3.00	Low
Personal ambition	210	2.60	3.00	2	1.255	2.00	3.00	3.00	Low
Time pressure	210	2.83	3.00	3	1.358	2.00	3.00	4.00	Low
Opportunity for international exposure	210	2.88	3.00	3	1.564	2.00	3.00	4.00	Low
Management expectations	212	3.14	3.00	3	1.190	3.00	3.00	4.00	Neutral
Amount of money involved	209	3.29	3.00	4	1.388	3.00	3.00	4.00	Medium
Likelihood of audit	210	3.47	4.00	4	1.303	3.00	4.00	4.00	Medium
Nature of transaction	211	3.73	4.00	4	1.103	3.00	4.00	4.00	High
Ambiguity in tax rules	212	3.85	4.00	4	0.982	3.00	4.00	5.00	High

Table 12.4 Likert scores from respondents in locations of high financial secrecy

Factor	n	Mean	Median	Mode	Variance	Percentiles			Risk level
						25	50	75	
Opportunity for international exposure	238	2.74	3.00	1	2.073	1.00	3.00	4.00	Low
Competitors aggressive tax planning	263	3.14	3.00	3	1.602	2.00	3.00	4.00	Neutral
Time pressure	276	3.35	3.00	3	1.326	3.00	3.00	4.00	Medium
Personal ambition	270	3.48	4.00	5	1.633	3.00	4.00	5.00	High
Amount of money involved	274	3.73	4.00	4	1.332	3.00	4.00	5.00	High
Likelihood of audit	269	3.76	4.00	4	1.324	3.00	4.00	5.00	High
Management expectations	269	3.79	4.00	4	1.347	3.00	4.00	5.00	High
Ambiguity in tax rules	278	3.91	4.00	4	0.953	3.00	4.00	5.00	High
Nature of transaction	272	4.00	4.00	4	0.904	3.00	4.00	5.00	High

Table 12.5 Mann–Whitney U test for differences between high and low levels of financial secrecy

Factor	Low secrecy		High secrecy		Significance
	Mean	Variance	Mean	Variance	
Opportunity for international exposure	2.88	1.564	2.74	2.073	0.238
Competitors aggressive tax planning	2.59	1.367	3.14	1.602	0.000
Time pressure	2.83	1.358	3.35	1.326	0.000
Personal ambition	2.60	1.255	3.48	1.633	0.000
Amount of money involved	3.29	1.388	3.73	1.332	0.000
Likelihood of audit	3.47	1.303	3.76	1.324	0.003
Management expectations	3.14	1.190	3.79	1.347	0.000
Ambiguity in tax rules	3.85	1.103	3.91	0.953	0.489
Nature of transaction	2.73	0.982	4.00	0.904	0.005

Time pressure is felt as a significantly higher influence by tax experts in locations of high secrecy, perhaps because of the nature of tax work being carried on there which may be more high-value and less routine and repetitive, or perhaps because of the significance of other competing factors. Interestingly, the likelihood of audit is reported as a higher impact on tax experts in countries with high secrecy. This could be interpreted as an indicator that there is greater concern in such locations that positions are being taken in conditions of secrecy with which the taxing authority would not agree. In either case, this points to a useful lever to regulators in that it suggests that an increased likelihood of audit would have a disproportionate impact on tax positions in high secrecy locations.

12.5 Conclusion

This research contributes to our understanding of the daily influences on tax experts at a micro level, and the kinds of triggers and circumstances that are felt as pressure to take a position that could be seen as stretching the envelope of policy. The factors identified as high-risk, or medium-risk, are not embedded in any one country or set of tax laws, and so these research findings complement extant work which uses experimental methods based on individual scenarios. One possible extension of this research would be to re-integrate the experimental methodological approach by using the findings here to develop new hypotheses, which could then be investigated using a mix of experimental, case-based and survey methodologies in a range of regulatory regimes or organizational environments.

Overall, the study shows that tax professionals perceive that certain situations make them more likely to adopt an aggressive or innovative tax position. While

this self-reported perception may not always translate directly into action, it is indicative of the *habitus* of the professional, and so is a valid criterion to inform policy-makers and regulators.

Significantly for regulators, some of these key situational variables were identified as more influential in jurisdictions of high financial secrecy. Our findings on the role of ambition-related factors such as the actions of competitors, management expectations and personal ambition support the ideas of tensions identified in Spence et al. (2015) between the commercial imperative of tax firms and the public interest served by the profession. The finding that these elements are more influential in conditions of higher financial secrecy may be indicative of the nature of work carried out in such countries, or may reflect the effect of a lack of transparency around the tax positions taken there. On the other hand, opportunity for international exposure is reported as relatively unlikely to lead to an aggressive or innovative tax decision, and this result is consistent in locations of high and low financial secrecy. This may be indicative of a growing awareness among tax experts that international exposure of tax positions they take presents challenges that are reputational as well as commercial.

It is clear that ambiguity in tax rules is a key lever for extending or limiting the scope of regulation, and is a key area for attention by legislators. International cooperation measures are already in play through the OECD BEPS process and across the EU. These could perhaps be complemented by some peer-reviewing of legislation across taxing bodies, to increase internal compatibility and to close potential gaps of dubious interpretation. Such cooperation requires a consensus that may be challenged by the trend towards tax competition. Nonetheless, the findings from this study show that it is an area which has significant potential for further investigation. The greater impact of the likelihood of audit on the tax position of tax experts is a significant potential lever to regulators in those locations. This is particularly useful since the opacity surrounding tax decisions in these locations makes them particularly challenging to regulate.

12.6 References

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The Implications of Making Tax Crimes a Predicate Crime for Money Laundering in the EU

Building a Legal Dataset of Tax Crimes and Money Laundering in the European Union

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13.1 Introduction

Globalization has been a very potent economic force in the past years and has not only changed the way trade and commerce develop but also the way crime and other threats to nations operate. Taxation, being the key source of revenue for governments, has not been exempt from the effects of globalization, especially after the financial crisis. Tax avoidance and evasion were increasingly recognized as a serious, worldwide concern since they have reduced the ability of governments to raise the revenue necessary to fill their coffers. For example, recent estimates suggest that the tax gap in the European Union might be €825 billion a year based on 2015 data (Murphy 2019; see Chapter 5 for an overview of the estimates). This phenomenon has resulted in governments needing more and more tools to counteract the noxious effects of tax evasion nationally and on a global scale. Amongst the most controversial and promising solutions is that of tackling the classic crime of tax evasion with the tools of a new global crime: money laundering.

Since money launderers and tax evaders both used offshore centres to hide their identity and business, it was only a matter of time that the two fields—tax evasion and money laundering—would merge (Unger 2017). In 2012 the Financial Action Task Force (FATF) amended its recommendations and included tax evasion as a predicate offence for money laundering. Following the direction of the FATF, in 2015, the European Parliament passed the Directive (EU) 2015/849—otherwise known as the 4th Anti Money Laundering Directive (‘4th AMLD’)—that incorporated this principle by adding tax crimes as a predicate crime for money

laundering. However, the 4th AMLD did not offer a harmonized definition of tax crimes; hence it was left up to each member state to incorporate this principle, as they saw fit, in their national law.

Laws are a crucial part of the tax environment (see Chapter 2 as well as Chapter 14) as they are one of the rules under which the tax ecosystem operates. Taxpayers should pay their taxes following the law, and tax experts should advise them within the realm of it (see Chapter 12), hence avoidance and evasion behaviour are manipulations or disobedience to the law, respectively. Law enforcement personnel (investigators, prosecutors, and judges) regularly use and interpret the law in order to find who has not paid their taxes and to define whether and how they should be punished for this. Following the ecosystem approach of this book, this chapter analyses a pivotal regulatory shock to the tax ecosystem, the incorporation of tax crimes into the domain of money laundering legislation in the European Union.

This chapter seeks to shed light on the divergence of tax crimes and money laundering laws across Europe after the implementation of the 4th AMLD. We see the 4th AMLD as a shock that put money laundering regulation inside the tax ecosystem, and the way that countries implement this in their regulation is the response to this shock. This response will be key in determining the success of this policy. We use an innovative comparative approach that involves the analysis of tax evasion through an empirical legal lens. We built a dataset with the legislation of all European Union countries regarding tax crimes and money laundering, as well as other relevant legal variables such as the legal origin of each jurisdiction's legislation and their EU ascension date.

The importance of analysing the heterogeneity of tax crimes and its connection to money laundering legislation across the EU is relevant since to the best of our knowledge it has not been done in a systematic fashion before, furthermore consolidating legal information from a diverse set of countries is crucial in order to allow cross-country comparison and research. Moreover, it is also relevant from a practical policy perspective; this is supported by the 2016 proposal for a 'Directive of the European Parliament and of the Council on Countering Money Laundering by Criminal Law' where it is clearly stated that the differences in the EU legal frameworks can be exploited by criminals wherever they perceive anti-money laundering legislation to be the weakest. Furthermore, the differences in the definitions, scope and sanctions of money laundering can also affect the cooperation between different actors within the tax ecosystem as is stated in the same report:

For instance, differences in the scope of predicate offences make it difficult for Financial Intelligence Units (FIUs) and law enforcement authorities in one Member State to coordinate with other EU jurisdictions to tackle cross-border money laundering (e.g. as regards money laundering related to tax crimes).

As part of the consultation carried out to prepare this proposal, practitioners – including agencies such as Europol and Eurojust - reported that differences in criminalising this offence in Member States' legislation pose obstacles to effective police co-operation and cross-border investigations.

(COM/2016/0826 final – 2016/0414)

The proposal highlights that, if actions to harmonize are not carried out, there might be a rise in so-called 'forum shopping' where criminals choose the EU jurisdiction that is best for them to commit their illicit deeds in a similar way as in Chapter 3 where the authors find popular entrance points for US companies in Europe. In addition to the academic and practical contributions, this chapter also adds to the tax crime field by introducing a dataset that can be used for further research on the treatment of tax crimes across the European Union.

This chapter has been divided into four parts. The first part consists of a literature review and a historical accounting of how tax crimes became a predicate crime for money laundering, and how they ultimately landed as a predicate crime for money laundering in the 4th AMLD. The second part details the methodology and the results of our research. A third part discusses the findings in light of the similarities and divergences across jurisdictions and points out potential explanations for these differences. Finally, the conclusion gives an overview of our findings and what they mean for policy and suggests areas for further research.

13.2 Literature Review

In the late nineteenth century, Swiss bankers realized that an increase in tax rates across Europe gave them the possibility to attract this money in order to strengthen their financial sector (Guex 2000). These advances would lay the base for today's money laundering, although at that time the legal concept of money laundering did not exist. At the time, criminals, similarly to tax evaders, would simply leave the place where they committed crimes taking their money with them and depositing it elsewhere, as no one ever asked where the money came from.

As for tax evasion, it only became a crime that warranted punishment in the early twentieth century, famously getting Al Capone prosecuted as a tax evader rather than a mobster (Von Lampe 1999 cited in Gelemerova 2011). Interestingly enough the term for getting ill-gotten gains from crimes into the licit economy owes the name *money laundering* to Al Capone's use of launderettes—a cash-intensive business—to hide his revenues from illegal alcohol sales (Unger 2013). Tax evasion and money laundering's pasts have been long intertwined yet getting them to connect in the present has taken a long time.

In 1922 the United States criminalized drug abuse, starting a fight that continues today. By the 1970s it became clear that the government was losing the 'war

on drugs', and there was a need to continue the fight with new tools; one of them was money laundering regulation. Chasing the money could lead to finding and cutting funds of infamous drug lords. This new financial approach tries to 'hurt' criminals where they feel it the most: money.

In line with the war on drugs, only money from drug trafficking was chased and sought after, the idea of this financial approach was to prevent the criminals from enjoying ill-gained money and making their logistics and operations harder (Borlini and Montanaro 2016). Money laundering regulation has increased on a par with the crime itself, initially in the United States and other national legislations, and soon through international instruments of soft law.

In the United States, it started with the Bank Secrecy Act of 1970 though the requirements of this legislation were not enforced until the mid-'80s (Nadelmann 1993 cited in Sheptycki 2000). Money laundering was criminalized for the first time in 1986 in the US, through The Money Laundering Control Act of 1986. As the efforts to fight money laundering grew, so did the bilateral and multilateral regulation of money laundering. After all, the globalization of crimes requires globalized solutions, initially through mutual legal assistance treaties (MLATs) and later through the most recognizable form of soft multilateral law on money laundering the Financial Action Task Force.

The G7 and other guest countries initiated the FATF in 1989 during the Fifth Economic Summit of the G7.¹ Set as an intergovernmental body to set worldwide standards to fight money laundering, the FATF issued its first set of recommendations in 1990. The 40 Recommendations soon became the international standard for the anti-money laundering fight, and countries that did not commit to these were blacklisted. These recommendations are in the form of soft law;² hence, they give individual jurisdictions enough flexibility to adapt their legal framework to comply with the international standard and with their own needs. The FATF recommendations and their soft nature also allow for cooperation with non-state actors like banks and other financial institutions (Borlini and Montanaro 2016).

Tax evasion and money laundering would formally meet paths again when in 1996 IMF's Peter J. Quirk noted that improving tax collection and anti-laundering systems go hand in hand as illicit income is usually also susceptible to tax evasion (cited in Sheptycki 2000). This went in line with the fact that money laundering methods and techniques are often inversely proportional to those used in tax crimes. This can happen in two ways: (a) a money launderer wants to show a

¹ The FATF is housed in the OECD Parisian headquarters; at its start it had a budget of approximately four million francs and only had three employees. Today virtually all countries in the world are committed to the FATF standards.

² Soft law involves both legal and non-legal instruments. "These instruments are characterized by the relatively large amount of discretion which is left to the party bound by the obligation. Although soft law norms are discretionary in nature, they are not without important legal and political effects."

paper trail (because justification for them is crucial) while a tax evader does not want a paper trail that can track his crime; (b) someone can commit tax fraud by declaring less income while they can launder money by declaring more income or more profits (Koningsveld 2015).

When tax evasion and money laundering reconvened, tax evasion was thought as a means towards an end, the end being catching big criminals. It would take more years to consider tax evaders as money launderers, as for many years tax evasion was thought of as a lower kind of victimless crime.

13.2.1 Making Tax Crimes a Predicate Crime for Money Laundering

In order to understand the process, it is crucial to comprehend one key concept in the fight against money laundering: predicate offences. The concept of predicate offences comes from American law, much like other advances in money laundering legislation, 'a predicate offence is the underlying criminal offence that gave rise to the criminal proceeds which are the subject of a money laundering charge' (Bell 2003, p. 137). As money laundering is the use of criminal proceeds, the predicate crime is the crime that generates the proceeds. Although the first predicate offence was drug trafficking, by the mid-'90s, the definition of predicate offence broadened, and so the scope of AML measures expanded significantly. Perhaps the most 'politically sensitive' (Bell 2003) or the 'key area of dispute' has been whether tax offences should be a predicate offence for money laundering charges. However, given that tax offences are done today on a global scale and cause significant damage everywhere, it seemed necessary to include them. This considering especially that tax offences are in many jurisdictions a 'loophole' in their money laundering legislation (Bell 2003).

There are many reasons why it took so long for tax offences to be considered a predicate crime which range from the lack of political agreement on the issue to the interest of the banking sector and the opposition of many legal scholars. In this chapter, we will summarize them into three categories; later, we will describe how these ideas were overcome and how taxes landed into the 2012 FATF recommendations and the 4th AMLD, respectively.

The first line of argument is that tax evasion or tax offences are not a 'real or serious' crime, as they are white collar crimes and the harm they inflict is not comparable to that of drugs or terrorism. This view is not only flawed, as the law in many if not most countries considers tax evasion as a crime, but also fails to acknowledge the harm that tax evasion inflicts to the national coffers, in the words of the UK's Chancellor of the Exchequer, 'All crimes should mean all crimes. Who is the victim is irrelevant. Tax crimes make the law-abiding suffer. It is they who make up the shortfall caused by those who cheat' (cited in Bridges 1996).

The second line of argument is related to the difference between what constitutes illicit gains in a crime such as drug trafficking and that in a tax offence. The underlying argument is that the conduct behind the tax offence act is a legitimate one, meaning that the profit was made legitimately. The unpaid tax on this profit under this logic does not make the profits illegitimate. However, this definition does not account for the fact that the crime is not the conduct generating the profit rather the concealment of part of this profit that should be paid in taxes—especially considering that the unlawful retention of money also gives a pecuniary advantage to those who commit the act.

The third position was mainly held by those professionals involved in money laundering. For example, in 1998 the European Banking Federation presented a paper to the European Commission stating that because there is not an identifiable asset to which a bank could apply money-laundering prevention, applying this principle would be difficult (cited in Oliver 2002). Furthermore, applying the principle would be a significant burden on professional advisors, making them prone to being prosecuted for assisting money laundering. It is necessary to emphasize that although in 2015 tax offences were included in the 4th AMLD, the European Banking Federation criticized this inclusion once again (Böszörmenyi and Schweighofer 2015). This third reason exemplifies how professionals are norm shaping agents of the tax ecosystem.

This discussion continued for much of the '90s and the first decade of the 2000s as can be seen in Table 13.1, tax was hardly mentioned in any of the first FATF recommendations. In the first version issued in 1990 tax was not mentioned and in the two subsequent versions the word tax only appears in connection to tax advisors and their professional role as gatekeepers of the financial system, however, taxes are not mentioned as a predicate crime yet. The lack of inclusion of taxation reveals the lack of homogeneity in the global AML regime (Levi and Reuter 2006) and the spaces that impede cooperation among jurisdictions. It is necessary to highlight that the 2003 FATF recommendations do define severe offences as those that are subject to more than one year or a minimum of six

Table 13.1 Evolution of taxes in the FATF recommendations

FATF Recommendations	Mentions of Tax	Explanation
1990	0	
1996	2	Recommendation 15 only related to tax advisors in their professional role
2003	2	Recommendation 15 is now 13 but stays intact in terms of content
2012	13	Incorporation of tax crimes in the list of predicate crimes

months imprisonment, however, whether taxes fall into this is dependent on each jurisdiction.

The connection of money laundering and tax crimes also became evident for the Organization for Economic Co-operation and Development ('OECD') who in 2009 prepared a handbook as a practical tool for tax authorities to identify money laundering during the course of a tax audit. According to the OECD, tax authorities have a central role to play in identifying and reporting unusual money laundering transactions to the Financial Intelligence Units (FIU) this handbook was updated in 2019 (OECD 2019). However, it was not until 2012 that taxes were included as a predicate crime according to the FATF recommendations, tax crimes were included as part of the predicate offences list. Table 13.1 illustrates the evolution of mentions of tax in FATF recommendations.

13.2.2 The 4th AML Directive

As was the case with the previous editions of the FATF, the principles were incorporated by the European Union through a directive, specifically through the 4th Anti Money Laundering Directive, the first EU AMLD dates back to 1991. Table 13.2 similarly to 13.1 details the evolution of taxes in throughout the documents of the EU AML Directives over time, in 1991 there was no mention to taxes, in the 2001 and 2005 editions the word tax was mentioned four and five times respectively and in both only concerning the role of tax advisors in their role as professionals that can facilitate money laundering. By 2015, the mention of taxes increased to 20, with a particular focus on including tax crimes as predicate crimes for money laundering and emphasizing exchange of information in order to fight tax crimes.

The 4th AMLD following the line of the FATF introduces the reference to tax crimes as a predicate offence for money laundering; this includes both direct and indirect taxation:

Table 13.2 Evolution of taxes in the AMLD recommendations

EU AML Directive	Mentions of Tax	Explanation
1991	0	
2001	4	Only related to tax advisors in their professional role
2005	5	Only related to tax advisors in their professional role
2015	20	In addition to the existing articles on tax advice, tax crimes are included in the broad definition of criminal activity. Exchange of information in tax crimes related cases is emphasized

all offences, including tax crimes relating to direct taxes and indirect taxes and as defined in the national law of the Member States, which are punishable by deprivation of liberty or a detention order for a maximum of more than one year or, as regards Member States that have a minimum threshold for offences in their legal system, all offences punishable by deprivation of liberty or a detention order for a minimum of more than six months. (4th AMLD Art. 3(4)f)

According to Langlois (2013) this definition rather than extending the scope of the directive is more an explicit demonstration of the increase in political will to fight tax fraud and evasion (2013). The 4th AMLD was issued in 2015 and EU Member States had until 2017 to transpose it into their legislation. Although the inclusion of tax crimes as a predicate crime for money laundering is explicit, it fails to give a concrete definition for what a tax crime is. Thus, leaving each jurisdiction to define or redefine what they consider a tax crime. Additionally, other relevant measures included in the directive are the reinforcement of the sanctioning powers of relevant authorities and provisions for data protection and privacy

The FATF and the EU are not alone in their efforts to incorporate tax evasion into money laundering regulation and legislation. The G-20 and the OECD have also had their eye on the fight against tax evasion in order to ensure a fairer tax system. A clear example of this is the inclusion by the OECD in their 2007 report titled *Fighting Tax Crime: The Ten Global Principles* of Principle 1 that states explicitly that ‘Jurisdictions should have the legal framework in place to ensure that violations of tax law are included as a criminal offence and that effective sanctions apply in practice.’

It has already been pointed out by many authors that different EU member states have a different understanding of what the purpose of AML law is (Unger et al. 2014). In this sense, it is essential to question whether adding tax crimes explicitly will help fight tax evasion and fraud through AML regulation, or whether these concepts will make AML laws more heterogeneous than before.

The lack of homogeneity across definitions and regulation of money laundering has also been highlighted in the literature (Unger et al. 2014) and by the EU itself (Thirion and Scherrer 2017). In 2012, the Commission published a roadmap to harmonize these definitions based on Article 83(1) of the Treaty on the Functioning of the European Union (TFEU) (Borlini and Montanaro 2016; Met-Domestici 2013). However, although this proposal had the support of relevant EU bodies such as EUROPOL it was eventually turned down when member states refused to endorse the project.

13.3 Methodology

In order to analyse the implementation of tax crimes as a predicate crime for money laundering across the EU and the divergence on how jurisdictions define

this, we built a database³ that consolidates EU tax crime and money laundering regulation from all 28 European Union members and Liechtenstein.

The comparative tax and money laundering law table uses an extensive number of resources.⁴ The base of the information comes from a 2016 European Parliamentary committee (EP) set up in the wake of the Panama Papers.⁵ As part of this EP investigation, the Chairman of the Committee requested information about every Member States ability to investigate cases of tax evasion, tax avoidance, tax fraud, and money laundering. In response to this, and published online, the Minister of Finance of each Member State submitted their capabilities of fighting tax crimes. However, this information was slightly dated and not comprehensive enough, so we looked for the relevant laws in the official gazette or legal database of each country.

Additionally, we complemented this search with surveys on tax law available through the Legal Database of Thompson Reuters and the IBFD (International Bureau of Fiscal Direction). Finally, we emailed every country's ministry of finance and asked them to verify the information that we put on our table.⁶ Although we tried to find the official translations to English for each legal text, this was not necessarily available; hence we recurred to translation tools such as Google Translate which we complemented with the translator Linguee and legal translation dictionaries.⁷ From the sources mentioned above, we obtained variables that are not only useful for our research, but that could be used in the future to answer other research questions. Tables 13.3 and 13.4 have a detailed list of the variables available.

We complemented the dataset by generating variables that allow for a more straightforward analysis of the law; this involved extracting the relevant information from the text. For some, this meant generating binary variables reflecting

³ The tax law database was also used as part of the master thesis titled 'Evading your Origins' by Jason Batchelor for the MSc in Economic Policy at Utrecht University. The legal table also had significant input from research assistant Francisca Vallejo, J.D., MSc.

⁴ The references for the legal tables and the legal database are available through the Zenodo platform and/or upon request to the corresponding authors.

