The Market for Tax Havens

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Abstract

I investigate the determinants and consequences of the rise of tax havens using a novel database that tracks the creation and development of offshore legal institutions in 48 tax havens. After describing the evolution of tax havens in the 20th century and several key empirical patterns, I explore the causal determinants of their emergence. Building on the idea that tax havens are the suppliers in the market for offshore services, I show that offshore services demand shocks explain why countries become tax havens. I also find that competition shocks explain why tax havens update their regulations. This reaction is facilitated by the diffusion of legal technologies across tax havens. Finally, I show that a country's becoming a tax haven generates per capita GDP gains and sectoral reallocation within its economy. In turn, nonhaven countries' tax structure is affected by the rise of tax havens, resulting in an increased tax burden on labor relative to that on capital. **Keywords**: Tax Havens, Taxation, Regulatory Competition, International Taxation, Tax Avoidance, Tax Evasion.
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1 Introduction

The emergence of tax havens is one of the most important economic phenomena of globalization. Despite tax havens' being nonexistent in the 19th century, there are now almost 50 of them in the world, ranging from small islands in the Caribbean, Indian and Pacific Oceans to wealthy city-states such as Singapore and Hong Kong and developed countries such as Ireland, Switzerland, and the Netherlands. Tax havens are small countries, primarily located at the periphery of large markets, that offer opacity and low levels of taxation to individuals and corporations. Their use strongly influences the tax revenues collected from both individuals (Zucman, 2013, Alstadsæter et al., 2018) and firms (Hines and Rice, 1994, Tørsløv et al., 2023, Fuest et al., 2022, Ferrari et al., 2022) in nonhaven countries. Because they facilitate tax evasion and tax avoidance, they also affect tax morale (Luttmer and Singhal, 2014, Besley et al., 2023), optimal tax policy (Piketty et al., 2014), and perceptions of tax policy (Stantcheva, 2021). On top of these effects on public finance, several studies have documented their impact on various socioeconomic outcomes such as inequalities of income and wealth, capture of rents by elites, and measurement of economic activity. [1]

In this paper, I investigate the determinants and consequences of the emergence of tax havens. I build on two main ideas. The first is that tax havens result from the building of an *offshore legal architecture*, i.e., legal, political and economic institutions that allow them to provide offshore services. The concept of legal architecture is useful to illustrate that, beyond low tax rates, a country's enactment of a set of offshore regulations is a necessary condition for it to become a tax haven. An offshore legal architecture is composed of blocks, which I call *legal technologies*, that reflect tax havens' specialization. Legal technologies are legal tools that allow tax havens to supply offshore services such as banking secrecy or tax-exempt trusts in exchange for the payment of a low tax rate or a fee. [2] To become a tax haven, a country must introduce an offshore legal technology through a legal reform. Once a country becomes a tax haven, its legal architecture can be updated to attract more demand or to adapt to new regulations in nonhaven countries. Based on this idea, I collect data about reforms of the offshore legal architectures of 48 tax havens, identifying when these countries became tax havens (the *extensive margin* of offshore services supply) and when they updated their legal architecture (the *intensive margin* of supply). My primary sources are tax haven guidebooks written by tax lawyers. I complement these with a wealth of sources ranging from academic papers to advertising

1. Zucman (2013) and Guvenen et al. (2022) have shown that tax havens affect the measurement of macroeconomic aggregates. They also affect inequalities and their measurement (Alstadsæter et al., 2019, Guyton et al., 2021), measurement of portfolio holdings (Coppola et al., 2021) and corporate control (Garcia-Bernardo et al., 2017, Fonseca et al., 2023) and allow the avoidance of financial risk regulation (Alfaro et al., 2020). Additionally, elites use tax havens to capture revenues (Andersen et al., 2017, Andersen et al., 2022) or avoid regulations (see Kollewe, 2022 on sanctions against Russia), with detrimental consequences for perceptions of government and elites in many countries (Louis-Sidois and Mougin, 2023, Guriev et al., 2021).

2. It is often assumed that provision of secrecy is not accompanied by tax revenue collection. However, users of offshore entities generally pay fees. Registering a trust in the Cayman Islands, for example, costs $500 at registration and $500 in annual fees. Hence, the offshore sector (*financial services licenses* in the official terminology) accounted for 33% of the Caymans' tax revenues in 2020 (Government of the Cayman Islands, 2021).

brochures from offshore service providers. To my knowledge, this dataset is the first to provide a time-varying account of the emergence and evolution of tax havens; the literature generally relies instead on a constant tax haven indicator variable (Slemrod, 2008, Dharmapala and Hines, 2009).

The second main idea is that tax havens can be studied through the lens of market forces. They are the key suppliers in the market for offshore services. On the other side of this market, demand for offshore services comes from tax evaders in nonhaven countries who seek low tax rates, advantageous regulations, and secrecy. Features of the market environment, such as demand shocks, supply shocks and competition, therefore affect countries' incentives to enter this market by becoming tax havens. Based on this idea, I study the impact of demand and supply shocks on tax havens' legal architecture at both the extensive and intensive margins.

I first study demand shocks. I show that demand for tax haven services has strong geographical determinants. Using leaked data from the Offshore Leaks about more than 800,000 offshore entities opened in tax havens (ICIJ, 2022a), I estimate a gravity equation and find an elasticity of the use of tax haven entities with respect to distance equal to one. I can use this geographical variation to proxy countries' differential exposure to demand shocks: I construct the demand for offshore services addressed to a country i as the average level of taxation in foreign countries weighted by (a function of) their distance to country i and their size. Intuitively, a country such as Switzerland receives more offshore demand from France than from a more distant country such India and from the U.S. than from an equally distant but economically smaller country such as Canada.

In a regression framework, I explain the tax haven status of a country and its probability of passing a new reform by the level of offshore services demand it receives interacted with its size. This interaction with size comes from the fact, already discussed theoretically by Hansen and Kessler (2001) and Slemrod and Wilson (2009), that only small jurisdictions have an incentive to become tax havens. Intuitively, this is the case because developing the offshore sector crowds resources out of the productive sector. When the productive sector is small, as in the Cayman Islands, for instance, the losses in this sector are compensated by the gains in the offshore sector. In contrast, when the productive sector is large, the gains in the offshore sector do not compensate the losses. This is because these gains are largely independent of country size since use of a tax haven generally excludes engagement in real productive activities in that country.

To circumvent potential endogeneity, I predict the level of taxation in a country using changes in the level of democracy and in the ideology of the head of government. These variables affect domestic taxation policies (Kiser and Karceski, 2017) but are arguably independent of different endogenous factors. They can address reverse causality concerns, for instance, as long as they are independent of tax havens' policies. In addition, I test whether these variables are correlated with potential confounding factors such as economic shocks, globalization shocks, or liberalization shocks and find no link between them. Then, I construct an instrumental variable (IV) for offshore services demand using the level of taxation predicted by these variables. The IV results confirm

the ordinary least squares (OLS) results, and I find that an increase in offshore services demand of one standard deviation increases the probability that a very small country becomes a tax haven by 97%. This probability decreases with country size and becomes nil for countries at the first size quartile. Importantly, I find that demand matters more for the passage of the first offshore legal architecture reform (the extensive margin of offshore services supply) than for the passage of other reforms (the intensive margin of supply), on which its impact is small and not significantly different from zero.

Given that demand shocks do not explain the variation in offshore architecture reforms in countries that are already tax havens, I investigate such reforms' sensitivity to supply-side shocks. I leverage the quasi-natural experiment of British decolonization, which is plausibly exogenous to the level of supply and demand for offshore services and which increased the number of competing tax havens. Using an event-study design, I show a sizeable impact of a nation's becoming independent from the U.K. on the number of offshore tax reforms that it passes. Hence, independence waves can be used as exogenous events that spurred to the adoption of offshore architecture reforms in newly decolonized countries and increases in competition between tax havens (see Sævold, 2022 for an historical account).

I first show that increased competition pushes tax havens to update their legal architecture, similarly to how firms update their products in response to increased market competition. This effect is the result of two opposing forces. An increase in competition decreases rents in the offshore services market, which should discourage offshore architecture reforms. At the same time, it increases information about the offshore legal technologies available. Indeed, the introduction of a legal technology in a foreign country provides insights on both how to design it from a legal point of view and its effectiveness, hence decreasing the costs of investing in this legal technology. This channel is illustrated by the fact that some tax havens have imported other countries' offshore architecture laws verbatim into their own legal systems (as in several Pacific tax havens in the 1980s, as noted by Palan et al., 2009). I further show that, in line with this channel, tax havens react to competition shocks by adopting the same legal technology as their neighbors, suggesting spatial diffusion of offshore architecture reforms, in particular when their implementation cost is small. This result highlights the essential role of legal technologies in the dynamics of the tax haven market. In addition, it helps clarify these dynamics when tax havens face negative shocks to their rents, which also happens when anti–tax haven regulation is strengthened in nonhaven countries.

Finally, I study the consequences of tax havens. The shifting of one dollar of tax base to a tax haven is neutral from an accounting point of view at the world level: the reduction in tax revenue in the nonhaven country is offset by an increase in tax revenue in the tax haven and a rise in private (post-tax) income. However, this ignores the externalities associated with government revenue: additional tax revenues in tax havens may spur economic development, increased private income might influence investment in the tax haven or in the nonhaven country, and lost tax revenues in nonhaven countries could negatively impact their GDP. On top of this, nonhaven countries can react by endogenously adapting their tax policies (Keen and Konrad, 2013).

I first show in an event-study framework and with a generalized synthetic control (SC) method (Liu et al., 2022) that a country's becoming a tax haven positively impacts its GDP per capita. [3] The findings reveal growth gains of 3.4 percentage points annually over 10 years for tax havens, resulting in a 40% long-term increase over the growth of their nonhaven counterparts. Furthermore, I provide evidence that this result captures changes in the real economy by demonstrating that the economic structure of new tax havens transitions away from the agricultural sector.

Then, I explore the impact of exposure to tax havens on nonhaven countries. Building on the assumption that tax haven exposure is a function of geographical distance, I find that the availability of nearby tax havens, on average, does not significantly affect GDP and total tax revenues in nonhaven countries. However, exposure to tax havens durably affects nonhaven countries' tax structure. Countries exposed to tax havens shift the burden of taxation from capital to labor, with important implications for economic inequalities. The tax revenues losses from the use of tax havens by mobile agents are compensated by increases in the taxation of less-mobile agents, such that total tax revenues remain unchanged. To conclude, I argue that tax havens can be analyzed as a revenue-neutral subsidy of mobile agents financed by a tax on immobile agents.

I rationalize these three results about the demand for and supply of tax havens and their consequences in a conceptual framework inspired by the literature on legal capacity building (Besley and Persson, 2011). I study the decision of a government to become a tax haven given its own characteristics, the external demand for tax haven operations and competition in the market for offshore services. The framework also supports the use of geographical variation to identify these effects.

This paper is related to several strands of research. One of its key contributions is the construction of a novel dataset of offshore legal architecture reforms in tax havens. This dataset represents the first attempt to follow the tax haven status of many countries across time. The tracking of temporal and spatial variation also enables the use of causal inference methods, in particular generalized difference-in-differences (de Chaisemartin and D'Haultfœuille, 2024). This approach complements the more descriptive approaches of history and political science works on this topic (see Palan et al., 2009, Ogle, 2017, 2020, Hollis and McKenna, 2019, Farquet, 2021, and Guex, 2023; and Guex, 2021 on Switzerland, Rawlings, 2004 on Vanuatu and van Beurden and Jonker, 2021 on Curaçao) and allows quantitative historical comparison of tax havens. Zucman (2015) provides an interesting approach by constructing a long-run series of offshore wealth held in Switzerland. Here, I follow a different approach and bring more representativeness regarding the supply of offshore services: I cover different countries that become tax havens at different times and places and by means of different legal technologies. This general approach makes it possible to exploit different sources of variation and to find common factors that explain the rise of tax havens. It also allows me to provide new descriptive evidence on the emergence of tax havens in the 20th century at global scale. In terms of data sources used, my paper also contributes to a scarce literature that

3. My approach speaks to a recent literature that uses SC to estimate the causal impact of historical events on country-level GDP (e.g., Abadie et al., 2015, Billmeier and Nannicini, 2013, Funke et al., 2023).

uses and analyzes micro-level data from Offshore Leaks. [4] Using these data, I document for the first time that the use of tax havens follows a strong gravity pattern, and I am the first to link Offshore Leaks data to offshore architecture reforms in tax havens.

Second, my paper is related to the public finance literature on the role of tax havens in the world economy (Palan et al., 2009, Zucman, 2014, 2015, Hebous, 2014). The tax haven literature is generally interested in the contemporaneous effects of the use of tax havens on nonhaven countries. However, the determinants and domestic consequences of the emergence of tax havens have been less studied. Some theoretical papers in the tax competition literature are interested in the causes of tax havens (Kanbur and Keen, 1993, Hansen and Kessler, 2001, Slemrod and Wilson, 2009). On the empirical side, few papers study what determinants give rise to tax havens. An exception is Dharmapala and Hines (2009), who study the correlation between governance institutions and tax haven status using cross-sectional data. They argue that better-governed countries are more likely to be tax havens and that this is likely driven by ex ante superior governance before they become tax havens. My paper differs from theirs in that it emphasizes the role of market forces in tax havens' adoption of offshore architecture reforms. In addition, I construct a novel database that allows me to study a broader range of potential causes of the emergence of tax havens. By analyzing tax havens through the lens of the offshore services market, I propose a unifying framework to understand them. To the best of my knowledge, this analysis is the first attempt to establish a causal link between the rise in demand for offshore services and the reforms birthing new tax havens. [5] In my paper, demand for tax havens is identified by the geographic variation in tax rates. This approach is connected to recent papers emphasizing the importance of gravity links between high-tax countries and tax havens (see, for instance, Ferrari et al., 2022). I also show the importance of competition between tax havens, which has been mostly overlooked in the literature. Even if some theoretical frameworks have taken this competition into account (e.g., Slemrod and Wilson, 2009, Johannesen, 2010), only Elsayyad and Konrad (2012) focus their argument on it. By affecting rents, competition between tax havens pushes them to adapt by reinforcing their legal architecture, which is made possible by legal technology innovations. I insist on the importance of these legal tools and show their key roles in the dynamics of the market for tax havens. [6] From a policy point of view, these mechanisms are important for our understanding of the consequences of international tax reforms. Such reforms should aim to prevent legal innovation on the part of tax havens by increasing the costs of potential new legal technologies.

This paper contributes to the understanding of the consequences of globalization for public finance. It is the first paper to study the long-term consequences of the emer-

4. To my knowledge, the only other examples of papers that use the Offshore Leaks database systematically are Omartian (2017) and Garcia Alvarado and Mandel (2022). In addition, leaks from tax havens have been used by Alstadsæter et al. (2019), Bomare and Le Guern Herry (2022), Brounstein (2021), Londoño-Vélez and Avila-Mahecha (2024) and Johannesen et al. (2022) for matching with administrative wealth records.

5. While Desai et al. (2006) and Garrett and Suárez Serrato (2019) discuss the demand for tax havens, these papers are interested more in which firms demand tax havens' services and how elastic this demand is than in the endogenous consequences of this demand for tax havens' policies.

6. This approach is also linked to studies of policy diffusion. See, for instance, Shipan and Volden (2008), Cao (2010), and DellaVigna and Kim (2022).

gence of tax havens by looking at the moment when countries become tax havens. My results demonstrate that while exposure to tax havens does not necessarily affect GDP per capita or total tax revenues in nonhaven countries, the latter countries make up for their tax losses by increasing the tax burden on labor, a less mobile factor than capital. This result suggests that tax havens have long-term consequences for nonhavens' tax structure, which in turn affects inequality. This adds to the finding of Alstadsæter et al. (2019) that tax havens reinforce inequalities because their use is concentrated in the top of the wealth distribution. This finding also complements the papers on the role of globalization and tax competition on countries' tax structure (Antràs et al., 2017, Egger et al., 2019, Bachas et al., 2022, Ferey et al., 2023, Thunecke, 2023). Finally, it echoes the finding of Bilicka et al. (2023) that the municipal tax structure in Germany is affected by the presence of tax-avoiding firms. From the tax havens' point of view, I show causal evidence of how some countries took advantage of globalization and beggar-thy-neighbor policies to grow. This effect is in line with the results of Hines (2005) and Butkiewicz and Gordon (2013), whose evidence suggests a positive impact of a country's being a tax haven on its GDP. In contrast, Miethe (2020) finds no direct link between financial activity and local activity in tax havens, but he does not use shocks to tax havens' financial activity to establish this result.

Finally, my paper contributes to the large literature about the links between institutions, taxation and development (Schumpeter, 1954, Besley and Persson, 2011, Martin and Prasad, 2014). In this vein, it is part of the literature that underscores the pivotal role of the law in shaping economic outcomes (La Porta et al., 1998, La Porta et al., 2008, Pistor, 2019). This paper not only demonstrates the impact of tax institutions on domestic development but also sheds light on the cross-border influence of a country's legal institutions under globalization (Aidt et al., 2021). My findings also contribute to the regulatory competition literature, with obvious parallels between competition among tax havens and other forms of regulatory competition. Notably, the concept of legal architecture, explored here in the context of tax havens, could be applied to diverse forms of regulatory competition. Moreover, the examination of the construction of tax havens' legal architecture through a market lens could be more broadly applicable. It can be seen as a prominent example of the "law market" discussed by legal scholars (Ribstein and O'Hara, 2009). This analytical framework can be extended to the study of competition for capital in general (Keen and Konrad, 2013) and for environmental regulations (Copeland, 2008), subsidy competition (Ferrari and Ossa, 2023, Slattery, 2024), the provision of legal opacity (Moreau-Kastler and Toubal, 2021), and the commercialization of state sovereignty (Palan, 2002, Slemrod, 2008).

The rest of the paper is constructed as follows. Section 2 provides more institutional details and describes the construction of the data. Section 3 presents three stylized facts about the development of tax havens. Section 4 presents a conceptual framework for studying a country's incentives to become a tax haven. In section 5, I study the role of offshore services demand shocks in the development of tax havens. Section 6 studies the role of competition among tax havens, and section 7 provides new results on the impact of a country's becoming a tax haven on its GDP per capita. Section 8 concludes.

2 Legal architecture of tax havens

The existence of specific laws is necessary for tax haven activity in a territory, as they provide stability and predictability to the users of offshore services. I build a new dataset on the construction of this offshore legal architecture of current tax havens. A country-by-country description of how I construct the dataset is provided in the online data documentation. I use both qualitative and quantitative information to understand how countries become tax havens. The new dataset is the result of a careful analysis and classification of the legal environment of tax havens. My methodology is new and relies on a limited set of public information that is observable to the researcher. It also recognizes the fundamental role of law in wealth-creation processes (Deakin et al., 2017, Pistor, 2019).

My data collection is motivated by the lack of time-varying, detailed and measurable information about tax havens. There are at least four reasons for this lack. First, tax havens operate secretly and do not disclose essential information on their activities as offshore centers. Second, many tax havens are small countries with small statistical offices or territories that depend on other jurisdictions. Third, comparability across different sources and over a long period is limited. Fourth, until now, researchers have focused mainly on tax haven's tax rates. These rates are often tailored to specific offshore structures and generally differ from the statutory tax rate (except when this rate is 0% for any activity). Archival information on these rates is difficult to collect and harmonize for the reasons cited above.

Institutional context Before describing in detail the construction of the database, I make explicit the institutional context that underlies it. Following the terminology of Ogle (2017), the *legal architecture* of a tax haven is the set of laws that provide it with legal instruments to supply offshore services. Low or zero tax rates for specific types of income is a necessary condition for a country to become a tax haven.[7] However, it is not a sufficient condition, as an offshore legal architecture is necessary to provide tools to create secrecy, provide flexibility and blur the links between the ultimate wealth owners and their offshore assets and revenues. It is only under the condition of the existence of an adequate legal architecture that an individual can benefit from a country's tax haven features without her evasion being detected by her origin country. For instance, Switzerland's bank secrecy law of 1934, which is central to its offshore legal architecture, was enacted partly to prevent foreign authorities from accessing details about Swiss bank activities following a tax scandal in which French authorities pressured Swiss banks for information (Guex, 2000).[8] Tax havens' legal architecture is specifically designed to cir-

7. Note that having a low tax rate on all types of income is not necessary. Some tax havens can have high tax rates on income of types other than those for which their offshore architecture and services are specialized.

8. New Caledonia, a French territory in the Pacific, offers another interesting example of the importance of the legal architecture, beyond low tax rates, for the emergence of a tax haven. New Caledonia was a no-tax jurisdiction, but France was reluctant to make it a tax haven (Rawlings, 2004). As a consequence, offshore legal technologies have never been developed there, and it has never been considered a tax haven despite its advantageous tax regime.

cumvent high-tax countries' regulations.[9] The new dataset describes the development of such architecture and the rise of tax havens.

My reliance on the concept of legal architecture turns on the idea that law is a central determinant of economic processes and institutions. This view is based on both the work of legal scholars (see, for instance, the analyses of Deakin et al., 2017 and Pistor, 2013) and a vast economic literature studying how variations in legal systems and rules affect economic and social outcomes (La Porta et al., 2008). In particular, Pistor (2019) argues that the law is what gives assets their capacity to create wealth and what protects the wealth created by assets. This exactly describes what happens in tax havens: they design laws to allow offshore users to create and protect their wealth by shielding assets and revenues from the tax authorities of nonhaven countries. This is precisely what constitutes their legal architecture.

Tax havens can use many legal technologies to build their legal architecture. For instance, one of the most prominent examples is the designation of international business companies (IBCs). IBCs can have only one founder, shareholder, and director, who can be the same person, and require no annual meetings. They are tax-free and require limited reporting and disclosure (e.g., financial statements are not necessary, and incorporation documents do not include the identity of the company's ultimate owners). The only condition for registering an IBC is that it cannot have any domestic activity. The history of the British Virgin Islands, especially the *International Business Companies Act* of 1984, has borne out the profound role of IBCs in the transformation of this and other countries into tax havens. Within a few years of passage of the 1984 act, the British Virgin Islands had become a leader in offshore company registration, with more than 130,000 IBCs registered in 1994, representing almost half of the market (Darius and Williams, 1997).[10] Trusts, exempt corporations, and holdings are other examples of offshore legal technologies.

The legal reforms passed to implement these technologies are the main building blocks of the legal architecture of a tax haven. Many different types of such reforms are available to tax havens, and the menu of reforms implemented determines a haven's offshore specialization. Table I summarizes the different types of laws that I record. I classify them into five broad categories that follow their different possible uses. There are the legal technologies, such as trusts, that are used to directly circumvent personal taxation ("Personal"). Other types of technologies target firms to allow them to avoid corporate taxation ("Corporate"). However, in a world where a large share of income consists of business income or capital income, the frontier between personal and corporate taxation is porous and opens up opportunities for optimization and evasion (Love, 2021).[11] Some technologies widely implemented by tax havens are classified as "Dual,"

9. See, for instance, the case of the Cook Islands described in Harrington (2016).

10. The importance of IBCs is recognized by both scholars (e.g., Palan et al., 2009, Harrington, 2016) and professionals (see, e.g., Riegels, 2014, from the offshore law firm Harneys). In 2014, Appleby, a leading international law firm incorporated in Bermuda, wrote a blog post to celebrate the 30th anniversary of the law, recognizing that "one would be hard-pressed to find an example of a similar law that has had such profound and positive implications for the jurisdiction in which it was promulgated" (Kirk, 2014).

11. This refers to the problem of income shifting across the individual and corporate tax bases. Gordon and Slemrod (1998) document that it has existed in the U.S. since at least 1965. Smith et al. (2019) estimate

as they are equally used to circumvent corporate and personal taxation. This is, for instance, the case of IBCs, which are tax-exempt companies with limited administrative requirements and high secrecy.

For offshore strategies to work efficiently, the tax avoider must maintain secrecy and hold her offshore revenues and wealth in a bank. Offshore banking therefore greases the wheels of the offshore industry. It is classified separately as it appears complementary to other types of technologies because it allows individuals and firms to hold revenues in offshore banks while keeping their identity secret thanks to banking secrecy. Finally, the "Other" category includes regulations that do not fall within the classic categories, illustrating the diversity of options available to countries to become tax havens.

In sum, my approach relies on the reforms implemented by tax havens to build and develop their offshore legal architecture. A potential downside of this approach is that the supply of tax haven services may not be mediated through new regulations or that my data collection might miss some significant laws. This latter is especially relevant for countries with a long and complex offshore history or for countries with federal systems, where offshore legislation can be enacted at subnational levels (see, for instance, the case of Switzerland, described in Guex, 2021). Note that these represent only a very limited number of countries among tax havens. In this case, one advantage of my approach, which can alleviate bias related to these country features, is that it relies on reports written by tax lawyers advising potential users of tax havens. This allows me to include in my sample only the laws that users perceive to be most relevant for their use of a tax haven; in turn, laws not reported in my data might not be particularly important for the building of the tax havens' legal structure.