⁵ The Panama Papers is a leak from 2016 of 11.5 million documents that belonged to the internal administration of the Panamanian law firm and TCSP, Mossack & Fonseca. The leaked documents showed how this firm together with banks incorporated 214,488 offshore companies in tax havens to facilitate tax avoidance, tax evasion, and money laundering (see. www.icij.org). Today every student and interested person can 'play' detecting offshore connections and networks by clicking <https://offshoreleaks.icij.org>. (Unger 2017, p. 6).

⁶ The information regarding country replications is available as the Appendix in Section 13.7 of this chapter. All suggestions and corrections by relevant authorities regarding form or content have been amended.

⁷ We complemented this with the help of local lawyers and professionals. Alexandra Nagoyeva, MSc. helped with translations from Hungarian and Slovak. Cătălina-Alexandra Papari, MSc helped with Romanian translations and Linda Kunertová, MSc with Czech.

Table 13.3 Taxation variables in legal dataset

Name	Description
Legal origins	Identifies the legal origin of the law of the country; Scandinavian, Common, French, and German.
Native terminology	The variable is what tax crime is called in the native language of each jurisdiction.
Translation	The variable is the Native Terminology translated into English.
Tax crime	The variable contains the provisions for the tax crime as stated in the law of each country.
Threshold for criminalization	The variable contains the provision outlining the thresholds needed to be evaded for it to be considered a tax crime in law for each country.
Minimum threshold for criminal liability	The variable contains the minimum sum of money needed for it to be considered a tax crime in law for each country.
Minimum threshold to be eligible for maximum penalty	The variable contains the minimum sum of money needed to be evaded for it to attract the maximum penalty for the tax crime in law for each country.
Punishment for crime	The variable contains the provision outlining the available punishments attached to the tax crime in law for each country.
Max.–max. criminal punishment	The variable is the maximum number of years in prison attached to the tax crime in law.
Prescription criminal time	The variable is the prescription time attached to the maximum possible penalty for the Tax Crime.
Legal person liability	The variable equals zero if only the legal person can be criminally liable for the crime, and equals one if both the legal person and the natural person who committed the offence can be criminally liable for tax crime. The variable equals 2 if the legal person cannot be criminally liable.

whether a concept is in the law or not; for others, we extracted precise numbers from the text such as the different penalties, thresholds for criminalization, and prescription length. We converted all monetary figures to euros, applying the conversion rate as of 07/05/2019, and adjusted for purchasing power using the Eurostat Purchasing Power Parity 2017.

Tables 13.3 and 13.4 show the variables available in our dataset, however there are many more variables that could be obtained such as the maximum penalty for each type of tax crime, all threshold for tax crimes, etc. Hence this dataset is intended to be dynamic and information can be constantly added on.

Table 13.4 Money laundering variables in legal dataset

Name	Description
Money laundering law	The variable contains the provisions for money laundering, as stated in the law of each country.
Money laundering punishment	The provision outlining the available punishments attached to the money laundering in law for each country. The references for each country are available in the table reference list.
Fine	Severest possible pecuniary punishment for the offence of money laundering, in euros.
Threshold for maximum penalty	The minimum sum of money, in euros, needed to be laundered for the maximum penalty to be attached to the offence.
Maximum possible jail time	The variable has a numerical value that reflects the maximum jail time for money laundering. To code this, we code a max.-punitive approach, meaning we take the maximum prison time.
Prescription time	The variable contains the provisions established in the law for the prescription of money laundering as stated in the law of each country.
Minimum threshold to be eligible for maximum penalty	The monetary threshold necessary to be eligible for the maximum penalty in a country, if exists.
Money laundering prescription time	The variable has a numerical value that reflects the prescription time for money laundering. This might be either general prescription time or a specific one. In cases where prescription time is dependent on possible jail-time we take into consideration the prescription time that matches the maximum jail time for tax crimes. E.g. In Belgium, crimes that get above three years of jail time are prescribed in ten years. Hence, we do not consider potential lower prescription times in cases of lower sentencing.
Natural person liability for legal person actions ML	The variable equals zero if only the legal person can be criminally liable for the crime, and equals one if both the legal person and the natural person who committed the offence can be criminally liable for tax crime. The variable equals 2 if the legal person cannot be criminally liable.

13.4 The Legal Dataset

The final output of the database mentioned above resulted in a total of 1708 cells, and these are consolidated and summarized as an appendix to the end of this chapter.

Although the core tenants of the law are similar between the Member States, there were large discrepancies as to how they treat both money laundering and tax

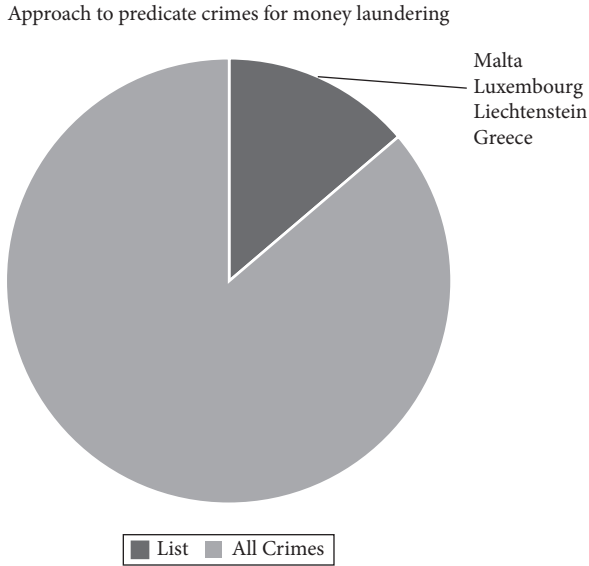


Figure 13.1 Approach to predicate crimes for money laundering.

crimes. Every country has tax crimes as a predicate crime for money laundering, with almost all using the all crimes approach. The only countries in our dataset that use the list approach are Greece, Liechtenstein, Luxembourg, and Malta (Figure 13.1).

In this chapter we will analyse to core parts of the law for tax and money laundering, the penalties and the prescription time. Heterogeneity across the EU in either of them can pose serious challenges for the fight against tax crimes and can define the usefulness of money laundering a means towards fighting tax crimes. In addition, we draft potential explanations of these divergencies by seeing the commonalities between jurisdictions.

13.4.1 Penalties

Criminal legal codes have the main goal of setting the limits between what conducts are allowed and what actions are illegal. The penalties in a criminal code indicate the rules that govern citizen behaviour, when citizens violate these rules criminal law determines if the perpetrator is criminally liable and third it imposes the liability (Darley et al. 2001). Penalties do not only fulfil a deterrent role in a criminal code they also reflect how serious a crime is, for example in

the case of a parliamentarian or semi-parliamentarian government they reflect ‘parliament’s view of the seriousness of the most extreme example of the offence’ (MacKinnell et al. 2010).

This chapter explores the differences in penalties for tax crimes and money laundering across the European Union. Albeit, we take into consideration the penalties found within the tax crimes related articles as well as the articles related to money laundering, we do not take into consideration that jail sentences can be added up in certain jurisdictions or in case of aggravating factors such as when tax evasion is committed as part of organized crime. In order to determine the maximum penalty, we have taken a maximum–maximum approach hence we use the highest available prison time for the worst category of crime, the minimum is set relative to the same crime hence it is the minimum for the maximum crime. We do this in order to make the numbers comparable between countries, as jurisdictions can have anywhere between two to four or more categories of crimes with different punishments. Additionally, the minimum is zero for jurisdiction where sentencing is only established based on a maximum but do not specify a minimum; this is the case for jurisdictions such as: Cyprus, Denmark, and France for Tax Crimes and Slovenia, Malta, and the Netherlands for money laundering. This does not mean that judges do not have a practical minimum.

Analysing the heterogeneity of penalties both minimums and maximums has a twofold relevance. On one hand, these differences can lead to forum shopping across the member states which means that criminals may choose to focus their activities in member states with the least severe sanctions (De Bondt and Miettinen 2015) and criminals may not only choose for different locations but they can also exploit the differences in legal systems to their advantage (Arnone and Borlini 2010). On the other hand, these differences can also signal the seriousness given to these crimes across member states for political, historical, or economic reasons.

13.4.1.1 Penalties for Tax Crimes across the EU

When it comes to taxation the main deterrent goal of the penalty is to scare offenders and taxpayers from violating tax laws. However, there is still an ongoing debate on whether prison sentences foster voluntary compliance (Walker, 2000). If they have any effect it is in conjunction with the probability of detection as high penalties do not work by themselves. Table 13.5 illustrates the overall picture for prison times for tax crimes in the EU 28.⁸

When analysing minimum and maximum penalties across the EU it is crucial to do a between analysis. This means comparing the penalties between jurisdictions, this because in the case of forum shopping we can assume a criminal will

⁸ At the moment of writing this chapter the United Kingdom was still part of the European Union; hence it is considered as such in our analysis

Table 13.5 Prison times for tax crimes across the EU

	Minimum prison time (<i>in years</i>)	Maximum prison time (<i>in years</i>)
lowest	0	0.5
highest	7	12
average	1.3	7

**Figure 13.2** Maximum prison time for tax crimes.

want to go to the jurisdiction with the most lenient penalties in relation to his/her own country. For example, following Figure 13.2 a map of the jurisdiction where the lightest jurisdictions are those with higher penalties and the darkest those with the lowest maximum penalties, in that case a criminal would prefer to go to a 'darker' country.

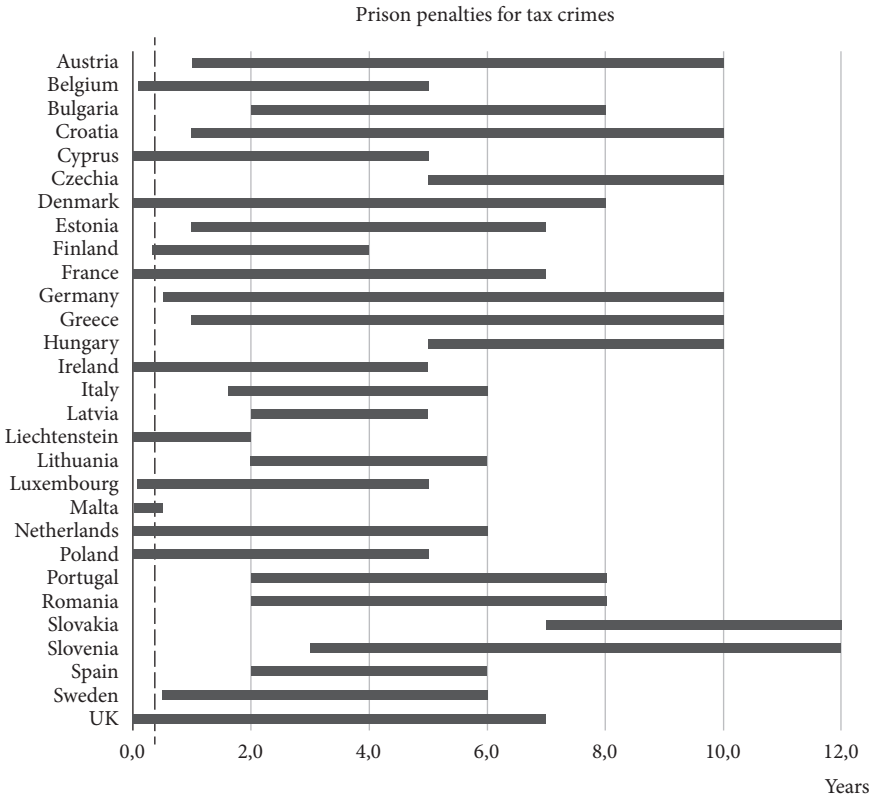


Figure 13.3 Ranges of prison penalties for tax crimes.

Figure 13.3 illustrates the country-specific situation of the ranges of prison penalties for tax crimes. The lowest minimum prison time is zero; this is the case in the UK, the Netherlands, and Malta. For example, the lowest maximum prison time is half a year in Malta. The highest minimum prison time is seven years in Slovakia where they also have the highest maximum prison time, which is 12 years same as Slovenia. On average the minimum prison time across the EU is 1.3 years and the average maximum prison time is seven years. The dashed vertical represents the 4th AMLD requirement that tax crimes must be punished with a maximum penalty of over one year.

In this chapter we analyse the patterns of penalties for tax crimes in light of two key variables from the Financial Secrecy Index:⁹ avoids promotion of tax evasion and administrative capacity. The indicator of ‘avoids promotion of tax evasion’, assess whether or not a jurisdiction facilitates tax evasion. The administrative capacity indicator considers the capacity of a jurisdiction’s tax authority to collect

⁹ A full description of all variables of the FSI is available at: <https://www.financialsecrecyindex.com/>

and process data for investigating and taxing those who can escape their tax duties. Additionally, we use a descriptive variable from our own dataset based on the legal origins of each jurisdiction, in order to see if countries with the same legal origin follow the same patterns in terms of their punitive approach. There are four legal origins in Europe: common law, which is predominant in Anglo-Saxon countries (Ireland and the UK), and three different strands of civil law: Germanic, French, and Scandinavian. Former socialist countries that belonged to the USSR are also recoded into one of the latter.

In the EU there are three countries that have very low maximum penalties: Malta (half a year), Lichtenstein (two years), and Finland (four years), two of these countries Malta and Liechtenstein rank high in terms of the facilitation of tax evasion according to the Financial Secrecy Index (see Chapter 6). Although Finland has a very low maximum penalty it does not seem to be a jurisdiction that promotes tax evasion, the reason behind its low ranking is most likely related to a historical decrease in its punitive legal features by finding alternatives to imprisonment.

A similar logic applies to those countries that have high maximum penalties for tax crimes (Austria, Croatia, Czechia, Germany, Greece, Hungary, Slovakia, and Slovenia). All of these countries have between ten and twelve years of prison for tax crimes, and with the exception of Czechia and Slovakia they all rank relatively low in terms of facilitation of tax evasion. Furthermore, there are 10 EU jurisdictions that rank high on the promotion of tax evasion according to the FSI, out of these only Czechia and Slovakia have high minimum prison times (Table 13.6).

All other jurisdictions ranking high on the promotion of tax evasion have between zero and two years minimum prison time for tax crimes. In Figure 13.3 we can see the range of prison time that can be awarded for tax crimes, Liechtenstein and Malta both have a very low range of prison time that can be given to a tax offender. Between zero and two years in Liechtenstein and between zero and half a year in Malta. Both of these jurisdictions also rank high in terms of

Table 13.6 Promotion of tax evasion (FSI) and prison times

	Promotion of tax evasion	Minimum prison time	Maximum prison time
1	Slovakia	7	12
2	Romania	2	8
3	Netherlands	0	6
4	Liechtenstein	0	2
5	France	0	7
6	Czechia	5	10
7	Ireland	0	5
8	UK	0	7
9	Malta	0	0.5
10	Luxembourg	0.1	5

promotion of tax evasion. In Table 13.6 we list the top ten of EU Jurisdictions that promote or facilitate tax evasion. We find that those countries that promote tax evasion on the FSI also have low minimum prison times for tax crimes and medium to low maximum prison times for tax crimes. The seriousness given to a crime is related to the maximum sentence available, hence it is not surprising that those countries that promote it also don't have serious penalties for it. There are two interesting outliers in this list, Slovakia and Czechia. Both have been actively trying to fight tax crimes more strongly which could be the reason why they have a high minimum and maximum prison time. Yet these changes in the law are only the first step and hence do not yet result in lowering their promotion of tax evasion rank.

Another relevant variable is that of tax administrative capacity. When ranking the EU Member States by their tax administrative capacity the worse performing are Belgium, Estonia, Germany, Lichtenstein, and Luxembourg. With the exception of Germany, all these jurisdictions have either a low or medium maximum prison time for tax crimes and a negligible minimum prison time that ranges between zero and one year.

When it comes to maximum prison times there is also a slight trend in the line of legal origins theory, as all of the countries with the highest prison times have a Germanic legal origin. Table 13.7 shows a list of the countries with the highest maximum prison times in years and their legal origin. Although Greece seems to be the exception in our list, the German legal tradition did influence the legal structure of Greece (La Porta et al. 2008).¹⁰ In addition and in line with our expectation countries with Scandinavian tradition have either low or medium maximum penalties, as these nations have reformed their laws in order to reduce the use of imprisonment (Lappi-Seppälä 2007).

Table 13.7 Maximum prison times and legal origin

	Promotion of tax evasion	Maximum prison time	Legal origin
1	Austria	10	Germanic
2	Croatia	10	Germanic
3	Czechia	10	Germanic
4	Germany	10	Germanic
5	Greece	10	French*
6	Hungary	10	Germanic
7	Slovakia	12	Germanic
8	Slovenia	12	Germanic

¹⁰ For our dataset we used the excel coding of legal origins available with the following paper: LaPorta et al. 1999. 'The Quality of Government', *Journal of Law, Economics and Organization* 15 (1): 222–79, where Greece is coded as of French legal origin. However in a more recent paper of the same authors Greece is said to have Germanic influence.

13.4.1.2 Penalties for Money Laundering across the EU

Similar to tax, the role of prison sentences for money laundering is both deterrent and punitive. However, money laundering legislation is seen as an additional deterrence, to deter the criminal from committing the crime that originates the dirty money and to impede them from enjoying their ill-gotten gains. Table 13.8 illustrates the overall picture for the EU regarding maximum and minimum penalties in prison time for money laundering. The lowest minimum prison time is zero and the highest is 12, regarding maximum prison time the lowest maximum is five and the highest 20.

Figure 13.4 illustrates the range of punishments available in terms of jail time for money laundering across Europe. Many countries have more than one money laundering article, each with its own criminalization and punishment. For the sake of comparison, we take into consideration the primary offence and its corresponding punishment. The harshest punishments can be found for Slovenia (where an individual could face up to 20 years of prison for money laundering), Malta (where it can go up to 18 years) and Bulgaria (where an individual could face up to 15 years in jail).

When it comes to low maximums for money laundering, there are four jurisdictions where the maximum is only five years: Luxembourg, Liechtenstein, Germany, and Belgium. These four jurisdictions also rank as weak in terms of tax administrative capacity. This is interesting as tax administrations do not only have a role in identifying tax evasion but also in reporting suspected serious crimes such as money laundering. Furthermore, Luxembourg and Liechtenstein have other similarities in common, as mentioned previously, they both rank highly in terms of facilitation of tax evasion.

To analyse prison time for money laundering we also take into consideration the anti-money laundering variable in the FSI that measures the extent to which the countries regime is failing to meet the recommendations of the FATF. The index assigns a score to each jurisdiction between 0 and 1, where 1 means the country is failing to meet the FATF recommendations. The worst performing EU country is Greece and it scored 0.66 points. There is no pattern in the countries that rank the worst in this variable in regard to the maximum possible penalty for money laundering. In regard to their legal origin, the pattern that repeats itself is that none of the Scandinavian countries have a high maximum

Table 13.8 Maximum prison times across the EU for money laundering

	Minimum prison time (<i>in years</i>)	Maximum prison time (<i>in years</i>)
lowest	0	5
highest	12	20
average	1	10

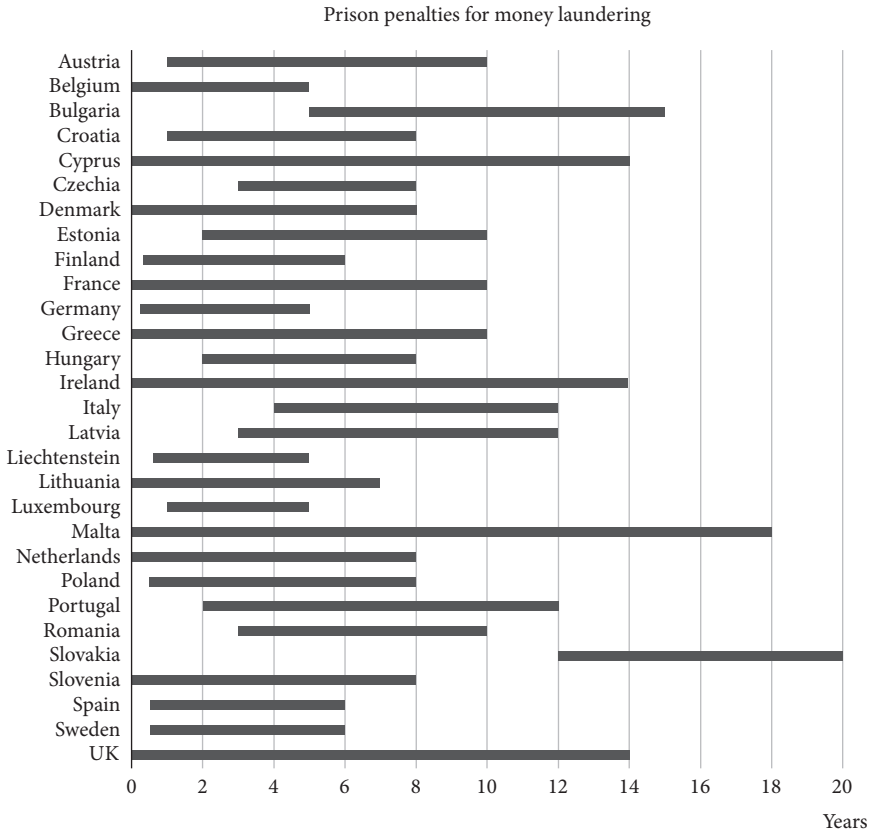


Figure 13.4 Prison penalties for money laundering.

penalty. In Sweden, Finland, and Denmark the maximum penalties range between six and eight years.

Finally, but very relevant for the future harmonization of money laundering law across the EU, in 2018 the European Parliament and Council informally agreed on, among other issues, to set a standardized EU minimum penalty for certain crimes. The amount of years discussed was four years of imprisonment for money laundering maximum sentences. Our data shows that there are only three countries that satisfy this principle (Italy, Bulgaria, and Slovakia). Hence this requirement would require many countries to heavily increase their minimum sentences.

13.4.1.3 Tax Evasion and Money Laundering

Penalties reflect how serious a crime is considered, which is also a reflection of the culture in the country. We find that countries that promote tax evasion (as determined and defined by the FSI) also do not punish it as harshly as those who do not. Yet, given that the implementation of the 4th AMLD makes tax

crimes a predicate crime for money laundering, this analysis would not be complete without seeing both side to side. Figure 13.5 represents the maximum penalties for tax crimes (in black) and money laundering (in light grey), if the maximum is the same there is only a black dot.

From the image it is clear that there are three types of jurisdictions: those that consider money laundering ‘worse’ than tax crimes, those that consider it equal and those who consider it less (see Table 13.9). In the first category we have

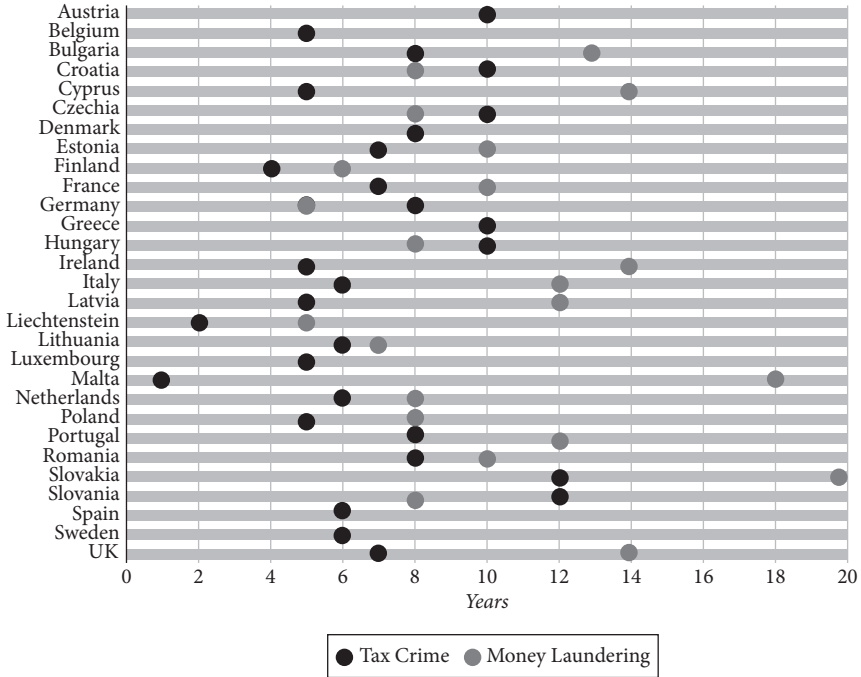


Figure 13.5 Maximum prison times for tax crimes and money laundering.

Table 13.9 Money laundering and tax crime treatment

Tax and money laundering treatment	Countries
Money laundering > Tax crime	Bulgaria, Cyprus, Estonia, Finland, France, Italy, Latvia, Lichtenstein, Lithuania, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, United Kingdom
Money laundering = Tax crime	Austria, Belgium, Denmark, Greece, Luxembourg, Spain, Sweden
Money laundering < Tax crime	Croatia, Czechia, Germany, Hungary, Romania, Slovenia

16 countries; Bulgaria, Cyprus, Estonia, Finland, France, Italy, Latvia, Lichtenstein, Lithuania, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, and the United Kingdom. There are seven countries in the second category of countries who punish them with an equal maximum: Austria, Belgium, Denmark, Greece, Luxembourg, Spain, and Sweden. Lastly, there are six countries that have higher available punishments for tax crimes than money laundering; Croatia, Czechia, Germany, Hungary, Romania, and Slovenia.

When analysing these three groups we find that all countries that punish tax crimes more than money laundering share in common that their laws are of Germanic legal origin. In addition, the three countries that have a common law origin (Malta, Ireland, and the UK) all punish money laundering more than tax crimes. Furthermore, with the exception of Czechia, no country that ranks high in promotion of tax evasion punishes tax evasion more than money laundering. An extreme case is that of Malta that has the lowest maximum punishment for taxes and the second highest maximum punishment for money laundering.

How these sentencing possibilities will play out in practice still needs to be seen and it will depend on their approach to sentencing. Countries that can add up the sentence of tax crimes and money laundering, and those countries that punish money laundering harsher than tax crimes and sentence based on the 'worst' crime can benefit from the incorporation of tax crimes as a predicate for money laundering as it allows for a harsher punishment and potentially better deterrence. Recidivism is high in white collar crimes such as tax crimes due to the lenience in sentencing and punishment (Fredericks et al. 2016), hence having higher punishments available can deter those who would commit a tax crime.

13.4.2 Prescription Times

The second relevant variable analysed by this chapter is prescription times or their common-law equivalent of statute of limitations. These times reflect how long the crime can be prosecuted after it has been committed. Their relevance is two-fold: on the one hand prescription periods are crucial for cooperation among countries; on the other they represent a ticking clock for prosecutors and investigators. By making tax crimes a predicate crime for money laundering, the prescription time of money laundering becomes relevant for tax crimes and vice versa. In this subsection first we will briefly explain the dual functionality of prescription periods; second we provide an overview of the prescription periods across the EU and find the patterns they follow in the EU; and finally we analyse their interactions and how this can help in the fight against tax crimes.

The cooperation role of prescription times is related to the mutual assistance that jurisdictions can give each other in terms of exchange of information, notification of liabilities and asset (unpaid tax) recovery. Although states must

assist each other, the formal procedure of requesting such assistance is limited by the prescription period (Baker et al. 2011). In spite of the fact that cooperation might happen through other channels, their validity can still be questioned in court, if it does not abide by principles that respect the so-called ‘fundamental tax rights’ such as the statute of limitations. In practical terms this means that if in jurisdiction A tax crimes are prescribed after eight years, and it asks information of a certain account in jurisdiction B where tax crimes are prescribed after four years; jurisdiction B might not be able to give information that can be crucial to the case.

The second role of prescription times is to limit the time that a crime can be prosecuted. The main argument behind this is to protect individuals from false accusations as the accused might not be able to access evidence to disprove the claims. It is also said that these times are a way to make officials (investigators, prosecutors, etc.) discover and take to trial those who violate the law as swiftly as possible (‘The Statute of Limitations in Criminal Law: A Penetrable Barrier to Prosecution’ 1954). In recent times, prescription times were discussed widely in the context of the Panama Papers, where for example the Panamanian prosecutor of the Mossack Fonseca case, had a tough job as the violations of Panamanian law by the company were subject to a shorter statute of limitations.

Figure 13.6 illustrates the different prescription times for tax crimes and money laundering across the EU. Many countries have higher prescription periods for money laundering than for tax evasion.¹¹ Out of the 29 jurisdictions, nine have higher prescription periods for money laundering than for tax crimes, 14 have the same prescription periods for both offences and six have higher prescription periods for taxes than for money laundering.

When taking into consideration these three groups of countries, those that have higher prescription periods for tax crimes than for money laundering (listed in Table 13.10) also have higher maximums for tax crimes than for money laundering. This reinforces the notion that criminal law is a reflection of what is considered a ‘harsher crime’. In these countries tax evasion seems to be more serious or at least it seems to guarantee having stronger means of punishing both in terms of higher prison sentences and more time to process the crime.

The countries that can theoretically benefit the most according to our table are those with very low prescription times for tax evasion relative to money laundering: Austria, Ireland, Malta, Portugal, the Netherlands, Italy, Poland, Luxembourg, and Bulgaria. Having tax crimes as a predicate crime for money laundering can extend the period over which tax crimes can be investigated and ultimately prosecuted.

¹¹ In order to have comparable data we use the highest possible prescription time for both tax crimes and money laundering.

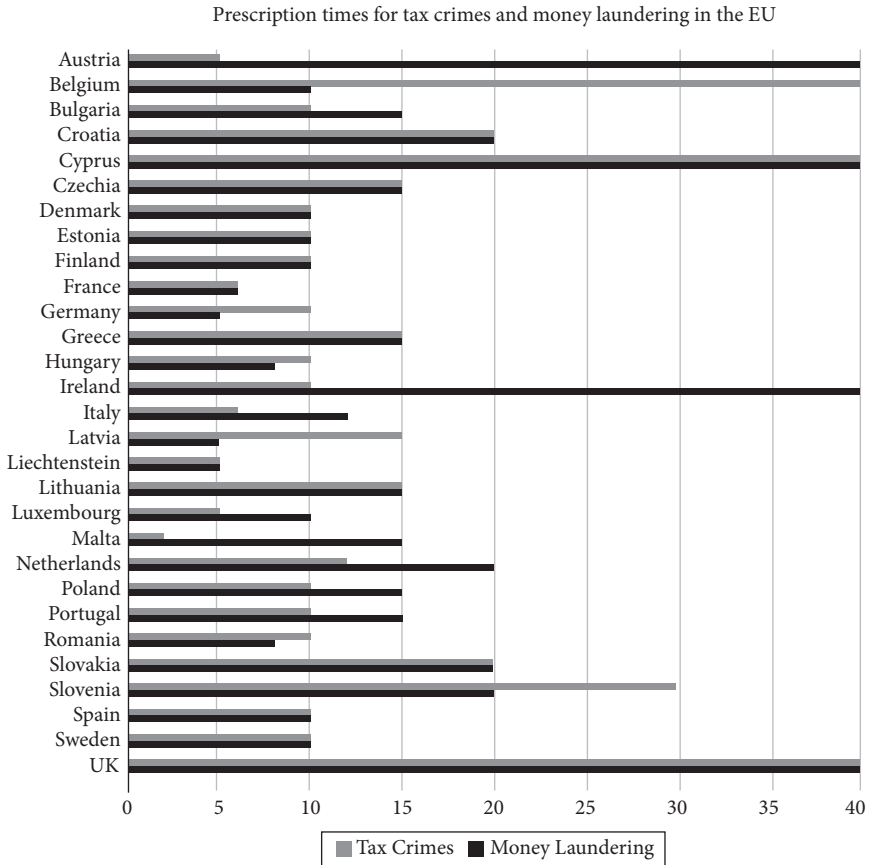


Figure 13.6 Prescription times for tax crimes and money laundering in the EU.

Table 13.10 Difference of prescription times between tax crimes and money laundering

	Money laundering	Tax crimes	Difference between tax crimes and money laundering
Romania	8	10	2
Hungary	8	10	2
Germany	5	10	5
Slovenia	20	30	10
Latvia	5	15	10
Belgium	10	never	89

However, there are more factors that come into play. In certain jurisdictions the limitation periods can be extended when the crime is committed by a criminal organization, in others the conviction of money laundering is only possible if the predicate crime has not been prescribed (Stephenson et al. 2011); in jurisdictions such as the Netherlands, money laundering is considered an ‘on-going’ crime that exists as long as the money is there, and hence can practically never be prescribed—although the law states the period is 12 years (Huygen 2015). Hence in order to understand the full complexity it would be necessary to go into the nitty-gritty of each country’s specific prescription times. However, our data does show the overall picture of the current situation in the EU, and how making tax crimes a predicate crime for money laundering can be a useful legal tool.

13.5 Conclusions

This chapter sheds light on the divergence of tax crimes and money laundering legislation across Europe after the implementation of the 4th AMLD. We analysed the 4th AMLD as a shock that put the tax ecosystem into money laundering regulation, and we analysed the way two key factors—prison times and prescription times—limit or affect the use of money laundering regulation in the fight against tax crimes.

The implementation of the rule that tax crimes are a predicate crime for money laundering is a historical step in the fight against tax evasion. However, our research also shows that this step alone is not enough. When taking into consideration the heterogeneity of tax laws and money laundering across the EU we see two practical implications: (a) space for forum shopping due to the differences in minimum and maximum prison times for both crimes and (b) difficulties for cooperation amongst countries due to differences in statutory limitations to tax or money laundering prosecution. The heterogeneity of tax crime law in Europe adds on to the problem of lack of harmonization in money laundering regulation across Europe.

When analysing the reasons that might explain this divergence, we find that jurisdictions that promote tax evasion according to the Financial Secrecy Index (see Chapter 6) are also more lenient than other jurisdictions when it comes to their tax crime law. Hence these jurisdictions are not only attractive to tax avoiders but potentially to tax criminals and those who wish to commit their crimes in the most lenient jurisdictions. This aspect is worth analysing further. It would be especially interesting to compare the maximum and minimum prison times in the law to those that judges give in practice. For such an analysis to be possible, all EU countries would have to make tax crime statistics widely and freely available.

Another aspect to be considered is the trends related to the legal origins of countries. Implementation and drafting of EU directives often fail to recognize

that historical and legal differences can impact the way legislation is implemented across Europe. If these differences are known beforehand, they can be accounted for when enacting regulation.

This research has raised many questions in need of further investigation. What would now be needed is a cross-national study analysing the effectiveness of tax and money laundering investigations. A big challenge for our research was finding information about cases, number of prosecutions, number of investigators, etc. per country. For further work on this topic, it is crucial to increase transparency and availability of such information across the European Union.

13.6 Appendix

Country	Native Terminology	Translation	Tax Crime	Max Punishment	Tax Crime Prescription	Money Laundering Law	Max Possible Criminal Sentence	Money Laundering Prescription Number
Austria	1) Abgaben-hinterziehung 2) Grob fährlässige Abgabenverkürzung 3) Abgabenbetrug	1) Tax evasion 2) Gross negligent tax reduction 3) Tax fraud	Fiscal Offences Act Article 33 Article 35 Article 39	10	5	Criminal Code Article 165	10	99
Belgium	1) inbreuk wetboek inkomstenbelasting 2) valsheid in fiscale geschriften	1) Fraud code income tax 2) Forgery of tax documents	Code des impôts sur les revenus 1992 Article 449 Article 450	5	99	Criminal Code Article 505	5	10
Bulgaria	1) избегне установяване или плащане на данъчни задължения	1) Avoid the payment of tax obligations	Criminal Code Article 93 Article 234 Article 255a Article 256 Article 258 Article 259 Article 260	8	10	Criminal Code Article 253 Article 253a Article 253b	15	15
Croatia	1) Utaja poreza ili carine	1) Tax or customs evasion	Criminal Code Article 256 Tax or customs evasion	10	20	Criminal Code Article 265	8	20
Cyprus	1) Ψευδής δήλωσις κ.λ.π.	1) False statements, etc. (regarding taxation) 2) Defrauding the public revenue	Assessment and Collection of Taxes Law Section 49 False statements etc. Section 51A Criminal Code Section 297 Section 298	5	99	Prevention and Suppression of Money Laundering Activities Act Section 4	14	99

Continued

Continued

Country	Native Terminology	Translation	Tax Crime	Max Punishment	Tax Crime Description	Money Laundering Law	Max Possible Criminal Sentence	Money Laundering Prescription Number
Czech Rep.	1) Zkrácení daně, poplatku a podobné povinné platby 2) Neodvedení daně, pojistného na sociální zabezpečení a podobné povinné platby	1) Reduction of tax, fee and similar mandatory payments 2) Non-payment of taxes, social security contributions and similar mandatory payments	Criminal code: Division 2— Tax, Fees and Foreign Currency Criminal Offences Section 240—Evasion of Taxes, Fees and Similar Compulsory Payments Section 241 Evasion of Tax, Social Security Insurance Fee and Similar Compulsory Payment	10	15	Criminal Code Section 216 Section 217	8	15
Denmark	1) Skattesvig	1) Tax evasion 2) Tax fraud	Criminal code: Section 289 Section 289 a	8	10	Criminal Code Section 290 Section 290a	8	10
Estonia	1) Maksukohustuse varjamine	1) Concealment of tax liability	Tax control act: Section 82. Section 83. Criminal Code Section 389-1. Concealment of tax liability and unfounded increase of claim for refund	7	10	Criminal Code Section 394 Section 394-1	10	10
Finland	1) Veropetos 2) Törkeä veropetos 3) Lievä veropetos 4) Verorikkomus	1) Tax evasion or fraud 2) Aggravated tax fraud 3) Petty tax fraud 4) Tax violation	Criminal Code Chapter 29—Offences against public finances (769/1990) Section 1—Tax fraud	4	10	Criminal Code Chapter 32 Section 6 Section 7 Section 8	6	10

		Section 2—Aggravated tax fraud			Section 9 Section 10
		Section 3—Petty tax fraud			
		Section 4—Tax violation			
France	1) Soustraire frauduleusement à l'établissement ou paiement total ou partiel des impôts	1) Fraudulently subtract from the establishment or payment of taxes in whole or in part	7	6	Criminal Code Article 324-1 to Article 324-9
Germany	1) Steuerhinterziehung	1) Tax evasion	10	10	Criminal CodeSection 261
Greece	1) <i>Εγκληματα φοροδιαφυγής</i>	1) Tax evasion Crimes	10	15	Legislation Law 4557/30.07.2018 Article 2
Hungary	1) Költségvetési csalás	1) Budget fraud	10	10	Criminal Code Section 399 Section 401 Section 402
Ireland	1) Revenue Offences 2) Tax evasion	1) Revenue Offences 2) Tax evasion	5	10	Criminal Justice (money laundering and terrorist financing) Act 2010Section 6 Section 7
Italy	1) Evasione delle imposte	1) Tax evasion	6	6	Criminal Code Article 648-bis Article 648-ter Article 648-ter1 Article 648-quarter
		Penal Code Title II CRIMES Chapter I Crimes concerning declaration Art. 2. Fraudulent declaration through the use of invoices or other			

Continued

Country	Native Terminology	Translation	Tax Crime	Max Punishment	Tax Crime Description	Money Laundering Law	Max Possible Criminal Sentence	Money Laundering Prescription Number
			documents for non-existent transactions.					
			Art. 3. Fraudulent declaration by other means					
			Art. 4. Unfaithful declaration.					
			Art. 5. Omitted declaration.					
			Chapter II					
			Crimes regarding documents and payment of taxes					
			Art. 8. Issuance of invoices or other documents for non-existent transactions					
			Art. 10. Concealment or destruction of accounting documents					
			Art. 10-bis. Omitted payment of withholdings due or certified.					
			Art. 10-ter Omitted payment of VAT					
			Art. 10-quater Undue compensation					
			Art. 11. Fraudulent subtraction from the payment of taxes					

Latvia	1) Izvairšanās no nodokļu 2) Krāpšana	1) Tax evasion 2) Fraud	Criminal Code Section 218. Evasion of Tax Payments and Payments Equivalent Thereto Section 219. Avoiding Submission of Declaration	5	15	12	5
Lithuania	1) Sukčiavimas 2) Mokesčių nesumokėjimas	1) Fraud 2) Failure to pay taxes	Criminal Code Article 219—Failure to Pay Taxes	6	15	7	15
Luxembourg	1) Steuerhinterziehung	1) Tax evasion	Tax Code Section 396 Section 397 Penal Code Art. 505, Art. 506.	5	5	506- 1 to Article 506–8	10
Malta	Tax evasion	Tax evasion	Income Management Act Article 52.	0,5	2	Prevention of Money Laundering Act Article 2 Article 3	15
Netherlands			General Tax Law Article 69 Article 69a	68	12	Criminal Code Article 420	20
Poland	1) uchylając się od opodatkowania	1) Evading taxation	Tax Criminal Code Section II Chapter 6 Fiscal offences and tax offences against tax obligations and settlements due to subsidies or subsidies Article 54 Article 55	5	10	Criminal Code Article 299	15

Continued

Continued

Country	Native Terminology	Translation	Tax Crime	Max Punishment/Tax	Tax Crime Description	Money Laundering Law	Max Possible Criminal Sentence	Money Laundering Prescription Number
Portugal	1) Fraude Fiscal 2) Infracções Tributárias	1) Tax Fraud 2) Tax Infringement	Article 56	8	General Regime of Tax Infractions (GRTI)	Penal Code Article 368	12	15
			Article 56a					
			Article 56c					
			Article 56d					
			Article 60					
			Article 61					
			Article 76					
			Article 77					
			TITLE I					
			Tax crimes					
Romania	1) evaziunii fiscale	1) tax evasion	CHAPTER I	15	Law no. 241 of 15 July 2005 on the prevention and combating of tax evasion Article 9	Law No. 656/2002 regarding the prevention and sanctioning of money laundering Article 29	10	8
			Common tax crimes					
			Article 87 Tax swindling					
			Article 88 Credit frustration					
			Article 103 Fraud					
			Article 104					
			Article 105					
			Misappropriation of funds					
			Law no. 241 of 15 July 2005 on the prevention and combating of tax evasion Article 9					
			Article 9					

Slovakia	1) Skrátenie dane	1) Tax evasion	Criminal Code	12	20	Criminal Code	20
	2) Daňový podvod	2) Tax fraud	Section 276 Tax and Insurance Evasion Section 277 Failure to Pay Tax and Insurance Section 277a Tax fraud Section 278 Non-payment of tax and insurance Section 278a Obstruction of Tax Administration			Section 231 Section 232 Section 233 Section 234	
Slovenia	1) Davčna zatajitev	1) Tax evasion	Criminal Code Criminal offences against the Economy Tax evasion Article 249 Article 394 (tax offences of individuals) Article 395 (more serious tax offences of individuals) Article 396 (exemption from offence when submitting a tax return based on self-disclosure) Article 397 (tax offences related to the performance of activities)	12	30	Criminal Code Article 245	8
Spain	1) Defraudación de Hacienda Pública	1) Offences against public finances	Criminal Code TITLE XIV Of the crimes against the Public Treasury and against the Social Security Article 305. Article 305 bis Article 310. Article 310 bis.	6	10	Criminal Code Article 301 Article 302 Article 303 Article 304	6

Continued

Continued

Country	Native Terminology	Translation	Tax Crime	Max Punishment	Tax Crime Description	Money Laundering Law	Max Possible Criminal Sentence	Money Laundering Prescription Number
Sweden	1) Skattebrott	1) Tax crime	Tax Crime Act (1971: 69) Section 2 Section 3 Section 4 Section 5 Section 6 Section 7 Section 8	6	10	Act on penalties for money laundering offences Section 3 Section 4 Section 5 Section 6 Section 7 Section 8	6	10
UK	Cheating the public revenue Fraudulent Evasion of tax	Cheating the public revenue Fraudulent Evasion of tax	Cheating the public revenue—common law offence Tax Management Act – Section 106A Offence of fraudulent evasion of income tax Section 94 Failure to make return for corporation tax Criminal Finances Act 2017 - Article 45—Failure to prevent facilitation of UK tax evasion offences Section 95	99	99	Proceeds of Crime Act 2002 Section 327 Section 334 Section 340	14	99

USA	1) Evade Tax 2) Defeat tax	1) Evade Tax 2) Defeat tax	US Code—Title 26 section Section 7201 Section 7202 Section 7521	5	6	US Code Title 18 Section 1956 Section 1957	20	5
Liechtenstein	2) Defeat tax	1) Tax Fraud 2) Misappropriation of tax to be deducted at source	National and Municipal Taxes Act (Tax Act; SteG) Article 140 Tax fraud Article 141 Misappropriation of tax to be deducted at source Article 142 Voluntary disclosure	2	5	Criminal Code Section 165	5	5

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Policy Reform Effects in the Tax Ecosystem

An Agent-Based Simulation Approach

Peter Gerbrands and Brigitte Unger

14.1 Introduction

This chapter analyses the effects of two recent tax policy reforms: Country-by-Country Reporting (CbCR) and Automatic Exchange of Information (AEOI) in the tax ecosystem. These two reforms have different goals: while the former aims at reducing tax avoidance of corporations, the latter one focusses on reducing tax evasion by individuals. How successful have these policies been and how successful will they be when implemented fully in all EU countries?

So far, policy analyses have concentrated either on studying effects of reforms on tax avoidance (the legal part of not paying taxes by using loopholes in the international tax system) or on tax evasion (the illegal part of not declaring taxes). Following this logic, so far, the effects of reforms of CbCR and AEOI have also been analysed separately in the literature.

We will present a model that allows the study of both reforms and their interaction simultaneously. Policy reforms, when happening at the same time, can reinforce or counteract each other. Our model allows us to simulate the isolated effects of both reforms and to study them jointly. We evaluate the effects of these reforms by comparing them to what would have happened to tax compliance in the absence of these reforms (if they would never have happened), to a baseline model (what had happened until 2019 without implementing them further) and to full implementation of each reform by all 33 European countries studied. We do so over ten years, from 2019 to 2029 to allow the tax ecosystem to adjust and in order to see the long-term reactions to the reforms.

Our model views tax avoidance and tax evasion as sharing one crucial feature: the non-compliance of some of the actors of the tax ecosystem, which leads to unpaid taxes depriving the public sector of resources needed for public spending. Hence, the policy effects that we study are effects on tax compliance, which we can separate into effects on tax avoidance and tax evasion.

The model offers a tool for regulators to find out what makes companies and individuals within the EU 27 Member States and five additional European

countries become more compliant, and what deters them from doing so. With this, policy recommendations for improvement of reforms, which aim at collecting more tax revenues in order to fill the public COFFERS, can be derived.

In the following, we will first describe the two policy reforms CbCR and AEOI and existing analyses of their effects (Section 14.1). We will then describe why we think that our model—an agent-based simulation model—might be more appropriate (Section 14.2). We then describe the theoretical model of tax compliance from which we start, the slippery slope of Kirchler et al. (2008) (Section 14.3) and how we modify it for analysing an international tax system (Section 14.4). We then give an overview of the data collected (Section 14.5) and present our results (Section 14.6). We conclude (Section 14.7) and point at future research needed.

14.2 Tax Policy Reforms and Their Effects in the Literature

14.2.1 Country-by-Country Reporting (CbCR)

As of 2017, Council Directive 2016/881/EU¹ requires Multinational (MNE) Groups in the EU, with total consolidated revenue of 750 million Euro or more, to file A Country-By-Country Report. The Country-by-Country Report will include information, for every tax jurisdiction in which the MNE group does business, on the amount of revenue, the profit before income tax, the income tax paid and accrued, the number of employees, the stated capital, the retained earnings and the tangible assets. This allows to control for profit shifting by big corporations (see Chapter 6). The competent authority of the Member State that receives the Country-by-Country Report shall, by automatic exchange, communicate the report to any other Member States in which one or more Constituent Entities (i.e. companies) of the MNE Group are either resident for tax purposes, or are subject to tax with respect to the business carried out through a permanent establishment there.²

The introduction of CbCR reporting among banks provided insight into the behaviour of tax avoidance. In a European Commission discussion paper (Bouvatier et al. 2017) CbCR data shows that tax havens attract excessive banking activity and that the estimated tax losses generated by European banks range between 1 and 3.6 billion Euro. Overesch and Wolff (2017) find that banks with a significant presence in tax havens, significantly increase their effective tax rate and therefore conclude that CbCR is an effective policy instrument to counter corporate tax avoidance.