A second potential limitation of my approach is that the introduction of new legal technologies through reforms does not directly capture the supply of tax haven services, only the legislation that allows it. For instance, tax havens might write laws that are not followed by an increase in the production of tax havens' services—because of poor quality, for instance. Importantly, at the end of this section, I show evidence that new offshoring architecture reforms increase (on average) the supply of tax havens services. In addition, as the purpose of this database is to record the construction of offshore institutions in tax havens through their legal architectures, it is crucial to record any important law, even one of low quality, as it marks a significant change in the willingness of a country to act as a tax haven.

Construction I collect new data on major reforms undertaken by tax havens to build their legal architecture. The dataset covers reforms that made countries tax havens (the extensive margin of offshore services supply) and on subsequent reforms updating their legal architecture (the intensive margin of supply). Countries may update their legal architecture to reinforce existing legal technologies or create new opportunities for offshore users by introducing new technologies.

that three-quarters of U.S. S-corporation business income (a specific legal form of corporation in the U.S.) is actually wage income. Income shifting across tax bases has also been documented in other empirical settings; see, for instance, Harju and Matikka (2016) and Alstadsæter and Jacob (2016).

The dataset includes 50 jurisdictions representing tax havens of different types and sizes worldwide. These countries today constitute the bulk of offshore services providers. They closely match those on tax haven lists used in the literature. Appendix Table A.1 lists the countries included as tax havens in this paper, and Appendix Figure A.1 shows them on a world map. It also compares this list to eleven other lists aggregated by Palan et al. (2009). These lists of tax havens were established by different institutions and for different purposes between 1977 and 2008. Except for Costa Rica, which is absent, the list in this paper covers all the tax havens mentioned in at least 4 of the 11 sources. [12] The data collection stops in 2000, which marks the end of the expansion of tax havens and the beginning of a phase of regulation in high-tax countries (Sharman, 2019).

The construction of the dataset relies on a wealth of information provided by the *Guide Chambost des Paradis Fiscaux* (Chambost, 2000) and the *Guide Mondial des Paradis Fiscaux* (Beauchamp, 1992). [13] Both books scrutinize the legal architecture of tax havens and carefully describe their different possible uses. They provide a detailed description of laws and regulations that allow a potential tax evader to move assets and revenues to the haven territory. Both guides meticulously describe the banking system along with the existence of de jure or de facto banking secrecy. The authors also provide information on the haven territory—its geography, population, economy, living cost, history and political system.

For each country, I collect the key dates that the authors identify as important in the construction of the country's offshore legal architecture. I then compare these dates between both sources to ensure that the identified dates are indeed perceived as significant. This alleviates potential bias that might arise from my relying on only one source and recovers complementary information about some regulations when the original text is insufficiently precise. Indeed, the two sources often do not provide the same information. For instance, one source might not identify the original legal technology, might give the name but not the date of a regulation, might be imprecise about some regulations, or might not cover a regulation discussed in the other source. For some countries, especially minor tax havens, the descriptions are shorter, and information might be missing.

To deal with these issues, in addition to cross-checking these sources, I collect more information from external sources such as the guides written by Starchild (1994) and Barber (2007) and different editions of the Doggart (1975) guide to tax havens. I also rely on academic papers on specific countries or regions (Mendis et al., 2002 and Fossen, 2002 provide important and useful information on the Caribbean and Pacific tax havens). Palan et al. (2009) provide additional information on several tax havens. I also use infor-

12. More precisely, I started with the list of tax havens from Dharmapala and Hines (2009). To it, I added the Netherlands and Malaysia (in particular, the Federal Territory of Labuan), which are considered tax havens but are not included on their list. I did not include Belgium because of conflicting information on its role as a tax haven. Watteyne (2023) argues that Belgium's history as a tax haven ended after WWI. I did not include U.S. states such as New Jersey or Delaware, either. These states have mainly been considered local tax havens (see, for instance, Dyreng et al., 2013), though this might be changing.

13. These books are available in French only. André Beauchamp and Édouard Chambost are international tax lawyers specialized in the use of tax havens. Chambost wrote eight different editions of his book from 1977 to 2005. He is specialized in the creation of tax (avoidance) schemes between jurisdictions (http://www.edouard-chambost.com/picture_library/chambost_articles_recadrer/1998-1999/1998_paradis_fiscaux_ou_sanctuaire_suisse.pdf).

mation from various *Financial Secrecy Index* reports (Tax Justice Network, 2020). Finally, I use several documents written by offshore service providers to advise their clients or inform them of different offshore opportunities. [14]These alternative sources are used to systematically confirm the existence of laws identified in the two main sources. Sometimes, they also reveal the existence of reforms not mentioned in the main sources. More details on the construction are available in the online documentation for the dataset.

Finally, I could not find reliable and precise information on the offshore legal architecture of two minor tax havens, San Marino and the Maldives. [15] Consequently, my dataset includes information about 48 tax havens for which I observe 141 reforms.

Data consistency Before I turn to the analysis of this new dataset, it is essential to check its consistency. I investigate whether the implementation of new offshore architecture reforms leads to the provision of more tax haven services. To proxy tax haven services provision over time, I use micro-level data from Offshore Leaks (ICIJ, 2022b). The ICIJ has received data from different leaks from tax-advising firms between 2013 and 2021 (ICIJ, 2022a). These data include micro-level information on more than 800,000 entities opened in several tax havens along with the date when they opened and, when available, information on their owners. I use these data to count the number of offshore entities located in a tax haven i at date t. I detail the treatment of the data in Appendix D.

My exercise here focuses on the implementation of reforms introducing IBCs because this is the type of legal technology most likely to be covered by Offshore Leaks. I run an event study to investigate whether a new reform in a country i at date t has any effect on the number of offshore entities located there. As illustrated by Figure A.9, I find that following a reform adoption, the number of offshore entities recorded in Offshore Leaks increases by 200% after 10 years. This effect appears immediately after the reform and increases over time, while the prereform coefficients are close to zero and not statistically different from zero. This figure shows, using two independent data sources, that reforms of tax havens' legal architecture give rise to an increase in tax haven services provision in these countries. This result supports the consistency of the data. Details about this exercise are provided in Appendix E.

Additional data I complement the information on tax havens' legal architecture with additional data. Appendix A provides a list of all data sources used in this paper.

I first associate each territory with a status relative to its history as a sovereign state. Each country or territory can be classed as independent, nonindependent and a colony,

14. For instance, Trust provides "Fact Sheets" about many offshore jurisdictions: https://www.tridenttrust.com/knowledge/brochures-fact-sheets/. Trident Trust is one of the world's largest offshore providers, according to the International Consortium of Investigative Journalists (ICIJ). It operates in 19 of the tax havens present in my list, in addition to having offices in the U.S., the U.K. and Canada. Its operations were exposed in the Pandora Papers, with more than 3.3 million records leaked.

15. As illustrated by Appendix Table A.1, the Maldives appear on only three tax havens lists and San Marino on only one. Chambost (2000) devotes only two lines to San Marino to write that he does not consider it a tax haven, while Beauchamp (1992) writes that "if San Marino has an old reputation of tax haven, the republic has taken very few actions to justify it" (p.549, own translation). The Maldives are not covered in any of the main sources.

or nonindependent and not a colony. This last status includes, for instance, territories such as Jersey and Guernsey, which are generally not considered colonies even though they depend on the United Kingdom. I gather this information from the Colonial Dates Dataset (Becker, 2020), the CEPII Gravity Dataset (Head and Mayer, 2014) and the Issue Correlates of War (ICOW) colonial dataset (Hensel, 2018). I then manually complete the data when information is missing for a given territory using `worldstatesmen.org`, `rulers.org`, and `wikipedia.org`.

To measure the level of taxation worldwide, I combine two types of sources. First, I use the Tax Introduction Dataset (Seelkopf et al., 2021), which provides the date of introduction of six different modern taxes (including personal income taxes and corporate income taxes) for 220 countries and territories in the world. The authors distinguish modern from premodern taxes by the former's simple and broad tax bases, administrative complexity (they require information-intensive processes), and redistributive potential. This data source about the extensive margin of taxation is completed with information about the intensive margin. I use data from the Government Tax Revenue dataset created by Andersson and Brambor (2019a, 2019b). The dataset covers 31 countries between 1800 and 2012 (a nonsquare matrix) and provides information on their tax revenues as a share of GDP. I use this information as a proxy for the effective tax rate. Interestingly, the data distinguish between direct and indirect tax revenues. Despite covering fewer countries than the Tax Introduction dataset, this data covers a large share of the world economy (e.g., 66% of the world's GDP in 1950). When data are missing, as is particularly the case for world war periods, I linearly interpolate between two dates where I observe the level of taxation. This allows me to improve coverage. I use data from 1920 onward. Before this date, the coverage is too restricted. Overall, both sources provide a different but complementary view on world taxation.

3 Development of tax havens

The new dataset provides new information about the rise of tax havens in the 20th century, shedding light on key supply and demand forces in the market for offshore tax haven services. First, I detail the characteristics and long-run evolution of tax havens. Then, guided by this first exploration, I explore the characteristics of the demand for tax haven services and show how gravity forces shape it. Finally, I study the links between colonial empires and the development of tax havens.

3.1 Long-run development of tax havens

I first document the striking increase in the number of tax havens in the 20th century. I describe the pattern of expansion by type of reform and broad geographic region. Finally, I show that country size and colonial history are two critical determinants of a country's choice to become a tax haven.

Rise of tax havens Figure 1 describes the development of tax havens in the 20th century, distinguishing the extensive and intensive margins of tax haven supply in panel (a). The interwar period witnessed the initial rise, linked to the introduction of modern direct taxation through individual and corporate income taxes in several countries. Notably, the 1950s marked the start of large-scale updates to the legal architectures of existing tax havens, with a pronounced acceleration in follow-on reforms from the 1970s onward. The vertical line marks the beginning of British decolonization in the Caribbean, a pivotal moment that drove increased offshore architecture reforms. Most of the reforms at the end of the period affected the intensive margin of tax haven supply (follow-on reforms), reinforcing the legal architecture of already existing tax havens, rather than the extensive margin.

Panel (b) decomposes the follow-on reforms into those introducing a new legal technology (*new technology*) and those reinforcing a legal technology in which the country is already specialized (*revisions*). This distinction illustrates a fundamental trade-off faced by suppliers in competitive markets—the choice between specialization for vertical competition and diversification for horizontal competition. The figure reveals a slightly higher frequency of reforms introducing new legal technologies, indicating that tax havens compete through both horizontal diversification and vertical specialization.

Legal technologies To better understand the evolution of tax havens, we need to study the type of legal technologies introduced. Figure 2 decomposes the trend based on tax havens' specialization, as categorized in Table I.

During the interwar period, the inaugural reforms reflected diversification across various legal technologies, hinting at limited competition among tax havens. However, from the 1950s, "Exempt companies" surfaced as the predominant type of tax haven technology, with the associated reforms outpacing those in other sectors. These companies, which provide flexibility to both firms and individuals (particularly for managing business income), also reduce administrative costs for countries that become tax havens. This attractive property might explain the growth in this technology's adoption by tax havens.

The figure also shows a rapid rise in the number of banking reforms. These include offshore banking or bank secrecy laws, which complement other legal technologies. Unlike onshore banks, offshore banks provide flexibility and secrecy, which is crucial for offshore users. Consequently, offshore banking reforms are expected to develop simultaneously with other legal technologies.

Finally, IBCs appear to have grown increasingly attractive at the end of the century, with a significant increase in the number of IBC reforms. There were a few IBC reforms in the 1960s, but we observe a break in the trend following the reform of 1984 in the British Virgin Islands. Since then, IBCs have been the legal technology that has experienced the most remarkable growth, emphasizing the key role of legal innovations in tax havens' development. They also illustrate how quickly legal innovations can diffuse. In contrast to innovations in other markets, legal innovations can be readily replicated since regulations are publicly available and are not protected from replication.

Geography of tax havens Figure 3 studies the spatial dimension of the rise of tax havens. It highlights striking regional differences in their expansion, with Europe, the Americas, and later Asia hosting a significant number and Oceania and Africa lagging behind.

Until the 1950s, almost all tax havens were located in Europe and the Americas, particularly the Caribbean area. This is in line with the fact that taxation was first introduced in these regions. Indeed, a striking fact about state-building in the 20th century is the rapid spread of modern taxation (Seelkopf et al., 2021). A consequence of this global rise in taxation is that some individuals and firms are now eager to avoid it, creating demand for tax avoidance and evasion services. On the personal taxation side, this trend was reinforced by the fact that personal income taxes were characterized by a high degree of progressiveness, with top marginal tax rates often higher than 60% in the 1920s. [16]

Figure A.2 correlates the rise in modern direct taxation (personal and corporate income taxes) with the building of tax haven architecture in Europe and America. It underscores a demand-driven mechanism whereby introductions of taxes are positively correlated with tax haven reforms at a regional level. Conversely, the reforms in the two regions at the end of the 20th century cannot be straightforwardly explained by rising taxation, suggesting a role of alternative factors such as competition between tax havens and decolonization. Appendix Figure A.3 extends this analysis to Asia, Africa, and Oceania. It reveals a similar trend in Asia, i.e., a lag between tax introductions and the surge in tax haven reforms. However, Oceania and Africa exhibit a distinct evolution, with a steep rise not directly correlated with increases in direct taxation reforms.

For a large part of the 20th century, Europe hosted the largest number of tax havens. From the 1960s, following decolonization and the global liberalization of financial flows associated with the end of the Bretton Woods system, we observe a break in the trend of tax havens in the Americas, whose number increased significantly. This period also marked the emergence of tax havens in other regions, namely, Asia and Oceania and, to a lesser extent, Africa. We thus observe two broad periods delineated in the global history of tax havens during the 20th century. In the first, from WWI to the seventies, Europe dominated, with Switzerland being a key player. [17] From the 1970s, a shift occurred as more tax havens appeared in the developing world, particularly the Caribbean, which became a tax haven hub. The changing geography of the offshore world mirrored the shift in the global economic center from Europe to the U.S.

Characteristics of tax havens To complete the description of tax havens, I explore two important supply-side characteristics underscored by the literature. The most significant is tax havens' small size (Dharmapala and Hines, 2009). This characteristic has also been rationalized by theoretical models (Kanbur and Keen, 1993, Hansen and Kessler, 2001, Slemrod and Wilson, 2009, Bucovetsky, 2014). A second important characteristic of tax havens is their colonial history. Different studies have highlighted the

16. A recent literature shows that individuals at the top of the distribution are more likely to evade taxes (Alstadsæter et al., 2019, Leenders et al., 2023).

17. The history of Switzerland, particularly its dominant role during the interwar period, has been the subject of several studies by historians. See, for instance, Farquet (2016, 2018) and Guex (2000, 2021).

tight connection between the colonial world, especially the British one, and the making of tax havens (e.g., Palan et al., 2009, Ogle, 2017, 2020).

Appendix Figure A.4 plots the share of tax havens by size and colonial history over the years. Until the decolonization period, small countries (in the first quartile of country size) exhibited a similar trend, irrespective of their colonial history. A notable shift occurred in the 1960s, with more than 80% of small U.K.-related countries being tax havens compared to 40% of non-U.K-related. countries. The trend is similar among large countries. This dynamic dimension in the tax havens market adds to the literature, indicating that the decolonization shock significantly influenced the development of tax havens, particularly in newly independent and small countries. I further examine the decolonization shock in section 3.3.

Size of the market for tax havens How did the increase in the number of tax havens impact the size of the global market for offshore services? We know from the previous section that this increase was linked to the increase in offshore services provision in countries introducing new reforms. This increase in the provision of services could have come at the expense of the tax havens already supplying the market or could have expanded the size of the market. I evaluate this alternatives in Appendix F.

I use data from Zucman (2013) on fiduciary deposits in Switzerland by country of origin between 1976 and 2014 from the Swiss National Bank. The Swiss market is one of the largest for tax evasion by individuals: it represented 34% of all offshore financial wealth in 2008 and was probably even larger before this date (Zucman (2013), Alstadsæter et al., 2018). To access the Swiss market for tax evasion purposes, one has to intermediate deposits through a tax haven. Data on the origin country of Swiss deposits therefore allow me to proxy the market share of each tax haven in the Swiss offshore market.

Figure A.10 in Appendix F delineates the market size of tax havens, distinguishing between those becoming havens before and after 1960. The global size of the tax haven market in Switzerland surged over the period, especially from the early 1990s. While the share of older tax havens oscillated around 30%, the market share of new tax havens consistently rose, matching that of the old tax havens after 2010. This increase in new tax havens' share is not associated with a decline in the share of old tax havens, suggesting limited substitution. This entry of new tax havens contributed to the increase in size of the tax havens market.

3.2 Gravity as a determinant of tax haven use

The remarks above correlate the rise of taxation with the rise of tax havens reforms across time and space. An implicit assumption to explain this pattern is that there is a regional component of demand: the introduction of taxes in one country increases the demand for tax haven services in nearby countries. This boils down to assuming that the costs of tax evasion increase with distance. Bilateral evasion costs are diverse. For instance, they vary with the extent of compatibility between the regulations in the high-tax country and those in the offshore country. They also include communication

and travel costs. Locating one's assets in a tax haven means traveling there occasionally (even in the 21st century; see Harrington, 2016), communicating with intermediaries located in the tax haven, etc. These costs are likely distance dependent.

Empirical support for this assumption is found in the literature highlighting the gravity structure of the use of tax havens. Studying the behavior of multinational firms, Ferrari et al. (2022) show that a gravity-like relationship exists for profit shifting between production locations and tax havens. This link is also found in the bilateral profit shifting data of Tørsløv et al. (2023). Studying tax evasion by individuals in the Netherlands, Leenders et al. (2023) find that individuals close to a border tend to locate their hidden wealth in the country with which they share the border, again suggesting geography-dependent costs.

To complement this evidence, I employ micro-level data from Offshore Leaks, focusing on the bilateral information in the dataset. Using the ownership links provided by the ICIJ, I create a variable that measures the number of links between each $(nonhaven; haven)$ country pair. These links represent ownership connections between offshore entities in a tax haven j and an entities in a nonhaven country i. I detail the treatment of the data and the main assumptions made to count links between two countries in Appendix D. I estimate the following gravity equation to explain the number of links between a pair:

$$\#Links_{ijk} = exp\left(\beta_1 ln(Dist_{ij}) + \beta_2 Ever\ Colony_{ij} + \beta_3 Legal\ origins_{ij} + \nu_{ik} + \nu_{jk}\right)\epsilon_{ijk} \quad (1)$$

where $\#Links_{ijk}$ is the number of links between nonhaven country i and tax haven j as documented in the leak source k (see the list of sources in Appendix D).[18] $Dist_{ij}$ is the geographic distance between i and j, $Ever\ Colony_{ij}$ is an indicator variable equal to 1 if the two countries have ever been in a colonial relationship, and $Legal\ origins_{ij}$ is an indicator variable equal to 1 if the two countries share legal origins. ν_{ik} and ν_{jk} are country×source fixed effects that account for any country-level characteristic and any country×source-level characteristics such as preferences on the part of the offshore providers exposed in a given leak for certain tax havens or origin countries. ϵ_{ijk} is the error term. Given the count nature of the data, the equation is estimated using a Poisson pseudo-maximum likelihood (PPML) estimator. To focus on links indicative of ultimate ownership, I conduct the estimation on a restricted sample where the origin countries are nonhaven countries and the destination countries are tax havens. My results are quantitatively similar when estimated with OLS or in the nonrestricted sample.

The results are displayed in Table II. I find that distance plays an important role, with a 1% distance increase decreasing the number of links between two countries by approximately 1%. This result supports the hypothesis that bilateral evasion costs increase with distance. Furthermore, it is important to note that these costs also depend negatively on the legal similarities between the origin country and the tax haven: sharing a common legal origin increases the number of tax evasion links. This can be explained by the fact

18. I retain the information about the source of the leak to absorb any source-specific bias in coverage through fixed effects. Similar results are obtained when this dimension of heterogeneity is not used.

that two legal systems with the same origin might be more complementary when one wants to evade or avoid taxation.

In summary, the evidence indicates that distance is a crucial factor influencing the demand received by tax havens. This observed pattern aligns with the concept of market access in the economic geography literature (Redding and Venables, 2004), according to which countries close to large markets are better positioned to serve demand, similarly to how tax havens benefit from proximity to countries implementing higher tax rates. Consequently, countries near large markets with high tax rates are more likely to become tax havens, irrespective of their own size.

3.3 Colonial empires and tax havens

In this subsection, I explore in more detail the links between colonial empires and tax havens, a topic extensively discussed in the literature on the history of tax havens. The new data can help us explore these questions. Various studies have underscored the close connection between the colonial world, particularly the British empire, and the genesis of tax havens (e.g., Palan et al., 2009, Ogle, 2017, 2020). Newly independent countries found a convenient specialization in the tax haven industry, which was predicated on a resource available to all countries: sovereignty. Ogle (2017) argues that the connection between the colonial and offshore worlds is linked to the United Kingdom's setting up of an informal empire with limited actual sovereignty but within a distinctive legal space. The difference between legal spaces generates loopholes that former colonies exploit for purposes of providing offshore services. She also argues that the decolonization shock was partly an offshore services demand shock, with colonizers' assets partly reallocated to tax havens after decolonization. In contrast, Farquet (2021) argues that even though some colonial assets were relocated to tax havens, the bulk of offshore assets are rich countries' assets.

The tight link between the former UK colonies and tax havens is also related to the fact that these colonies use common law, a legal system originating in the UK that is perceived to be more conducive of tax evasion and tax avoidance than civil law (see, for instance, Palan et al., 2009). In addition, some scholars have argued that the United Kingdom has encouraged these countries, at least indirectly, to become tax havens to reduce their need for development aid (Sagar et al., 2013, Ogle, 2017). However, the recent contribution of Sævold (2022), which draws on extensive access to archives, concludes that there was no strategic effort by the UK administration to create a network of tax havens that would benefit the metropolitan power. Nonetheless, other colonial powers such as France have been more reluctant to encourage this development choice (Rawlings, 2004, Woker, 2024).

To further explore the links between colonial empires and tax havens, I study the evolution of the offshore policies of countries following their independence from the UK. I estimate a dynamic difference-in-differences specification where the treated group is composed of countries experiencing decolonization and the control group of countries

that become independent from another colonizer.

$$Cumul\ Tax\ Haven\ Reforms_{it} = \sum_{k=-7}^{15} \beta_k Independent\ from\ UK_{it}^{k} + \mu_i + \mu_t + \epsilon_{it} \quad (2)$$

where $Cumul\ Tax\ Haven\ Reforms_{it}$ counts the number of tax haven reforms made by country i at date t. $Independent\ from\ UK_{it}^{k}$ is a dummy variable equal to one for treated countries k years before or after they become independent from the UK. μ_i and μ_t are country and time fixed effects, and ϵ_{it} is the error term. The equation is estimated with the TWFE estimator of de Chaisemartin and D'Haultfœuille (2024) to account for potential effect heterogeneity in a generalized difference-in-difference setting with different treatment dates. [19]

A crucial identification assumption is the exogeneity of the decolonization process with regard to tax haven policies. In theory, a positive demand shock for tax haven services could simultaneously increase a country's probability of becoming a tax haven and probability of becoming independent. In reality, however, the timing of decolonization appears exogenous to the probability that the decolonized country becomes a tax haven. First, the timing of independence is uncertain, depending mostly on local and regional conditions, wars for independence, pro-independence protests, and negotiations with the colonizer. Sævold (2022) emphasizes that offshore policies and decolonization policies were "ad-hoc" and not "strategically planned". [20] Second, a country does not need to become independent for it to become a tax haven or implement offshore policies. Some territories became tax havens before independence (e.g., St. Vincent and the Grenadines), and some tax havens have never gained independence (e.g., the Cayman Islands). If the timing of independence were endogenous to the probability of a country's becoming a tax haven, we would expect to observe nonparallel pretrends. As we will see below, this is not the case.

The results are displayed in Figure 4. I find that the number of offshore reforms passed by former U.K. colonies increases by approximately 0.15 units 10 years after becoming independent, in comparison to the number passed by territories that gained independence from a different colonizer. This effect is substantial given that the average number of reforms passed by countries in the sample is 0.17 (with a maximum of six). The absence of significant pretrends for U.K. colonies and the exogeneity of decolonization suggest that this is a causal effect.

To sum up, the shock of decolonization represents a sizable exogenous shock in U.K. colonies' offshore history. This fact helps explain the significant increase in the number of tax havens and reforms from the 1960s in the different descriptive figures above. I use

19. I estimate a linear generalized difference-in-difference model here because it allows more flexibility in the settings with different treatment timings. Alternatively, Wooldridge (2023) proposes a nonlinear estimator that includes many interaction effects, making it hard for the model to converge in certain cases.

20. Sævold (2022) writes, "The extent to which tax havens eventually spread through the Empire was not foreseen from the outset" (p.243) and "These factors further emphasize that tax haven formation in a British context was closely entangled with processes of independence, characterized by the *ad hoc* decisions that led to more independence, and were not strategically planned by the UK administration – quite the contrary." (p.252).

this shock in section 6 to analyze the effects of increasing competitive pressure on tax havens' choices.