¹ <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016L0881>

² For details see: see https://ec.europa.eu/taxation_customs/business/tax-cooperation-control/administrative-cooperation/enhanced-administrative-cooperation-field-direct-taxation/country-country-reporting_en

Adding corporations to file private CbCR reports allowed De Simone and Olbert (2019) to focus on the location of corporate economic activity rather than banking, and found CbCR to be effective. Using similar data but adopting a difference-in-difference approach (which is also used in Chapter 7), Hugger (2019) finds that the effective tax rate of included multinational corporations has increased by 0.8 percentage points. Because the total tax payments have not changed, and the intended effect of countering tax avoidance to redistribute the income according to apportionment factors of the European Commission (2007)³ has not emerged, the author concludes that evidence of CbCR effectiveness is weak. Also, the findings of Chapter 8 still see many loopholes preventing CbCR effectiveness, such as lack of exchange of information on CbCR, and too high thresholds for CbCR obligations of companies.

Though, as has been shown above, there are studies in support of CbCR being effective in combating aggressive tax planning (companies' relocations, higher tax rates paid by them), we do not know whether the observed effects in economic activity are truly caused by the reform or are just confounding factors resulting from many of the economic and political turbulences.

14.2.2 Automatic Exchange of Information (AEOI)

The Automatic Exchange of Information (AEOI) Directive (Council Directive 2014/107/EU) aims at exposing the capital positions of foreign residents to their native country as to combat tax evasion practices. In March 2014, Luxembourg and Austria finally agreed to participate in the Directive, due to the pressure generated by the United States to comply with a similar agreement, the Foreign Account Tax Compliance Act (Hakelberg 2015).

Fuelled by the pressure of AEOI, a tax amnesty programme in Norway demonstrated that this pressure resulted in a significant rise in tax payments. According to Alstadsaeter et al. (2018), AEOI is, therefore, an effective tool to repatriate assets and reduce tax evasion. Contrary to popular belief, their Norwegian tax data does not show a substitution effect towards more tax avoidance. One could question whether there was enough hidden wealth to repatriate in the first place. Shifting profits via earlier bilateral treaties, treaty shopping (Davies 2004), could have obfuscated hidden wealth prior to the implementation of AEOI in 2014. Using collected data from a G-20's earlier bank secrecy initiative, Johannesen and Zucman (2014) find evidence to support this claim of treaty shopping and find that relocation of bank deposits is a likely scenario, arguing that AEOI is insufficient and withholding taxes are also needed since not all countries

³ European Commission (2007). CCCTB: Possible elements of the sharing mechanism, Common Consolidated Corporate Tax Base Working Group Document: CCCTB/WP060/doc/en.

participate in AEOI (notably the US does not participate, see Chapter 3 and Chapter 7).

Ahrens et al. (Chapter 7) and Ahrens and Bothner (2019) conduct difference-in-difference analysis that finds that after AEOI, household assets in tax havens reduced by 67 per cent. Unfortunately, assets hidden behind corporate structures remain obfuscated due to limited reporting of ultimate beneficial owners and as such the individuals for which this wealth is accrued.

While the use of AEOI is seemingly highly effective, privacy considerations create legal ways around sharing tax information with foreign authorities (Gupta 2019; Xiaoqing 2018) and IT related technical aspects affect the successful adoption and implementation of AEOI standards (Kurnia et al. 2019). Another concern of increasing the level of information exchange is the potential reduction of the inflow from offshore hiding spots and as such reduce general welfare. The reason for this is that cash that is hidden offshore and eventually returns to its country of origin, round-tripping (Marchiori and Pierrard 2018) will under the new regime not come back home any more.

The issues above show the importance of framing a policy's effectiveness and of taking into account substitution effects. Even if in terms of tax revenue, a policy might be effective, it may also deteriorate privacy laws, increase IT costs or have other adverse effects on the economy. We think that taking into account the manifold behaviour of actors and linking micro- and macro approaches is a more promising way to study policy reform effects. When confronted with reforms, actors adapt their tax compliance behaviour to their new environment.

14.3 Studying Tax Reforms in an Agent-Based Simulation Model

Tax policy reforms can be studied in macroeconomic models (see the studies shown under 14.1, such as repatriation of wealth or difference-in-difference methods of household assets held in tax havens). However, finding their true effects on tax revenue losses is obfuscated by the secretive nature of tax avoidance and tax evasion. At best, macroeconomic indicators can be used to proxy the impacts of such policies, but the need for a micro-level foundation remains. Micro-studies suffer from limitations for extensive data exchange due to privacy considerations. Tax evaders will hardly identify themselves as such; companies will hardly display their tax avoidance strategies; and authorities' hands to expose data about suspicious, but perhaps innocent, citizens are bound. Even if both macro- and micro-level data would be present, analysing tax compliance behaviour would still be distorted. Especially the endogeneity of policy changes in their possibilities to evade and avoid taxation complicates the empirical analysis.

Seen the complexity of the tax ecosystem, endogeneity of policies and associated problems, and confounding factors, agent-based models (ABM's) provide a good alternative (Axelrod 2003; Flache and Macy 2017) to existing tax policy models. An agent-based model (ABM) is a class of computational models for simulating the actions and interactions of autonomous agents (this can be individuals or collective entities such as organizations or groups) in order to assess their effects on the system as a whole. Agent-based models are a kind of micro model that simulate the simultaneous operations and interactions of multiple agents. Macro changes emerge from micro agents' behaviour. Individual agents have typically boundedly rationality, are acting in what they perceive as their own interests, such as reproduction or economic benefit, and are using heuristics or simple decision-making rules. ABM agents may experience 'learning', adaptation, and reproduction.

ABMs allow for high complexity and stochastic interactions, not restricting any unexpected emergent behaviour, create the opportunity to run 'counterfactual' simulations, i.e. what-if scenarios, and they can control for real-life confounding factors, such as individuals orienting themselves at their neighbours' behaviour rather than making rational decisions.

Especially when large shocks and non-calculable uncertainty are created by tax policy reforms, traditional models might face problems. Actors may not always react rationally but might follow Keynes' (1936, ch. 12, 'The State of Long-term Expectation') advice on how to behave under uncertainty, and assume that their past behaviour is a good guide for future behaviour. When there are major economic shocks, future events cannot be predicted from past development; this is why traditional macroeconomic models are doomed to fail. Still, shocks in the tax ecosystem—like new international regulations for transparency and information exchange—can be analysed, when assuming that people's behavioural intent remains quite stable. The advantage of an agent-based simulation model is that it can predict future effects of policy reforms.

Another complication in assessing a policy's impact is the inability to isolate the policy change from other events that take place in the real world. Given that actors are interconnected, adapt their behaviour based on their environment, learn from their experience, and have specific attitudes towards taxation, the tax ecosystem is a complex adaptive system for which traditional analysis approaches are seemingly not well equipped.

In order to deal with the dynamics of the tax ecosystem and analyse policy reforms, with the behavioural intention of agents to keep on going as usual, and with the high level of interaction among agents, we opted for an agent-based model (ABM). ABMs are considered a promising way forward (Foster 2005; Macal and North 2010; Smith and Conrey 2007), which have several advantages. First, an ABM enables the use of generic standards found by macroeconomic models and allows for creating a heterogeneous population that deviates from

the standards by using knowledge from case studies or other sources. Having generated micro-level data, the researcher can intervene and alter the circumstances in different simulations, creating the option to assess counter-factual scenarios (de Marchi and Page 2014). Second, Agent-Based models (ABM's) can relax the macroeconomic equilibrium micro-foundations and allow for the emergence of unplanned aggregate outcomes (Gatti et al. 2010). Third, ABM's can support the interaction between agents, influencing both changes in individual behaviour as in the social norms and allowing for (social) learning (Laver and Sergenti 2012).

We, for the first time, analyse tax avoidance and tax evasion jointly in one ABM, which allows to include spillover effects from corporate tax avoidance behaviour to individual tax evasion behaviour. In a comprehensive literature review on the use of ABM's to analyse tax evasion, Hokamp et al. (2018) list 60 publications from 32 different research groups (i.e. developed simulations) of agent-based simulations that focus on tax evasion published between 2000 and 2017. Reviewing these and 12 extra, previously unlisted, publications shows that none of them analyse both tax avoidance and evasion as distinct factors within the same environment. However, tax avoidance and tax evasion are interdependent. The intrinsic motivation to pay taxes, tax morale (Frey 1992; Luttmer and Singhal 2014), affects both tax avoidance and evasion and is also affected (crowded out) by government policy (Frey 1997) as well as subject to social norm-setting (Alm et al. 1999). The effect of tax avoidance on tax morale, in turn, affects tax evasion and vice versa. To give an example: if big corporations avoid taxation, this reduces the tax morale of individuals and will increase tax evasion. If individuals evade taxes, big corporations might feel less threatened by consumer sanctioning, when exposed as not paying their fair share of taxes. For this reason, this chapter argues that tax avoidance and tax evasion should be analysed within the same model.

The agent-based simulation model allows us to capture the tax ecosystem perspective because it allows taking into account the multitude of actors and interactions that are involved in tax policy reforms. In an influential book, Holland (1992) provides an example that resembles the problem of fighting tax evasion and avoidance. The author considers the immune system in which antibodies continuously combat ever-changing antigens. Given the ongoing evolution of antigens, the system is unable to list all the potential types and must adapt to relevant threats. The same evolutionary character can be recognized in the corporate structures used to avoid corporate income taxation.

The evolutionary character of the tax ecosystem is partly driven by governments changing their ways through implementing new policies, and through altering existing policies, to gain or retain tax revenues. Perpetrators, in turn, reorganize themselves into new corporate forms and permanent establishments to circumvent or use the policies at hand. A comprehensive analysis of the

tax-ecosystem should, therefore, include the heterogeneity and different intentions of the agents, their limited views of the environment and the evolutionary succession of the system's entirety.

While Chapter 2 gives an overview of different actor types and political drivers for change, this chapter goes one step deeper by providing psychologically and behavioural driven analysis of their compliance, as the following section will show.

14.4 The Theoretical Model

14.4.1 Tax Compliance Behaviour in the Economic Literature

The traditional economics of crime answer to increasing compliance is simple: more auditing and punishment will make people pay more taxes. Based on a rational choice approach in which the effect of punishment on the prevalence of crime is mathematically optimized (Becker 1968), Allingham and Sandmo (1972) developed and analysed a model focused on tax evasion, further called the AS-model. After changing the penalty base from undeclared income to evaded tax (Yitzhaki 1974), the model has strongly influenced subsequent literature even to date. Unfortunately, compared to empirical observations, the AS-model does not predict the observed level of tax compliance accurately (Dubin and Wilde 1987).

To explain this discrepancy, Alm et al. (1992) developed an experiment and concluded that to some extent, an extreme level of risk aversion could be the cause and suggested that compliance is justified based on a personal evaluation of the public goods consumed. In a footnote, the authors suggest that the psychological predisposition of taxpayers or tax morale also affects tax behaviour but it is left out given the focus on the role of public goods. This paper assumes that one's development of tax morale is a complex multi-directional process which affects the rationality of the decision making.

Several additions to the standard AS-model adopt an intrinsic tax morale and involve allocating different weights to the expected utilities of tax evasion, making evasion less profitable than the purely risk-based decision (Fortin et al. 2007; Gordon 1989; Kim 2003; Myles and Naylor 1996). In the same way, Traxler (2010) embedded an extrinsic ethical component, defending the bidirectional interaction between the individual tax identity and the associated social norm. Further exploring this interaction in terms of sympathy and empathy provides conflicting counter-intuitive results (Calvet and Alm 2014), which demonstrates the assumed complexity, and finding good proxies for such recondite factors is difficult.

Given the amount of effort invested in developing an expected utility model for tax evasion, why do the results remain questionable? According to Schoemaker (1982), rational models are flawed due to the non-rationality of people. People are

unable to interpret probabilities accurately, to comprehend the problem space fully, and not to be influenced by social norms and other contextual factors. But for well-structured repetitive tasks, optimizing expected utility models could have credible results, because long-term learning by the decision-maker converges towards the optimal choice. The author concludes that these models are worthwhile as long as no viable alternatives emerge. Have these alternatives emerged to date?

One alternative is using case studies, which provide relevant information on methods of corporate tax avoidance like transfer pricing (Asongu et al. 2019) or treaty shopping (Candau and Le Cacheux 2018) and the administrative tools of corporate tax evasion (Nawawi and Salin 2018). Some focus on specific concepts like corporate social responsibility (CSR) and review some organizations' response (Ylönen and Laine 2015). Others focus on the domestic policies of a specific country (Ceccato and Benson 2016; Courakis 2001; Dinis et al. 2017; Duncan 2019; Finér and Ylönen 2017; Fjeldstad and Semboja 2001; Mróz 2018; Stewart 2018). Case studies generally have too many details to generalize the findings effectively or suffer from limited numerical representation.

Reviewing the different methodological approaches to tax compliance makes clear that while expected utility models and experiments may provide useful indications on different aspects of tax evasion and avoidance, they capture far too little details to provide a comprehensive analysis of the effects of tax policy. Besides, these models are based on aggregated data and hence ignore individual differences among the population and potential unexpected behaviour that may emerge from new policies. While case study approaches include much more detail to explain non-compliant behaviour and policy responses, they often lack the power to be generalized into a useful prediction, given the few cases such studies contain due to the high costs for analysing each case. Tax evasion and avoidance cannot be captured in simple models and requires a more elaborate approach.

14.4.2 The Slippery Slope Framework

The slippery slope framework, as developed by Kirchler (2007) and Kirchler et al. (2008) suggests that not only economic but also psychological factors, determine tax compliance. An overview of the inconsistent empirical findings in the literature with regard to the economic factors income, tax rate, audit probability, and severity of fines is reported in Kirchler, Muehlbacher, Kastlunger, and Wahl (2010).

There is, on the one hand, the coercive power of the state as reflected in audit rates and punishment but also the persuasive power of the state (Alm 2007; Prinz et al. 2014) to convince its citizens about the usefulness of paid taxes.

Psychological factors like social norms or the perceived fairness with regard to the tax system and the authorities were identified as relevant influences

concerning tax honesty of citizens. Social norms relate to the acceptance of tax evasion among a relevant reference group, and a number of studies confirmed that perceived tax evasion among friends and colleagues is correlated with hypothetical, as well as, self-reported tax evasion (e.g. Bergman et al. 2005; Cullis and Lewis 1997; Webley et al. 2001).

The 'slippery slope framework' suggests two main determinants of tax compliance: trust in authorities and power of authorities. When both trust and power are low, taxpayers will evade taxes as much as they can. Increasing the power of authorities leads to forced compliance, whereas boosting trust results in enhanced voluntary compliance. Hence, high compliance can be accomplished either by pronounced trust in authorities or under conditions of the strong power of authorities, but the quality of cooperation differs. Reforms can result in more (or less) forced compliance or in more (or less) voluntary compliance. If the tax burden is perceived to be heavier than that of comparable others, compliance is to decrease.

Tyler (2006) and Kirchler (2007), claim that tax authorities can encourage compliance not only by enforcing it, e.g. using audits and penalties policies related to financial transparency, but also by fairness and quality of service, and other means of persuasion. The slippery slope framework typically presents the persuasive power as 'trust in authorities' (Kirchler et al. 2008; Prinz et al. 2014) but also the concept of 'legitimate power' is used (Hartl et al. 2015; Kastlunger et al. 2013). Fairness and quality of service are also considered to affect compliance (Braithwaite 2007), independently of coercive power.

As mentioned above, the slippery slope graph suggests two factors determining tax compliance, trust (or persuasive power) and enforcement power (or coercive power), but there are also interdependent factors involved. Social norms, in this framework, are said to be related to both power and trust. On the one hand, they affect the tax laws and the role given to authorities which directly influence power, and on the other hand, social norms may help to decrease or increase trust, depending on the message (Kirchler et al., 2008). Also, fines can in an antagonistic climate, be part of a 'cops and robbers'-game, whereas in a synergistic climate they may be perceived as adequate retribution for behaviour that harms the community. Thus, deterrence might be connected to both trust and power.

There is also an indirect mediation effect of both, trust on the relation between retributive justice and voluntary compliance, as well as power on the relation between retributive justice and enforced compliance. Thus, it might be possible to influence perceptions of trust and power by changing the prevailing impression of retributive justice (Kogler et al. 2015).

The slippery slope framework has been extensively tested in multiple experiments (Batrancea et al. 2019; Benk and Budak 2012; Kastlunger et al. 2013; Kogler et al. 2013; Kogler et al. 2015; Lisi 2012a; Muehlbacher et al. 2011; Wahl et al. 2010). In these studies, coercive power represents 'taxpayers' perception of tax

authorities' capacity to detect and sanction tax evasion' and 'persuasive power' or 'trust in the state' is defined as 'taxpayers' perception that tax authorities act benevolently and work for the common good' (Batrancea et al. 2019).

14.4.3 Modifications of the Slippery Slope Model for an International Tax System

The slippery slope model focusses on one country. Taxpayers comply or do not comply within their country, but they do not look for loopholes in the international tax system in order to evade or avoid paying taxes. The tax reforms we analyse, take place in an international context of tax competition between countries. Policy reforms of one country will affect compliance in neighbouring or other countries, since actors are connected through media reports on the internet, and interact in global (professional) networks.

In an open economy, where many forms of tax evasion and tax avoidance consist in finding loopholes between jurisdictions, the coercive power of the state deteriorates even when audit rates and fines stay constant. In a global setting where residents can circumvent national tax laws, the coercive power of the state will decline. Audits and punishment might become less effective.

Also, the persuasive power needs reinterpretation, because, e.g. lowering corporate tax rates may not be considered beneficial for the common good, while stopping companies from relocating or decreasing the competition between multinationals and local companies that have fewer abilities to avoid taxation may be perceived to support the common good.

The slippery slope framework consists of surveys and experiments, which concentrate on domestic tax compliance and do not assess the effects of other countries on tax compliance in the country of interest specifically. This spillover effect is only implicitly embedded in the answers of survey respondents. This has inspired the authors of this chapter to redefine the core concepts within an open economy in which policy spillover effects are included explicitly.

In an open economy, the coercive power of the state continues to focus on policy measures and policy enforcement, forcing compliance by threatening with audits and penalties and pushing for financial transparency and exposure. Nevertheless, if other countries compete with lower audits or fines, this might affect the coercive power of the state in question.

Also, the notion of the persuasive power of the state—the ability of the state to convince its residents that paying national taxes is a meaningful thing to do to contribute to the welfare of the country—needs reinterpretation in an international setting. Citizens' perception of 'meaningful state expenditures' will change when tax money by some of them can desert the country without the state being able to recuperate it.

This chapter, inspired by the slippery slope framework of Kirchler et al. (2008) and Kirchler and Wahl (2010), distinguishes the national/domestic components relevant for tax compliance (audit rates, fines, trust in the state, fairness, etc.) and the ‘relative state power’ which is the capacity of the state when compared to other states which might offer loopholes or more favourable tax conditions. Other states can influence compliance behaviour in a country. Therefore, we introduce the concept of ‘relative state power’, which is defined by the differences between national policies. The model in this chapter considers that the relative power relies mainly on policy advantages that a state can provide, through different tax policies⁴ (tax havens) and different reporting requirements (secrecy havens). We assume that in an open global economy, tax compliance depends on the combination of the coercive and persuasive national power and of the relative international power of the state.

For example, governments try to attract corporations to establish themselves in the country they represent offering special deals, as known from literature on tax competition (Candau and Le Cacheux 2018; Devereux et al. 2008; McCarthy et al. 2008; Slemrod and Wilson 2009). Figure 14.1 shows our modified ‘slippery slope’

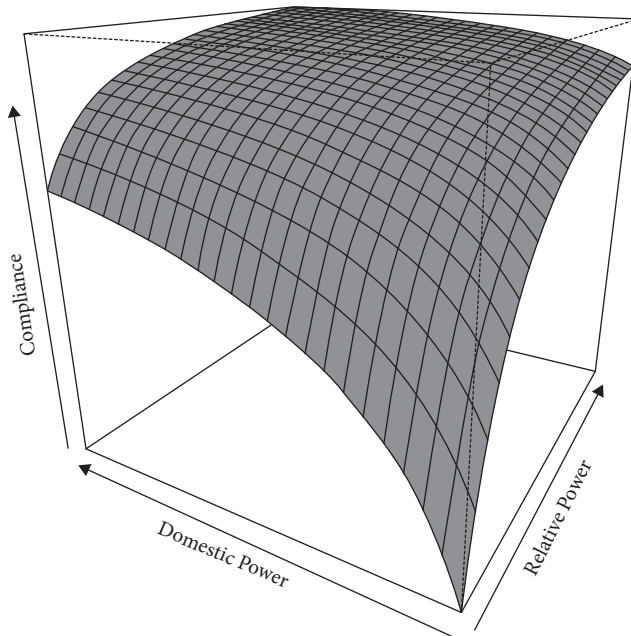


Figure 14.1 Theoretical model of tax compliance as a function of domestic and relative power of the state.

⁴ See (Bunn and Asen 2019) for a good overview of different advantageous tax policies.

model, where domestic power and spillover effects from other countries (relative power vis à vis other countries) determine tax compliance.

14.4.4 Developing the Theoretical Agent-Based Model

This agent-based simulation adopts the mathematical formalization of the slippery slope framework developed by Prinz et al. (2014) in which the perceived governments' coercive and persuasive powers and the observed environment affect the agent's compliance decision. Instead of focusing on trust or persuasive power and coercive power (as used in the works of Kirchler et al.), the open economy model presented here adopts domestic power and relative power and implements two more significant changes. First, the dichotomous difference between either evasion or compliance minded agents is converted into a continuous, linear scale defined by the degree of the agent's tax morale. Second, the network effect on which the agent responds is considered to be a local partial network that differs per agent, instead of a complete network representing the whole society. It is the local neighbourhood which influences tax morale and not the whole country or the overall European tax morale.

In our model, as said in the previous section, while the coercive power is based on audits and punishment, the persuasive power is based on trust in the state to provide adequate services to its residents, the relative power of the state as defined here is based on this ability to do so when compared to another state. An important indicator of 'service quality' is the level and inequality of income. For example, when two countries provide similar income and inequality levels, the country with a lower tax rate is considered to be more trustworthy and thus persuades its citizens to pay taxes locally. At the same time, a country with higher tax rates might still convince its citizens to pay taxes locally when the state's quality is much better even though the costs are somewhat higher. In an open economy where agents can reallocate their wealth freely, the quality of the state compared to others, i.e. the relative position influences the attitude towards tax compliance.

Changes in tax policy can change tax behaviour of those affected in unforeseen ways, and therefore it is difficult to assess the implications of the policy change. Within the literature on planned behaviour, Ajzen (1991) provides a framework that explains the origins of behavioural intent which eventually translates into the observed behaviour. The author defines three core components that determine the agent's intentions, which are the attitude towards the behaviour, subjective norms, and perceived behavioural control. Then, based on the perceived limitations of its behavioural control, true behaviour is enacted. In this agent-based simulation model, these core components are the government's ability to persuade the taxpayer to comply, the agent's tax morale and how others influence it, and finally the perceived ability of the state to coerce compliance respectively.

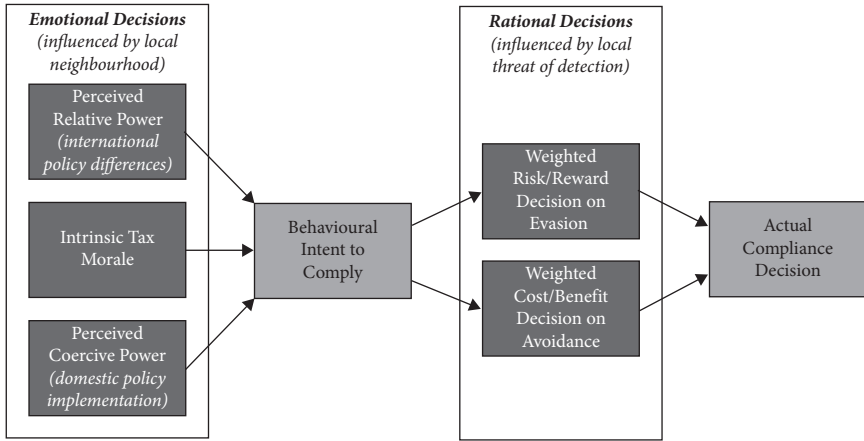


Figure 14.2 Conceptual framework for an agent’s planned behaviour.

Source: Author-made.

Figure 14.2 shows how the agent-based model operates. All agents have an individually assigned intrinsic tax morale, which is more or less influenceable by their local neighbourhoods. Based on the tax policy regime of the home country, agents perceive the government’s domestic power (p_d) of collecting taxes. Also, based on the differences between the country of origin and a potential target country, to which the avoidance or evasion stream could flow, the relative power of the home country (p_r) is perceived.

The behavioural intent to comply with respect to tax evasion (c_e) is defined as (for avoidance (c_a) α and β are replaced by δ and ϵ respectively):⁵

$$c_e = \max \left[1 - p_d^{-\alpha} \cdot p_r^{-\beta} \cdot s^n, 0 \right].$$

The domestic and relative power of the state affect the agent’s behavioural intent to comply (c) with the weights of α and β (which are a function of the tax morale) and by the compliance behaviour of its neighbours (s^n). These psychological, emotional or moral components of decision making, which determine the agent’s behavioural intent to comply, are followed by a rational decision-making process. Each agent makes a personal rational decision regarding the payoff for evasion or avoidance. This depends on the risks of being detected versus the benefits of doing so. For tax evaders, it is the chance of being audited and punished. For tax avoiders, it is the costs involved in setting up tax avoidance schemes or the

⁵ For details on the specification of this equation, please refer to (Prinz, Muehlbacher, and Kirchler 2014).

implications of being publicly exposed. By comparing costs and benefits of compliance, tax avoidance and evasion, the agent acts.

The local neighbourhood affects the individual perception of agents. Strong differences between the perceived coercive and relative power affect one's tax morale (e.g. substituting voluntary compliance with forced compliance when the state has strong enforcement power, like audits and fines, while providing poor services). The outcome of the agent's decision-making process, in turn, affects the other agents' local perceptions.

The entire framework is implemented as an agent-based model in the NetLogo software (Wilensky 1999), using the belief-desire-intent (BDI) agents framework (Bratman 1987; Rao and Georgeff 1995). This allows agents to first observe their environment (with errors and a local view, for example, tax rates in the neighbouring country, compliance of the agent's closest to them, and whether enforcement activity takes place in their neighbourhood), learn from their experience (earlier audits), construct their belief system, after which they define their desires in that system (intention to comply), upon which they act (actual evasion and avoidance decision). Knowing the general concept of the agent's logic, coercive and relative power needs to be defined and operationalized.

14.4.5 How the Agent-Based Simulation Process Works

The model always works when comparing a home country to another foreign country. In short, after defining the source and target countries, the system sets up the environment variables (such as the tax system and all other initial values as shown in Table 14.1) after which the following simulation steps take place each period (year):

1. Agents observe their environment and determine their perceived domestic and relative power of the state. This can include special tax rulings, the provision of infrastructure and network opportunities for research and development or sales compared to another country, which are encoded through the financial secrecy and tax haven levels. Based on the results, their local neighbourhood and their intrinsic tax morale (or need for social responsibility due to shareholders or consumer pressures), agents set their behavioural intent to comply within this country.
2. Based on their intention to comply, the agents calculate their benefit of evading taxes using an updated weighted AS-model and the weighted utility for avoiding taxes, which are linked to the costs for implementing the tax scheme and the tax gain received by it.
3. The corporations choose whether to comply, evade or avoid, determine the amount associated to it, and report their taxes. Next, to simulate the

Table 14.1 Overview collected data points used in the model

Datapoint	Description
Country	Country name and ISO3 code, no measurement required.
Rule of law	To proxy the coercive power of the government, the 'rule-of-law' indicator from the World Bank is used (Kaufmann, Kraay, and Mastruzzi 2010).
Trust in authorities	To proxy the persuasive power of the government for which trust is associated as a good indicator, Transparency International's Corruption Perceptions Index is used (https://www.transparency.org/cpi2018).
Initial tax morale	Question V234 of the European Values Surveys of 2008 and 2017 (Gedeshi et al. 2016, 2019). asking about the justification of tax evasion practices. If no 2017 data is available, the 2008 data is used adjusted with the average change of all countries for which this data is available. The final score is rescaled from 0 (no morale) to 1 (full morale).
Financial secrecy level	Uses the 2018 secrecy score of the financial secrecy index reported per country by the Tax Justice Network. The score ranges from the theoretical minimum of 0 to a maximum of 100.
Maximum secrecy level	Represents the secrecy score in the case a country has no implementation of CbCR and AEOI.
AEOI implementation level	The AEOI level as implemented by the financial secrecy score (to compensate for the maximum level, higher scores refer to the lower level of policy implementation). In the simulation, the scale is reversed (higher level of implementation results in a higher score).
Corporate tax haven level	Uses the haven score as reported by the Tax Justice Network's Corporate Tax Haven Index 2019.
Maximum corporate tax haven level	Represents the tax haven score in the case a country has no implementation of CbCR and AEOI.
CbCR Implementation level	Uses the CbCR level as implemented by the corporate tax haven index. Just like the AEOI level, also here, the scale is reversed in the simulation model.
CbCR local access level	Uses the local filing of CbCR indicator as implemented by the corporate tax haven index 2019. Just like the AEOI level, also here, the scale is reversed in the simulation model.
Withholding tax rate	Calculates the average of the reported withholding tax rates for dividends, interest and royalty payments, per source (reported online by EY, KPMG, Deloitte and PWC). Finally, the total average is calculated.
FTE employed by tax authorities	Reports the number of full-time equivalents employed by the national tax authorities, Table 5.6 (OECD 2015).
FTE allocated to auditing activities	Reports the percentage of FTE allocated to tax auditing activities, as reported in Table D.4 (OECD 2019b).

Country population	Indicates the population count per square kilometre, retrieved from the UN's 2018 World Population (https://population.un.org/wpp/Download/Standard/Population/)
Population per allocated auditing FTE	Reporting resource ratio's in Table D.3 of (OECD 2019a), reporting the population per FTE.
Prescription time tax evasion	Prescription times for tax evasion as reported by (Rossel et al. 2019) in this book complemented with best practice information retrieved online for missing or unspecified values.
Expected audit rate	Assuming a maximum of 12 audits per year per FTE (as deemed reasonable by an expert on the Dutch tax authorities) this rate is calculated by the reciprocal of FTE allocated to auditing, multiplied by the population per FTE, multiplied by the prescription time.
Maximum imprisonment tax evasion	Maximum years in prison as reported by (Rossel et al. 2019) in this book complemented with information from Thomson Reuters Practical Law. ⁶
Criminalization threshold for tax evasion	Threshold value after which criminalization occurs as reported by (Rossel et al. 2019) in this book. If not provided, the level is calculated using the prescription time and average income.
Average income level	From USD to EUR converted amounts of the national average income as reported by UNDP (http://hdr.undp.org/en/content/gni-capita-ppp-terms-constant-2011-ppp).
Income inequality level	Consists of the GINI index, retrieved from the WorldBank (https://data.worldbank.org/indicator/SI.POV.GINI).
Indicator for personal and corporate liability	An indicator that states if legal liability for tax evasion can be prosecuted At the personal or corporate level, or both, as reported by (Rossel et al. 2019) in this book.
Expected penalty rate for tax evasion	The expected penalty rate is calculated using the average income, maximum imprisonment, crime threshold and legal liability measures. For some countries, legal documentation was available that provided penalty rates.
Income level per tax bracket	For each country, the corporate income taxes are retrieved using the PwC Worldwide Tax Summaries (https://www.pwc.com/gx/en/services/tax/worldwide-tax-summaries.html) for which the income level and associated tax rate are collected.
Tax rate per tax bracket	For each country, the corporate income taxes are retrieved using the PwC Worldwide Tax Summaries (https://www.pwc.com/gx/en/services/tax/worldwide-tax-summaries.html) for which the income level and associated tax rate are collected.

⁶ <https://uk.practicallaw.thomsonreuters.com>

dynamic environment of a society, agents move in social space, changing their local environment by losing and creating connections with other agents. Similar agents tend to attract each other.

4. Based on the audit rate, tax enforcers select zero or more agents in their neighbourhood and will detect evasion if it took place (i.e. an audit will always reveal the truth), after which they penalize the perpetrators. By definition, tax avoidance is not illegal and thus cannot be prosecuted.
5. Finally, the corporations learn from their auditing experience, share new insights with their neighbourhood. They also respond to their auditing experience according to the ‘bomb crater effect’ (Kastlunger et al. 2009), where some significantly increase compliance after being audited while others completely decrease it. Finally, larger imbalances between the domestic and relative power cause an increase or decrease in the tax morale, similar to the differences between coercive and persuasive power (Kastlunger et al. 2013; Mas’ud, Manaf, and Saad 2014).

14.5 Data Collection

In order to operationalize domestic (coercive and persuasive) power and international relative power of the state and the environment for each of the 27 European member-states and some additional European countries (UK, Iceland, Liechtenstein, Norway, Switzerland), 26 variables are collected or calculated, shown in Table 14.1.

In order to measure the domestically determined and the internationally determined relative powers, defined in the previous section, data on the enforcement capacity of the state and their tax policies is collected. Given that the differences between countries’ policies define the relative power, it uses the same data points but calculates the bilateral differences.

The first two variables of Table 14.1, the rule of law and trust in authorities, proxy the coercive and persuasive power respectively in the literature, see, e.g. Lisi (2012b) and Mas’ud et al. (2014). The initial tax morale provides the starting point after which the dynamics of the simulated system influence its development. As a starting point for tax morale, question v234 of two European Values Studies (Gedeshi et al. 2016, 2019) is rescaled (from 1–10 to 0–1) and used.

All other variables used to identify the underlying sources that construct these powers were inspired by the tax compliance literature, by policy reforms being discussed and by data available.

Country population is of importance because, in high density populations, the number of interactions among agents is typically higher. Hence agents get more input than in less dense countries. Finally, the average income level and income inequality level provide insight into the wealth distribution, which reflects the

agent's abilities and impacts when evading or avoiding taxes. The individual agent's income levels remain constant, based on GDP per capita (United Nations 2014) and the GINI measure of inequality (World Bank 2019).

In particular, variables that point at international tax competition and implementation of international tax regulations in the books and practice were added. Since we capture both tax avoidance and tax evasion in this model, also criminal punishment data were added for the latter.

Detailed analysis performed by the Tax Justice Network led to the development of the financial secrecy index (FSI),⁷ which indicates to what extent countries contribute to tax evasion possibilities and obfuscate avoidance practices (Cobham et al. 2015) and the corporate tax haven index (CTHI),⁸ focusing on preferential tax policies that tax avoidance schemes use (Tax Justice Network 2019 and Chapter 6). Policies that provide or remove veils of financial secrecy are collected and coded by the Tax Justice Network (2018) and used in the model's variable financial secrecy level.

In order to isolate the AEOI policy changes, the secrecy index is recalculated to the hypothetical situation in which no AEOI is available, the maximum secrecy level. The level of implementing AEOI is coded separately (AEOI implementation level) and offsets the maximum secrecy level. The same logic is applied to assess targeted corporate tax advantages (Tax Justice Network 2019), captured as the corporate tax haven level. Again, the policies of interest, CbCR implementation level and CbCR local access level are isolated to specifically assess their influence, leading to the maximum corporate tax haven level.

Besides the targeted policies, some other factors are used in the tax system, such as the use and height of the withholding tax rate and the income level per tax bracket, as well as the tax rate per tax bracket. The simulation considers both regressive and progressive CIT schemes but simplifies different withholding taxes to one average withholding tax rate. For foreign entities, the simulation uses the 'LACIT', the lowest possible tax rate developed by Tax Justice Network (Tax Justice Network 2019).

Little data is available about criminalization and enforcement policies. Based on legal analysis (Chapter 13) and reported resource allocation to tax auditing (OECD 2019b), an expected audit rate is calculated. In order to identify the enforcement capacity of the state, several different variables are used. Governments do not provide details on their enforcement policy since this may support tax evaders to find better ways to evade. An approximation of the probability to get audited is calculated using the FTE employed by tax authorities and FTE allocated to auditing together with the population, the population per allocated auditing FTE and defines the chance to get audited, the expected audit rate.

⁷ <https://www.financialsecrecyindex.com/>

⁸ <https://www.corporatetaxhavenindex.org/>

Once caught, what are the consequences? If the penalties are low, then even when the probability of getting caught is high, the total risk for evasion remains limited. To measure the expected penalty rate for evasion, the legal study in this book is used (see Chapter 13). Based on the maximum imprisonment tax evasion, an indicator of the severity of punishment, and criminalization threshold for tax evasion which defines at what level tax evasion is considered a criminal offence, one can calculate the penalty. Using the average income level, one can proxy the personal losses for the time spent in prison. Finally, the indicator for personal and corporate liability identifies whether corporations can be charged, the management can be held responsible and if they can be accountable for both the corporate behaviour as their own behaviour (tried twice for the same offence) which may strongly increase the penalty.

Besides the policy indicators, the perceived powers are also affected by the income inequality level of the state. For example, when the government has low power to enforce tax compliance, inequality should be higher.

14.6 Calibration of the Tax Policy Reform Model

In order to construct the baseline of the model that allows comparing the effects of different policy reforms, one first needs a well-calibrated agent-based model. Ideally, a well-calibrated agent-based model leads to consistently replicating known results, as is the case in, e.g. Franke and Westerhoff (2012). The problem with this policy simulation, though, is that estimation of the amounts of tax avoidance and evasion needed for calibration are still vague, as shown in Chapter 5, which is the main reason for developing this model in the first place. Therefore, the chosen alternative calibration process here uses known data from a Danish investigation on tax non-compliance, in combination with an arbitrary selection of a known tax haven, namely Ireland. The calibration is then validated using another pair of countries, namely an expected tax gap estimated in the United Kingdom, using Luxembourg as the tax haven of choice.

Based on a report (FISCALIS 2018) which provides clear information on the Danish situation in 2012, 80 per cent of the corporations demonstrate compliant behaviour. Half of the 20 per cent of non-compliant corporations are non-compliant by mistake. Together they account for a corporate income tax loss of approximately 20 per cent of the collected CIT. By running the simulation many times and altering different parameters (the calibration process), the configuration which simulates the expected behaviour most closely was retrieved.

The calibration shows that the costs associated with restructuring financial assets and corporate forms are, with 0.01 per cent of the transferred amount, considered negligible. The influence of the external local environment of an agent on its tax morale is expected to be around 52 per cent. This means that the average

tax morale of the neighbours is slightly more important than the agent’s internal morale, which demonstrates the power of the local social environment. Since coercive power decreases voluntary compliance (i.e., tax morale) while the persuasive power increases it (Wahl, Kastlunger, and Kirchler 2010), our model calculates that the difference between the powers results in an overall effect, for which the maximum change is calibrated to be 10 per cent (so if the coercive power is highest, 7, and the relative power the lowest, 1, the new tax morale will be around 90 per cent of the old level).

With respect to the slippery slope framework as it is implemented in this model (Kirchler et al. 2008; Prinz et al. 2014), the domestic power of the government affects corporations with a near-zero tax morale to comply with the regulation (α -low = 0.15) and becomes much more relevant for those with a higher tax morale (α -high = 0.49). A similar effect applies to the relative power (β -low = 0.19 and β -high = 0.82), but this effect is much stronger. With respect to tax avoidance the domestic power starts much weaker (δ -low = 0.19, δ -high = 0.45) while the relative power is somewhat stronger (ϵ -low = 0.11, ϵ -high = 0.76). Compared to the perceived relative power of the state, the perceived domestic power has a stronger effect on low-morale agents but remains small as tax morale grows, the opposite is true for the perceived relative power.

After the model is calibrated, using a high-performance cluster computer, each possible scenario is executed six times, resulting in 61,440 simulations, of which the average result is used for further analysis. The simulation uses the first ten steps (years) as an initialization period for the simulation in which the agents create the ‘memory’ they need for learning the expected audit rate. Then, the simulation starts in 2004 and ends in 2034. The results for Denmark with respect to Ireland indicates a CIT loss of approximately 16.1 per cent (CI: 11.9–20.2 per cent) and on average a compliance rate of 81.3 per cent of corporations (CI: 77.5–85.1 per cent) in the year 2012, as shown in Figure 14.3. This means that the

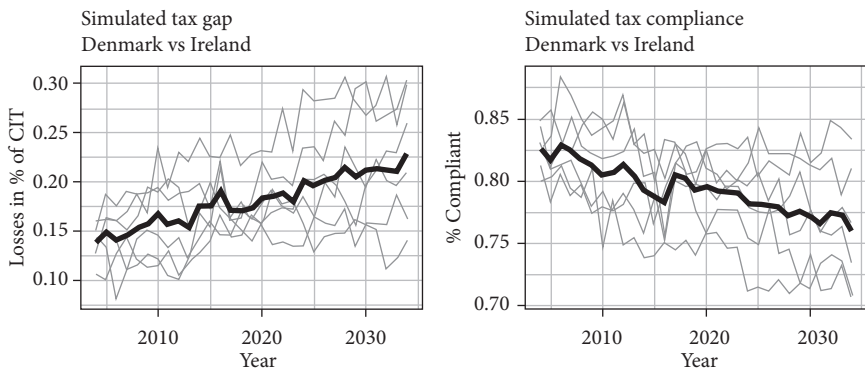


Figure 14.3 Simulation results of avoidance and compliance in Denmark.

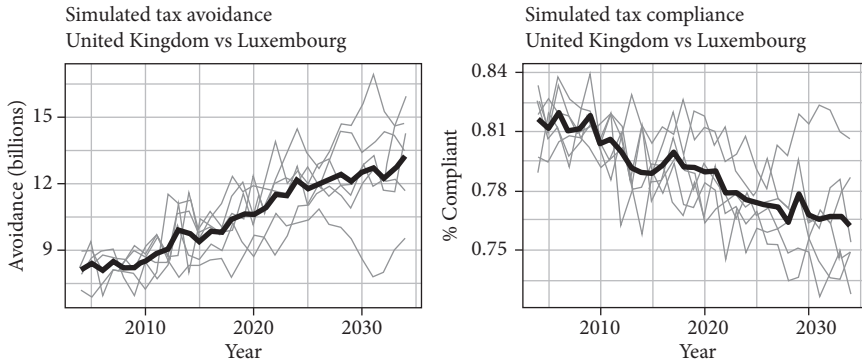


Figure 14.4 Simulation results of avoidance (amount) and compliance in the United Kingdom.

calibration worked properly and the model predicts within the range that was found, approximately 20 per cent, in the earlier study (FISCALIS 2018).

Continuing the simulation under the current policies, clearly shows a decline in corporate compliance in Denmark, losing approximately 0.35 percentage points per year, increasing the total loss from 16.1 per cent in 2012 to 23.0 per cent of the collected CIT in 2034.

To validate the results, another country must yield proper results too. Therefore, using the breakdown on page 17 of the tax gap reported by HM Revenue & Customs (2019), the expected gap of 2017–18 should be £4.0 bn for business taxpayers' self-reported income tax and £5.2 bn. in corporation taxes, totalling to £9.2 bn. or €10.9 bn. This estimate comes close to the avoidance estimates of this simulation as depicted in Figure 14.4 (which are €9.7bn in 2017 and €10.4bn in 2018).

14.7 Simulation Results of Different Scenarios of Tax Policy Reforms

As already shown in the calibration and validation section, to define the impact of the different policies, the analysis is separated into five scenarios. The baseline scenario, in which the status quo is being simulated, thus the AEOI level, CbCR level, and CbCR local access policies as indexed by Tax Justice Network are used for both the source and target country. Also, no further change in these indices is implemented. This baseline scenario is compared to the 'Nothing' scenario, a counterfactual scenario that shows what would have happened if none of the policies had ever been implemented at all. Figure 14.5 shows the two scenarios to date, which visually indicate the effectiveness of the current policies. While tax avoidance seems to be little affected by the currently implemented policies, tax

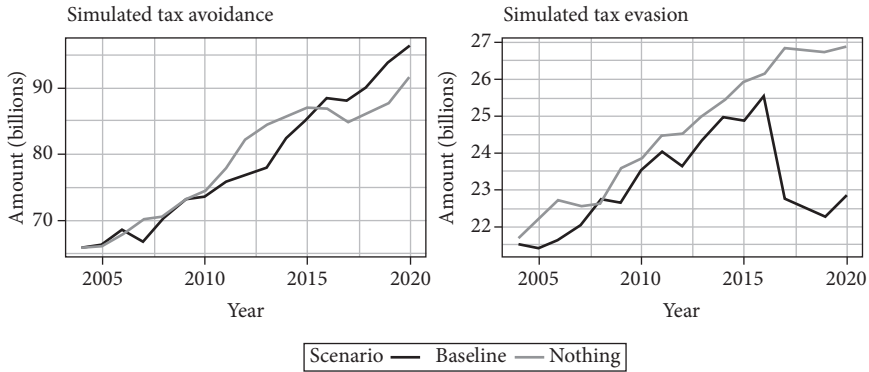


Figure 14.5 Comparing the baseline scenario with a counterfactual of no policies at all.

evasion practices seem to be significantly reduced. Nevertheless, tax evasion is higher in 2020 than in 2005.

Given that tax avoidance does not show an apparent change over time (left chart), the implementation of CbCR seems not very effective or the results have many caveats and uncertainties (Hugger 2019; Overesch and Wolff 2017; De Simone and Olbert 2019) while AEOI appears effective (right chart) in fighting tax evasion showing a big drop after 2015 (Marchiori and Pierrard 2018 and Chapter 7). Reality might be more complex, CbCR and AEOI might have spillover effects, thus CbCR might influence tax evasion and AEOI might influence tax avoidance. Therefore, we simulate what would happen if we fully implement one policy while leaving the other unchanged.

The ‘CbCR Full’ and ‘AEOI Full’ scenario’s test compliance behaviour in which the continuation of full implementation of one of the respective policies in all EU member states is simulated while the other policy remains unchanged. The ‘Cancel Both’ scenario depicts the case in which both policies are dropped. Finally, there is the ‘Both Full’ scenario in which both policies are fully implemented.

Figure 14.6 shows that CbCR has had a strong effect on both avoidance (left) and evasion (right) practices but only temporarily, which seems to be caused by a large drop in tax morale (see Figure 14.7). The implementation of AEOI seems to have affected tax evasion, but its effect remains quite unclear with respect to tax avoidance practices, which is explained by the fact that many countries already fully implemented the policy. Cancelling all policy actions, as of 2019, increases the expected corporate tax evasion and avoidance indicating that doing away with the policy reform would worsen the situation and that the policy reforms had some positive impact on tax compliance.