4 Conceptual framework

To guide the empirical exploration, this section presents a conceptual framework that describes the fundamental forces influencing a government's choice to turn its country into a tax haven and update its legal architecture. The decision to become a tax haven is the result of the building of legal and fiscal institutions, in the spirit of the legal capacity building framework of Besley and Persson (2011). In addition, this framework describes tax havens' potential competitive interactions in the market for tax haven services. Appendix H proposes a more formal framework.

Setup Utilitarian governments want to maximize the sum of the private revenues of homogeneous individuals and of tax revenues. Tax revenues are constrained by the country's fiscal capacity and by the fact that individuals evade taxation by using tax havens. Governments can choose between becoming tax havens or remaining nonhavens. Nonhaven countries have one sector (the *productive* sector) characterized by its productivity. If a country decides to become a tax haven, an offshore sector is introduced. This sector is characterized by the quality of its legal technology, p_i, which can be increased by means of (costly) reforms of the offshore architecture. To become a tax haven, the country must invest in the development of a legal technology, which is costly. The real sector is taxed at rate t_i, and the offshore sector is taxed at rate $t_i^o < t_i$. Setting up an offshore sector allows the state to tax the foreign demand for offshore services and potentially increase its tax revenues. Individuals in nonhaven countries can evade taxation by using tax havens and otherwise pay taxes domestically.

Hypothesis 1. The gains from becoming a tax haven depend on the level of demand received by the tax haven from each nonhaven country in the world. These gains depend negatively on bilateral evasion costs (τ_{ij}), on the tax rate of the tax haven (t_i^o), and on an individual tax morality parameter distributed Gumbel. They depend positively on the quality of the tax haven legal architecture (p_i), and on the tax rate of the nonhaven country (t_n).

Some formality is necessary to illustrate this hypothesis and its consequences. Denote as V_{ni} the deterministic part of the utility received from using tax haven i by country n, as V_n the deterministic part of the utility from living in country n and not avoiding taxes, and as $\{TH\}$ the set of tax havens. Then, exploiting the Gumbel distribution of the tax morality parameter, we have the probability that an individual in n pays her taxes in country i:

$$\mathbb{P}_{ni} = \frac{\exp\left(V_{ni}\left(t_i^o, p_i, \tau_{ni}\right)\right)}{\sum_{k\in\{TH\}} \exp\left(V_{nk}\left(t_k^o, p_k, \tau_{nk}\right)\right) + \exp\left(V_n\left(t_n\right)\right)} \tag{3}$$

Note that $\mathbb{P}_{nn}$ corresponds to the probability that taxes are not evaded. Multiplied by individuals' revenues, $\mathbb{P}_{ni}$ also defines country n's demand for offshore services from tax haven i.

Remark 1. Demand shocks depend on nonhaven countries' tax rates: $\frac{\partial \mathbb{P}_{ni}}{\partial t_n} > 0$

Tax rates are one important determinant of a country's demand for offshore services. Exogenous changes in tax rates therefore increase n's demand for offshore services from i.

Remark 2. Shocks are distance dependent: $\frac{\partial \mathbb{P}_{ni}}{\partial \tau_{ni}} < 0$

The demand received by a tax haven depends on its characteristics, including the quality of its offshore legal architecture, its tax rate on the offshore sector, and its geography. Based on the results from section 3, the distance between the nonhaven origin country and the tax haven is a determinant of the marginal gains from a country's becoming a tax haven when offshore services demand increases. A tax haven further from the shock's origin experiences a proportionally lower positive demand shock, making demand shocks dependent on the distance from the shock.

Remark 3. Competition matters.

Competition is pivotal, and it directly affects the left part of the denominator in Equation 3. An increase in the number of tax havens diminishes demand for tax haven i, all else equal. However, the intensity of competition from other tax havens k depends on their bilateral costs with country n, τ_{nk}. Consequently, two tax havens that share a similar geographic location compete with each other more than two tax havens more distant from each other. Drawing a parallel with the economic geography literature (Redding and Venables, 2004), we can think of $\mathbb{P}_{ni}$ as a measure of the bilateral market access of nonhavens to tax havens.

Hypothesis 2. In tax havens, the tax rate on the domestic sector is a function of the tax rate on the offshore sector.

This constraint creates a trade-off: a decrease in a tax haven's tax rate to attract more offshore revenues comes at the expense of tax revenues from the domestic economy. This is a mechanism similar to that in Slemrod and Wilson (2009). From an empirical point of view, tax rates on the domestic economy in tax havens tend to be lower than those of comparable countries, suggesting that this hypothesis is empirically substantiated. [21] More broadly, this hypothesis implies that the offshore sector absorbs resources from the domestic sector.

Testable Implication 1. A country's probability of becoming a tax haven depends on the interaction between the size of the offshore services demand shock and the country's own size (Section 5).

21. Table A.11 in Appendix G compares the corporate and individual tax rates on the domestic economy in tax havens and nonhavens. It shows that tax rates in tax havens tend to be lower than those in nonhavens by 5 percentage points for personal taxation and 7 points for corporate taxation. Controlling for different country characteristics in Figures A.11 and A.12, I also find that tax havens have lower tax rates than similar countries. One can also imagine that a disconnection between the domestic and offshore tax rates in tax haven pushes domestic taxpayers to try to appear as foreigners to benefit from the lower tax rates. This is, for instance, what happens with round-tripping, whereby firms invest in their domestic countries through foreign entities to benefit from advantageous conditions (Hanlon et al., 2015).

The role of country size is driven by the fact that the gains from becoming a tax haven are constant with respect to country size while the costs of becoming a tax haven increase with country size. Because tax havens' offshore sector does not attract real activity, only paper money, the gains from becoming a tax haven do not depend on country size. This is illustrated by the fact that the only physical item required to use a tax haven is often a postbox. This disconnect between size and revenues is precisely what allows very small countries such as the British Virgin Islands to provide a great deal of tax haven services. In contrast, the cost of becoming a tax haven increases with size. Following Hypothesis 2, the larger a country is, the larger is the proportion of forgone revenues from the domestic sector with respect to the additional revenue from the offshore sector (which does not depend on size). As a consequence, only small countries, below a given size threshold, will gain from becoming tax havens.

In this context, a positive demand shock such as a tax increase in a country (Remark 1) increases demand for tax haven services, especially in neighboring countries (Remark 2). However, this shock will have a heterogeneous impact on countries' choices according to their size: for countries that are too large, the marginal increase in benefits from becoming a tax haven do not outweigh its cost. These countries will not be sensitive to the shock, in contrast to smaller countries.

Hypothesis 3. The cost of introducing a legal technology decreases when other countries have introduced this legal technology.

A country's adoption of a new legal technology provides positive spillovers to other countries: It increases their knowledge of legal technologies and gives them information about how successful a given legal framework can be. This effect is spurred by the fact that laws, unlike technologies, cannot be protected by patents: they are freely observed and free to copy. Anecdotally, the British Virgin Islands' IBC law enacted in 1984 has been copied almost verbatim by other offshore jurisdictions such as Anguilla and the Bahamas. This suggests that the diffusion of new legal technologies can reduce the costs of updating the offshore legal architecture and increase the probability of offshore reforms.

Testable Implication 2. The effect of an increase in competition on the offshore legal architecture of a tax haven is the sum of two opposing effects: First competition decreases rents in the market. Second, competition decreases the cost of implementing offshore legal technologies (Section 6).

This proposition results from Remark 3, which shows that an increase in the number of tax havens increases competition and decreases rents, and from Hypothesis 3, which assumes that the cost of implementing a specific reform decreases when other countries implement it. According to this proposition, the net effect of additional competition is undetermined and depends on the relative size of the two effects. The effect of competition on tax havens' legal architecture is ultimately an empirical question.

Testable Implications 1 and 2 describe the impact of market shocks on tax havens' legal architecture. The rest of this section is dedicated to studying the consequences of exposure to tax havens.

Hypothesis 4. Nonhaven countries must reach a given level of tax revenues. This is done through different tax bases, some of which are mobile (i.e., affected by tax evasion and avoidance), some of which are immobile (i.e., not affected by tax evasion and avoidance).

This hypothesis is in line with the design of tax systems in many countries, where the governments levy taxes on different tax bases. It recognizes that, to provide public goods, a country must collect a given level of tax revenues. Consequently, a government must neutralize the effect of negative tax shocks on its budget by substituting revenue streams across tax bases.

Testable Implication 3. Exposure to tax havens affects the tax structure of nonhaven countries: it shifts taxation from mobile to immobile bases (section 7).

This implication results from Hypothesis 3. When a mobile tax base is affected by an increase in tax evasion, the decrease in tax revenues from the mobile tax base is compensated by an increase in tax revenues from the immobile tax base. This implication about the substitutability of tax bases is supported by different results in the literature in the context of corporate taxation. Bilicka et al. (2023) show that countries with high losses from tax avoidance have on average higher indirect tax rates. In addition, Thunecke (2023) shows that corporate taxes and consumption taxes are substitutes and that consumption taxes fully compensate decreases in corporate tax rates due to tax competition. It is also important to note that because tax havens affect the relative taxation of different groups in nonhaven countries, they affect inequalities in nonhaven countries.

5 Demand shocks in tax havens

The remainder of the paper aims to test Testable Implications 1–3. On Testable Implication 1, I show that the interaction between the demand for offshore services received by a country and the country's size drives the development of tax havens. To test this, I use the temporal and spatial variation in demand shocks triggered by tax changes over the 20th century. Political shocks are used to obtain exogenous variation.

Demand shocks My conceptual framework indicates that demand has a geographical component. The geographical variation in demand comes from i) the assumption of bilateral evasion costs and ii) the assumption that the bilateral costs increase with distance. The assumption that bilateral costs increase with distance, empirically supported by our results in section 3, is critical to identification as it creates country-level variation in the offshore services demand faced by a country. A country further from the demand shock experiences a smaller increase in demand than a closer country.

I construct the demand shocks received by country i as a weighted average of other countries' tax level. The weight represents the exposure of country i to the offshore demand sent by the other countries. This specification has the advantage of being easy to interpret and can deliver elasticities of reforms to foreign demand. The weights are a

function of size, proxied by countries j's population, and distance. In the baseline regression, I use the following function, and I propose a robustness analysis with different weights: $W_{ijt} = \frac{\mathbb{1}_{dist_{ij}<2500} Pop_{jt}}{\sum_j \mathbb{1}_{dist_{ij}<2500} Pop_{jt}}$. This weight is simple, as it is assigned proportional to country size to each country j less distant to i than 2500 km, and a weight of 0 is assigned to countries located further away. This specification puts a high weight on regional shocks. From these weights, I compute demand as:

$$D_{it} = \left(\sum_j W_{ijt} \right)^{-1} \times \sum_j \left(W_{ijt} \times \frac{Direct\ Tax\ Revenues_{jt}}{GDP_{jt}} \right) \tag{4}$$

The level of taxation in country i is proxied by the average direct tax revenues in GDP. The data come from the Government Revenues Dataset (Andersson and Brambor, 2019a, 2019b).

Identification To study the effect of demand on the tax havens' legal architecture, I estimate the following equation:

$$\mathbb{1}_{Reform_{it}} = \alpha_1 D_{it} + \alpha_2 D_{it} \times ln(Area_i) + \chi Z_{it} + \mu_i + \mu_t + u_{it} \tag{5}$$

with $\mathbb{1}_{Reform_{it}}$ being an indicator variable equal to 1 if country i passes a reform at date t and D_{it} being the demand received by country i at date t. $ln(Area)$ is the logarithm of the size of the country. Z_{it} is a vector of control variables, and χ is the associated vector of coefficients. The control variables include an indicator for a country's being independent at date t and the number of years since independence. Country fixed effects and time fixed effects are introduced through μ_i and μ_t. u_{it} represents the residuals. The equation is estimated with a linear probability model.[22] Countries that never become tax havens are included in the estimation sample. However, countries that never receive any demand (i.e., countries i for which $\forall t, D_{it} = 0$) are excluded from the sample. The demand corresponds to an i-specific average of the tax rate in foreign countries weighted by the size of these countries and their distance to country i. It is therefore a shift-share design (Borusyak et al., 2022).

The identification of the impact of offshore services demand shocks on tax haven formation raises empirical concerns. In particular, some shocks could affect both the tax-revenues-to-GDP ratio observed in foreign nonhaven countries and their probability of passing a reform. The existence of tax competition can push nonhaven countries to decrease their tax rates to compete for capital when tax havens appear, creating reverse causality. Unobserved confounders such as liberalization policies could also affect both tax rates and the probability that countries become tax havens because of increased capital mobility (see, for instance, Hollis and McKenna, 2019).

To deal with this issue, I propose an IV strategy where I construct a variable that affects a country's probability of passing a reform only through the variable's effect on

22. According to Timoneda (2021), a linear probability model with fixed effects is well suited for estimating models with rare events, as it is the case in our data. It also facilitates the use and interpretation of instrumental variables and interaction models.

the demand for tax haven services. To do so, I predict exogenous changes in tax revenues and then use this variable, $\widehat{\frac{Direct\ Tax\ Revenues_{jt}}{GDP_{jt}}}^{IV}$, to build an exogenous demand variable, D_{it}^{IV}.

My consideration of exogenous changes in taxation is inspired by results from the comparative taxation literature. In particular, Kiser and Karceski (2017) highlight three important determinants of tax revenues from a comparative perspective: war, democracy, and development. Cameron (1978) also points to the role of government ideology in explaining taxation trends.

The occurrence or the threat of war has been extensively discussed as a determinant of tax revenues (Tilly, 1990). However, the occurrence of war might be correlated with both tax levels and tax flight and therefore is not a good candidate for an IV. Development, measured by GDP per capita, might also be subject to endogeneity, as it is likely to be correlated to regional economic shocks, and would then affect both the dependent and the independent variables. In contrast, democratization appears much more independent of these shocks. For instance, Acemoglu et al. (2008, 2009) and Barron et al. (2014) argue, in a panel setting, that democratization is not caused by changes in income. Therefore, the level of democracy is probably not correlated with regional-level shocks that might affect the probability that some countries enact tax haven reforms. In addition, a long-standing literature describes how different government ideologies affect economic outcomes, particularly taxation levels (Cameron, 1978, Tavares, 2004, Pettersson-Lidbom, 2008). For instance, tax revenues tend to be larger for left-wing than for right-wing governments. The variation in tax levels due to changes in government ideology is likely to be exogenous with respect to tax haven reforms in nearby countries. Therefore, this variable appears suitable for my IV strategy.

In an initial stage of the IV strategy, $\widehat{\frac{Direct\ Tax\ Revenues_{jt}}{GDP_{jt}}}^{IV}$ is predicted based on the level of democracy, the ideology of the head of government (left, center or right), country fixed effects and time fixed effects. To increase the reliability of my estimates, I interact the democracy index and ideology indexes with continent dummies to obtain continent-specific effects of each variable on the ratio of direct tax revenues over GDP:

$$\begin{aligned}\frac{Direct\ Tax\ Revenues_{jt}}{GDP_{jt}} = & \sum_r \theta_1^r Democracy_{jt} \times \mathbb{1}_{region=r} + \sum_r \theta_2^r \mathbb{1}_{Left_{jt}} \times \mathbb{1}_{region=r} \\ & + \sum_r \theta_3^r \mathbb{1}_{Right_{jt}} \times \mathbb{1}_{region=r} \\ & + \delta_j + \delta_t + e_{jt}\end{aligned} \tag{6}$$

where $\frac{Direct\ Tax\ Revenues_{jt}}{GDP_{jt}}$ is the share of direct taxation in GDP in country j at date t and $Democracy_{jt}$ is a variable that captures the extent of democracy in country j using V-Dem's electoral democracy index (Coppedge et al., 2021). $\mathbb{1}_{Left_{jt}}$ and $\mathbb{1}_{Right_{jt}}$ are indicators for whether the head of government belongs to the left or the right (the excluded category is "center" governments). These data come from Brambor et al. (2017), who provide information on the ideology of the head of government of 33 countries from 1870 to 2012. $\mathbb{1}_{region=r}$ are indicator variables equal to 1 for each different world region (Africa,

Americas, Asia, Europe,Oceania), indexed by r. δ_j is country fixed effects, δ_t is year fixed effects and e_{jt} is the error term. The regression is estimated over the period 1920–2000.

Using the predicted value, $\widehat{\frac{Direct\ Tax\ Revenues_{jt}}{GDP_{jt}}}$, I construct the instrument, D_{it}^{IV}, as the weighted average of direct taxation in countries surrounding a given country i following equation 4. As an instrumental variable, D_{it}^{IV} should fulfill two conditions: i) it must be correlated with D_{it} (the relevance condition) and ii) it should affect the probability of a coutnry's becoming a tax haven only through its effect on D_{it} (the exclusion restriction). I evaluate the first condition by looking at the first-stage F-statistics, which are large and above the thresholds of relative bias computed by Stock and Yogo (2005). The exclusion restriction holds as long as no endogenous variation is introduced in our initial stage. Following Borusyak et al. (2022), I study the correlation between my instrument and shock-level characteristics to assess the validity of the IV in Table A.2. The table shows that the instrument is not correlated with per capita GDP growth, trade, or any measure of (economic, commercial or financial) liberalization following the KOF globalization index (Gygli et al., 2019) or the financial openness index of Quinn and Toyoda (2008). In addition, the within R-squared of the regression is almost systematically below 0.001. These results confirm that the instrument is not correlated with shock-level observable characteristics that might bring endogeneity.

Results The results from the estimation of equation 5 are displayed in Table III. The table gives the results for all reforms in column (1), for only the first reform making a country a tax haven (i.e., countries leave the estimation sample once they becomes a tax haven) in column (2), and for other reforms conditional on the country's being a tax haven in column (3). The number of observations in columns (2) and (3) sums up to the number of observations in column (1). The results are presented for the OLS and IV estimations.

In column (1), an increase in the weighted average of the tax-to-GDP ratio of 1 percentage point increases a country's probability of becoming a tax haven by 0.41 percentage points for the smallest countries in the sample. To scale this effect, we must compare it with a typical variation in the residualized dependent variable and with countries' average probability of enacting a reform in the sample. [23] When demand increases by one standard deviation, a small country's probability of doing a reform as revealed by the standardized effect increases by 66%. Note that the initial probability of doing a reform is very low in the sample. Hence, even though a typical change in demand significantly influences the probability of reform, the absolute impact remains small. This suggests that substantial demand increases are required to impact a country's decision to enact a reform.

The negative coefficient on the interaction between demand and size shows that the effect of demand decreases with the size of the country. It is nil for countries with an area of 22,574 km^2, corresponding to the 36th percentile of size, approximately equivalent to the size of Belize or Israel.

23. To residualize the dependent variable, I clear it of the variation coming from the fixed effects. My procedure for doing so follows the methodology proposed by Mummolo and Peterson (2018).

The IV results go in the same direction as the OLS results. The standardized effect for small countries is larger, at approximately one. This effect becomes nil for countries at the 24th percentile of size, approximately equivalent to the size of Comoros.

The sample is split to estimate the results in columns (2) and (3) to facilitate a more precise analysis. The results in column (2) reveal that the effect of demand is driven by the extensive margin of tax havens: when demand increases, it pushes countries that are not tax havens to become tax havens. This effect appears in both the OLS and IV estimations. In contrast, the effect of demand conditional on a country's already being a tax haven is not significantly different from zero and small in absolute terms, as revealed by the standardized coefficient. The result in column (2) confirms that the effect of demand decreases with distance and disappears around the 30th size percentile in the OLS estimation and around the 45th size percentile in the IV estimation. For a visual representation of these results, refer to Appendix Figure A.5.

In sum, the results presented in this table support Testable Implication 1, demonstrating that demand exerts a significant influence only on the smallest countries in the sample.

Robustness To assess the robustness of these results, I propose different exercises. In Table A.3, I use a threshold of 5000 km to compute the demand received by a country. Then, I correct the IV estimates for spatial correlation using the estimator of Colella et al. (2019) and specifying spatial clusters such that the correlation between error terms of two observations decreases linearly with distance and is zero when their distance is larger than 1000 km and when they are separated by more than 10 years (Table A.4). In Table A.5, instead of relying on the weighted average of the tax-to-GDP ratio in foreign countries, I rely on information about tax introductions using data from Seelkopf et al. (2021). Finally, I randomly permute 1000 times the demand shocks received by tax havens. I randomly assign to a country the demand shock received the same year by another country (Table A.6). In all cases, the main results of this section are confirmed.

6 Competition shocks

The previous section studies how tax havens are affected when the demand for tax haven services changes exogenously. It has been established that an increase in the potential demand received by a country increases its probability of becoming a tax haven. This effect decreases with country size. The results also suggest that demand does not explain well why tax havens update their legal architecture. Testable Implication 2 from section 4 shows that competition between tax havens can also drive their offshore policies.

In this section, I explore whether competition shocks can help us understand other causal determinants of the behavior of tax havens, in particular how they adapt when they face negative shocks to their rents. This is, for instance, what is expected when governments introduce anti-avoidance policies.

Identification For identification of the effect of competition in the market for tax haven services, I exploit a large quasi-natural experiment, the decolonization of British colonies in the Caribbean and the Pacific. Decolonization can be seen as a large supply shock. Figure 4 has demonstrated that this shock increased former U.K colonies' probability of passing an offshore reform. Following the wave of decolonization, many newly decolonized countries became tax havens or updated their legal architecture for offshoring. This shock can be described primarily as a supply shock that pushed many newly independent countries to seek additional revenues. It exogenously increased competition between tax havens by increasing the number of suppliers in the market.

To identify the effect of competition on tax havens' policies, I assume that, as for demand, there is a geographic component of competition. Two tax havens that are geographically close will compete more than two remote tax havens. This assumption is directly linked to my theoretical framework, where tax havens that are geographically close attract demand from the same places (see Remark 3). In addition, column (1) of Table A.7 in Appendix B finds, using the Offshore Leaks data, that one additional tax haven reform in an area of 1000 km reduces the number of entities registered in a given tax haven by 3.7%. This illustrates the negative effect of competition on the number of offshore users in a given tax haven. [24]

To generate differential exposure to competition, I again use geographical variation by looking at the impact of new offshore reforms within a 1000 km circle. [25] The impact of competition is then identified by the fact that different countries are hit differently by the competition shock based on their geography. The countries closer to tax havens that implement reforms are hit harder by the shock. To study the role of competition in tax havens' policies, I estimate the following equation:

$$\mathbb{1}_{Reform_{it}} = \beta_1 ln(D_{it}) + \beta_2 \left(\sum_{j \neq i} \mathbb{1}_{Reforms_{jt}} \times \mathbb{1}_{Dist_{ij}<1000km} \right) + CZ_{it} + \gamma_i + \gamma_t + v_{it} \qquad (7)$$

where $\mathbb{1}_{Reform_{it}}$ is an indicator variable equal to 1 when a reform is enacted in country i at date t. $\left(\sum_{j \neq i} \mathbb{1}_{Reforms_{jt}} \times \mathbb{1}_{Dist_{ij}<1000km} \right)$ is a variable that counts the number of reforms enacted in foreign havens j less than 1000 km away. Z_{it} is a vector of control variables, γ_i is country fixed effects, and γ_t is time fixed effects. v_{it} represents the residuals. The equation is estimated with a linear probability model.

The effect of competition on the legal architecture of tax havens is estimated through β_2. Equation 7 is subject to endogeneity through reverse causality. Indeed, reforms passed in country i depend on other tax havens' policies, which in turn depend on i's policies. Therefore, I use the natural experiment of decolonization to obtain exogenous variation in the passage of reforms. I concentrate on areas in the postwar Americas and Pacific since these were affected by the decolonization shock. I instrument the number of reforms within 1000 km around a given country by the number of newly indepen-

24. Note that in this table, the regression sample period is restricted to years after 1945 and the countries and territories to those in Oceania and Americas, as in the other regressions in this section.

25. This threshold—lower than that in the previous section—is justified by the fact that it offers more variation given that many tax havens are clustered in similar geographic areas.

dent British colonies within the 1000 km around this country. Because of the country and time fixed effects, this instrument captures only the variation coming from newly independent countries. The variation exploited in these regressions comes from the differential exposure of different tax havens to the shock due to differences in geography and in the timing of decolonization.

The exclusion restriction requires that the independence of countries within an area of 1000 km around country i affects its offshore policies only because it pushes newly independent countries to enact tax haven reforms. The geography and timing of decolonization have the advantage of being independent of the level of demand for tax haven services. However, one might argue that decolonization could have impacted tax havens' development through a demand channel. If decolonization increased economic uncertainty, this might have triggered capital flight to close countries. This is, however, unlikely as the bulk of offshore assets came from developed countries (Farquet, 2021). The exploration of the Offshore Leaks data in column (2) of Table A.7 in Appendix B shows no impact of the decolonization on the incorporation of new offshore entities. This is not compatible with a positive demand shock, in which case we would observe an increase in the number of registered entities. Therefore, I can rule out a violation of the exclusion restriction through this channel.