Looking at the results in numbers, for each of the scenarios, the total amounts of tax avoided and evaded are calculated for all European source countries and

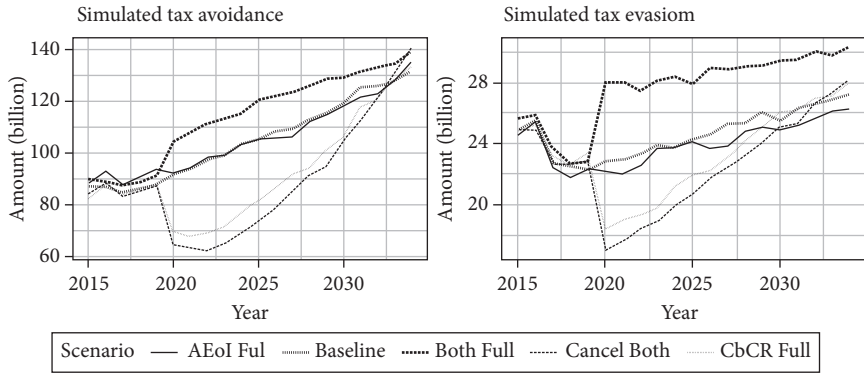


Figure 14.6 Simulation results of total European CIT avoidance and evasion.

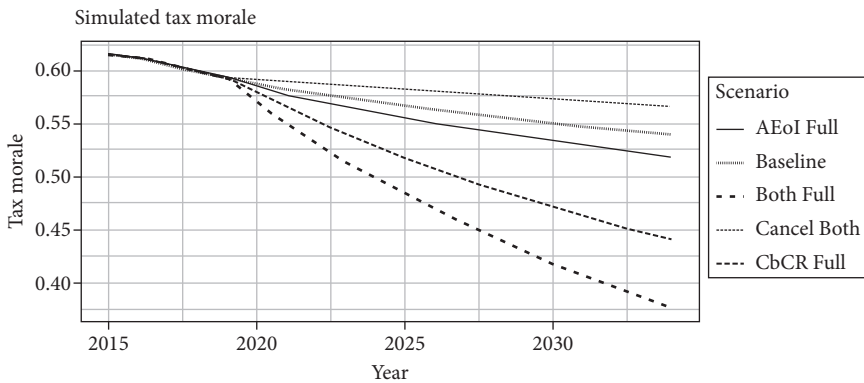


Figure 14.7 Development of tax morale due to policy implementations.

added together per destination (European countries only) to get the full extent of the tax-losses due to avoidance and evasion combined within Europe, as provided in billions of Euro in Table 14.2.

In the European context, the current estimate of tax non-compliance is €104.9bn and is expected to rise with 29.5 per cent to €135.8bn ten years later, *ceteris paribus*. Dropping the implemented policies leads to the largest increase in revenue losses of 39.9 per cent, an annual extra 43.2 billion Euro. Any other scenario, AEOI, CbCR, and both, results in lower total losses in 2029 compared to the baseline scenario, but its long-term validity needs a closer look especially given the steep decrease of tax morale (as shown in Figure 14.7).

If EU member states continue to implement the CbCR and AEOI policies equally, they increase their domestic coercive and persuasive power, but their relative power is not affected by these actions. Especially in the ‘Both Full’ scenario in which all policies are implemented fully by all countries, this change affects the

Table 14.2 Overview of expected tax losses due to avoidance and evasion within Europe

Scenario	2009	2019	Diff.	2029	Diff.
Baseline	€90.9bn	€104.9bn	+15.4%	€135.8bn	+29.5%
Cancel both	€92.8bn	€108.4bn	+16.8%	€151.6bn	+39.9%
CbCR full	€87.9bn	€106.3bn	+20.9%	€121.2bn	+14.0%
AEoI full	€91.3bn	€110.5bn	+21.0%	€134.0bn	+21.3%
Both full	€90.8bn	€104.5bn	+15.1%	€113.5bn	+8.6%

tax morale to such an extent that both tax evasion and avoidance become more popular after the initial dip.

According to the simulation results, the AEoI policy seems the most promising in reducing tax evasion, but the policy will not be able to curb the CIT evasion and avoidance problem into decline. The reason is that the tax morale of agents declines. The domestic power of the state, which increases, is not compensated by an increase in relative power within EU countries since they did the same policy reform. Perhaps European countries will have to accept some increase of non-compliance in order to achieve a fairer distribution of tax revenues. (As long as there are differences with the rest of the world there might still be some effects not caught in the model.)

14.8 Simulation Results for Individual European Countries

The amounts of tax evasion and tax avoidance that are flowing from a source country into the destination country as a consequence of tax policy reforms (full CbCR implementation, full AEoI policy reforms, both reforms, or fictitiously cancelling them all) can be calculated by summarizing the agents' decisions to move revenues (legally or illegally) from the source country to the destination in order to identify which countries are the real secrecy jurisdictions and corporate tax havens in Europe.

For each country, Figure 14.8 shows on the horizontal axis how much taxes are avoided using that country, while the vertical axis shows the amount of taxes evaded. The known tax havens like Luxembourg, Switzerland, The Netherlands, and Ireland score high in receiving avoidance flows, but surprisingly Austria, Finland, and Belgium receive large flows too. From a CIT evasion perspective, Liechtenstein provides the best secrecy, but Norway, Denmark, and Sweden also receive many funds, possibly because the penalty rates are considered to be low compared to the other countries. The importance levels are calculated using a normalized scale of the total amount avoided and evaded, but the number of levels displayed in the legend is automatically determined and may differ between figures.

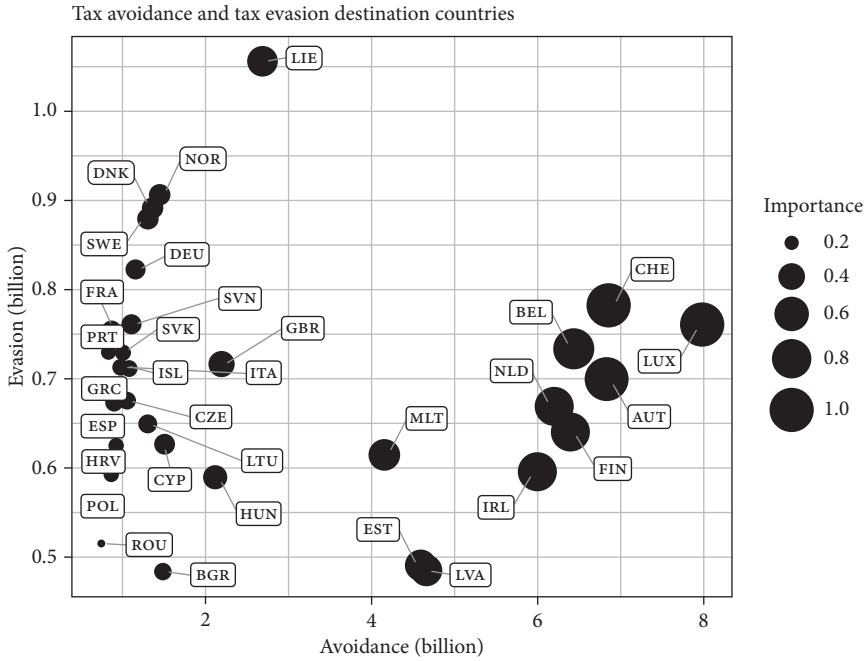


Figure 14.8 Simulated destinations for taxes avoided and evaded in 2019 in the baseline model.

Reversing the picture, looking at the countries where the biggest losses take place, leads to Figure 14.9, where the countries most affected by CIT loss due to tax avoidance are Spain, the UK, and Italy. France loses around €3.7bn per year due to tax evasion practices, but the UK, Spain, and Italy lose significant revenues caused by evasion as well.

Continuing the simulation from the status quo until 2029, without making any further changes in policies, leads to a strong increase of attractiveness for all existing tax and secrecy havens and thus a redistributive effect among countries will not take place. Figure 14.10 shows the sum of the amounts avoided and evaded per destination country and indicates that the distribution in 2029 resemble the current distribution indicating that no redistributive effect takes place.⁹

When comparing the incoming tax avoidance flows of the baseline scenario with the ‘Both Full’ scenario, meaning that AEOI and CbCR will be fully implemented by all countries, the same effect is observed: tax havens remain attractive, but as intended, the increase of tax avoidance between the two scenario’s is reduced.

While the amounts are important to get a sense of urgency and the lost opportunities, a comparable view on the effects of specific policies is gained by

⁹ The Pearson’s correlation coefficient is 0.997.

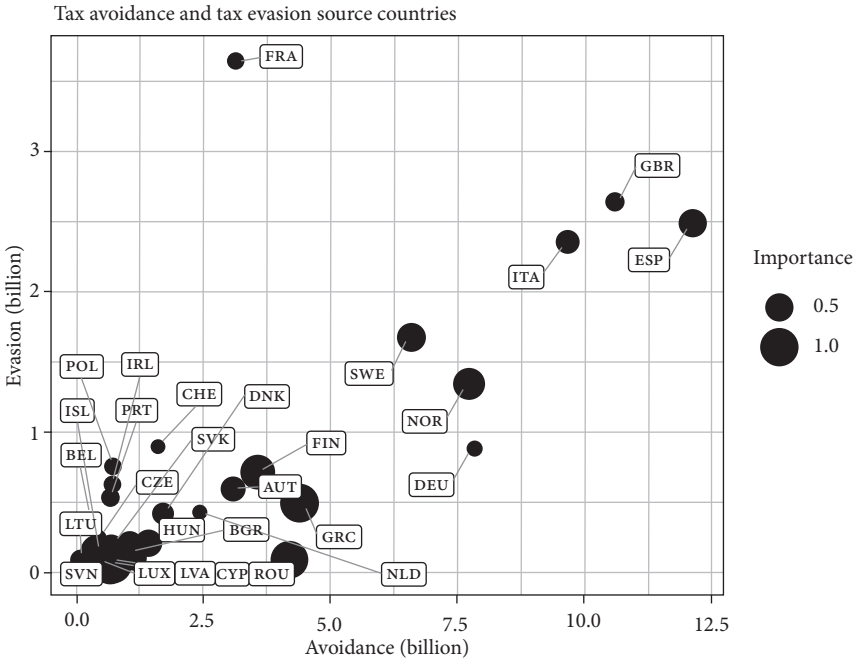


Figure 14.9 Simulated sources for taxes avoided and evaded in 2019 in the baseline model.

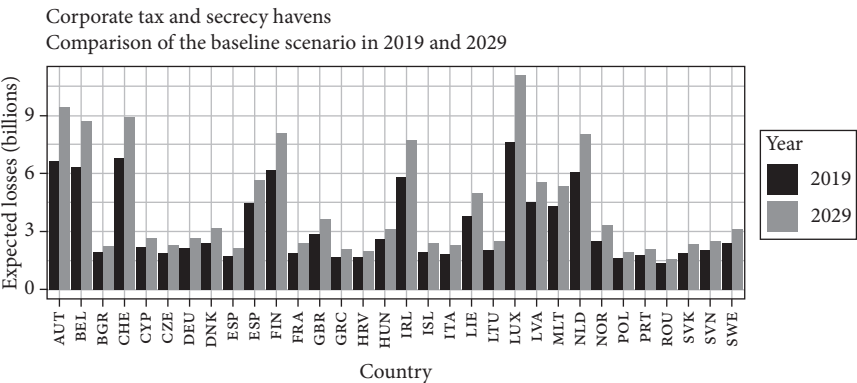


Figure 14.10 Overview of current simulated tax and secrecy haven ranking 2019 and 2029.

rescaling the results into relative positions so that the differences between years (Figure 14.11) or scenarios (Figure 14.12) can be compared.

Figure 14.11 and Figure 14.12 show the position of all European countries as a destination for tax avoidance (horizontal axis) and tax evasion (vertical axis). The further to the right, or to the top, a country is positioned, the more taxes are

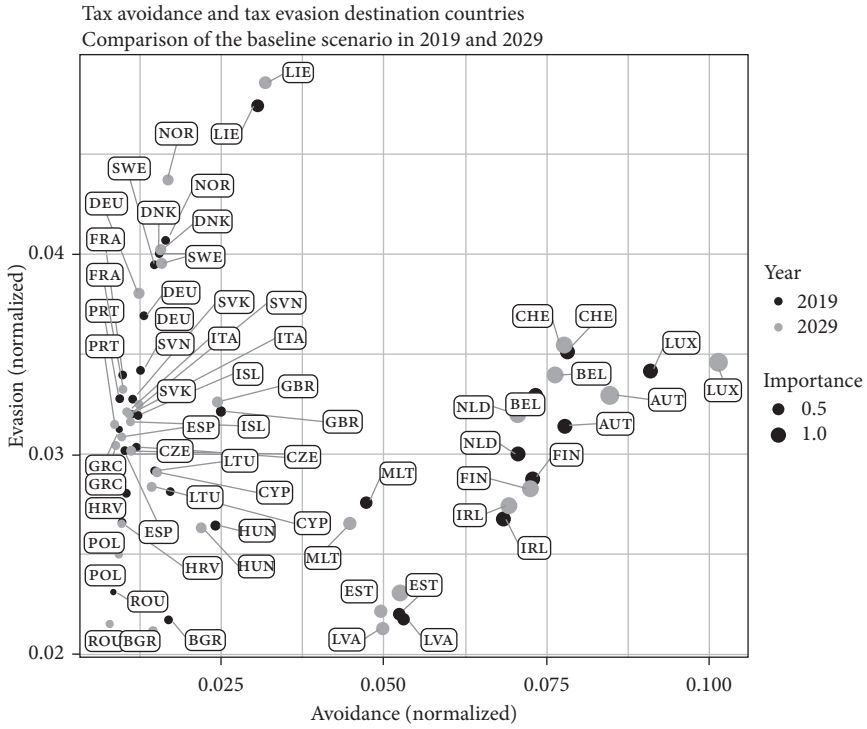


Figure 14.11 Temporal changes in the baseline scenario.

avoided or evaded due to that country. While in total the amounts of tax evasion and avoidance increase, it is clear that the relative positions of the tax destinations change little. Luxembourg, for example, becomes more attractive for tax avoidance while Norway strongly increases its evasion position (Figure 14.11). While the scenario in which both policies are fully implemented has the highest absolute impact, the relative impact per country seems to have little effect, i.e., the known tax havens remain the same (Figure 14.12).

By aggregating the average increase or decrease in the relative position for the top, middle and bottom evasion and avoidance flow receiving countries for each scenario compared to the baseline, an expected total change is calculated (see Table 14.3). Dropping all policies increases the position of the top ten tax havens while deteriorating the relative position of all others. Implementing CbCR or both CbCR and AEOI increases the position of both the middle and lower receivers, the latter scenario, ‘Both Full’, has the strongest effect. Only implementing AEOI helps the receivers in the middle but hurts the redistribution effect since the top ten is losing very little while the bottom ten loses a lot.

In Table 14.3, the first line reads that the most significant tax haven, Luxembourg, under the baseline scenario is the recipient for about 10.1 per cent

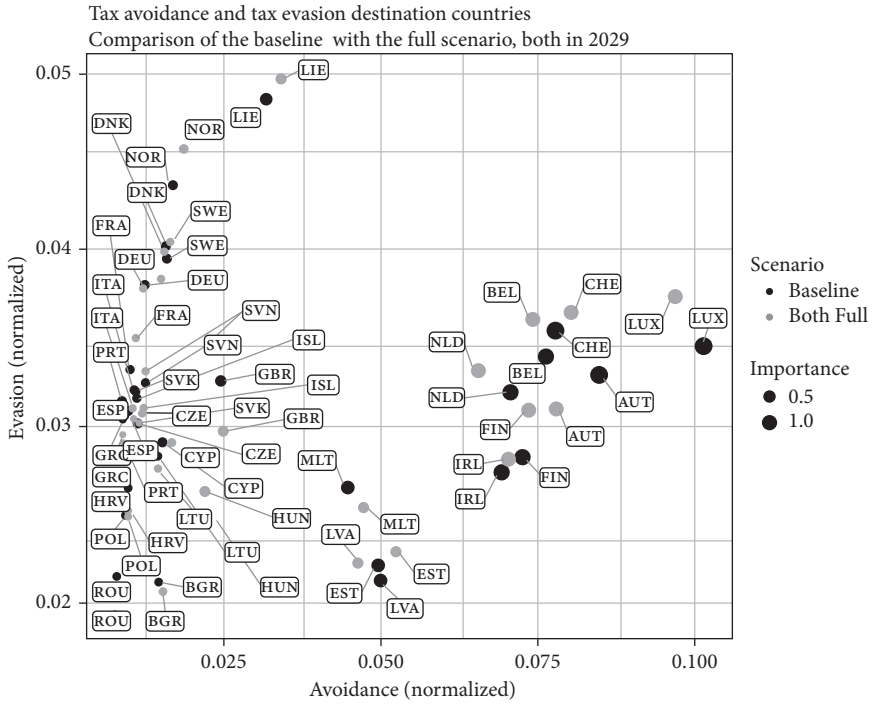


Figure 14.12 Changes between ‘baseline’ and ‘both full’ scenarios for 2029.

(second column) of all the outbound flows. The next two columns show that fully implementing CbCR decreases the position of Luxembourg to 9.9 per cent (which is a change of -2.0 per cent). By aggregating the change in receiving inflows for the current winners, middle, and losers (bottom four rows in Table 14.3) one can see that by fully implementing both scenarios, the highest increase for the losers is realized (0.311) and the current tax havens lose the most (-0.175). Figure 14.13 presents geographically the increase or decrease in relative position for European countries presented in Table 14.3 for the four alternative scenarios explored.

Countries that increase their relative position, i.e. the relative amount of inflowing avoidance and evasion streams, are marked darker, while those losing their position are lightly coloured. The shading is not linked to the monetary amounts (Table 14.2), but rather provides insight into the countries that, relative to all others, profit or lose the most. A geographical visualization of the differences between the baseline and all other scenario’s is displayed in Figure 14.13, where the dark countries represent those who benefit most from the scenario and the lighter ones gain least or lose most.

As can be seen from Figure 14.13, where darker countries gain from the specific scenario and lighter countries suffer from these policy initiatives, for example,

Table 14.3 Scenario comparison of normalized tax avoidance flows

Target Country	Baseline	Cancel Both	CbCR Full	AEoI Full	Both Full		
Luxembourg	0.101	0.101	0.099	-0.020	0.105	0.097	-0.040
Austria	0.085	0.077	-0.094	-0.047	0.081	0.078	-0.082
Switzerland	0.078	0.077	-0.013	0.026	0.078	0.080	0.026
Belgium	0.076	0.076	0.000	0.000	0.074	0.074	-0.026
Finland	0.073	0.078	0.068	-0.027	0.073	0.074	0.014
Netherlands	0.071	0.073	0.028	0.000	0.071	0.065	-0.085
Ireland	0.069	0.069	0.000	-0.043	0.068	0.070	0.014
Estonia	0.050	0.053	0.060	0.060	0.055	0.052	0.040
Latvia	0.050	0.048	-0.040	-0.060	0.046	0.046	-0.080
Malta	0.045	0.047	0.044	-0.022	0.046	0.047	0.044
Liechtenstein	0.032	0.031	-0.031	0.063	0.031	0.034	0.063
United Kingdom	0.024	0.025	0.042	0.083	0.024	0.025	0.042
Hungary	0.022	0.023	0.045	0.045	0.022	0.023	0.045
Norway	0.017	0.017	0.000	0.059	0.016	0.019	0.118
Denmark	0.016	0.015	-0.063	-0.063	0.015	0.015	-0.063
Sweden	0.016	0.014	-0.125	0.000	0.015	0.016	0.000
Bulgaria	0.015	0.013	-0.133	0.000	0.016	0.015	0.000
Cyprus	0.015	0.016	0.067	0.067	0.015	0.017	0.133
Lithuania	0.014	0.014	0.000	-0.071	0.015	0.014	0.000
Germany	0.012	0.011	-0.083	0.000	0.012	0.012	0.000
Slovenia	0.012	0.013	0.083	0.083	0.013	0.012	0.000
Czechia	0.011	0.011	0.000	0.000	0.012	0.012	0.091
Iceland	0.011	0.011	0.000	0.182	0.012	0.012	0.091
Italy	0.011	0.010	-0.091	0.000	0.011	0.010	-0.091
Slovakia	0.011	0.011	0.000	0.000	0.011	0.011	0.000
Croatia	0.010	0.009	-0.100	-0.100	0.009	0.010	0.000
France	0.010	0.010	0.000	0.100	0.010	0.011	0.100
Spain	0.010	0.010	0.000	0.000	0.010	0.011	0.100

Greece	0.009	0.008	-0.111	0.009	0.000	0.009	0.000	0.009	0.000
Poland	0.009	0.009	0.000	0.010	0.111	0.009	0.000	0.010	0.111
Portugal	0.009	0.008	-0.111	0.009	0.000	0.009	0.000	0.009	0.000
Romania	0.008	0.008	0.000	0.007	-0.125	0.007	-0.125	0.008	0.000
<i>Change winners</i>			<i>0.054</i>		<i>-0.134</i>		<i>-0.006</i>		<i>-0.175</i>
<i>Change middle</i>			<i>-0.198</i>		<i>0.266</i>		<i>0.097</i>		<i>0.429</i>
<i>Change losers</i>			<i>-0.413</i>		<i>0.168</i>		<i>-0.134</i>		<i>0.311</i>
<i>Total change</i>			<i>-0.557</i>		<i>0.300</i>		<i>-0.043</i>		<i>0.566</i>

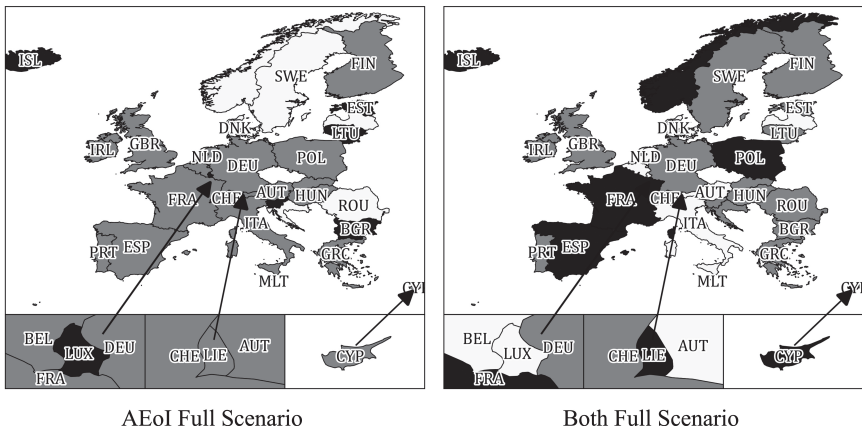
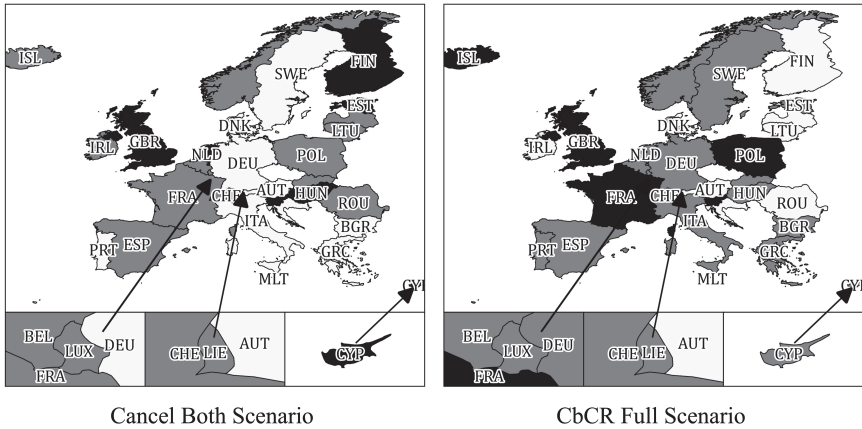


Figure 14.13 Comparison of relative impacted winners (dark) and losers (light) per scenario.

shows that fully implementing both CbCR and AEoI (bottom right) supports Norway, Poland, France, and Spain, increase their incoming foreign flows, but also that of Liechtenstein and Cyprus. On the other hand, Austria, Luxembourg, The Netherlands, and Belgium loose foreign flows relative to their previous position. The United Kingdom would have profited from stopping both scenarios after 2019 or implementing only CbCR,

14.9 Conclusion and Future Research Needed

This chapter provides a model that allows evaluating tax policy reforms. It first reviews some of the difficulties in assessing the effectiveness of tax policy

implementation and provides an alternative approach based on the psychological foundations of tax compliance, a redefined slippery slope framework for an international tax regime. Within the concept of a tax ecosystem, a self-organizing complex system, the chapter describes and applies an agent-based simulation. Afterwards, the simulation tests the effect of both country-by-country reporting and automatic exchange of information on corporate tax avoidance and evasion within all EU member states and five more European countries.