The instrument could still be subject to the omitted variable bias pointed out by Borusyak and Hull (2023) that arises through nonrandom exposure to random shocks. Indeed, exposure to the random shock might not be random since it depends on the number of neighbors that are British colonies. I follow the suggestions of Borusyak and Hull (2023) and recenter my instrumental variable by the number of British nonindependent territories within a 1000 km circle around country i at date t. If we assume a constant probability of a country's becoming independent each year, this last variable is proportional to the expected shock.

Results The results are displayed in Table IV. The three first columns display the OLS estimates, columns (3) to (6) display the IV estimates with the number of independent countries in 1000 km around as instrument, and columns (7) to (9) present IV results from a restricted sample of countries that did not become independent during the period studied. This sample restriction limits the bias introduced by the fact that some countries might have experienced the decolonization shock at the same time as the competition shock. This is an additional robustness exercise, as this channel is accounted for by the controls for independence and time since independence in columns (3) to (6). The coefficient on the number of surrounding reforms is multiplied by 100. It should be interpreted as the percentage-point increase in the probability of a country's becoming a tax haven when there is one new reform in the surrounding area. The average change in the number of reforms in a 1000 km circle from 1945 to 2000 in the sample is on average 8 conditional on a country's being a tax haven.

Looking at all reforms in column (1), we observe that one additional tax haven reform in the vicinity of a given country increases its probability of becoming a tax haven by 0.12 percentage points, corresponding to 1 percentage point for 8 additional reforms.

The effect is similar if we concentrate only on the first reforms. When looking at follow-on reforms passed in countries that are already tax havens, 1 additional reform increases the probability of a country's passing a new reform by 0.34 percentage points. The effect is imprecisely estimated, though, and not significantly different from 0 at the 10% level. The level of demand, captured through the weighted level of taxation in foreign countries, positively affects the probability of reform, albeit not significantly.

The IV regressions confirm the above results: one new reform in the vicinity of a country increases its probability of passing a reform by 0.15 percentage points, of becoming a tax haven by 0.13 percentage points and of adopting a subsequent reform once it is already a tax haven by 0.6 percentage points. When the sample is restricted to countries in the sample that never become independent, I find a large effect on follow-on reforms. A new reform within a 1000 km circle increases a country's probability of adopting a subsequent reform by 1.2 percentage points. This corresponds to an increase of 9.6 percentage points at the average exposure level. However, despite being positive, the effect on first reforms is now lower than that in the previous columns and not significantly different from zero. This suggests that for these countries, the level of competition had little effect on their transformation into tax havens.

Overall, these results show a large effect of competition on tax havens' policies. I now discuss a potential channel of this effect: the role of legal technologies and their diffusion.

Mechanism: Role of legal technologies At least two channels, discussed in Proposition 2, could be at play in the effect of competition in the market for tax haven services. On the one hand, more competition reduces tax havens' rents. On the other hand, tax havens might want to adjust to a competition shock by updating their legal architecture to increase their rents.[26] They can benefit in making this latter adaptation from the diffusion of new legal technologies.

The competition effect is therefore intertwined with a learning effect, whereby actual and potential competitors can observe the types of laws used by other countries and can design their own laws in line with their perception of the effectiveness of the former. This effect can be magnified by the fact that such laws are generally written with the help of a small pool of lawyers advising several countries simultaneously.

This second effect dominates the first, as we observe an increase in the number of reforms in tax havens hit by the competition shock. In particular, we see that tax havens react on the intensive margin of offshore services supply. This intensive-margin change can be decomposed into the effect on reforms in an area of specialization in which the tax haven has already passed a reform and the effect on reforms in a new area. An area of specialization corresponds to a broad type of legal technology (e.g., "Individual" or "Banking"). This is what I explore in Appendix Table A.8. This table replicates columns (6) and (9) of Table IV with indicator variables for "Reforms in a new area" or "Revisions" as dependent variables. The table shows that the competition shock has a larger impact

26. Another alternative would be to compete on tax rates. The absence of historical information on the tax rate applied by tax havens prevents me from exploring this channel.

on legal technology investments in new areas than on those in areas in which the tax haven is already specialized. This is true both for all countries and for only nonindependent countries.

Innovation in a new area can be facilitated if investment in the legal architecture is not costly. This is the case when new legal technologies emerge (Hypothesis 3). IBCs constitute one such technology. The descriptive evidence in Figure 2 shows that IBCs diffused quickly between countries despite being a relatively late innovation in the 20th century. The emergence of new legal technologies can favor learning among tax havens, which helps to mitigate the negative effects of decreased rents from greater competition. Learning is particularly facilitated by the fact that laws are public and not protected from reproduction.

Here, I study the extent to which the diffusion of IBCs fueled the reaction of tax havens to the competition shock. To do so, I follow the structure of equation 7 and look at the impact of new IBC reforms within a 1000 km circle on a country's probability of introducing this type of reform in its legal architecture:

$$\mathbb{1}_{FirstReform_{it}^{IBC}} = \zeta_1 ln(D_{it}) + \zeta_2 \left(\sum_j Reforms_{jt}^{IBC} \times \mathbb{1}_{Dist_{ij}<1000km} \right) + CZ_{it} + \gamma_i + \gamma_t + u_{it} \quad (8)$$

where $\mathbb{1}_{FirstReform_{it}^{IBC}}$ is an indicator variable equal to 1 when an IBC reform is enacted in country i at date t for the first time. The country leaves the sample once it has enacted such a reform. $\left(\sum_j Reforms_{jt}^{IBC} \times \mathbb{1}_{Dist_{ij}<1000km} \right)$ is a variable that counts the number of IBC reforms enacted in foreign havens less than 1000 km away. Z_{it} is a vector of control variables, γ_i is country fixed effects, and γ_t is time fixed effects. u_{it} represents the residuals. The equation is estimated with a linear probability model.

The coefficient ζ_2 is interpreted as the effect of one additional IBC reform in a 1000 km circle on a country's probability of passing a reform in this category. A larger coefficient means that IBC reforms are more likely to diffuse geographically.

In Appendix Table A.9, I first estimate this model using OLS for reforms in the four most important categories at the end of the sample period: "Banking," "Exempt Companies (no IBC)", "IBCs," and "Individual." The results reveal that IBC reforms, finance reforms and individual reforms are those that diffuse most in the whole sample. One additional reform in the vicinity of a tax haven not yet specialized in IBCs increases its probability of implementing such a reform by 0.4 percentage points. This effect is statistically significant at the 5% level. For reforms targeting individuals, this number increases to 0.6 percentage points, while it is small and not significantly different from zero for exempt-company reforms (excluding IBCs). These results suggest that the cost of implementation and diffusion differs by technology.

Table V analyzes the role of IBC reforms in the reaction to the competition shock using the same sample as in Table IV.[27] Column (1) considers all reforms and includes independent and nonindependent countries. The coefficient estimated is of a magnitude similar to (slightly higher than) that in the whole sample. This means that the diffusion

27. Because these regressions are estimated in a restricted sample, there are not enough reforms of other types to replicate the analysis for other technologies.

patterns are closer in this sample than in the whole sample. The Kleibergen–Paap F statistic is above conventional thresholds. Column (2) restricts the sample to follow-on reforms passed once a country is already a tax haven. The coefficient estimated is large and positive but not very precise. Column (3) limits the sample to nonindependent countries. Again, the coefficient is close to that estimated in column (1) but not significantly different from zero at conventional levels. Finally, column (4) looks at follow-on reforms, conditional on a country's being a tax haven. I find a large, positive coefficient for IBCs, revealing an important diffusion pattern of this technology among nonindependent countries following the decolonization shock.

The results of this section suggest one mechanism to explain the observed effect of competition. Facing a negative shock to their rents, tax havens tend to explore new areas of specialization. New legal technologies, especially ones whose implementation costs are low such as IBCs, facilitate the upgrading of tax havens' offshoring architecture following the shock. Legal innovations are therefore crucial to our understanding of the dynamics in the market for tax havens, particularly when they face a negative shock to their rents.

7 Consequences of tax havens

This section studies the consequences of the emergence of tax havens for tax haven countries' own development and for other countries' economic outcomes. It tests Testable Implication 3 about the reaction of nonhavens to the presence of tax havens.

From an accounting point of view, the mechanical impact of tax havens on GDP should be neutral at the world level: any increases in private revenues and tax havens' tax revenues should offset the decline in tax revenues in nonhaven countries. Nevertheless, it is essential to take into account that this reallocation of revenues affects i) the investment behavior of countries and private agents and ii) the tax-setting behavior of high-tax countries. An increase in tax havens' revenues and private revenues might spur growth by increasing investment and consumption, while a decrease in tax revenues in high-tax countries might affect public spending and therefore GDP. High-tax countries might also react to the availability of tax havens by adjusting their own tax policy. All these effects make the long-term effects of tax havens different from those in the short run. Under some modeling assumptions, tax havens can even have positive spillovers to other countries in terms of welfare (Hong and Smart, 2010, Chu et al., 2015) or tax revenues (Johannesen, 2010). The empirical question of the global effect of exposure to tax havens on other countries is then an open one. The data collected for this paper offer a unique occasion to explore the causal impact of offshore tax havens' policies on their own domestic development and on other countries' economies.

7.1 Consequences of becoming a tax haven

I first investigate the effects of a country's becoming a tax haven on its GDP per capita. I run an event-study regression where I regress the log of GDP per capita on

leads and lags of the event of the country's becoming a tax haven. The data on GDP per capita are taken from the World Bank and begin in 1962. They are not available for all countries, especially for tax havens that are small and sometimes nonindependent countries. This limits the number of tax havens that can be included in the estimation sample.

To identify the causal effects of a country's becoming a tax haven, one would like, in an ideal experiment, to compare the evolution of two similar countries—one that becomes a tax haven and another that does not. To approximate this thought experiment as closely as possible, I adopt two different strategies. First, I run a difference-in-differences specification with heterogeneous treatment timing, following the methodology of de Chaisemartin and D'Haultfœuille (2020). To be able to effectively compare tax havens to similar countries, I restrict the sample to countries in the same region as new tax havens. This exercise is restricted to the Caribbean, Middle East and Pacific, with nine tax havens included in the treated group. [28] Then, to include more tax havens in the estimation, I switch to an interactive fixed effects estimator. This estimator has been introduced by Gobillon and Magnac (2016) and Xu (2017) and recently discussed in Liu et al. (2022). It can be seen as an extension of generalized synthetic control matching (Xu, 2017). By including interactions between an individual-specific effect and a time-specific effect, it more granularly captures possible confounders that are time invariant but whose effect might vary over time. Fifteen treated countries are included in this estimation sample. [29] I estimate the following equation:

$$ln(GDPpc_{it}) = \sum_{k=-10}^{15} \theta_k Haven_{it}^k + \eta_i + \eta_t + \iota_{it} \tag{9}$$

where $GDPpc_{it}$ is the GDP per capita of country i at date t. $Haven_{it}$ is equal to 1 when country i becomes a tax haven. $Independent_{it}^k$ is a dummy variable equal to one for treated countries k years before or after they become independent. η_i and η_t are country and time fixed effects, and ι_{it} is the error term. The control group corresponds to countries that never become tax havens.

The results are displayed in Figure 5. Both panels of the figure show a consistent and interesting pattern: Becoming a tax haven increases GDP per capita by a large amount. The average growth rate estimated is almost 50% after 10 years in the restricted sample of panel (a). This number corresponds to an annual additional growth rate of GDP per capita of 4.1%. In panel (b), the estimated effect is a bit smaller, with a gain of 40% after 10 years, corresponding to an annual growth rate premium of 3.4 percentage points. This result is in line with the anecdotal observation that the countries in my sample experienced large growth rates at the end of the 20th century. For instance, one year after becoming a tax haven in 1986, Grenada experienced a 9.3% increase in its GDP per

28. The tax havens included in the sample are Dominica, Grenada, Jordania, St. Kitts and Nevis, St. Lucia, the Marshall Islands, Tonga, St. Vincent and the Grenadines, and Western Samoa.

29. These are Belize, Hong Kong, Mauritius, Malaysia, Singapore, and Seychelles in addition to those on the previous list.

capita.[30] Panel (a) shows that the gains from becoming a tax haven virtually stagnate after 10 years on average and potentially decrease over time. This pattern is not found in panel (b), even if the gains appear smaller over time. Even if the premium from becoming a tax haven is mainly short term, it creates long-term differences in GDP per capita. In both figures, the pre-event coefficients are small, stable, and not significantly different from zero. This reinforces the case for a causal interpretation of the results.

It must be noted that the GDP data should be taken with caution. First, they might not be very precise or might be partly imputed, given the level of development of the countries that enter the estimation. This is a drawback that is hard to correct for. Measurement error appears here to be a confounding factor. However, the confounding would have to follow a very specific path to be consistent with the observed trend in Figure 5. Second, increases in GDP in tax havens might reflect revenues accruing only to foreigners, who represent a large share of the economy. Therefore, the increases in GDP might not reflect changes in domestic welfare or in real activity.

To check whether the GDP changes are really linked to changes in tax havens' economic structure, I study the evolution of agricultural land in Figure A.7. I find that a country's becoming a tax haven decreases its share of agricultural land by 20% after 15 years, with a steadily decreasing trend. This effect suggests that at least part of the change in GDP per capita is driven by a transition of tax havens' economies out of the agricultural sector.

These results could be interpreted in the light of tax competition theory, which would predict that countries become tax havens as long as there is a positive rent from doing so. In turn, the marginal potential tax haven should be indifferent between becoming and not becoming a tax haven (Slemrod and Wilson, 2009, Johannesen, 2010). The results here are at odds with this theoretical reasoning. There could be different reasons for this. First, I study here a specific group of tax havens. The large positive effects on GDP per capita would suggest that there are still rents for a country to acquire by becoming a tax haven. In the absence of structural changes in the international taxation environment, more countries would be expected to become tax havens. Second, it might be possible that rents do exist for countries with certain characteristics but that no existing country has these required characteristics and thus no country is willing to enter the tax haven market. Third, as discussed before, per capita GDP overestimates welfare in tax havens. Using a more appropriate metric might decrease the potential gains to a country from becoming a tax haven.

7.2 Effect of exposure to tax havens on other countries

A large literature shows the wide range of consequences of exposure to tax havens for nonhaven (see footnote 1). It documents an erosion of mobile tax bases from the use of tax havens (Tørsløv et al., 2023). These papers generally focus on the direct effects of the availability of tax havens on other countries, disregarding potential general equilibrium

30. Using different empirical settings, Hines (2005) and Butkiewicz and Gordon (2013) also find a positive impact of a country's being a tax haven on its GDP.

effects or the responses by affected countries, as studied in the tax competition literature (Keen and Konrad, 2013). This subsection studies the long-term effects of exposure to tax havens on other countries' GDP per capita, tax revenues, and tax structure using countries that switch from being nonhavens to being tax havens.

Even if the data on hand are ideal for this exercise, the empirical setup is challenging. First, all countries appear to be treated when a new tax haven emerges. To solve this issue, I again rely on geographical variation. I assume that a nonhaven country is more intensively treated when a tax haven appears in its neighborhood. This assumption is motivated by the evidence discussed in section 3 that the use of tax havens follows gravity patterns and that the costs of using tax havens increases with distance. In this exercise, I consider the treatment to correspond to the arrival of a new tax haven in a 2500 km circle around a given country.

Second, even once the treatment is defined, there might be multiple treatments (one for each new tax haven). I follow the recent developments in the difference-in-differences literature extending the canonical setup to more general settings. In particular, de Chaisemartin and D'Haultfœuille (2024) propose an estimator robust to treatment effect heterogeneity that allows estimation of the dynamic causal effect of multiple treatments. The main idea of this estimator is to compare switchers (countries that have new tax havens in their vicinity) l periods after treatment to groups that have not switched yet but that have the same treatment at the beginning of the sample. I propose one baseline empirical model and two robustness tests.

The tax revenue data for a large set of countries are available only from 1965. I cannot measure any effect of tax havens on tax revenue outcomes before this date. To take into account the fact that countries might have been affected by tax havens before 1965, I design two different groups: the group of countries never exposed to tax havens and the group of countries already exposed to at least one tax haven. In both of these groups, some countries might be further treated (*treatment group)* and some not (*control group*). This step is necessary because the estimator compares switchers to nonswitchers with the same treatment at the beginning of the sample. To make the countries in the second group more similar, I also restrict the estimation to countries with at most five tax havens in a 2500 km circle around them when they enter the sample.

I propose two alternative empirical settings in Figure A.8 of Appendix C. In the first, I do not restrict the estimation to countries with at most five tax havens in a 2500 km circle around them when they enter the sample. This estimation has the advantage of including more countries in the estimation sample at the expense of the quality of the control group. Second, instead of relying on the number of surrounding tax havens, I use the share of countries in a 2500 km circle that are tax havens as my treatment variable. This specification allows me to account for the fact that countries that have more neighbors are structurally more likely to have tax havens in their neighborhood. The estimator will compare switchers l periods after treatment to groups that have not switched yet but that have the same share of tax havens around them at the beginning of the sample period. This condition limits the number of countries in the estimation since some treated units might not have comparable units available.

I study the effects of new tax havens on other countries' GDP per capita, tax revenues and tax structure. I use the recent database made available by Bachas et al. (2022) on the tax revenues of a large number of countries for a long period in the second part of the 20th century. They separate these revenues between those levied on capital (corporate income taxes, wealth taxes, property taxes, and a share of personal income taxes) and those levied on labor (payroll taxes, social security payments, and a share of personal income taxes). The tax structure is studied through the differential taxation of labor and capital. This is only an imperfect proxy of a country's tax structure, but it is the best long-run comparative information currently available.

I estimate the following equation:

$$y_{it} = \sum_{k=-3}^{10} \beta_k \left(\sum_j Haven_j^k \times \mathbb{1}_{dist_{ij}<2500km} \right) + \mu_i + \mu_t + e_{it} \tag{10}$$

where y_{it} is the outcome of interest for country i at date t—the logarithm of GDP per capita, total tax revenues as a share of net domestic product (NDP), or the difference between tax revenues on labor and tax revenues on capital as a share of NDP. $\left(\sum_j Haven_j^k \times \mathbb{1}_{dist_{ij}<2500km} \right)$ corresponds to the number of new tax havens in a 2500 km circle around country i. μ_i and μ_t are country and year fixed effects. e_{it} represents the residuals of the estimation.

The coefficient estimated at a given period k corresponds to the weighted average of the effect of current treatment and of its previous lags on the outcome under the no-anticipation assumption and the parallel trends assumption. The parallel trends assumption requires that treated countries would have had the same expected evolution of their outcome as nonswitchers with the same initial treatment if they had not been treated.

The results are displayed in Figure 6. Panel (a) plots the estimated effect of exposure to a new tax haven in the neighborhood on GDP per capita. I find no distinguishable effects, with small coefficients and large confidence intervals. Panel (b) explores the effect on total tax revenues. First, we can see from the pre-event coefficients that the assumption of parallel pretrends is unlikely to hold. Indeed, this supports the finding in section 5 that tax havens appear in reaction to tax increases in neighboring countries. Post-event, there are no statistically significant effects of the presence of new tax havens in the neighborhood, even though the point estimates suggest a small negative effect on tax revenues. Combined with the results in the literature documenting a negative immediate effect of tax havens on tax revenues, this suggests that governments that want to collect a certain amount of tax revenue react to tax revenue losses due to tax havens by offsetting them with increased taxes on other bases. This view is in line with the finding of Bilicka et al. (2023) that German municipalities highly exposed to tax avoidance by multinational enterprises (MNEs) tend to have larger indirect tax revenues.

Finally, I explore the potential effect of exposure to tax havens on other countries' tax structure in panel (c). I compare the taxation that falls on labor (a relatively immobile factor) to the taxation that falls on capital (a relatively mobile factor). Interestingly, the differences in pretrends are not significantly different from zero. This means that if tax policy changes in nonhaven countries do cause countries to become tax havens, this is

not attributable to a differential increase in taxation of capital over that of labor. Following the first event, taxation of labor increases relative to that on capital. The effect is large (+2 percentage points of NDP 6 years after the first treatment) and statistically significant at the 95% level. Given that the average difference in 2000 is approximately 4.5% of NDP, this means that the emergence of new neighboring tax havens increases this difference by approximately 44%. Importantly, this result shows that governments react to the use of tax havens by changing their tax structure. Taxation of capital decreases relative to that of labor, which is much less mobile. This result documents a new channel through which globalization affected the tax structure of countries over the second part of the 20th century (Egger et al., 2019, Bachas et al., 2022).

8 Conclusion

In this paper, I introduced a novel database that tracks the development of tax havens' legal architecture. Using this database, I highlighted the key role of market forces in tax havens' creation and evolution. Demand matters through the market access of tax havens, while competition among tax havens appears as a primary driver of their development. Legal innovations also play a crucial role in how tax havens react to competition shocks. Last, I demonstrated that the gains from a country's becoming a tax haven on its GDP per capita come at the cost of a significant impact on the tax structure of nonhaven countries.

Recent developments in the regulation of tax havens, such as the OECD-led Common Reporting Standard (CRS) and the two-pillar reform of the international corporate tax system, introduce substantial negative shocks to tax havens' rents (Gómez-Cram and Olbert, 2023). The insights from this paper suggest that these policies may induce tax havens to update their legal architectures to introduce new legal technologies. This is confirmed by the fact that some tax havens have deepened their offshore legal architecture by implementing "high-risk" citizenship-by-investment schemes to circumvent the CRS (Langenmayr and Zyska, 2023, OECD, 2022). These reforms generate substantial government revenue for these states. [31]

An unintended consequence of regulations may be increased competition between tax havens and heightened aggressiveness in their own regulations. In turn, this paper underscores the importance of designing international regulations of tax havens to be robust against legal innovations and their diffusion.

31. According to Eastern Caribbean Central Bank data, in 2021, citizenship-by-investment schemes represented 9% of government revenues in Antigua and Barbuda (0% in 2014), 54% in Dominica (12% in 2014), 4% in Grenada (0% in 2014), and 51% in St. Kitts and Nevis (37% in 2014).

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Tables

Table I – Types of legal technologies

Category	Legal Technology	Description	Examples
Individual 38 reforms	- Trust laws (⋆)	Legal disconnection between asset use and ownership	*Turks and Caicos Islands' Trust Ordinance 1990*
	- Other (⋆)	Tax abolition, for example	*Monaco's abolition of personal income taxes 1869*
Corporate 37 reforms	- MNE	Attraction of MNE activities and profits	*Ireland's Export Profits Tax Relief 1956*
	- Holding	Special regimes for holding companies	*Luxembourg's Loi sur le régime fiscal des sociétés de participations financières (holding companies) 1929*
	- Offshore insurance and captives	Self-insurance allowing revenue transfers to tax havens	*Barbados's Exempt Insurance Act 1983*
	- Flag of convenience	Limited regulations and tax rates for ships registered in an offshore maritime registry	*Panama's Law/63 on Foreign Ship Registration*
Dual 65 reforms	- IBC	Tax-neutral companies with no domestic activities and limited legal requirements	*British Virgin Islands' International Business Companies Act 1984*
	- Other exempt companies	Similar as IBC	*Jersey's Corporation Tax Law 1940*
Banking 38 reforms	- Offshore banking (⋆)	Unregulated banks with limited taxation and legal requirements	*Anguilla's Banking Ordinance 1991*
	- Bank secrecy (⋆)	Protects account holders from investigations	*Switzerland's Banking Act 1934*
Other 16 reforms	- Tax treaties (⋆)	Limitation of bilateral taxation, allowing conduit entities to benefit from treaties	*Netherlands Antilles's tax treaty with the Netherlands (Belastingregeling Koninkrinjk) 1964*
	- Specific regulations (⋆)	Country-specific rules not classified elsewhere	*Bahamas's Hawksbill Creek Agreement 1955*

Note: This table classifies reforms by legal technology and broad category. The number displayed after the category name counts the number of reforms adopted in each category at the end of the sample period in 2000. The total exceeds the number of reforms recorded in the database as some reforms belong to several categories. Legal technologies highlighted with the symbol ⋆ are grouped together within a broad category to form a subcategory.