The model estimates that without new developments corporate tax avoidance schemes will increase the CIT losses from €104.9 to €135.8 billion, while fully implementing both Country-by-Country Reporting and Automatic Exchange of Information is expected to decrease the total CIT losses with 16.4 per cent (resulting in €113.5 billion in 2029 instead). So, policy reforms were better than doing nothing but were not able to reverse non-compliance.

While both AEoI and CbCR do have intended effects of reducing tax avoidance and tax evasion, they did not manage to turn around the trend of increasing avoidance and evasion. Tax avoidance and tax evasion increased less than without reforms. However, overall tax compliance did not increase. This is because these reforms had negative effects on tax morale. This means that additional policies must be added which do not allow for loopholes to escape taxation. Tax avoidance must be perceived as tackled in order to affect tax evaders' moral positively.

The power of this agent-based model lies in its ability to deal with a complex adaptive system, and to apply a model of planned behaviour to virtually test and predict policy effects. Also, the model allows relating publicly available data, e.g. the government revenue dataset of the UNU Wider project (ICTD/UNU-WIDER 2017) to estimations of the associated tax gap.

The model shows the larger effect of implementing Country-by-Country Reporting compared to AEoI, which contrasts with current literature. A possible explanation for this result is the extensive effect policies have on the development of tax morale. In our model, corporations and (wealthy) individuals are treated both as agents, treating individuals and companies as interchangeable. At the same time, the effect of CbCR on the tax morale of all taxpayers might be underestimated in the current literature.

This model is the first one to jointly include tax avoidance and tax evasion. Future research may benefit from a model in which different agents represent corporations and individuals with ties between them, where the corporate behaviour would depend indirectly on the management's joint tax morale. Another potential factor that may alter the results is the hidden development of the perceived coercive and relative power of the government, e.g. the insignificant coefficients (large variance) for the level of AEoI. Therefore separating the coercive power in a truly coercive power and a legitimate power as done by Hartl et al. (2015) may provide additional insight.

Although the current CbCR policy does not show a strong effect to date on corporate tax avoidance, its power to affect the tax morale is of key importance for the long-term development of non-compliance. Also, the effect of AEOI would not have been as large if CbCR was not implemented as well. Therefore, it concludes that the series of policy changes combined is of critical importance in a complex adaptive system.

Perceived from a bilateral stance, this agent-based simulation model will be useful and can be extended for policymakers to assess the effectiveness of a potential policy change and can thus determine the best response to counter the spillover effect due to tax competition.

Some of the results are surprising, such as the relatively high position of Norway as a secrecy jurisdiction and Finland as a tax haven. The most likely explanation for this phenomenon is the fact that the simulation only includes two countries at a time. Additionally, in terms of Garcia-Bernardo et al. (2017), this model only recognizes tax evasion and avoidance end-points, the so-called ‘sinks’, while ‘conduit’ countries remain missing. An extension of this model in which agents may compare and choose from multiple countries, multiple times, could, therefore, be of interest, especially when pathways via multiple jurisdictions can be formed. Also, more complex corporate structures could be introduced.

14.10 Acknowledgements

The authors thank all the participants of the COFFERS project. In particular James Alm and Erich Kirchler for their valuable input in earlier versions of the agent-based model, Joras Ferwerda and Lucia Rossel Flores for their input and editing of this chapter. In addition, we thank all participants of the COFFERS dissemination conferences in Vienna and Brussels for their questions and suggestions.

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15

Conclusions

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The financial crisis, combined with a fiscal crisis and the need for public revenues, has put tax regulation prominently on the international agenda. After a long phase of unsuccessful international tax policy reforms—‘a cold or slow burning phase of regulation’—suddenly a ‘hot or fast burning phase of regulation’ occurred (see e.g. Boine et al. 2005; Seabrooke and Tsingou 2019). This meant that contrary to earlier reform efforts, which were lax, outlying, and lacked legitimacy, significant changes in international tax regulation such as improving the exchange of information, increasing transparency, closing loopholes in the international tax system, and improving cooperation among countries, seemed suddenly possible.

Throughout this book, we have explored how international tax regulation in the aftermath of the financial crisis has affected the diverse actors involved. In order to analyse complex reactions, we use the metaphor of the tax ecosystem. In Section 15.1, we describe the actors involved in international tax policy changes. Section 15.2 shows the amount of unpaid taxes at stake, and hence, the relevance and necessity of international tax reforms. Section 15.3 assesses the effectiveness of new regulations for corporations and for individuals in the tax ecosystem. We conclude with recommendations of how to improve the international tax regime in order to combat tax avoidance, tax evasion, and money laundering.

15.1 Actors Involved in International Tax Policy Change

There are multiple actors and authorities involved in an international tax system. In order to grasp their interactions, we view the tax system as an ecosystem with diverse ‘species’ trying to survive. When faced with large shocks, such as new international regulations, the tax ecosystem will—similar to nature after a volcano eruption—try to adapt. Species will try to survive; some will become bigger, others will be extinct, new ones will emerge. Actors are both reacting to change and driving change.

As Laage-Thompsen and Seabrooke show in Chapter 2, changes in the international tax ecosystem can be driven by diverse actors’ claims to different forms of

authority: to the official authority of governments, the professional authority of associations and tax experts, and practice-based forms of authority such as tax practices of successful companies. Their definition of actors is a broad one that includes persons, organizations, institutions, and political entities; these are the species of their tax ecosystem.

15.2 Jurisdictions and National Laws

The first type of actors involved are countries and other sovereign jurisdictions that can compete for specific segments of taxation in order to find their niches within the ecosystem. Some will do this by trying to attract Intellectual Property investments by offering tax benefits; others will try to attract general Foreign Direct Investment with low tax rates. Some aim at attracting real investment, others at attracting ‘paper’ investment. As a result, the political interest they have in change can be quite diverse. As Milogolov (2019) shows, the combination of tax tools that countries use depends, among other things, on their degree of economic development, a variable that changes over time and also gives rise to changes in tax competition.

The actors in our tax ecosystem act under defined rules; these rules are encompassed in the legal system that sets boundaries between what is legal and what is illegal tax behaviour. Ambiguities in these rules can create loopholes in the tax system, which new regulation can then close. However, when laws are set nationally, loopholes can emerge at the international level. A famous example is the ‘Double Irish Dutch Sandwich’, illustrated in Figure 15.1, by which American companies, rather than paying 35 per cent corporation tax in the US (now lowered to 21 per cent by President Trump) managed to escape taxation. They shifted their profits from European sales as royalty payments or licence fees from one Irish daughter company through The Netherlands (where intra-European transfers for royalties are tax-free) to a second Irish daughter company with remote management (which was by then tax-free in Ireland) seated in Bermuda. Under international pressure, Ireland has changed its law.

In light of such abuses of the law in a COFFERS organized conference in Vienna¹ experts discussed whether the law could draw a sharp line between what is legal (tax avoidance) or illegal tax behaviour (tax evasion). This discussion led to the deduction that even if the law in the books would be capable of drawing this line straightly, the law in practice might still vary. As Wright and Kreissl (2014) expressed: ‘Black letter law is categorical and binary (yes/no; legal/illegal). Nevertheless, the real world is multidimensional, complex, and ambivalent (more

¹ For further information or summaries of COFFERS events see www.coffers.eu

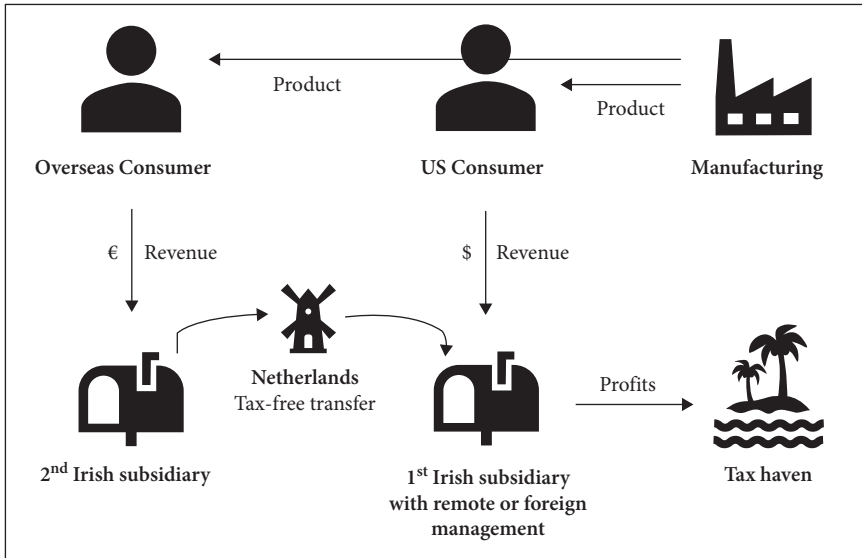


Figure 15.1 The Double Irish Dutch Sandwich.

Source: Author-made.

or less; as well as; conflicting interpretations of events and actions). It is the human factor that counts as well.’ How laws are executed in practice, not only between countries but also within a country varies. In our project, we found, that even public prosecutors of the same country, gave different answers as to whether they would prosecute a specific tax evasion case and how they would do it (Rossel et al. 2019). Killian et al. in *Chapter 12* find that ambiguities in tax rules can trigger aggressive tax planning or innovation by tax advisors, opening the door for tax positions and advice that obeys the letter but not the spirit of the law.

Law is in itself complex, and tax law is not an exception. Some countries have separate tax codes that include all tax-related regulation including that in charge of punishing tax evaders; others have tax crimes included in the general penal code. Fines and criminal punishment differ widely among EU Member States, *Chapter 13* gives an overview of tax law in the twenty-eight EU Member States and shows significant differences in as to what are the maximum and minimum jail sentences that someone can face for committing a tax crime. A tax criminal in the EU could face only a maximum of six months prison time in Malta, while in Austria or France this could be up to ten years and even up to twelve years in Slovenia.

In the tax ecosystem, national governments are important actors that have to find a balance between the international pressure to fulfil treaties reducing tax competition and national requests of protecting local industry and at the same time attracting international investors. They act in a double Principal-Agent Settings,

squeezed between two different needs (as in Ferwerda et al. 2019) of maintaining international attractiveness and reputation and protecting local actors.

15.3 International Organizations

In an increasingly multipolar world, global institutions and actors also come to play and constitute an important part of the tax ecosystem. Intergovernmental organizations like the OECD which have become key players in the tax arena by pushing forward international tax reforms (Chapter 2), though they are dependent on their financing countries for the acceptance and implementation of such. The fact that only small islands but no single OECD country were on the first OECD (1998) list of Harmful Tax Practices is just one example of the politics involved in deciding which jurisdictions get shamed and which ones do not.

As Ates et al. from the Tax Justice Network show in *Chapter 6*, when ranking countries for the Corporate Tax Haven Index, there are indeed some islands, like the British Virgin Islands, Bermuda, and the Cayman Islands which rank as top secrecy providers, but these are followed by OECD member countries like the Netherlands, Switzerland, and Luxembourg, as well as Singapore, Hong Kong and the UK.

This chapter confirms that blacklists often ignore the role that powerful countries play in the international arena and overestimate the participation of smaller or politically weaker jurisdictions. As Ferwerda et al. (2019) show, blacklists made by international or intergovernmental organizations are doomed to fail. Blacklists will become empty because of diplomatic negotiations trying to escape the economic sanctions involved in blacklisting. An example of this was the failure of the EU blacklist of money laundering initiated by EU commissioner Vera Jourova, in March 2019, which had listed Saudi Arabia and then had to be withdrawn. Also diplomatic relations can be at stake and can prevent listing all the black sheep.²

The above points out why blacklists—if considered useful at all—should either be done by independent non-profit organizations (e.g. Tax Justice Network or Transparency International) or replaced by white lists of best practices. Pointing out positive practices might be more encouraging than naming and shaming under the pressure of economic sanctions. The latter will only lead to compliance in the books, compliance on paper, but not in practice.

In 2017, the OECD issued the Ten Global Principles to Fight Tax Crime based on the experiences of 31 jurisdictions. This living document sets out the ten essential legal, strategic, administrative, and operational requirements for effectively fighting

² See the news item by Reuters: 'EU states block blacklisting Saudi, Panama over dirty money', accessed 13 February 2020 at <https://www.reuters.com/article/us-eu-saudi-moneylaundering/eu-states-block-blacklisting-saudi-panama-over-dirty-money-idUSKCN1QO15M>

tax crimes. Principle 7 states ‘make tax crimes a predicate offence for money laundering’. However, how jurisdictions will implement these principles is left up to them to decide; here is where the main weakness of these OECD principles lies.

Another intergovernmental organization involved in the international tax game is the Financial Action Task Force (FATF) in charge of fighting money laundering, which sets the international standards of anti-money laundering under a strong influence of the United States. As can be seen from the blacklisted countries over time (North Korea, Iran, Myanmar), intense geopolitical pressures influence these decisions. The fact that the FATF in 2012 set tax crimes as a predicate crime for money laundering, so that not paying taxes could suddenly become a serious crime, similar to drugs, corruption, and financing terrorism, had a severe impact on how unpaid taxes are perceived. The fact that the US has not put tax evasion on its own list of predicate crimes until today is only one of the peculiarities in which geopolitical pressure can work. As Chapters 7 and 8 show, the lack of reciprocity regarding Country Reporting Standards and Automatic Exchange of Information between the US and Europe mirrors this double standard.

15.4 Corporations

The rules of the game are partially pushed by intergovernmental actors through recommendations such as those mentioned above, and implemented but also modified by governments. But there is another group that plays literally and figuratively with these rules, namely market participants such as corporations and investors, who want to maximize profits and in turn end up paying little to no taxes. As Chapter 2 shows for one hundred big corporate holdings, company constructions that are set up to exploit loopholes in international tax law can be very sophisticated. Over time these structures have become more and more complex. The use of ‘in-betweeners’—subsidiaries in offshore centres that are linked to subsidiaries in other countries—is typical for tax avoidance schemes. The authors of the chapter see ‘opportunity spaces’ created by corporations by setting up a large variety of shell companies in different countries so that they can make use of them whenever needed. The fact that the IMF (Damgaard et al. 2019) estimates that 15 trillion USD are parked in shell companies worldwide shows that the space of opportunity for companies to avoid taxes is vast.

15.5 Experts

Finding loopholes in international tax law is not an easy task: it requires specialized knowledge; this is why professional accounting firms or tax planning companies play an essential role in facilitating the knowledge necessary to do this.

Professional service firms like the Big Four (KPMG, PwC, EY, and Deloitte) are sometimes in a schizophrenic twofold position, advising governments on how to regulate taxation while at the same time they are advising their clients on how to avoid paying taxes. Nevertheless, they do not only advise and plan, but they are also in charge of doing the auditing of many companies (PwC does, for example, the auditing of the financial management of our COFFERS project in The Netherlands). The new international regulations, similar to a volcanic eruption in nature, disturb their business since their long-term planning depends on clear and predictable rules. This is why change can mean endangered business opportunities. For example, Lux Leaks—information about Luxembourg’s tax rulings set up by PwC for more than 300 companies between 2002 to 2012—revealed tax avoidance constructions and tax rulings for big company clients from PwC between 2002 and 2012, impacting later efforts to regulate international taxation. Clients getting exposed publicly or—as is the case with Apple—having to face lawsuits, is damaging for tax experts’ business. Therefore, the Big Four are also willing to accept new rules as long as they do not regularly change again and again and allow stable business. Predictable rules are essential for them rather than a vacuum of unclear, new, and ever-changing regulations.

There are all sorts of highly trained and paid lawyers, tax advisors and accountants in the tax ecosystem, making a business out of identifying tax loopholes. But as Chapter 12 shows, tax experts also have their professional ethics and have to find a balance between trying to minimize tax payments for their clients and their tax morale. They act differently in different environments. High financial secrecy and lax tax regulation influence their behaviour negatively but not uniformly. Ambition related factors, for example, are more influential in countries with higher financial secrecy.

15.6 The Public, Media, and Non-Profit Organizations

The public is another critical driver of change in the tax ecosystem. While, in earlier times, not paying taxes was not a big public issue, this has changed after the financial crisis. Much of the public no longer accepts that public money is spent on saving banks at the cost of reducing welfare benefits for the poor, while big companies get away without paying taxes to fill the public coffers. The revelations of Lux Leaks were undoubtedly a catalyst in shaping public opinion. Although companies still face more consumer sanctions when they employ child labour or when they are involved in an environmental scandal, than when they pay no taxes (Vogel 2007); the awareness of consumers of what companies are doing has increased, as has the public sense of the ‘unfairness’ of not paying taxes. The fact that tax crimes are now a predicate crime for money laundering (see FATF 2012 and EU AML Directive 2015), indicates a shift in the perception of how

serious it is not to pay taxes. What had long been considered a ‘cavaliers delict’ has now become a serious crime.

The media also has a vital role in shaping public opinion. The International Consortium of Investigative Journalists (ICIJ) is an excellent example of this. In 2016, the famous John Doe, a pseudonym used by the whistleblower of the Panama Papers, turned over 11.5 million *documents* from the law firm Mossack Fonseca to the newspaper *Süddeutsche Zeitung*. In a joint—and for journalists, unusual solidarity and compliance—action more than 90 newspapers published tax scandals of their countrymen simultaneously. Iceland’s prime minister had to resign and even the British Queen was mentioned.

Nevertheless, many of the tax avoiders and evaders mentioned in tax leaks have not been punished till today. Moreover, some of the whistleblowers faced a miserable life after their exposure to tax scandals. The whistleblowers of Lux Leaks, Antoine Deltour and Raphaël Halet, who passed on confidential information, got convicted to fines and suspended jail sentences. No company mentioned in this leak was charged. This is a cautionary tale that calls for new regulations, such as whistle-blower protection, which again needs legal arrangements and compromises of conflicting interests.

There are non-governmental organizations, such as the Tax Justice Network, who regularly point at regulatory deficits of taxation. Chapter 6 shows the importance of benchmarking and of indices, such as the Financial Secrecy Index, which ranks jurisdictions according to how much secrecy they provide; or the Corporate Tax Haven Index which shows which deficits persist in national regulations that make tax havens possible. They cover more than 100 countries and their good visualization of results makes their work a beneficial tool to all working on tax havens, tax avoidance, and tax evasion. Their bilateral Financial Secrecy Index also shows which country provides the most crucial secrecy opportunities for which country. So, to give an example, Panama is not the main attractor of German tax evaders, while it is for US citizens (Jansky et al. 2018).

The fact that the actions of intergovernmental regulations or big players like the EU and the US can change the tax arena for governments, companies and tax professionals shows that change in the international tax system is the outcome of repetitive interactions between all these actors or—in *our words*—species of the tax ecosystem. As Laage-Thompsen and Seabrooke (Chapter 2) show, change towards the new international regulations was possible because of the interaction of all these actors and an interplay of all forms of authorities. Similar to what happens in nature when big shocks such as an earthquake or as a tsunami occur, changes in regulation can result in a paradigm shift in the tax ecosystem. As Picciotto (2019) mentions, the international tax system developed as a form of technocratic governance, aimed at facilitating international investment, neglecting provisions for cooperation between national governments for tax enforcement. Its endogenous flaws resulted in its politicization in the 1970s, and again in the 1990s, leading to an increasingly technicized form of global governance, centred mainly

on the OECD. However, policy-making became more uncertain after the financial crisis, which accelerated a shift towards increasingly volatile interactions between the spheres of technocracy and politics. Complex global problems requiring long time-horizons are dealt with by increasingly narrowly focused technical specialists, dominated by corporatized bureaucracies operating in public–private symbiosis; while in the sphere of politics, a wider public seeks simple solutions and mistrusts experts, with good reason given the experience of regulatory failures, often due to the capture of regulation by private interests. Instant communication favours opinion-formers claiming authority, while representative democracy has shifted to ‘audience representation’, opening the way for demagogue leaders, as well as clientelism and corruption. This destabilizes technical fields, opening up possibilities for a paradigm shift, illustrated by the dramatic changes of the last decade in international tax governance (Picciotto 2019).

15.7 Amounts of Unpaid Taxes

The drive for change in the international tax regime is partly also due to the large and increasing amounts involved. Table 15.1 puts forth some of the most recent estimations of illicit flows. Reducing tax avoidance, tax evasion, and money laundering is essential, given their large volume with estimates of tax evasion ranging between 190 billion USD and 650 billion USD (Henry 2012). Jansky and Palansky (2019) are in the lower bound of this range when they estimate that the lost revenues from FDI related profit shifting are 125 billion USD worldwide. A recent publication of the IMF (Damgaard et al. 2019) shows that 15 trillion USD are parked in shell companies, which can be used whenever needed by big companies in order to make use of tax loopholes. Zucman (2013) estimates that approximately 10 per cent of global GDP is held in tax havens, most of it illegally. Cobham et al. (2019) estimate a trade reporting gap of 9561 billion USD. Ferwerda et al. (2019) estimate 2333 billion USD of money laundering flows worldwide.

As Chapter 12 shows, the amounts estimated diverge widely. This depends on what is estimated (stocks, flows, money laundering, tax evasion, tax avoidance), how is it estimated, and which data are used. Nevertheless, even if estimates diverge widely, they have one thing in common: tax avoidance, tax evasion, and money laundering are sizeable, so sizeable that only a small part of them could solve major global problems such as stopping world hunger, eliminating the education gap and maintaining biodiversity. The most serious problems of the world, stopping famine is estimated between 7 billion and 265 billion USD; filling the education gap would cost 39 billion USD (see Cobham and Klees 2016); and maintaining biodiversity (100 billion USD)³ could be solved when recuperating even only parts of the illicit financial flows.

³ See: <https://m.economicstimes.com/news/science/earth-day-saving-the-planet-may-cost-usd-100-billion-per-year/articleshow/68991339.cms>).

Table 15.1 Selected estimations of Illicit Financial Flows

Study	Estimation (billion USD)	Countries included	What is estimated?
Cobham and Janský (2017)	50–80	US	Tax gain US multinationals with profit shifting
Clausing (2016)	77–111	US	Tax gain US multinationals with profit shifting
Janský and Palanský (2019)	125	Global estimate	Lost tax revenues from FDI related profit shifting
Crivelli et al. (2015)	>200	developing countries	Revenue loss from tax avoidance
Crivelli et al. (2015)	>400	OECD countries	Revenue loss from tax avoidance
Cobham and Janský (2018)	500	Global estimate	Revenue loss from tax avoidance
Tørsløv et al. (2018)	>600	Global estimate	Shifted profits
Janský and Palanský (2019)	420	Global estimate	Shifted profits
Murphy (2019)	852–1,023 ⁴	EU-28	Tax gap
Ferwerda et al. (2019)	2,333	Global estimate	Money laundering
Walker (1999)	2,850	Global estimate	Money laundering
Zucman (2013)	5,878	Global estimate	Hidden wealth offshore
Van Koningsveld (2015)	5,900	Global estimate	Offshore financial assets
Zucman (2015)	7,600	Global estimate	Hidden wealth
Cobham et al. (2019)	9,561	Global estimate	Trade reporting gap
Damgaard et al. (2019)	15,000	Global estimate	Phantom FDI
Henry (2012)	>21,000–32,000	Global estimate	Private wealth invested virtually tax-free through offshore

Source: Made by the authors based on the reported studies. > indicates that the authors mentioned the estimate as a minimum. – indicates a range.