Table II – Gravity in Offshore Leaks data

	(1) Nb. links	(2) Nb. links
ln(Dist.)	-0.987***	-1.072***
	(0.104)	(0.113)
Colonial link		-0.146
		(0.241)
Common legal origin		1.435***
		(0.227)
Observations	2,291	2,291
Origin-source and Destination-source FE	Yes	Yes

Note: The equations are estimated with a PPML estimator. Robust standard errors clustered at the country-pair level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table III – Impact of demand on probability of reform

	(1) Reform	(2) First Reform	(3) Other Reforms
OLS			
Demand (within 2500 km)	0.413**	0.313**	1.404
	(0.201)	(0.128)	(1.058)
Demand (within 2500 km) × ln(Area)	-0.0412**	-0.0335***	-0.0668
	(0.0163)	(0.0110)	(0.110)
Standardized effect	0.661	1.535	0.443
Effect = 0 at size:	22574	11425	–
Effect = 0 at size percentile:	36	30	–
IV			
Demand (within 2500 km)	0.610*	0.879***	-2.135
	(0.365)	(0.278)	(2.267)
Demand (within 2500 km) × ln(Area)	-0.0813***	-0.0811***	-0.132
	(0.0257)	(0.0199)	(0.180)
Standardized effect	0.977	4.315	-0.674
Effect = 0 at size:	1820	50905	–
Effect = 0 at size percentile:	24	45	–
K-P F-stat	128.7	56.67	11.42
Observations	9,589	8,184	1,405
Time FE	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Controls	Yes	Yes	Yes

Note: This table estimates equation 5. Data on the share of taxes in GDP come from Andersson and Brambor (2019b). Data on tax havens' reforms come from own data collection detailed in section 2. Column (1) includes all reforms as dependent variables. In column (2), tax havens leave the sample after the first reform. Column (3) considers only new reforms by countries that are already tax havens. The *Effect=0* lines are not reported here because they are not interpretable. Additional controls correspond to an indicator variable for a country's being independent and the number of years since independence. I compute the standardized effects by multiplying the coefficient on demand (α_1) by the standard deviation of the residualized independent variable and dividing it by the average of the dependent variable in the sample. This can be interpreted as the percentage change in small countries' probability of the event represented by the dependent variable when demand increases by one standard deviation. "K-P F-stat" stands for the Kleibergen–Paap Wald rk F-statistic. Robust standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table IV – Impact of increased competition on probability of reform

	(1) $\mathbb{1}_{Reform}$	(2) $\mathbb{1}_{FirstRef.}$	(3) $\mathbb{1}_{OtherRef.}$	(4) $\mathbb{1}_{Ref.}$	(5) $\mathbb{1}_{FirstRef.}$	(6) $\mathbb{1}_{OtherRef.}$	(7) $\mathbb{1}_{Ref.}$	(8) $\mathbb{1}_{FirstRef.}$	(9) $\mathbb{1}_{OtherRef.}$
	OLS	OLS	OLS	IV	IV	IV	IV	IV	IV
ln(Av. Direct Tax/GdP)	0.0798	0.0236	-0.705	0.0886	0.0230	-0.199	0.733	0.177	8.435**
	(0.231)	(0.134)	(1.550)	(0.239)	(0.134)	(1.818)	(0.812)	(0.543)	(3.588)
# Reforms $<$ 1000 km	0.122**	0.115*	0.341	0.149**	0.133*	0.566	0.220**	0.0928	1.189***
	(0.0607)	(0.0604)	(0.309)	(0.0745)	(0.0691)	(0.343)	(0.0929)	(0.0957)	(0.182)
K-P F-stat				640.3	621.7	74.30	484.5	257.7	483.5
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Post-1945	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Nonindependent only	No	No	No	No	No	No	Yes	Yes	Yes
Observations	4,139	3,488	651	4,138	3,488	650	1,389	1,119	253

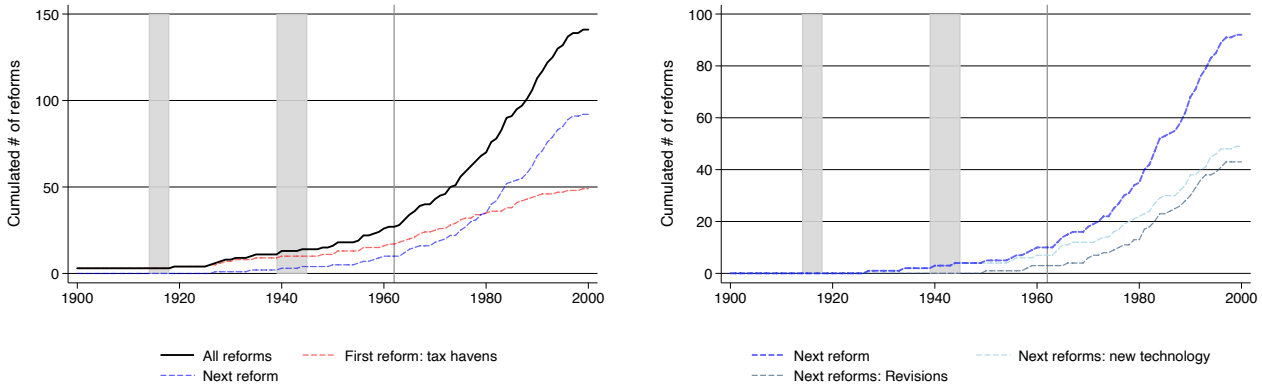
Note: This table estimates equation 7. Coefficients on # *Reforms $<$ 1000 km* have been multiplied by 100 for readability. Data on the share of taxes in GDP come from Andersson and Brambor (2019b). Data on tax havens' reforms come from own data collection detailed in section 2. Columns (1), (2) and (3) estimate an OLS regression. Columns (4), (5) and (6) estimate an IV regression. Columns (7), (8), and (9) estimate an IV regression restricted to the sample of never-independent territories. Additional controls are included in columns (1) to (6) and correspond to an indicator variable for a country's being independent and the number of years since independence. All regressions include country and year fixed effects. "K-P F-stat" stands for the Kleibergen–Paap Wald rk F statistic. Robust standard errors clustered at the country level in parentheses. *** p$<$0.01, ** p$<$0.05, * p$<$0.1

Table V – Competition and diffusion of IBCs

	(1)	(2)	(3)	(4)
			$\mathbb{1}_{FirstReform_{it}^{IBC}}$	
Number of IBC $<$ 1000 km	0.473**	1.567	0.350	8.344*
	(0.223)	(1.888)	(0.314)	(3.831)
K-P F stat	1109	48.65	1052	29.77
Controls	Yes	Yes	Yes	Yes
Country and year FE	Yes	Yes	Yes	Yes
Reform	All	Others	All	Others
Nonindependent only	No	No	Yes	Yes
Observations	3,928	439	1,332	197

Note: This table estimates equation 8 for IBC reforms. Coefficients on # *Reforms $<$ 1000 km* have been multiplied by 100 for readability. The sample is restricted to the "IV sample" from Table IV, i.e., countries in the Americas and Oceania after 1945. "Number of IBC laws $<$ 1000 km" corresponds to the number of countries that have introduced IBC laws and that are located less than 1000 km away from the country of interest. The dependent variable is an indicator variable equal to 1 if an IBC law has been implemented. Countries are dropped from the sample once they implement an IBC law. Additional controls are as follows: columns (1) and (2) include $ln(D_{it})$, an indicator variable for a country's being independent and the number of years since independence. Columns (3) and (4) include $ln(D_{it})$ only. The other control variables cannot be included, as the sample is restricted to nonindependent territories. Data on tax havens' reforms come from own data collection detailed in section 2. Details on the classification of reforms are displayed in Table I. Robust standard errors clustered at the country level in parentheses *** p$<$0.01, ** p$<$0.05, * p$<$0.1

Figures



(a) First and follow-on reforms

(b) Decomposition by purpose

Figure 1 – Rise of tax havens in the 20th century

Note: This figure depicts the rise of tax havens in the 20th century along two dimensions: (a) first and follow-on reforms and (b) the decomposition of follow-on reforms into those introducing a new legal technology and those reinforcing a technology in which the tax haven is already specialized. Data on tax havens' reforms come from own data collection detailed in section 2. Legal technologies considered here are the following: Banking, Insurance, Exempt companies (IBC or not), MNE-specific, Holding regimes, Individual, Ships, and Other. Shaded areas indicate the world wars and the vertical line (1962) the beginning of the independence wave in the U.K.-dominated Caribbean area.

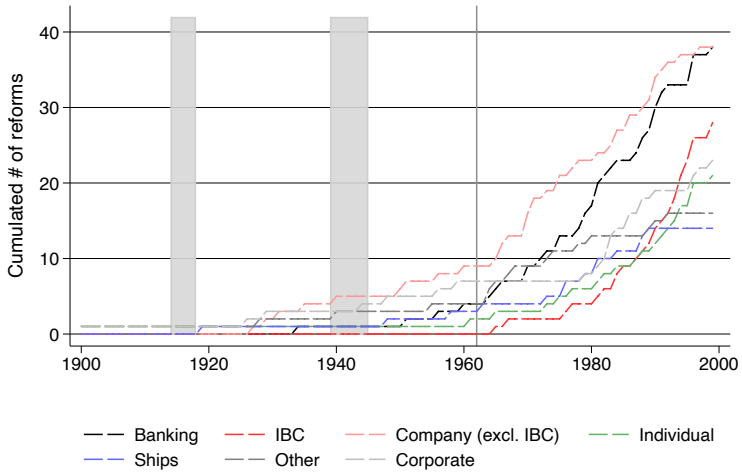


Figure 2 – Decomposition by type

Note: This figure plots the cumulated number of reforms by legal technology. Data on tax havens' reforms come from own data collection detailed in section 2. Details on the classification used in this figure are displayed in Table I. Shaded areas indicate the world wars and the vertical line (1962) the beginning of the independence wave in the U.K.-dominated Caribbean area.

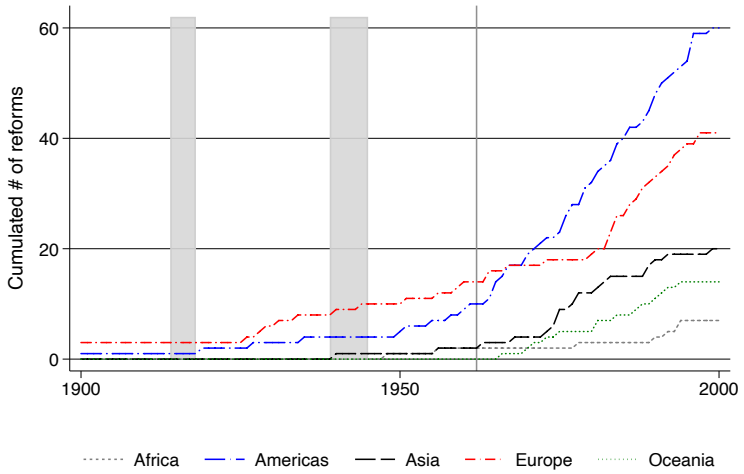


Figure 3 – Rise of tax havens in the 20th century: Decomposition by region

Note: This figure plots the cumulated number of tax haven reforms by broad world region. Data on tax havens' reforms come from own data collection detailed in section 2. Shaded areas indicate the world wars and the vertical line (1962) the beginning of the independence wave in the U.K.-dominated Caribbean area.

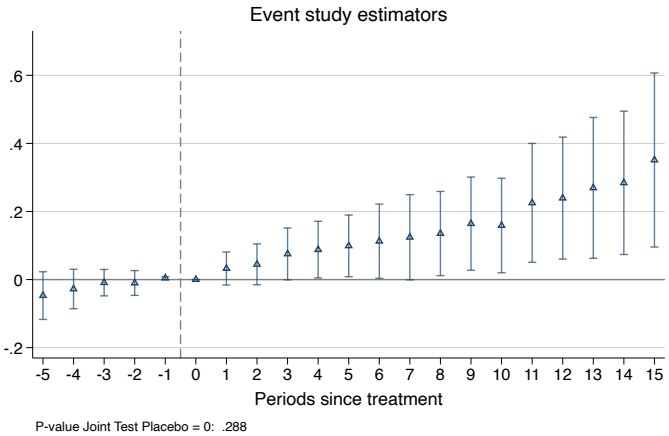
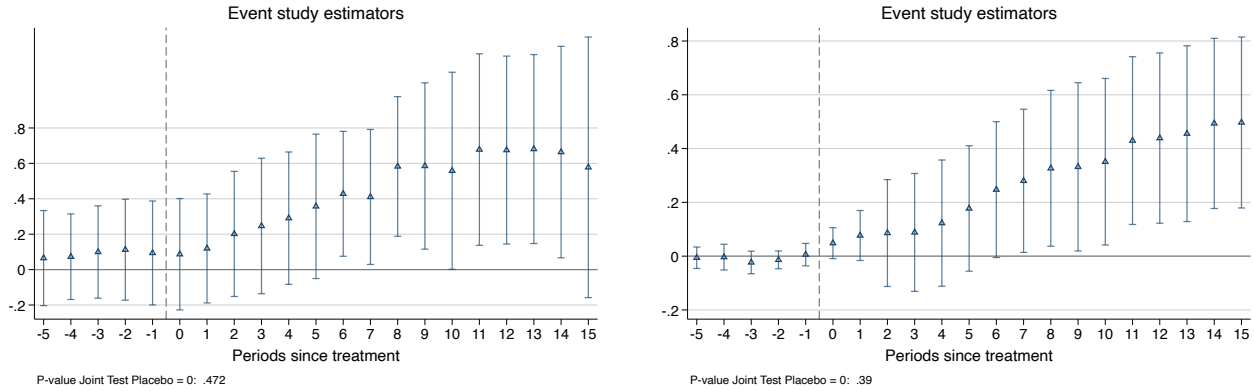


Figure 4 – Tax havens and colonial empires: Event study

Note: This figure plots coefficients from an event-study regression following equation 2. I use the estimator proposed by de Chaisemartin and D'Haultfœuille (2024). The treated group is composed of UK colonies becoming independent. The figure studies how the number of offshore reforms changes with a country's independence. The control group corresponds to territories with a different colonizer. The average number of reforms in the sample is equal to 0.17; 95% confidence intervals with standard errors clustered at the country level.

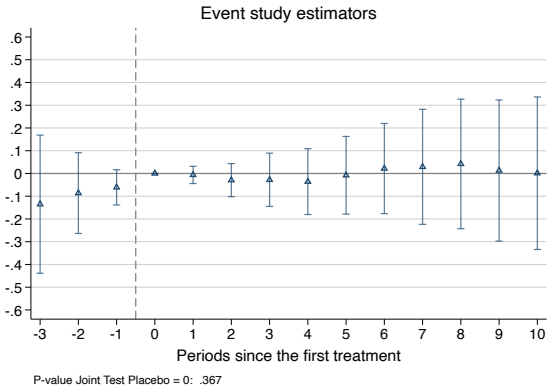


(a) Imputation estimator, restricted sample

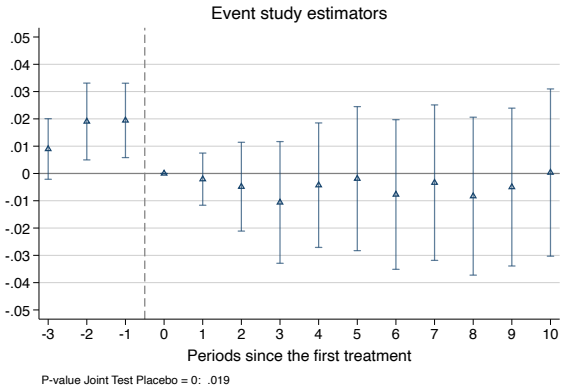
(b) Interactive fixed effects

Figure 5 – Effect of becoming a tax haven on GDP per capita

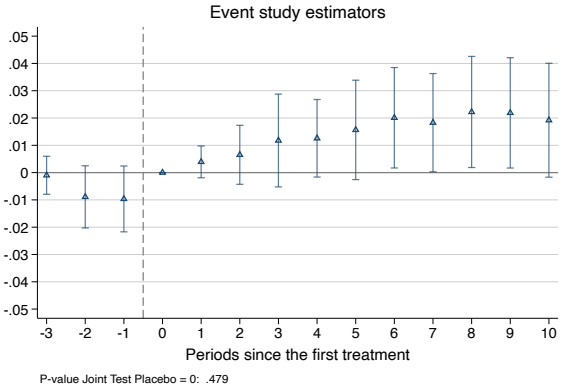
Note: This figure plots coefficients from an event-study regression following equation 9. In panel (a), I use the estimator proposed by de Chaisemartin and D'Haultfœuille (2020) for TWFE models. The treated group is composed of 9 tax havens from the Caribbean, Middle East and Pacific: Dominica, Grenada, Jordania, St. Kitts and Nevis, St. Lucia, the Marshall Islands, Tonga, St. Vincent and the Grenadines, and Western Samoa. The control group is composed of countries in the same regions that never become tax havens. In panel (b), I use interactive fixed effects, following Gobillon and Magnac (2016), Xu (2017) and Liu et al. (2022). The treated group is composed of 15 tax havens: the 9 from panel (a) plus Belize, Hong Kong, Mauritius, Malaysia, Singapore, and Seychelles. The control group is composed of all never-haven countries in the world. Both panels study how a country's becoming a tax haven affects its GDP per capita; 95% confidence intervals from bootstrapped standard errors (500 repetitions). The Wald p-value tests for the absence of differential pretrends.



(a) GDP per capita



(b) Tax revenues (% of NDP)



(c) Tax rev. on L - tax rev. on K (% of NDP)

Figure 6 – Effect of exposure to tax havens on other countries

Note: This figure plots coefficients from an event-study regression following equation 10 and estimated with the estimator of de Chaisemartin and D'Haultfœuille (2024). In panel (a), the dependent variable is GDP per capita. In panel (b), the dependent variable is total tax revenues as a share of NDP. In panel (c), the dependent variable is the difference between revenues from the taxation of labor and revenues from the taxation of capital as a share of NDP; 95% confidence intervals from standard errors clustered at the country level.

Online Appendix

A Data sources

GDP and GDP per capita and population: Long-term GDP and population data from GapMinder that aggregates GDP from World Bank (World Development indicators), the Maddison Project, and the Penn World Tables. Details on the documentation: https://www.gapminder.org/data/documentation/gd001/. The event study on tax havens and GDP per capita uses GDP and population data from the World Bank's World Development Indicators.

Colonial History: I first associate each territory with a status relative to its sovereign history. Each country or territory can be either independent, non-independent and a colony, or non-independent and not a colony. This last status is created to deal with specific cases treated differently by different databases about colonial history. For instance, the islands of Jersey and Guernsey, despite being under the actual control of the United Kingdom, are generally not considered as colonies. However, for the purpose of this paper, it is important to highlight their link with the United Kingdom. To this purpose I use information from the Colonial Dates Dataset (Becker, 2020), the Cepii Gravity Dataset (Head and Mayer, 2014) and the ICOW colonial dataset (Hensel, 2018). The data is then manually completed when information is missing for a given territory using worldstatesmen.org, rulers.org, and wikipedia.org. The main colonial variable used in this paper record the last ruler of a territory (including its current ruler if applicable). It includes countries not generally considered as colonies, such as the Channel Islands.

Tax introductions: Data from Seelkopf et al. (2021).

Tax revenues: Data from Andersson and Brambor (2019a, 2019b).

Gravity data: Data from the U.S. International Trade Commission Gravity Portal (release 2.1), Gurevich and Herman (n.d.).

Swiss Market for haven's services: Data from Zucman (2013)

Fee revenues in Cayman Islands: Data from Government of the Cayman Islands (2021)

Citizenship by investment revenues: Data from the statistics portal of the Eastern Caribbean Central Bank (https://www.eccb-centralbank.org/statistics/fiscals/comparative-report/3).

Ideology of the Head of State: Data from Brambor et al. (2017), available at https://heads-of-government.github.io/.

Democracy: Data from VDEM's electoral democracy index (Coppedge et al., 2021). *v2x_polyarchy* variable.

B Supplementary tables

Table A.1 – Comparing different lists of tax havens.

Country	Lists	Country	Lists	Country	Lists	Country	Lists	Country	Lists	Country	Lists	Country	Lists
Bahamas	11	**Vanuatu**	10	**Monaco**	8	**Samoa**	6	Latvia	2	Campione	1	Nigeria	1
Bermuda	11	**Gibraltar**	9	**Nauru**	8	**Seychelles**	6	Madeira	2	Egypt	1	Northern Cyprus	1
Cayman	11	**Hong Kong**	9	**St Kitts & Nevis**	8	**Lebanon**	5	**Netherlands**	2	France	1	Palau	1
Guernsey	11	**Singapore**	9	**Andorra**	7	**Niue**	5	Philippines	2	Germany	1	Puerto Rico	1
Jersey	11	**St Vincent & the Grenadines**	9	**Anguilla**	7	**Macau**	4	South Africa	2	Guatemala	1	Russia	1
Malta	11	**Switzerland**	9	**Bahrain**	7	**Malaysia**	4	**Tonga**	2	Honduras	1	San Marino	1
Panama	11	**Turks & Caicos Islands**	9	Costa Rica	7	**Montserrat**	4	Uruguay	2	Iceland	1	Sao Tome e Principe	1
Barbados	10	**Antigua & Barbuda**	8	**Marshall Islands**	7	Maldives	3	**US Virgin Islands**	2	Indonesia	1	Sark	1
British Virgin Islands	10	**Belize**	8	**Mauritius**	7	United Kingdom	3	USA	2	Ingushetia	1	Somalia	1
Cyprus	10	**Cook Islands**	8	**St. Lucia**	7	Brunei	2	Alderney	1	**Jordan**	1	Sri Lanka	1
Isle of Man	10	**Grenada**	8	**Aruba**	6	Dubai	2	Anjouan	1	Marianas	1	Taipei	1
Liechtenstein	10	**Ireland**	8	**Dominica**	6	Hungary	2	Belgium	1	Melilla	1	Trieste	1
Netherlands Antilles	10	**Luxembourg**	8	**Liberia**	6	Israel	2	Botswana	1	Myanmar	1	Ukraine	1

Note: This table counts the number of tax havens lists in which each country is reported. Countries used in the sample of this paper are highlighted in **bold** font. The list of countries comes from table 1.4 of Palan et al. (2009). The eleven lists are the following: International Bureau of Fiscal Documentation (1977), Charles Irish (1982), Hines and Rice (1994), OECD (2000), IMF (2000), FSF (2000), FATF (2000,2002), TJN (2005), IMF (2007), STHAA (2007), Low-Tax.net (2008).

Table A.2 – Correlation of the instrument with shock-level variables.

	(1) KOF Econ.	(2) KOF Trade	(3) KOF Finance	(4) Financial Openess	(5) Tariff	(6) ln(GDPpc growth)	(7) Trade (% of GDP)
$\widehat{\frac{Direct\ Tax\ Revenues\_jt}{GDP\_jt}}^{IV}$	0.628	0.342	0.908	1.970	-70.18	-5.594	-0.162
	(0.455)	(0.591)	(0.891)	(2.324)	(134.1)	(6.952)	(0.822)
Adj. Within R-Squared	0.00733	0.00117	0.00495	0.00517	-0.00243	0.000219	-0.000955
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

This table regresses shock-level variable on country-level characteristics to assess the validity of the instrument. variables are extracted from Gräbner et al. (2021). *KOF Econ*, *KOF Trade* and *KOF Finance* are the KOF globalization indexes computed by Gygli et al. (2019). They respectively capture *de jure* and *de facto* Economic globalization, Trade globalization and Financial globalization. *Financial Openness* corresponds to a text-based index for *de jure* financial openness computed by Quinn and Toyoda (2008) based on IMF's Annual Report on Exchange Arrangements and Exchange Restrictions. Robust standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table A.3 – The impact of demand on the probability of reform: robustness on the definition of demand

	(1) Reform	(2) First Reform	(3) Other Reforms
OLS			
Demand (within 5000km)	0.273***	0.261***	0.960
	(0.0917)	(0.0823)	(1.300)
Demand (within 5000km) × ln(Area)	-0.0341***	-0.0280***	-0.0514
	(0.00813)	(0.00678)	(0.118)
Standardized effect	0.576	1.580	0.281
Effect = 0 at size=	3028	11025	–
Effect = 0 at size percentile=	26	30	–
IV			
Demand (within 5000km)	0.331***	0.349***	0.685
	(0.118)	(0.116)	(1.579)
Demand (within 5000km) × ln(Area)	-0.0571***	-0.0415***	-0.113
	(0.0131)	(0.00958)	(0.125)
Standardized effect	0.698	2.113	0.200
Effect = 0 at size=	328	4466	418
Effect = 0 at size percentile=	12	27	14
K-P F-stat	293.1	195.8	18.96
Observations	15,733	14,086	1,647
Time FE	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Controls	Yes	Yes	Yes

Note: This table estimates equation 5. Data on the share of taxes in GDP comes from Andersson and Brambor (2019b). Data on tax havens' reforms comes from own data collection detailed in section 2. Column (1) includes all reforms as dependent variables. In column (2) tax havens leave the sample after the first reform. Column (3) only considers new reforms from countries that are already tax havens. Additional controls correspond to an indicator variable for being independent and the number of years since independence. The standardized effects are computed by multiplying the coefficient by the standard deviation of the residualized independent variable and dividing it by the average of the dependent variable in the sample. It can be interpreted as the percentage change in the probability of the event represented by the dependent variable when demand increases by one standard deviation. "K-P F-stat" stands for the Kleibergen-Paap Wald rk F statistic. Robust standard errors clustered at the country level in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table A.4 – The impact of demand on the probability of reform: robustness for spatial auto-correlation and independent variable definition

	(1) Reform	(2) First Reform	(3) Other Reforms
Demand (within 2500km)	0.610***	0.879***	-2.135
	(0.224)	(0.264)	(2.142)
Demand (within 2500km) × ln(Area)	-0.0813***	-0.0811***	-0.132
	(0.0188)	(0.0184)	(0.152)
Observations	9,589	8,184	1,405
Time FE	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Controls	Yes	Yes	Yes
K-P F-stat	111.4	70.32	5.982

This table estimates equation 5 using the estimator of Colella et al. (2019) that takes into account spatial auto-correlation. I specify spatial clusters such as the correlation between error terms of two observations decreases linearly with distance and is zero when their distance is larger than 1000km and when they are separated by more than 10 years. Data on the share of taxes in GDP comes from Andersson and Brambor (2019b). Data on tax havens' reforms comes from own data collection detailed in section 2. Column (1) includes all reforms as dependent variables. In column (2) tax havens leave the sample after the first reform. Column (3) only considers new reforms from countries that are already tax havens. Additional controls correspond to an indicator variable for being independent and the number of years since independence. "K-P F-stat" stands for the Kleibergen-Paap Wald rk F statistic. *** p<0.01, ** p<0.05, * p<0.1

Table A.5 – The impact of demand on the probability of reform: number of tax introductions

	(1) $\mathbb{1}_{Reform}$	(2) $\mathbb{1}_{FirstReform}$	(3) $\mathbb{1}_{OtherReforms}$
Extensive margin			
# Direct $<$ 2500km	0.389***	0.254***	0.583
	(0.0783)	(0.0517)	(0.419)
# Direct $<$ 2500km $\times$ ln(Area)	-0.0338***	-0.0218***	-0.0196
	(0.00607)	(0.00401)	(0.0399)
Standardized effect	0.415	0.756	0.0769
Effect = 0 at size=	99515	117809	–
Effect = 0 at size percentile=	54	57	–
Time FE	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
Controls	Yes	Yes	Yes
Observations	23,214	21,396	1,818

This table estimates equation (5). # Direct refers to the number of Corporate income taxes or Personal income taxes introduced within a distance range. The coefficient has been multiplied by 100 to ease interpretation. Data on the introduction of taxes comes from Seelkopf et al. (2021). Data on tax havens' reforms comes from own data collection detailed in section 2. Column (1) include all reforms as dependent variables. In column (2), tax havens leave the sample after the first reform. Columns (3) only considers new reforms from countries that are already tax havens. Additional controls correspond to an indicator variable for being independent, and the number of years since independence. The scaled effects are computed by multiplying the coefficient by the standard deviation of the residualized number of direct taxes introduced in less than 2500km and dividing it by the average of the dependent variable in the sample. It can be interpreted as the percentage change in the probability of the event represented by the dependent variable when demand increases by one standard deviation. *** p$<$0.01, ** p$<$0.05, * p$<$0.1

Table A.6 – Permutation tests

	OLS	IV
Share $\alpha_1^{placebo}$ as large as α_1	1.01%	2.47%
Share $\alpha_2^{placebo}$ as large as α_2	0.11%	$<$0.001%

This table shows the result of a permutation test. I run the OLS and IV specifications of column (1), Table III on a dataset where observations of the independent variables have been permuted between countries. In particular, it comes down to assigning the shocks received by a country j to another country i. I replicate this exercise with 200 different permutations of the data.

Table A.7 – Offshore entities and competition.

	(1)	(2)
	Number new offshore entities	
# Reforms $<$ 1000 km	-0.0364**	
	(0.0168)	
# Indep. countries $<$ 1000 km		-0.0566
		(0.0951)
Controls	Yes	Yes
Country and year FE	Yes	Yes
Observations	949	949

This table estimates with the Poisson pseudo-maximum likelihood estimator the following equation: $Number\ new\ offshore\ entitites_{it} = \beta_1(\sum_{j \neq i} \mathbb{1}_{R_{jt}} \times \mathbb{1}_{Dist_{ij}<1000km}) + XZ_{it} + \mu_i + \mu_t + \epsilon_{it}$. $Number\ offshore\ entitites_{it}$ is the number of offshore entities recorded in the Offshore Leaks data for country i at date t. $\sum_{j \neq i} \mathbb{1}_{R_{jt}} \times \mathbb{1}_{Dist_{ij}<1000km}$ corresponds to the number of reforms made in foreign tax havens distant by less than 1000km (column 1) or the number of independent countries distant by less than 1000km (column 2). Z_{it} is a vector of controls. μ_i are country fixed effects, and μ_t are time fixed effects. Controls include an indicator variable for independence, an indicator variable equal to one the year an offshore reform is enacted, a count of the number of offshore reforms implemented in the country, and an indicator variable indicating whether an "Exempt Company" law has been previously implemented. The sample is restricted to the post-1945 period and to Oceania and Americas. *** p$<$0.01, ** p$<$0.05, * p$<$0.1

Table A.8 – Competition and type of reform

	(1) $\mathbb{1}_{Reform\ in\ new\ area}$	(2) $\mathbb{1}_{Revision}$	(3) $\mathbb{1}_{Reform\ in\ new\ area}$	(4) $\mathbb{1}_{Revision}$
# Reforms $<$ 1000 km	4.436***	0.632***	3.233***	0.788***
	(0.999)	(0.188)	(0.853)	(0.199)
K-P F-stat	74.30	74.30	483.5	483.5
Controls	Yes	Yes	Yes	Yes
Reforms	Next	Next	Next	Next
Post-1945	Yes	Yes	Yes	Yes
Non independent only	No	No	Yes	Yes
Observations	650	650	253	253

Note: Coefficients on # *Reforms $<$ 1000 km* have been multiplied by 100 for readability. The sample from columns (1) and (2) correspond to the sample of column (6) in Table IV.The sample from columns (3) and (4) correspond to the sample of column (9) of Table IV. Robust standard errors clustered at the country level in parentheses. "New area" corresponds to reforms made in a sub-category in which the country had done no reform before and "revision" corresponds to reforms made in a sub-category in which the country had already made a reform before. Sub-category classification is the following: Banking, Insurance, Exempt companies (IBC or not), MNE-specific, Holding regimes, Individual, Ships, and Other. Additional controls are included: in columns (1) and (2) they include $ln(D_{it})$, an indicator variable for being independent and the number of years since independence. In columns (3) and (4) they include $ln(D_{it})$. The other control variables cannot be included as the sample is restricted to non-independent territories. *** p$<$0.01, ** p$<$0.05, * p$<$0.1

Table A.9 – The diffusion of legal technologies

	(1) IBC	(2) Finance	(3) Indiv	(4) Exempt (no IBC)
Number of laws $<$ 1000km	0.385**	0.306***	0.590**	0.0932
	(0.151)	(0.110)	(0.253)	(0.0661)
ln(Av. Direct Tax/GdP)	0.0307*	0.0506	0.0202	0.0375*
	(0.0179)	(0.0327)	(0.0190)	(0.0212)
Independent	0.00251**	0.00484***	0.00275**	0.00236*
	(0.00123)	(0.00177)	(0.00117)	(0.00127)
Time from indep.	-7.59e-05***	-5.98e-05*	-5.00e-05**	-5.68e-05***
	(2.40e-05)	(3.24e-05)	(2.11e-05)	(2.07e-05)
Country and year FE	Yes	Yes	Yes	Yes
Reform	All	All	All	All
Non-independent only	No	No	No	No
Observations	22,971	22,503	22,871	22,394

Note: This table estimates equation 8 on the whole sample. Coefficients on # *Reforms $<$ 1000 km* have been multiplied by 100 for readability. "Number of laws c $<$ 1000km" corresponds to the number of countries that have implemented an offshore law of the type indicated in the column header and that are located less than 1000km away from the country of interest. The dependent variable is an indicator variable equal to 1 if a law of the type indicated in the panel header has been implemented. Countries are dropped from the sample once they implement a law the category studied. Data on tax havens' reforms comes from own data collection detailed in section 2. Details on the classification of reforms are displayed in Table I. Robust standard errors clustered at the country level in parentheses *** p$<$0.01, ** p$<$0.05, * p$<$0.1

C Supplementary figures

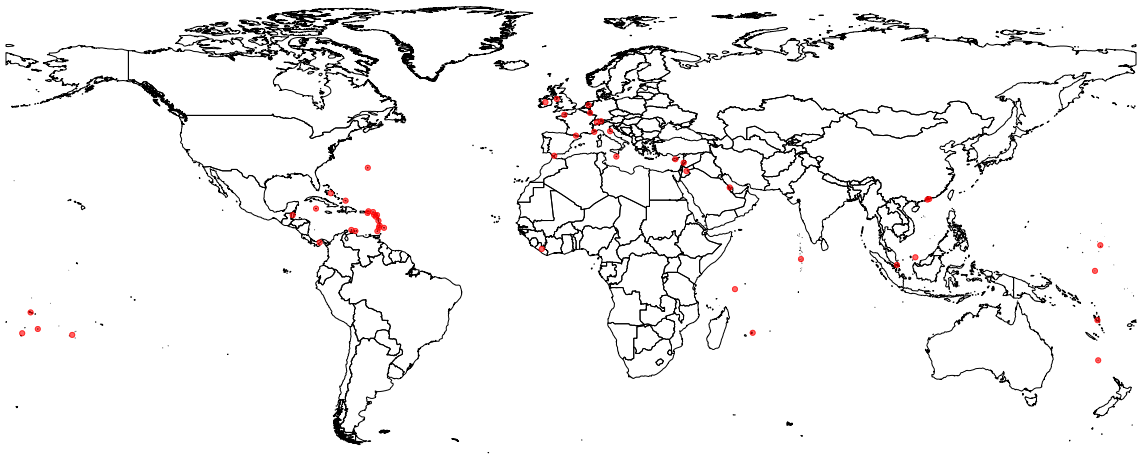


Figure A.1 – The location of contemporary tax havens.

Note: This map depicts tax havens nowadays. This list of tax havens is discussed in section 2 and presented in appendix Table A.1.

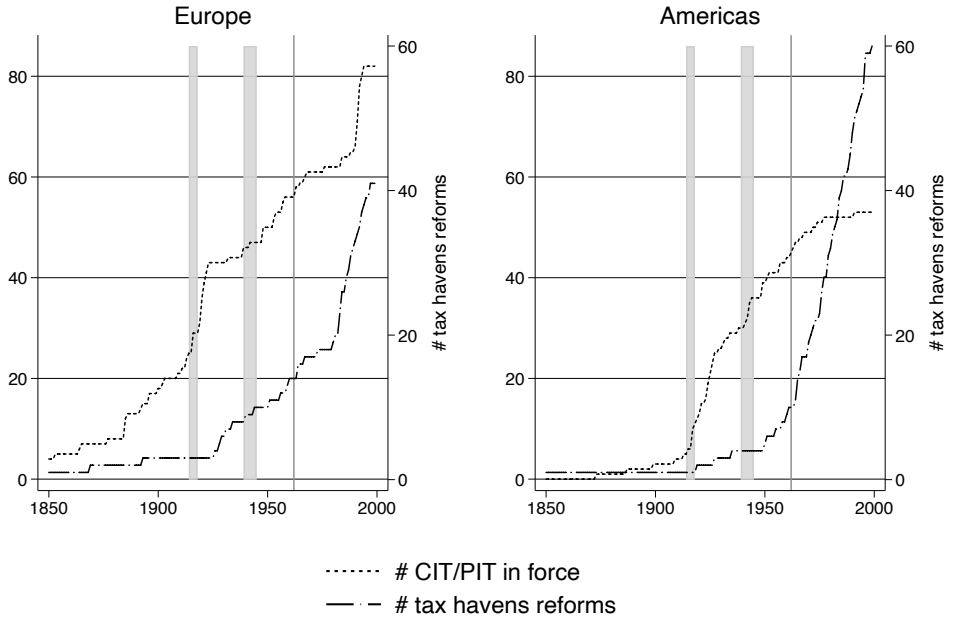


Figure A.2 – The building of tax havens' legal architecture and the rise of direct taxation.

Note: This figure plots the number of direct taxes (Corporate income taxes and Personal income taxes) introduced and the number of tax haven reforms for Europe and the Americas. Data on the introduction of taxes comes from Seelkopf et al. (2021). Data on tax havens' reforms comes from own data collection detailed in section 2. Shaded areas indicate the world wars and the vertical line (1962), the beginning of the independence wave in the U.K.-dominated Caribbean area.

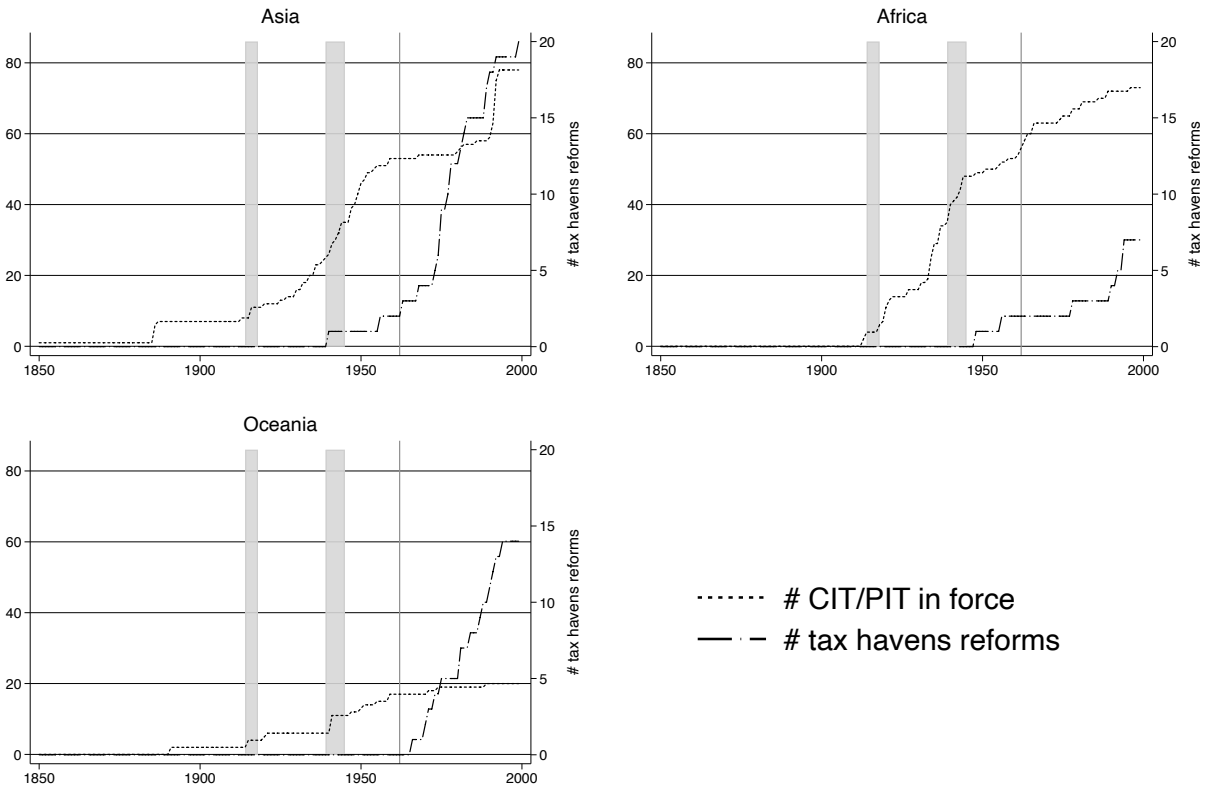


Figure A.3 – The building of tax havens' legal architecture and the rise of direct taxation (other regions)

Note: This figure plots the number of direct taxes (Corporate income taxes and Personal income taxes) introduced and the number of tax havens reforms for Africa, Asia, and Oceania. Data on the introduction of taxes comes from Seelkopf et al. (2021). Data on tax havens' reforms comes from own data collection detailed in section 2. Shaded areas indicate the world wars and the vertical line (1962), the beginning of the independence wave in the UK-dominated Caribbean area.

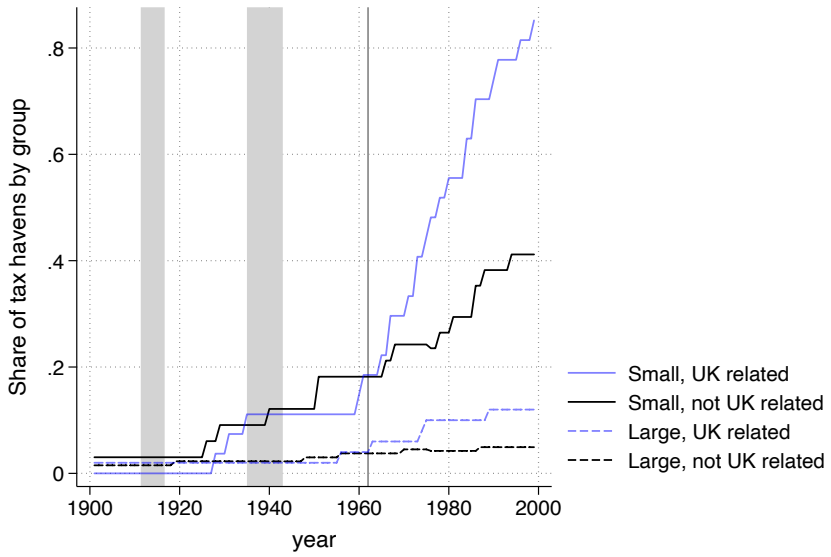
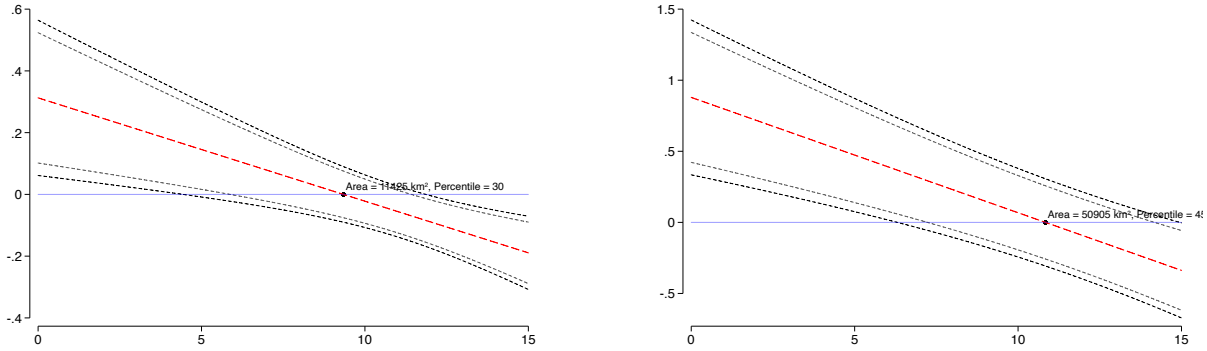


Figure A.4 – Tax havens characteristics: size and colonial history

Note: This figure plots the share of tax havens in two size groups (small and large countries) crossed with groups constructed according to colonial history (UK related or not). The group of small countries corresponds to countries in the first quartile of country size. Other countries are classified as large. UK-related colonies correspond to colonies for which the last ruler is the United Kingdom. The construction of colonial history is detailed in section 2. Data on tax havens' reforms comes from own data collection detailed in section 2. Shaded areas indicate the world wars and the vertical line (1962), the beginning of the independence wave in the UK-dominated Caribbean area.



(a) OLS results

(b) IV results

Figure A.5 – Effect of demand on the probability of becoming a tax haven:

Note: This figure plots the estimated effect of the impact of demand on the probability of becomming a tax haven for the OLS estimation (panel (a)) and the IV estimation (panel (b)). The confidence interval corresponds to a 5% confidence interval. Estimates are based on the specification of column (2) of Table III. The graph reports the size (and the corresponding decile) for which the estimated effect is exactly equal to zero.

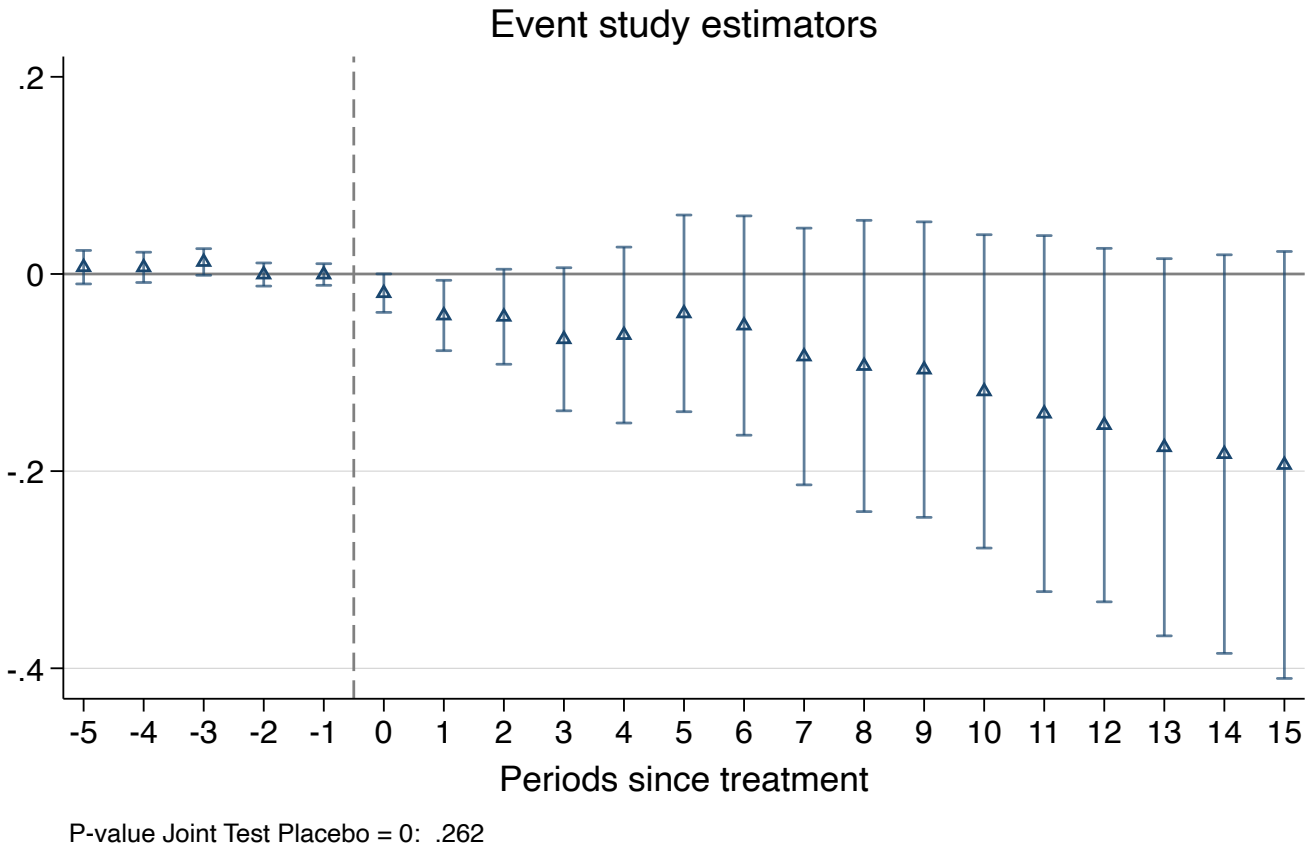
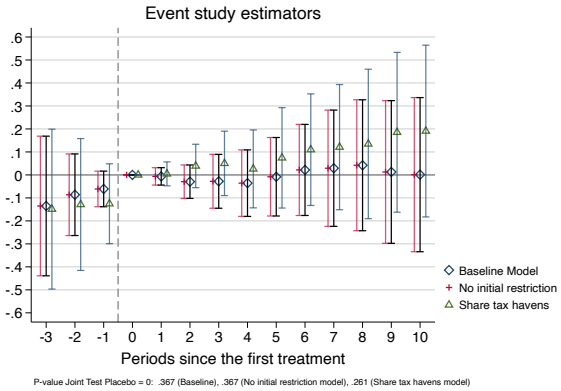


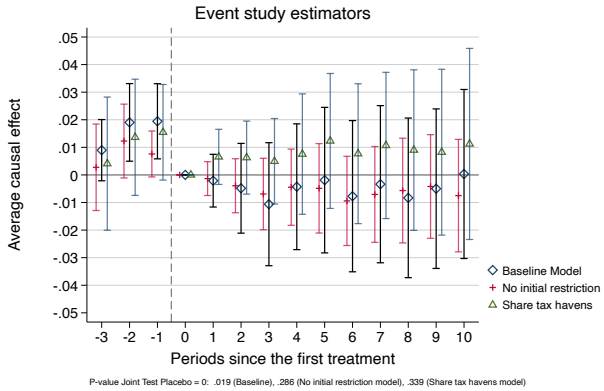
Figure A.6 – Share of agricultural lands

Figure A.7 – Effect of becoming a tax haven on agricultural lands

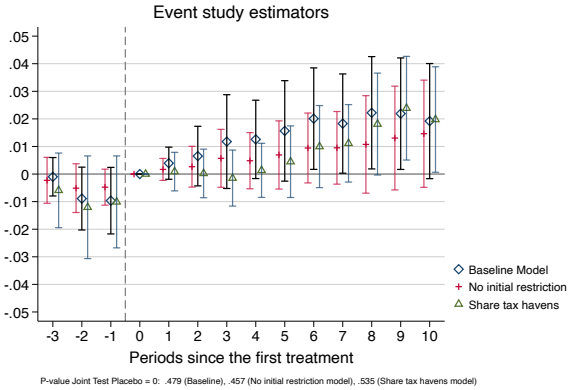
Note: This figure plots coefficients from an event-study regression following equation 9 using interacted fixed effects following Gobillon and Magnac (2016), Xu (2017) and Liu et al. (2022). It studies the impact of becomming a tax haven on the share of agricultural land. The treated group includes 15 countries: Belize, Dominica, Grenada, Hong-Kong, Jordania, Marshall Islands, Saint Kitts-and-Nevis, Saint Lucia, Saint Vincent-and-the-Grenadines, Seychelles, Mauritius, Malaysia, Singapore, Tonga, and Western Samoa. The control group is composed of all never-haven countries in the world. 95% confidence intervals from bootsptrapped standard errors (500 repetitions). The p-value tests for the absence of pre-trends.