The contribution of Richard Murphy (Chapter 4) on Reappraising Tax Gaps shows that the amount and reasons for tax gaps—potential tax revenues which are not collected—should be defined more broadly and be explored more systematically. In the literature, the tax gap is defined as the difference between the amount

⁴ The estimate in Murphy (2019) is in Euro, namely 750–900 billion Euro per year. For consistency the estimate is converted to USD using the exchange rate in January 2019 (when the paper was published): 1 USD = 0.88 Euro.

of tax that a revenue authority should collect within a jurisdiction based upon the laws it has in operation in an annual accounting period and the actual amount of tax paid during that same period. The IMF (2013, p. 11) distinguishes firstly the ‘compliance gap’ caused by non-payment that results from noncompliance with tax rules and, secondly, the ‘policy gap’, which refers to tax laws granting exemptions, tax liability deferrals or preferential tax rates. Murphy suggests that the definition of the ‘tax gap’ should be broadened. First, it should include policy choices, such as the tax base through a ‘tax base gap’ stemming from tax bases not taxed, such as wealth or inheritance taxes. This would help to make taxes that are not levied due to political choices, transparent. Second, policy choices regarding existing taxes, such as tax relief grants, should be included through a ‘tax rate gap’. Third, the cost of bad tax debt (declared sums owed but not actually paid) should be included, in order to include too lax tax administration efforts. In addition, a fourth and fifth inclusion should be that of ‘non-compliance’ factors such as tax evasion and the cost of tax avoidance, respectively. All countries should measure the tax gap resulting from these five tiers in order to allow for using the tax gap for policy choices.

15.8 Assessing the Tax Regime for Companies: Loopholes for Tax Avoidance

International tax regulations aimed at reducing tax avoidance and tax evasion. This book evaluates major policy reforms which constituted a shock in the tax ecosystem. BEPS, Automatic Exchange of Information, Legal Entity Identifiers and Anti Money Laundering Regulations. In the following, we assess first the measures aimed at reducing tax avoidance of corporations, then measures aimed at reducing tax evasion of individuals.

After the financial crisis, the OECD and the EU have made significant efforts to reduce tax avoidance by big companies. The Base Erosion and Profit Shifting programme of the OECD in 2013 consisted of 15 action plans that included *taxing the digital economy* (Action 1) and *neutralizing the effect of hybrid mismatch arrangements* (Action 2), both tools or methods that are used in aggressive tax planning in order to exploit differences in the tax treatment of two countries to achieve double non-taxation. Additionally, Action 3 *Controlled Foreign Company (CFC) rules* should reduce the risk that taxpayers can strip the tax base of their country of residence by shifting profits into a foreign company that is controlled by the taxpayers. *Limiting base erosion involving interest deductions and other financial payments* (Action 4) should prevent profit shifting from accumulating debts in the high tax country and benefiting from interest deductions for debts. Under BEPS Action 13, all large multinational enterprises (MNEs) are required to prepare a *country-by-country report* (CbCR) with aggregate data on the global

allocation of income, profit, taxes paid, and economic activity among tax jurisdictions in which they operate. This CbC report is shared with tax administrations in these jurisdictions, for use in high-level transfer pricing and BEPS risk assessments.

Thus far, Chapter 6 of this book argues, the Base Erosion and Profit Shifting (BEPS) initiative, which ran from 2013 to 2015, seems to have failed in reducing the misalignment between the location of multinationals' real economic activity and where they declare their resulting profits for tax purposes. One crucial point is that not all countries exchange this information, especially those who want to provide secrecy. For example, Czechia receives CbCR information from 73 countries and thereby covers 91 per cent of the secrecy it faces, Luxembourg, having activated the same amount of treaties, only covers 73.5 per cent. If Luxembourg would establish Information Exchange with just five more countries—Taiwan, Thailand, British Virgin Islands, Turkey, and the Bahamas—it would increase the share of secrecy covered to 83 per cent. The Bilateral Financial Secrecy Index, developed by Tax Justice Network, allows us to identify, for each country, the jurisdictions that are not yet covered by information exchange treaties and at the same time supply large amounts of secrecy.

The OECD is currently engaged in further reform of international tax rules at the bequest of the G-20 group of countries. The premise of the new process, sometimes referred to as BEPS 2.0, is to have an even more radical change in international tax regulation. Palan and Nesvetailova (Chapter 3) argue that the European Commission was exceptional regarding initiatives to reduce Aggressive Tax Planning: The Taxation and Customs Unit of the European Commission, TAXUD, launched a series of in-depth investigations into aggressive tax planning practices (TAXUD, 2017). The European Commission introduced two powerful measures, the Common Consolidated Corporate Tax Base Directive, and an Anti-Tax Avoidance Directive, a powerful suite of measures that aims to curb aggressive tax avoidance.

Another regulation that followed from the financial crisis is the Legal Entity Identifier (LEI), an initiative led by the market authorities of the US and channelled by the G-20 and then the Financial Stability Board in 2011. As Chapter 9 shows, the collapse of Lehman Brothers during the 2008 crisis revealed a critical blind spot in the ability of financial markets regulators to foresee a potentially risky concentration of liabilities by a small number of systemically important financial institutions. There was a need to see how legal entities are identified and how they relate to one another. Regulators could not foresee any concentration of liabilities via subsidiaries that a consolidating entity might be accumulating. The idea behind the Legal Entity Identifier was to give companies a trusted 20-digit code that could indicate the origin and ultimate beneficial owner of a company. Together with governance arrangements around an executive body, the Global Legal Entity Identifier Foundation (GLEIF) and a Regulatory Oversight

Committee (ROC) would collectively form the Global Legal Entity Identifier System (GLEIS). The authors identify two essential prerequisites for this data-driven regulation: accurate and reliable identification of entities engaged in market activities and the ability to trace the transactional and corporate relations of these entities. In 2017, data about the ultimate and immediate owners of entities identified was to be included.

Nonetheless, as many of the regulations analysed throughout this book, LEI also faces significant challenges. That is why Chapter 9 also discusses the problems of data quality related to this initiative. With many financial organizations controlling a bewildering number of entities (e.g. one of the banks researched maintains more than 25,000 such entities), it is difficult for an organization to know who knows what about the identification data it must report. Furthermore, it is expensive to update both this organizational knowledge and the data itself in order to report it. Consequently, the authors point at the importance of the development of a complex data-driven regulatory system for information on beneficial ownership relations among different actors in the financial ecosystem. Contrary to all other regulatory measures taken for companies, the LEI certification is not done by the public sector but by the private sector (GLEIF). Whether this will work or not still remains to be fully explored.

As we can see throughout the book, the efforts to curbe the noxious effects of tax avoidance and tax evasion have been manifold. However, the question remains how successful all these international efforts are. Indeed, some loopholes have been closed, such as the now infamous Double Irish Dutch Sandwich, used by many multinationals such as Apple, Google, Amazon, and Starbucks.

15.9 Creating New Tax Avoidance Structures

But as some loopholes close, others seem to rise. Chapter 2 uses the analogy of a squeezed balloon—where the shape changes, but the volume stays the same. Similarly, van Waarden (2002) talks about communicating vessels—when one closes one side, the liquid pops up at the other side. Another metaphor used is that of Unger and den Hertog (2012) when talking about how ‘water always finds its ways’. What these three have in common is that they all refer to the same phenomenon: that when regulators try to close one loophole, another one emerges.

The increasing complexity of corporate groups that allow for tax arbitrage (i.e. to exploit gaps, loopholes or blind spots in national rules and regulations to transfer profits from high to low tax jurisdictions) is a vessel for new loopholes to emerge. An important element in tax arbitration is to register some of the corporate entities of complex company structures in offshore jurisdictions. In Chapter 3, Palan and Nesvetailova distinguish between two types of holdings.

Type 1 holdings happen when an offshore subsidiary is controlled by a parent that does not control any other subsidiary. Type 2 holdings, are offshore subsidiaries placed ‘in-between’ other subsidiaries on the chain. They analyse one hundred non-financial firms and identify these ‘in-betweeners’ in offshore centres (OFC) as typical instruments of tax avoidance arrangements that generate hybrid mismatches. A key finding is that every fourth EU held subsidiary of the one hundred largest nonfinancial firms in the world was controlled through a Type 2 holding patterns, which points out the crucial role of the US in the tax ecosystem since non-Europeans firms have used these structures far more intensely in Europe than European firms.

Chapter 2 proposes that Europe seems to have become an attractive OFC for US holdings. Though the EU has—globally seen—the best regulatory regime, corporations can profit from multiple entry possibilities within the single market, such as the Netherlands, Ireland, Luxembourg, and the UK, which are among the most critical entry points for corporate tax avoidance worldwide. The fact that Europe has many entry points for the US, with different tax laws and avoidance opportunities, while the US has a unique entry point, also creates an asymmetry between the US and Europe and puts Europe in a weaker position. Apart from the company group structure, another understudied area for tax avoidance lies in the asset management of companies, their financial engineering. Chapter 2 shows that different tax mitigation techniques involve the use of derivatives. They allow either to change the taxes owed post hoc or to change profits in the balance sheets using options, swaps, or other derivatives. For example, if the taxpayer buys an option instead of buying an asset, he obtains the economic gain from changes in the value of the asset but does not pay capital gain tax because he is holding only the financial derivative on the asset, and not the asset itself. Balance sheet techniques of tax avoidance using derivatives seem to be more used than post hoc tax avoidance structures.

15.10 Digital Platforms

In an increasingly globalized world that is powered by the rise of technology, it is no surprise that an important loophole in the international tax system concerns digital platforms. Firms such as Amazon, Airbnb, Facebook, Google, and Uber operate platforms to host services, enabling consumers and businesses to connect and exchange. In this line Chapter 11, analyses the case of digital platform provider Uber whose business model is essentially a ‘legal artefact’. It does not own cars (the drivers provide the cars), it purports not to provide transport services (the drivers do the ride), and it does not have employees (all drivers are self-employed). Uber only provides a matching service through an app, bringing together customers in search of a ride with drivers. On top of this, it is a company

that makes heavy losses. As Wigan shows, losses translate into tax assets. ‘Loss carry forward’ is an accounting technique whereby operating losses accrued in one year are set against taxes on gains and income in the following years. The author states that ‘severe mismatch between the rise of a “knowledge economy” with firms composed of large volumes of intangible assets and tax systems designed for an earlier era where capital was less liquid and less internationalised’. Treating digital services as real services—hence perceiving Uber as a taxi company and not as a platform only—would be a way out of this type of tax avoidance.

As it happens in nature the entry of these new species in the ecosystem, or in this case, the market, generates diverse responses from other ‘species’. Some countries rejected the presence of Uber—the app is banned in Hungary and Bulgaria and is limited in many other European cities. The Danes asked Uber cars to have a taximeter—which is an expensive investment for private car drivers. The Austrians asked Uber to have a licence and to charge the same salaries and ask the same fares as other taxi drivers do in order not to underbid local taxi drivers, to give some examples.

An important finding, regarding taxing the digital economy is to either adjust the tax system to deal with twenty-first-century issues or to make digital services tangible. Uber services are taxi services, and online gambling is gambling. A similar problem occurs to law enforcement when it has to deal with virtual currencies. No law allows confiscating bitcoins. However, some laws allow for confiscating money. So, why not treat intangible virtual currencies, like Bitcoins, as tangible money? Make the digital world a real world.

15.11 Assessing the Tax Regime: Loopholes for Individuals

There is a difference in the effectiveness of policies to combat (illegal) tax evasion of (mostly personal) portfolio capital and measures to curb (legal, but undesirable) tax avoidance by multinational corporations (for a very brief overview of the history of initiatives and why the former were more successful than the latter see Chapter 7). COFFERS research concludes that regulations aimed at reducing individual tax behaviour have been more successful than regulations aimed at reducing corporate tax avoidance (see Chapters 3, 6, 7, and 10).

In 2019, 109 countries adopted the so-called common reporting standard CRS by multilateral agreement (Chapter 8). ‘The standard provides for annual automatic exchange between governments of financial account information, including balances, interest, dividends, and sales proceeds from financial assets reported to governments by financial institutions and covering accounts held by individuals and entities, including trusts and foundations’ (OECD 2014). This agreement was widely seen as a breakthrough in the fight against international tax evasion. The authors estimate that investments in tax havens are 67 per cent below where

they would have been without FATCA and CRS (Ahrens and Bothner 2020). Automatic exchange of information also allowed countries to raise dividend taxes, as taxpayers dividend income abroad would be reported to the country of residence. According to Chapter 7 the average tax rate on dividends in OECD countries was 4.5 per cent points higher in 2017 than it would have been without international tax cooperation.

Nevertheless, individuals can become creative when it comes to finding new loopholes. Confirming the ‘squeezed balloon’, ‘communicating vessels’, or ‘water always finds its ways’ hypothesis, Chapter 10 explores the use of freeports by wealthy individuals to hide their wealth in. She shows that the stricter regulation of the financial sector and automatic exchange of information resulted in the rise of luxury freeports, which are not covered by these regulations. Luxury freeports pop up like mushrooms, e.g., in Switzerland. Freeports were initially meant as a transit zone for goods and therefore were not explicitly regulated. Nowadays, they have become a permanent wealth storage place. They look from the outside like art museums and not like storage halls any more. Freeports are an exciting example of ‘policy success as a failure’: these freeports grew as an effect of financial secrecy measures. Instead of increasing transparency, crime was just displaced, displaced to art: wealth was stored elsewhere as art, stacked into boxes where no one will ever have the chance to appreciate it. These freeports can be used for tax evasion and money laundering because they allow circumventing the stricter rules of the financial sector.

15.12 Assessing BEPS versus Automatic Exchange of Information

In Chapter 7 the impact of AEI on international investment and capital tax rates is measured. The authors conclude that the international cooperation against tax evasion by individuals in the form of AEI was successful. Governments regained manoeuvring room to democratically set domestic tax policies that had previously been lost to the constraints of tax competition.

Finally Chapter 14 provides a micro foundation for tax compliance and assesses tax policy reforms, by modelling the tax ecosystem for all 27 EU Member States and five additional European countries. The agent-based simulation model allows corporate and human agents to interact with and influence each other. It allows for both tax avoidance and tax evasion. Actors perceive the beliefs and behaviours of other actors nearby and compare their situation with that in another country. Therefore, the model allows foreign policy to affect the results of domestic policy. In an agent-based model, actors do not have to be rational, their observations may be incorrect, and coincidence and chance play an important role. Tax compliance depends on the interaction of taxpayers in this complex adaptive

system. The model estimates the European corporate tax losses in 2019 to be €104.9 billion, which will increase to an annual loss of €135.8 billion in 2029 under the current policy regime. Fully implementing CbCR and AEOI decreases the expected tax gap of 2029 by 16.4 per cent to €113.5 billion. The seemingly small effect of CbCR is not so small in the long run, because CbCR affects eventually tax morale of individuals positively.

15.13 Policy Recommendations

The book shows that there is a paradigm shift in the international taxation regime. International regulations such as Automatic Exchange of Information show some impact. The regulation of corporate tax avoidance, like BEPS, was less successful until today. The COFFERS group sees transparency and reducing secrecy as the most important tools to solve impending problems. As many authors of this book stress, increasing transparency and reducing secrecy is the magic tool for combating tax avoidance, tax evasion, and money laundering. For this, the following is needed:

- Establish and improve Ultimate Beneficial Ownership Registers for all types of financial vehicles (companies, domestic and foreign trusts, partnerships, and foundations) and of land ownership. These registers must be up-to-date, and electronically easily accessible, at low or no cost. These registers should not only be obligatory if an entity is registered as a company in EU Member States, but also if it owns assets (real estate, freeports) in the EU.
- A withholding tax policy against non-participating (US) banks that fail to provide financial account data at the level of beneficial ownership via automatic information exchange, in order to reach reciprocity. Similar to what the US is doing, there should be a 30 per cent withholding tax policy for non-reciprocating financial institutions. Charging this tax to the US would already be a first important step.
- Automatic exchange relations between countries monitored visibly. Here the Bilateral Financial Secrecy Index of Tax Justice Network is of great help. It allows monitoring which country provides major secrecy opportunities to which country. One should also consider EU-pooled negotiation mandates versus some partners (e.g. Turkey, Taiwan).
- Europe should be learning from the US (FATCA): Using EU market access as leverage to require standards by international economic actors (banks, multinational companies, offshore investors).
- Abandon blacklists or at least let them be made by independent non-profit organizations which are neither diplomatically nor financially dependent on governments trying to prevent getting on these lists. Better develop white

lists of best practices and benchmark standards and policies implemented by EU Member States and others.

- Regulate digital platforms by insisting that they provide real services and use real assets. Particularly investigate and regulate new luxury freeports. Enlarge anti-tax evasion and money laundering regulations to non-financial in order to avoid that ‘water always finds its ways’ and that tax evaders find new niches to hide their assets.
- Regulate derivatives as they provide many ways to avoid taxation through balance sheet and post tax manipulation.
- Reduce grey zones between what is tax avoidance and what is tax evasion and money laundering by providing clear legal definitions. More international harmonization of definitions such as tax crime is needed. There needs to be more cross-country research on how tax and money laundering laws are used in practice. Information across the EU needs to be easier to find and to collect.
- Improve cooperation among stakeholders. Do not leave tax policy design to technical tax experts alone. Involve all stakeholders, including third world countries, as tax policy is a highly political and not only a technical issue. For this, translations are important. Both proper translations of tax laws into English (e.g. Swedish translation of tax breaks can be misleading), but also translating technical tax issues for non-specialists in order to involve them in the discussion can have a significant impact on knowledge creation and cooperation across Europe.

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Glossary

A

Agent-based model A class of computational models for simulating the actions and interactions of autonomous agents in order to assess their effects on the system as a whole

Anti-Tax Avoidance Directive (ATAD) A powerful suite of measures launched by the European Commission, that aims to curb aggressive tax avoidance and introduce a series of 'good governance' principles impacting third country jurisdictions as well

B

Balance sheet arbitrage Here financial engineering is used to affect the balance sheet or other accounting categories, moving money away from the income statement by playing the rules of the game of reporting

Base spillover This concept includes changes in taxable profits in reflection of both real responses (through investment and the like) and profit-shifting responses (affecting, loosely speaking, only where profits are booked for tax purposes)

Bilateral Financial Secrecy Index Estimates the importance of secrecy jurisdictions for each specific country individually

Bilateral Scale Weights A quantitative measure of the importance of the economic relationship between two jurisdictions

Blacklist (and greylist) Lists of non-cooperative jurisdictions published by the European Commission or other countries or organizations

Bottom-up approach Uses an audit sample of submitted tax returns to estimate errors found within them and then extrapolates this error rate across the whole population of submitted returns

C

Country-by-Country Reporting Accounting standard under which multinational corporations report on their economic activity, such as revenues, employees, or taxes paid, on a country-by-country basis

D

Data veracity Defined as the level of reliability associated with certain types of data including truthfulness, accuracy or precision, correctness

E

Equity maps The visual mapping and analysis of the legal structure of a firm. These allow the localization (among others) OFC-registered subsidiaries within the overall ecology of modern firms

F

Financial secrecy Enables individuals and companies to escape their home country's regulations and legislation, thereby undermining the ecosystems in which these agents generate their income and wealth

Financial Secrecy Index A single ranking that estimates which jurisdictions most contribute to the global problem of financial secrecy

G

Global Scale Weight (GSW) Measures the relevance of each jurisdiction for cross-border direct corporate investment. It measures a jurisdiction's market share (percentage) of exports of offshore financial services (financial services offered to non-residents)

H

Habitus Bourdieu's idea of an instinct which either facilitates or impairs a player in a particular situation, a 'feel for the game' which is not clearly articulated, but rather 'goes hand in glove with vagueness and indeterminacy'

Haven Score (HS) A qualitative measure, on a scale of 0–100, of how much a jurisdiction acts as a corporate tax haven

Hot phase of international reforms The phase in which many policies or reforms occur

I

Identification infrastructure Used for identifying financial entities

Infrastructure-making The process through which acceptance is reached and maintained with regard to common generalized routines whereby such routines are used, in turn, as a basis for more particular routines. For example, infrastructure-making may bring about a standard for identifying all financial institutions and this standard is used later for identifying a diversity of such institutions

Illicit financial flows Illegal movements of money or capital related to, among others, corruption, money laundering, tax evasion, tax avoidance, and the financing of terrorism

J

Jurisdictions Sovereign entities, legal systems

L

Luxury freeport Warehouses that serve as repositories for valuables. Geneva, Luxembourg, and Singapore all have one: in these places, great paintings can be kept and traded tax-free—no customs duty or value-added tax is owed—and anonymously

M

Markets Corporations, professional service firms, investors

Multinational enterprise A cluster of separate legal entities in several jurisdictions, which exist only if the laws of each jurisdiction recognize them as legal entities

N

Normative environments NGOs and civil society

O

Offshore world (a) Designated legal spaces that offer low tax rates and which, as a result, attract a disproportionate amount of the world's capital stock; (b) a malleable 'legal fiction' that is the mirror image of the legal fiction of 'the state' as an objective and geographically bounded entity

P

Path dependence Makes the point that institutions are likely to follow the track established by pacts, agreements, laws, and formal mandates

Political mandates IGOs, governments, geopolitical pressures

Policy gap Captures the effects of applying multiple rates and exemptions on the theoretical revenue that could be levied in a given VAT system. It is an indicator of the additional VAT revenue that a Member State could theoretically, i.e. in case of perfect tax compliance, generate if it applied a uniform VAT rate on all goods and services

Post-hoc manipulation Of taxable events, including various dimensions of transfer pricing, including thin financing and regulatory arbitrage

R

Relative power Based on trust in the state to provide adequate services to its residents, compared to another state

S

Secrecy jurisdictions Jurisdictions that provide opportunities to non-residents to hide their identity and thereby to escape the laws and regulations of their home country

Secrecy Score A qualitative measure, on a scale of 0–100, of how much a jurisdiction provides opportunities to non-residents to hide their identity and thereby to escape the laws and regulations of their home country

Slippery slope framework Suggests that not only economic but also psychological factors determine tax compliance by suggesting that the two main determinants of tax compliance: trust in authorities and power of authorities

Social ecology A space where actors interact to control the types and content of taxation

Strategic spillover effect Refers to tax competition in its broadest sense—most obviously in the potential form of a ‘race to the bottom’, as countries respond to lower CIT rates elsewhere by reducing their own rates

Surrogate filing Occurs when a multinational has a subsidiary in a country that does exchange information with a specific country, and it appoints this subsidiary to file the CbCR

T

Tax avoidance By definition legal; it consists of legal manoeuvres or schemes made by corporations to reduce their tax payments an example of this is the use of legal loopholes in order to reduce tax payments

Tax evasion Illegal and hence implies under-reporting or not reporting a certain income when this is required by law

Tax experts Crucial actors in the tax ecosystem; their position as the mediators of tax practice and as the conduit between taxpayer and tax regulator reflects the importance of critical research in this area

Tax gap Widely thought to be the difference between the amount of tax that a revenue authority should collect within its jurisdiction based upon the laws it has in operation in an annual accounting period and the actual amount of tax paid during that same period

Tax morale Intrinsic motivation to pay taxes

Tax policy gap Captures the effects of applying multiple rates and exemptions on the theoretical revenue that could be levied in a given VAT system. In other words, the policy gap is an indicator of the additional VAT revenue that a Member State could theoretically, i.e. in case of perfect tax compliance, generate if it applied a uniform VAT rate on all goods and services

Tax shelters Can be defined as products or structures developed either internally by the firm’s legal and accounting departments, or by investment banks, small tax shelter shops, and the large accounting firms (Bankman 2004, 12)

Tax spillover A loss arising within and between tax systems, whether domestic or international, as a result of one part of a tax system undermining the effectiveness of another part of the same tax system, or that of another state

Top-down Approach using macroeconomic data to estimate the potential tax base within an economy

Type 1 holding patterns Offshore subsidiaries controlled by a parent or a regional holding company, but that do not control, in turn, any other subsidiary. These kinds of subsidiaries are end of chains, or 'stand-alone' OFC registered subsidiaries

Type 2 holding Consist of offshore subsidiaries placed 'in-between' other subsidiaries on chains-

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