(a) GDP per capita



(b) Tax Revenues (% of NDP)



(c) Tax Rev. on L - Tax Rev. on K (% of NDP)

Figure A.8 – Effect of tax havens on other countries: robustness

Note: This figure plots coefficients from an event-study regression following equation 10 and estimated using the estimator of de Chaisemartin and D'Haultfœuille (2024). In panel (a), the dependent variable is GDP per capita. In panel (a), the dependent variable is total tax revenues as a share of NDP. In panel (c), the dependent variable is the difference between revenues from the taxation of labor and revenues from the taxation of capital as a share of NDP. The three figures estimates three diffirent empirical models for the identification of the effect of tax havens on other countries' outcomes. This first model is the baseline model and restricts the estimation to countries that have at most five tax havens in a circle of 2500km around them when they enter the sample. The second model ("No initial restriction") does not restrict the estimation to this subsample of countries. The Third model ("Share tax havens") uses the share of countries in a circle of 2500km that are tax havens as the treatment variable. 95% confidence intervals from standard errors clustered at the country level.

D Offshore Leaks

The Offshore Leaks data is used at several instances in the paper. The data has been released by the International Consortium of Investigative Journalists (ICIJ, 2022a, 2022b). It is the result from different leaks:

— Panama Papers (2016): entities registered by the law firm Mossack Fonseca.
— the Paradise Papers (2017): clients of the law firm Appleby and seven tax havens' corporate registries.
— the Pandora Papers (2021): data leaked from 12 offshore service providers.
— the Bahamas leaks (2016): Bahamas corporate registry containing information on Bahamian Companies, trusts and foundations.
— the Offshore Leaks (2013): entities incorporated through two service providers.

The data allows linking entities registered in tax havens to their owners (beneficial owners when available) and to the intermediaries participating in the offshore structure. The ICIJ has linked the owners (individuals or companies, named *officers* in the database) to specific countries using their registered addresses. The database provides information on more than 800,000 offshore entities. It also provides information about the date when the offshore entity was opened. For the purposes of this paper, the raw data has been used to construct two different datasets.

Panel data on offshore entities First, I make use of the panel structure of the data in section 3 and 6, and in appendix E. I create a dataset that counts the number of offshore entities located in a tax haven i at date t. To do so, I simply collapse the data at the $incorporation\ country \times year$ level. This dataset allows me to track the number of offshore entities recorded in each tax haven over time.

Bilateral data on offshore entities Second, I use the bilateral information provided by the dataset in section 3. This data allows me to track the number of links between a tax haven j and a non-haven country i. In 8.6% of the cases, a given officer is linked to more than one country. I drop cases where a given officer is linked to more than three countries (0.87% of the cases). Otherwise, I assign to the officer all the countries listed. I drop entities without any officer listed. I then count any observed entity linked to a given officer as a "link" between the tax haven in which the entity is registered and the country to which the officer has been assigned (if there are multiple countries, I count one different link for each different country). I obtain a dataset where I observe the number of offshore links for each pair of countries available in the data and for each different leak source. Keeping the heterogeneity coming from the source provider allows me to control for additional non-observed factors (such as the differential propensities for some law firms to work with tax havens or origin countries) through fixed effects.

I drop same-country pairs. The rest of this exercise assumes that the links available in the Offshore Leaks are a good proxy for the actual (unobserved) links. It should be the case as long as the entities revealed by the leaks are not correlated with the origin countries of officers. In all likelihood, this is not a strong assumption given the number of independent sources and the fact that the ICIJ has released data indistinctly from these

considerations. This data is then merged with the USITC gravity dataset (Gurevich and Herman, n.d.) to perform gravity estimations.

E Data Consistency

From reforms to service provision To investigate whether the provision of tax havens services follows new reforms, I use the micro-level data from the Offshore Leaks database described in Appendix D. I use a feature of this database that allows me to observe offshore entities, identified by their country of registration and year of creation. I can therefore track the number of entities registered in a tax haven, before and after a reform. Entities are seen as a proxy for the provision of offshore services. For this exercise, I concentrate only on reforms that aim at allowing for the registration of International Business Companies. This is the type of legal technology that corresponds best to the entities registered in the database.

$$m^x(Entities) = ln(Entities) \times \mathbb{1}_{Entities>0} + (-x) \times \mathbb{1}_{Entities=0}$$

with x that calibrates the trade-off between the extensive and the intensive margin. In this setting, a change of the number of entities registered in a tax haven from 0 to 1 is worth a $100x$ increase in the number of entities. Different values of x are used to accommodate different trade-offs between the two margins.

I estimate the following event-study regression:

$$m^x(Entities)_{it} = \sum_{k=-10}^{15} \zeta_k Haven_{it}^k + u_i + u_t + v_{it} \tag{11}$$

where $Haven_{it}^k$ is a dummy variable equal to one for treated countries k years before or after it becomes a tax haven. u_i and u_t are country and time fixed effects and v_{it} is the error term. The control group corresponds to tax havens that have never enacted any International Business Company reform. The equation is estimated using the using the estimator of de Chaisemartin and D'Haultfœuille (2024) to account for potential heterogeneous effects in a generalized difference-in-difference setting with different treatment dates.

Figure A.9 illustrates the impact of IBC reforms on offshore service provision. IBC reforms appear efficient in terms of entity incorporation. Following the reform adoption, the number of offshore entities recorded in the Offshore leaks data increases approximately by 200% after 10 years, and is very similar across the different specifications. The effect appears immediately after the reform and increases during the next years. Estimates before the treatment are very close to zero and not statistically significantly different from zero. This figure shows that tax-haven reforms, in the context of IBC incorporation at least, materialize into an increase in the provision of tax haven services.

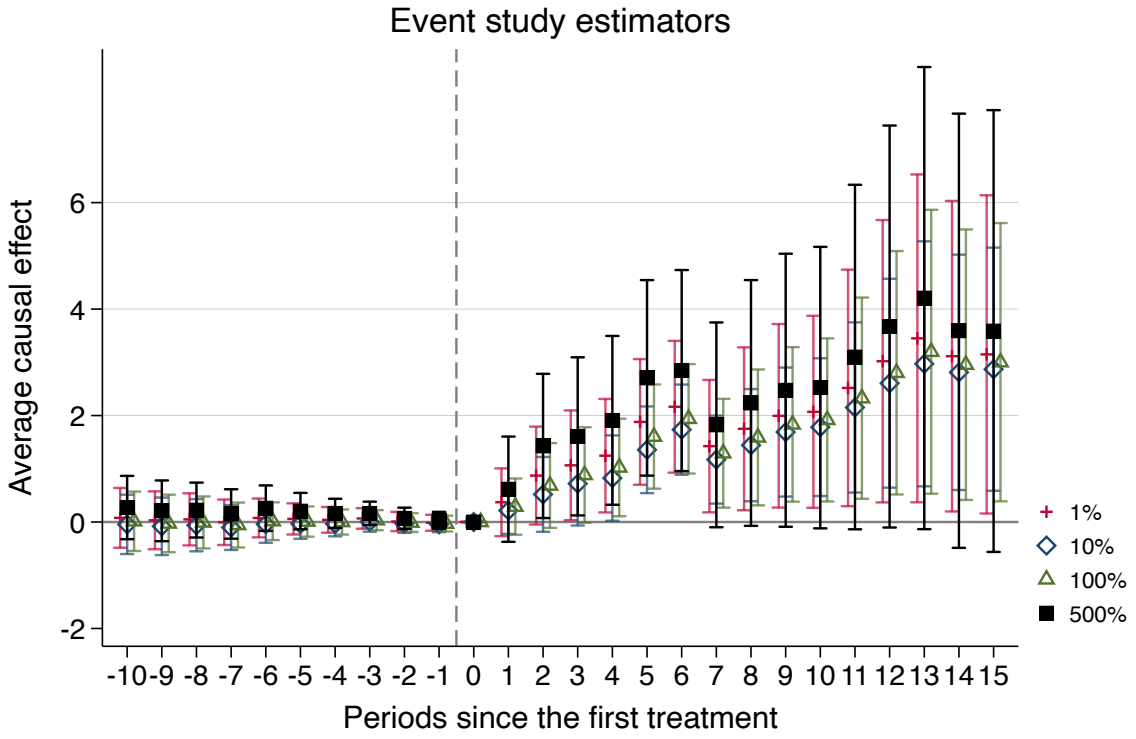


Figure A.9 – "International Business Companies" reforms and tax havens services: Event study

Note: This figure plots coefficients from four event-study regressions following equation 11 estimated using the estimator of de Chaisemartin and D'Haultfœuille (2024). The equation is estimated for different values of x, that calibrates the trade-off between the extensive and the intensive margin of the dependent variable. A change of the number of entities registered in a tax haven from 0 to 1 is worth a $100x$ increase in the number of entities. The treated group is composed of tax havens introducing "International Business Companies" reforms. It studies how the number of offshore entities registered in a tax haven changes when the country enacts a new IBC reform. The dependent variable has been transformed following Chen and Roth (2024) to keep zeros in the estimation. The control group corresponds to tax havens that have never enacted any exempt company reform. 95% confidence intervals from clustered standard errors. The p-value tests for the absence of pre-trends.

F The Swiss Market for Tax Evasion

This appendix studies whether the arrival of new tax havens substituted or complemented the already-existing tax havens.

The first challenge to answering this question is finding historical data about tax havens services' market size. To solve this issue, I use data from Zucman (2013) that collects fiduciary deposits in Switzerland by country of origin between 1976 and 2014 from the Swiss National Bank (SNB). Fiduciary deposits are deposits collected by Swiss banks and invested on behalf of their clients. As described by Zucman (2013), fiduciary deposits are used to avoid paying the 35% Swiss advance tax.[32] An interesting feature of this data is that the SNB records the origin of the last owner and does not see through conduit entities in tax havens. Consequently, it records investments made through tax havens from other places. Zucman (2013) argues that the majority of these investments are actually coming from European ultimate owners and are going to Switzerland through conduits in tax havens. Going through tax havens adds layers of secrecy between Swiss accounts and their actual owners. Assuming that the bulk of fiduciary deposits of tax havens corresponds to the use of sham corporations (such as IBCs for instance), an increase in the share of fiduciary deposits from tax havens corresponds to an increase in tax havens' market size for the Swiss market. The Swiss market is one of the largest ones for individuals' tax avoidance: according to Zucman (2013) it represented 34% of all offshore financial wealth in 2008 and it was probably even larger before this date (Alstadsæter et al., 2018). An increase in the share of fiduciary deposits from a given tax haven corresponds to an increase in market share from this tax haven in the Swiss offshore market.

Figure A.10 plots the market size of tax havens and decomposes it between countries that become tax havens before 1960 and countries that become tax havens after this date. This year represents the moment of the entry of new tax havens following decolonization (see Figure A.4 in appendix). These tax havens will develop their activity gradually during the end of the 20th century. We observe that the global size of the tax haven market in the Swiss place has been increasing over the period, especially since the beginning of the nineties. The share of the older tax havens has been oscillating around 30% of all deposits with a little upward trend since the nineties.

Importantly, the market share of new tax havens has constantly been increasing, reaching the level of old tax havens after 2010. This increase in the share of new tax havens is not associated with a sharp decrease in the share of old tax havens, indicating that substitution between new and old tax havens should have been limited. On the contrary, the total market share of tax havens in Switzerland, proxied by the thick black line, has constantly increased. We can conclude from this graph that there is a positive correlation between the entry of new tax havens since the sixties and the increase in the market size of tax havens. In other words, the entry of new tax havens has contributed to the increase in the market size of tax havens. It must also be noted that the increase

32. More precisely, any interest received on fiduciary deposits are considered as paid by foreigners. The bank acts as "fiduciary". This feature then creates a tax exemption. Fiduciary deposits represent one quarter of all foreign holdings in Switzerland in 2008.

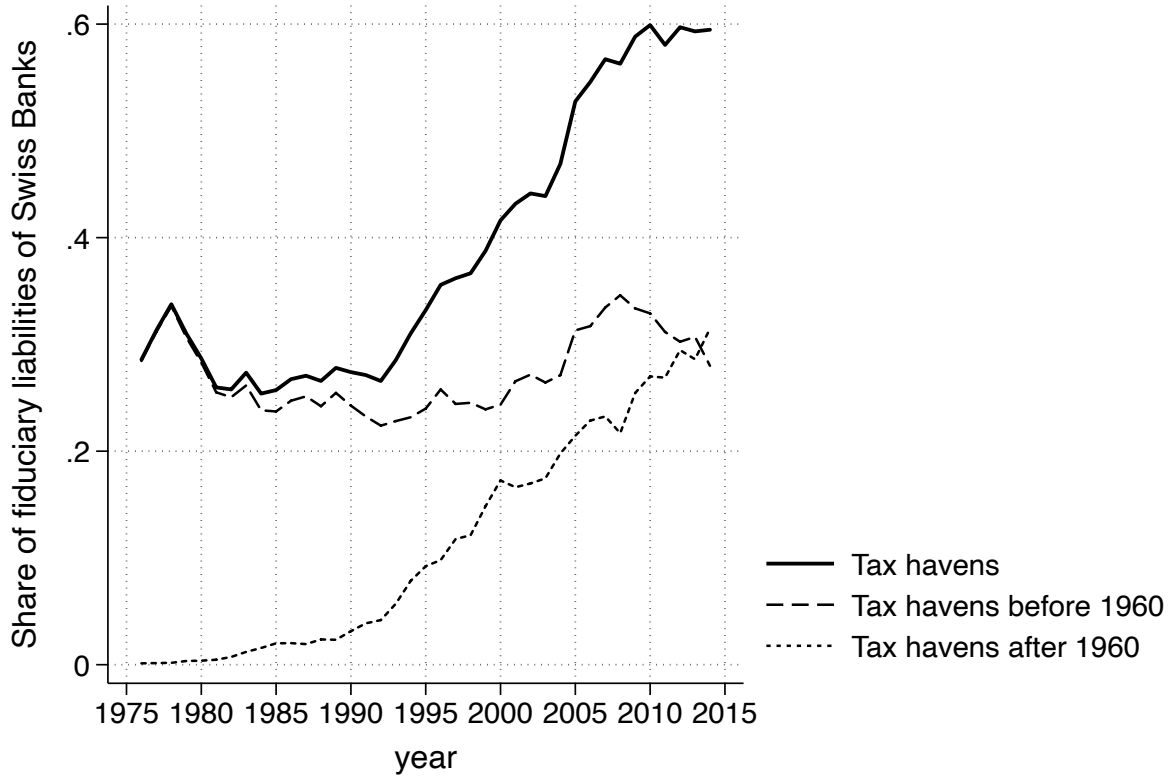


Figure A.10 – The Swiss Market for tax havens' services

Note: This figure plots the share of fiduciary liabilities of Swiss banks by the origin country of the direct owner. Fiduciary deposit data is from Zucman (2013) which collects fiduciary deposits in Swiss by origin from the Swiss National Bank (SNB). Fiduciary deposits are deposits collected by Swiss banks and invested on behalf of their clients. They are used to avoid paying some Swiss taxes. The SNB records the last owner's origin and does not see through conduit entities in tax havens. Data on tax havens' reforms comes from own data collection detailed in section 2. The category "Tax havens" includes all tax havens covered in the SNB dataset. This represents the market share of tax havens in Swiss fiduciary deposits. "Tax havens before 1960" includes entities that become tax havens before 1960: Andorra, Netherlands Antilles, Bahamas, Bermuda, Cayman Islands, Honk-Kong, Isle of Man, Ireland, Jersey, Lebanon, Liberia, Liechtenstein, Luxembourg, Monaco, Netherlands, and Panama. "Tax havens before 1960" includes entities that become tax havens after 1960: Aruba, Antigua and Barbuda, Bahrain, Belize, Barbados, Cyprus, Dominica, Guernsey, Gibraltar, Grenada, Jordan, Saint Kitts-and-Nevis, Saint Lucia, Macao, Marshall Islands, Malta, Mauritius, Malaysia, Nauru, Singapore, Seychelles, Turks and Caicos Islands, Tonga, Saint Vincent-and-the-Grenadines, Virgin British Islands, Vanuatu, and Western Samoa.

Table A.10 – Offshore entities and fiduciary deposits.

	(1)	(2)	(3)
		ln(Fiduciary deposits)	
ln(Number entities)	0.392***	0.574***	0.440***
	(0.129)	(0.0728)	(0.129)
Observations	743	287	404
R-squared	0.902	0.931	0.932
Sample		IBC reform	Other exempt reform
Country and year FE		Yes	Yes

This table display the results of the estimation of the following equation: $ln(Fiduciary\ deposits_{it}) = \kappa_1 ln(Number\ entities_{it}) + a_i + a_t + u_{it}$. $Fiduciary\ deposits_{it}$ correspond to Swiss fiduciary deposits coming from country i at date t, $Number\ entities_{it}$ corresponds to the number of offshore entities recorded in the Offshore Leaks in country i at date t, a_i are country fixed effects, a_t are year fixed effects and u_{it} are the residuals. "IBC reforms" stands for countries that have implemented IBC reforms. "Other exempt reform" stands for countries that have implemented other exempted company reforms. Robust standard errors clustered at the country level in parentheses.*** p<0.01, ** p<0.05, * p<0.1

in the share of fiduciary deposits held in Switzerland is positively correlated with the increase in offshore entities recorded in the Offshore Leaks (see Table A.10).

G Tax rates in tax havens

One assumption of the theoretical framework is that the tax rate on the domestic and offshore economies are correlated in tax havens. Consequently, tax rates in tax havens should be lower than in comparable countries. This section explores this hypothesis. I explore this hypothesis by collecting corporate and individual tax rates from KPMG tax rates tables (KPMG, n.d.). [33] Data are provided for 151 countries between 2011 and 2021. For corporate tax rate it lists the statutory tax rate for a large firm, including local taxes when substantial. For individual tax rates, it generally lists the top marginal income tax rate and does not include deductions or special rules.

Table A.11, describes the average tax rate applicable in tax havens for corporate income tax and individual income tax. It reveals substantial differences in tax rates between tax havens and non-havens. The corporate tax rate in tax havens is, on average, about 7 percentage points lower. It is, on average, 5 percentage points lower for the personal income tax rate. However, it is uncertain if this difference is driven by the fact that tax havens have specific characteristics such as being small countries or because they are tax havens, all other things being equal. The tax competition literature has shown that small countries have lower tax rates in equilibrium than larger countries, even in models that do not include tax havens (Bucovetsky, 1991). Consequently, tax havens tax rates should be compared to those of similar countries.

Table A.11 – Comparison of tax rates between havens and non-havens

	Corporate Income Tax	**Personal Income Tax**
Tax havens	17.3	24.0
Non-havens	24.2	29.1

Note: Average tax rates for tax havens and non-havens in 2021. Data on statutory income tax rates is taken from KPMG Tax Rates Tables. Corporate income tax corresponds to the statutory tax rate including local tax rates when applicable. Personal income tax corresponds to the top marginal tax rate and does not include deductions or special rules. The list of tax havens used is described in section 2 of the paper and available in Table A.1 of the appendix.

To do so, I estimate the following equation by OLS:

$$Rate_{it} = \beta_1 Tax\ Haven_i + CZ_i + \mu_t + \epsilon_{it}$$

with $Rate_{it}$ being the statutory tax rate (either corporate or personal), $Tax\ Haven_i$ an indicator variable equal to 1 if country i is a tax haven, Z_i a vector of country-level characteristics such as its size, its GDP or its legal origins, C is the vector of coefficients associated. μ_t is a year fixed effect and ϵ_{it} is the error term.

In figures A.11 and A.12, I plot the estimation of β_1 along with its 95% confidence interval for different models. Figure A.11 reveals that for all models, corporate income tax rates are lower in tax havens than in comparable countries by 3 percentage points

33. See https://home.kpmg/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html and https://home.kpmg/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/individual-income-tax-rates-table.html

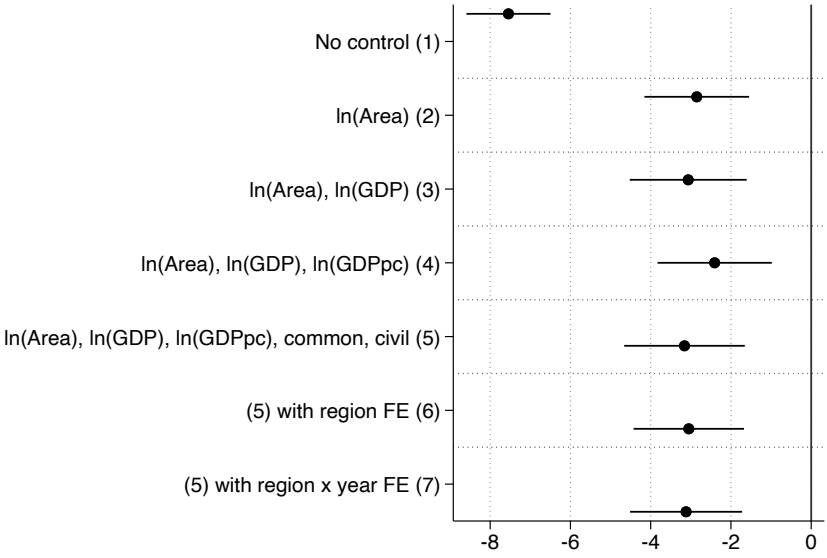


Figure A.11 – Estimation of β_1 for corporate income taxes

Note: This figure plots the estimation of β_1 along with its 95% confidence interval (robust standard errors) for different models. The dependent variable is the statutory corapote income tax rate including local taxes if applicable. Data on statutory income tax rates is taken from KPMG Tax Rates Tables.

on average. This effect is significantly different from zero at the 5% level. It is also true when we control for size, GDP, GDP per capita, legal origin and include region $\times$ year fixed effects. Interestingly, adding controls to the regression decreases by approximately 2.5 the estimated coefficient of tax havens. It confirms that a part of the lower tax rates in tax havens can be explained by their characteristics, particularly their size. However, controlling for these characteristics cannot fully explain why tax havens have lower tax rates than comparable countries.

Figure A.12 repeats the exercise for the individual tax rate. In models (1) to (5), including a diverse set of controls and year fixed effects, we observe a lower tax rate in tax havens than in comparable countries by about 2 percentage points. We add region fixed effects and region $\times$ year fixed effects in models (6) and (7). These models compare countries to similar countries in the same broad world region. The coefficient estimated appears negative but lower than in other models. This coefficient is also imprecisely estimated and not significantly different from zero at the 5% level.

Overall, these results do not contradict the assumption made in the theoretical framework that the domestic tax rate is not independent of the tax rate on the offshore economy. Indeed, tax rates on the domestic economy tend to be lower in tax havens than in comparable countries.

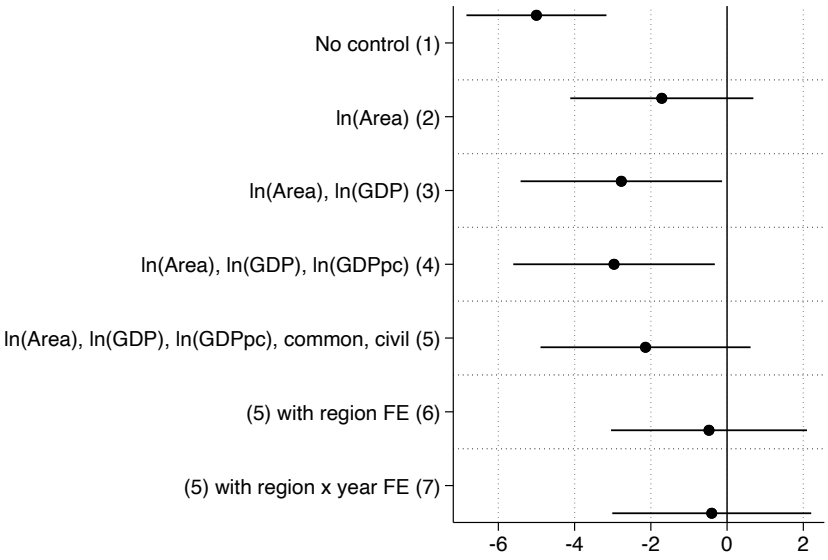


Figure A.12 – Estimation of β_1 for individual income taxes

Note: This figure plots the estimation of β_1 along with its 95% confidence interval (robust standard errors) for different models. The dependent variable is the statutory personal income tax rate base on the top marginal tax rate. Data on statutory income tax rates is taken from KPMG Tax Rates Tables.

H A Theoretical Framework

This appendix presents a theoretical framework that formally derives the Testable Implication 1 of the main text.

To build the theoretical framework, I use the legal capacity building framework of Besley and Persson (2011). In this 2-periods framework, a utility-maximizing government chooses its tax rate and the its level of productive infrastructures. Between the two periods, it can decide to invest in its productive infrastructure in order to increase revenues in period 2. To attract more tax revenues, he can also decide to become a tax haven by setting up an offshore legal architecture. This legal architecture can be upgraded through investment in legal technologies' quality between period 1 and period 2. Comparing its utility over the two periods, the government chooses before period 1 if it becomes a tax haven or not.

A simple economy Consider a simple economy where a government makes its choices taking the state of the economy in foreign countries as granted (mimicking the small open economy framework). There are two time periods $s = 1, 2$ and the population corresponds to N homogeneous individuals. The utility of a given individual is $u_s = (1 - t_s)y(\pi_s) + \alpha_s g_s$ with y its revenues, t_s the income tax rate, and g_s its consumption of a public good. Revenues are a positive function of the level of infrastructure in the country, π_s. π_s encompasses the legal support such as the administrative support or property rights protection but also more generally the level of public infrastructures in the economy such as education or health infrastructures.[34] It can be seen as the productivity of the real sector of the economy. $\alpha_s \geq 1$ is the value of the public good.

The tax rate t_s and the level of infrastructure π_s are constrained by the fiscal capacity τ_s and the infrastructure capacity Π_s. As seen later, in this simple model a non-haven government sets the highest possible tax rate and infrastructure level. The fact that they are constrained will push governments to invest in their respective capacities in order to increase future revenues. Here, because we are interested in tax havens that generally set taxes under the level of fiscal capacity, we consider the fiscal capacity as fixed: $\tau_s = \tau$. The government can invest in infrastructure by paying a cost defined as follows: $\mathcal{L}(\pi_2 - \pi_1)$. The cost is a positive and convex function of the difference between the levels of infrastructure in period 2 and in period 1 with $\mathcal{L}(0) = 0$.

Before considering the model where a country can choose to become a tax haven, I describe the optimum solution in the standard case.

The government budget is :

$$\underbrace{t_s y(\pi_s) N}_{\text{Revenues}} = \underbrace{g_s N + m_s N}_{\text{Expenses}}$$

$$\text{s.t. } t_s < \tau,$$

$$\pi_s < \Pi_s$$

34. This enlarges the definition of the fiscal capacity from Besley and Persson (2011). However, it is in line with their interpretation that investment in productive infrastructures and legal capacity share many similarities, see section 3.2 of their book.

with m_s the cost of investment per capita (which is 0 when $s = 2$). The tax revenues on the left-hand side should equal the government expenditures on the right-hand side: public goods provision and investment in infrastructures. As described in detail later, becoming a tax haven will precisely affect the government budget by bringing tax revenues from the taxation of offshore activity. Note that in the non-haven case, the size of the population will not matter. It will become important when introducing tax havens.

The timing is the following: τ_1, Π_1, α_1 and α_2 are given in stage 0.At the beginning of period 1, the government chooses a set of period-1 policies: $\{t_1, \pi_1, g_1\}$ and invest to determine Π_2. At the beginning of period 2 the government chooses a set of period-2 policies: $\{t_2, \pi_2, g_2\}$. The model is solved by backward induction.

A non-haven government maximizes:

$$\begin{aligned} u_s^I &= (1 - t_s)y(\pi_s) + \alpha_s g_s \\ \text{s.t } t_s y(\pi_s) &= g_s + m_s, \\ t &\leq \tau, \\ \pi_s &\leq \Pi_s. \end{aligned}$$

The level of public goods can be written as a residual from the government constraint: $g_s = t_s y(\pi_s) - m_s$. Therefore, taking into account the level of the public goods, the government now maximizes:

$$u_s^I = (1 - t_s)y(\pi_s) + \alpha_s \left(t_s y(\pi_s) - m_s\right)$$

What is the level of infrastructures and taxes? A first result of the model is that they are both set at their maximum possible level, those of their respective capacities.

Proof: the first order conditions are

$$\begin{aligned} \frac{\partial u_s^I}{\partial \pi_s} &= (1 - t_s)\, y_\pi + \lambda_s t_s y_\pi \geq 0 \text{ (infrastructures)} \\ \frac{\partial u_s^I}{\partial t_s} &= -y_\pi + \lambda_s y_\pi \geq 0 \text{ (taxes)} \end{aligned}$$

with $y_\pi = \frac{\partial y(\pi_s)}{\partial \pi_s}$. This notation, where derivation is noted with subscripts is applied for other variables in the rest of the paper.

Increasing the level of infrastructures or the level of taxation always increases utility. At the optimum, $t_s = \tau$ and $\pi_s = \Pi_s$. To increase utility in period 2, the government can invest in the infrastructure capacity, which will increase the general level of infrastructures in period 2, therefore increasing revenues.

I now describe how the level of investment is set. The investment in infrastructure capacity is an intertemporal problem. The government sets the optimal level of infrastructures in period 2 by maximizing its utility over the two periods.

$$W = (1 - t_1)y(\pi_1) + \alpha_1 \left(t_1 y(\pi_1) - m_1 \left(\pi_2 - \pi_1\right)\right) + (1 - t_2)y(\pi_2) + \alpha_2 \left(t_2 y(\pi_2)\right)$$

The level of investment in the public infrastructures that maximizes W is defined by:

$$\underbrace{\alpha_1 \mathcal{L}_\pi(\pi_2 - \pi_1)}_{\text{Marginal cost of investment}} \geq \underbrace{y_\pi \left[1 + (\alpha_2 - 1)t_2\right]}_{\text{Marginal benefits from investment}} \tag{12}$$

The government invests in the infrastructure capacity until the marginal cost of investment (lower public goods provision in period 1) is equal to or larger than the marginal benefits (higher revenues and higher public goods provision in period 2). The left-hand side is equal to 0 when there is no investment. The right-hand side is always positive because $\alpha_2 \geq 1$. Therefore, investment in the public infrastructure capacity will be positive. I use this condition as a benchmark to compare it with the situation where the country is a tax haven.

The tax haven option I now introduce the possibility for a country to become a tax haven. The government can choose to write a law before period 1 to introduce a legal technology and make its country a tax haven for periods 1 and 2. I assume that the government of a tax haven has the ability to tax foreign offshore revenues, ω_s^F. This modeling of tax evasion aims at being very simple to be as broad as possible and cover different uses of tax havens. It is possible to interpret it as individual tax evasion when an individual uses a trust structure or opens an international business company to channel its revenues in the tax haven in exchange of a small tax or a fee. It can also be interpreted as a firm shifting its revenues to the tax haven. Benefits of becoming a tax haven only come from higher tax revenues. Tax havens benefit from tax evaders only through additional taxes. As noted by Slemrod and Wilson (2009), this could extend to any indirect source of revenues such as revenues from tourism.

This new source of revenues comes with a constraint: the tax rate on the domestic economy and on the offshore revenues cannot be independent (see Hypothesis 2 of the main text). I assume that the tax rate on the domestic economy is proportional to the tax rate on the offshore revenues: $t_s = \delta t_s^o$ with t_s the tax rate on the domestic economy, t_s^o the tax rate on the offshore economy and $\delta \geq 1$. In absence of this constraint, becoming a tax haven is always utility-maximizing.

The demand for tax haven services Before describing how becoming a tax haven affects the choices of the country, I put more structure on ω_s^F, the demand for tax haven services addressed to the country of interest. Concretely, I provide here a functional form to equation 3. To do so, I look at the behavior of taxpayers in other countries indexed by n. The utility of an individual a when she pays taxes in n (no evasion) is: $V_n^a = (1 - t_n)\omega_n + \varkappa_{na}$ with ω_n its revenues and $\varkappa_{na}$ the preference of individual a for paying its taxes in n, distributed Gumbel. Time period subscripts s are omitted. We can interpret it as tax morale for instance. The individual can also choose to evade its taxes by locating all of its revenues in a tax haven $i \in \{TH\}$. In this case, the individual preference can be interpreted as an individual's taste for a given tax haven. These random parameters are assumed tobe independent across countries.

The service of tax evasion is sold competitively in each tax haven. I assume its marginal cost to be $\frac{1}{p_i}$ with p_i the quality of tax haven i's legal infrastructure. The qual-

ity of the tax haven's legal infrastructure represents how effective is the process of tax evasion in a country. It can be mediated through better legal technologies, better communication and travel infrastructure, better administrative and legal efficiency in the offshore sector, incentives for foreign banks and law firms to establish, *etc*. It works as a cost shifter that decreases the cost of using the country as a tax haven when it increases. On top of this cost, an individual from n has to pay an iceberg bilateral cost τ_{ni} that corresponds to communication costs, transport costs, and any other bilateral cost (the compatibility between the law systems of n and i for instance). This assumption is empirically relevant as demonstrated in Section 3. I also assume that one has to use an intermediary in i to use it a tax haven. The taxes paid by the intermediary firms in tax havens are fully passed-through to consumers. [35]

The total cost of evading taxes in country i is therefore: $\frac{\tau_{ni}\omega_n}{p_i(1-t_i^o)}$ The utility of the individual that evades taxation is i is $V_i = (1-t_i^o)\omega_n - \frac{\tau_{ni}\omega_n}{p_i(1-t_i^o)} + \varkappa_{na}$. Using the properties of the Gumbel distribution and noting U_k the deterministic part of the utility, the probability that an individual in n pays its taxes in country i, noted $\mathbb{P}_{ni}$, is

$$\begin{aligned}\mathbb{P}_{ni} &= \mathbb{P}\left(V_i > V_k, \forall k\right) = \mathbb{P}\left(\varkappa_{ka} < \varkappa_{na} + U_i - U_k\right) \\ &= \frac{exp\left(\left(1-t_i^o\right) - \frac{\tau_{ni}}{p_i(1-t_i^o)}\right)}{\sum_{k\in\{TH\}} exp\left(\left(1-t_k^o\right) - \frac{\tau_{nk}}{p_k(1-t_k^o)}\right) + exp(1-t_n)}\end{aligned}$$

This represents the share of people evading taxation in country n to tax haven i. As an individual that evades taxes shelters all his revenues in the tax haven, we can deduct the total amount of revenues sent from country n to tax haven i, which represents the demand from n to i and the total demand addressed to i:

$$\omega_s^F \equiv \omega_{i,s}^F = \sum_n D_{ni} = \sum_n N_n \omega_n \mathbb{P}_{ni} \tag{13}$$

Demand has the desired properties as it decreases with the tax haven's tax rate and the bilateral costs. It increases with the quality of the tax haven. Importantly it also decreases with the number of competitors and their bilateral costs relative to non-haven countries.

Tax rate, legal support, and tax haven quality The optimal public good level is set similarly as in the non-haven case. The new government objective function writes:

$$u_s^I = (1-\delta t_s^o)y(\pi_s) + \frac{\alpha_s}{N}\left[\delta t_s^o y(\pi_s)N + \underbrace{t_s^o \omega_s^F\left(p_s, t_s^o\right)}_{\text{Haven-specific revenues}} - m_s N\right]$$

Once a country is a tax haven it has to choose its quality p_s. By increasing its quality, the tax haven becomes more attractive, which increases ω_s^F. The quality of the tax haven is constrained by the "tax-haven-quality" capacity noted P_s. Between periods 1 and 2, the government can invest in P in order to be able to increase the quality of its legal

35. This assumption makes the demand to be zero when taxes in the tax haven are equal to one.

technologies in period 2. The cost of investment is noted $\mathcal{P}(p_2 - p_1)$ and has the same properties as $\mathcal{L}$.

Intuitively, as we can see π_s as the productivity of the real sector, p_s can be interpreted as the productivity of the offshore sector. Their relative strength can therefore be indicative of the advantage a country has in each sector.

We can now solve for the optimal tax rate, legal support and tax haven quality. To set its tax rate, the government maximizes its utility. Contrary to the non-haven case, where the tax rate is set at the level of the fiscal capacity, in this case, the tax rate might be set at a rate lower than the fiscal capacity. Therefore the tax rate is determined following the first-order condition:

$$\frac{\partial U_s}{\partial t_s} = \delta y(\pi_s)(\alpha_s - 1) + \frac{\alpha_s}{N}\left(\omega^F + t_s^o \omega_t^F\right) = 0 \tag{14}$$

with ω_t^F, the partial derivative of ω_s^F by t_s^o. The tax rate is set at the point where the marginal revenues from a higher tax rate equal the marginal losses on the offshore economy. There is no explicit solution to this equation. I note t_s^{o*} the solution of this equation. The tax rate on domestic activity is set to $t_s = min\{\delta t_s^{o*}, \tau_s\}$. In the rest of the exposition, I will consider that $t_s = \delta t_s^{o*}$, *i.e.* that δt_s^{o*} is small enough to be lower than the fiscal capacity. The optimal infrastructure level and tax haven quality are set the same way as in the non haven case. They are set at their maximum possible level, *i.e.* at their respective capacities (see proof in appendix I).

Investment in legal support and tax haven quality In order to enhance its expected utility over the two periods, the government can now invest in its infrastructure capacity and the quality of its legal architecture. It does so by maximizing its expected utility over the two periods.

Implication 1 : Tax havens always invest in the quality of their legal architecture. The more so if the costs of investment are low. In particular this is the case when the quality of the tax haven is small (as the cost function is convex) and when new legal technologies reduce the marginal cost of investment, $\mathcal{P}_p$, for all p. The introduction of a new legal technology that decreases costs therefore increases investment in quality. This implication corresponds to Hypothesis 3 of the main text.

Proof: the two following conditions describe investment in infrastructure capacity and tax-haven quality:

$$\alpha_1 \mathcal{L}_\pi(\pi_2 - \pi_1) \geq y_\pi \left[1 + (\alpha_2 - 1)\delta t_2^o\right] \tag{15}$$

$$\alpha_1 \mathcal{P}_p(p_2 - p_1) \geq t_2^o \frac{\alpha_2}{N} \omega_p \tag{16}$$

The government invests in the infrastructure and tax haven quality until the left-hand side of equations 15 and 16 are larger than the right-hand side. The left-hand side corresponds to the marginal cost of investment weighted by α_1, the marginal value of foregone tax revenue in period one. The right-hand side corresponds to the marginal gains of investment. As $\mathcal{L}(0) = 0$ and $\mathcal{P}(0) = 0$, it means that investment in infrastruc-

ture and tax haven quality will be positive as long as the right-hand side is positive. This is the case because $\alpha_1 - 1 > 0$.

Note that investment in the general public infrastructure is lower in tax havens than in non-haven countries. This result comes from the comparison of the investment condition in infrastructure when the country is a tax haven and when it is not. Both are very similar since the only difference is that it is scaled by a different tax rate. Because the equilibrium tax rate on the domestic economy is lower in tax havens than in other countries, this makes the investment in productive infrastructure less valuable. This result implies that tax havens, despite maximizing welfare, will invest less in the general public infrastructure than if they were not tax havens.

Which countries become tax havens? We now have all the elements to compare the utility when a government chooses to make its country a tax haven or not. The government does so by comparing utilities in both cases. The country becomes a tax haven if $U^H > U^{NH}$ over the two periods: $\mathbf{1}\{Haven\} = \mathbf{1}\{U^H > U^{NH}\}$. I define $\Delta_U = U_1^{TH} - U_1^{NTH} + U_2^{TH} - U_2^{NTH}$, the difference between the utility when the country is a tax haven and when it is not. When an ambiguity is possible, I note the optimal choice of the non-haven government with the superscript NH, and the optimal choice of the tax haven government with the superscript H.

$$\begin{aligned}\Delta_U = & \underbrace{y(\pi_1^*)\left(\delta t_1^{o*} - t_1^{NH*}\right)}_{\text{More domestic revenues in non-haven countries}} \underbrace{(\alpha_1 - 1)}_{\text{Net value of publics funds}} \\ & + \frac{\alpha_1}{N}\left(\underbrace{t_1^{o*}\omega_1^F}_{\text{Offshore sector revenues}}\right) + \underbrace{m_1^{NH*} - m_1^{H*}}_{\text{Differences in investment}} \\ & + \left(1 + (\alpha_2 - 1)\,\delta t_2^{o*}\right) y(\pi_2^{H*}) - \left(1 + (\alpha_2 - 1)\, t_2^{NH*}\right) y(\pi_2^{NH*}) \\ & + \frac{\alpha_2}{N} t_2^{o*}\omega_2^F\end{aligned}$$

The first line shows the losses from becoming a tax haven due to lower tax revenues on the domestic economy. These lower tax revenues only impact the difference in utility if the net value of public funds is strictly positive. The level of infrastructures, by increasing revenues, increases the value of these losses. The second line shows the gains from becoming a tax haven due to higher tax revenues on the offshore economy. It also shows the role of the differences in investment in legal capacity and tax haven quality. The third and fourth line are the equivalent of the two first lines for the second period. The only difference is that $y(\pi_2^{H*}) < y(\pi_2^{NH*})$ because the investment in infrastructures has been lower in the tax haven. As a consequence, the higher the cost of investment in infrastructure, the higher the probability of becoming a tax haven all other things being equal.

I now describe how ΔU is impacted by country size (N), changes in foreign tax rates (t_i), and initial levels of infrastructure and haven quality (π_1 and p_1) .

Implication 2: The probability that a country becomes a tax haven decreases with its size.

Proof in appendix I where I show that $\frac{\partial \Delta_U}{\partial N} \leq 0$. This result is due to the fact that a large population size provides more domestic tax receipts while not affecting offshore tax receipts. This result is in line with observations that tax havens are generally small countries. A similar result, with a different theoretical setting, is obtained by Slemrod and Wilson (2009).

Implication 3 (Testable Implication 1 of section 4): The introduction of taxes in foreign countries increases the probability that a country becomes a tax haven. This probability decreases when distance with these countries increases and decreases with country size.

Proof in appendix I. This Implication corresponds to the Testable Implication 1 of the main text. Intuitively, the introduction of taxes in foreign countries increases demand all other things being equal. Therefore it increases the potential revenues from becoming a tax haven. This benefits more tax havens that are closer to the country that introduces taxes because costs rise with distance, and tax havens that are smaller because the benefits of becoming a tax haven decrease with size. This result shows the key role of the market access of tax havens.

Implication 4: The higher the initial tax haven quality p_1, the higher the probability of becoming a tax haven. On the contrary the higher the initial level of infrastructure Π_1, the lower the probability of becoming a tax haven. This implication exhibits the role of absolute advantages. Countries with large p_1 compared to π_1 will have more incentives to become tax havens.

Proof in appendix I. This result is due to the fact that higher initial quality will increase the utility of becoming a tax haven compared to staying a non-haven country. As a consequence, if we make the hypothesis that the common law provides key legal instruments for offshore activity, common law countries are more likely to become tax havens, all other things being equal. The hypothesis of a greater offshore potential of the common law lies in the fact that trust laws are a key instrument of offshore practices and that they find their origins in the English common law (see Palan et al., 2009, Pistor, 2019 or Harrington, 2016 for discussions). Besides, if we assume the newly decolonized countries have a low level of infrastructure, we find that U.K. newly decolonized countries are more likely to become tax havens. This can explain the pattern found in Figure 4 that shows a causal impact of decolonization on the number of tax haven's reforms for former U.K. colonies. It also confirms that the reaction of countries to this shock directly depends on their characteristics. [36]

36. On a side note, combined with Implication 1, these results can shed light on the empirical results of Dharmapala and Hines (2009). The authors argue that, on average, tax havens are better-governed countries than other countries. They also write that they cannot establish the direction of the causality. In their empirical framework, governance is measured by voice and accountability, political stability, government effectiveness, rule of law and control of corruption. One can argue that these variables are associated with a larger tax haven quality p_s. Indeed all these variables are likely to decrease the cost of using a tax haven by providing stability and predictability to its users. Implication 3 implies that a higher initial p_1 is associated with a higher likelihood of becoming a tax haven, while Implication 1 suggests that tax havens invest in their governance. In other words, the causality likely goes in both directions.

I Theoretical proofs

Infrastructure level and tax haven quality. Proof that the level of infrastructure and the quality of the tax haven are set at their maximum in the non-haven case:

The firs-order condition for infrastructure maximization is:

$$\frac{\partial u_s^I}{\partial \pi_s} = \underbrace{y_\pi \left(\delta t_s(\alpha_s - 1)\right)}_{\geq 0} + t_\pi \underbrace{\left(\delta y(\pi_s)(\lambda_s - 1) + \frac{\alpha_s}{N}\left(\omega^F + t_s \omega_t^F\right)\right)}_{=0 \text{ using } 14} \geq 0$$

Therefore $\frac{\partial u_s^I}{\partial \pi_s}$ is always positive. The level of infrastructure is set at his maximum, constrained by the infrastructure capacity.

The first-order condition for tax haven quality maximization is:

$$\frac{\partial u_s^I}{\partial p_s} = t_p \underbrace{\left(\delta y(\pi_s)\left(\alpha_s - 1\right) + \frac{\alpha_s}{N}\left(\omega_s^F + \omega_t t_s\right)\right)}_{=0 \text{ using } 14} + \frac{\alpha_s}{N} t_s \frac{\partial \omega}{\partial p} \geq 0$$

Therefore $\frac{\partial u_s^I}{\partial p_s}$ is always positive. The tax haven quality is set at his maximum, defined by the tax haven capacity.

Implication 2 I compute $\frac{\partial \Delta U}{\partial N}$:

$$\frac{\partial \Delta U}{\partial N} = \sum_s t_{sN}\left(y\left(\pi_s\right)\left(\alpha_s - 1\right)\delta + \frac{\alpha_s}{N}\left(\omega_s^F + t_s^H \omega_{st}^F\right)\right) - \frac{\alpha_1}{N^2} t_s^H \omega_s^F$$

Because of the first-order condition on tax rate, $y\left(\pi_s\right)\left(\alpha_s - 1\right)\delta + \frac{\alpha_s}{N}\left(\omega_s^F + t_s^H \omega_{st}^F\right) = 0$ (this is the envelope condition). It follows that

$$\frac{\partial \Delta U}{\partial N} = -\sum_s \frac{\alpha_1}{N^2} t_s^H \omega_s^F \leq 0$$

Implication 3 To show that an increase in taxes in other countries increases the probability that a country become a tax haven, I compute $\frac{\partial \Delta U}{\partial t_i}$. I can make use of the envelope theorem to derive only the direct effect of t_i on ΔU, not considering effects of change in t_i in the endogenous variables.

$$\frac{\partial \Delta U}{\partial t_i} = \sum_s \frac{\alpha_s}{N}\left(t_s^H \omega_{t_i}^F\right)$$

with $\omega_{t_i}^F = \sum_i \omega_i N_i \mathbb{P}_{ih} \frac{exp(1-t_i)}{\left(\sum_{k\in\{TH\}} exp(A_k) + exp(1-t_i)\right)} \geq 0$

Additionally we can show that $\frac{\partial \Delta U}{\partial t_i \partial N} \leq 0$ and $\frac{\partial \Delta U}{\partial t_i \partial \tau_{ih}} \leq 0$:

$$\frac{\partial \Delta U}{\partial t_i \partial N} = -\sum_s \frac{\alpha_s}{N^2}\left(t_s^H \omega_{t_i}^F\right) \leq 0$$

$$\frac{\partial \Delta U}{\partial t_i \partial \tau_{ih}} = \sum_s \frac{\alpha_s}{N}\left(t_s^H \sum_i \omega_i N_i \frac{exp(1-t_i)}{\left(\sum_{k\in\{TH\}} exp(A_k) + exp(1-t_i)\right)} \mathbb{P}_{ih}\left(\frac{-1}{p_h(1-t_h)}\right)\right) \leq 0$$

Implication 4 To show that, the higher the level of initial tax haven quality, the higher the probability to become a tax haven, I compute $\frac{\partial \Delta U}{\partial p_1}$. To show that the higher the initial level of infrastructure, the lower the probability to become a tax haven, I compute $\frac{\partial \Delta U}{\partial \pi_1}$. Again, I make use of the envelope theorem.

$\frac{\partial \Delta U}{\partial p_1}$ gives:

$$\frac{\partial \Delta U}{\partial p_1} = \frac{\alpha_1}{N}\left(t_1^H \omega_p^F\right)$$

with

$$\omega_p^F = \sum_i N_i \omega_i \frac{\tau_{ih}}{p^2\left(1-t_h\right)}\left(\mathbb{P}_{ih} - \mathbb{P}_{ih}^2\right) \geq 0$$

$\frac{\partial \Delta U}{\partial \pi_1}$ gives:

$$\frac{\partial \Delta U}{\partial \pi_1} = y_\pi(\pi_1)\left(\delta t_1^H - t_1^{NH}\right)(\alpha_1 - 1) \leq 0$$

This result is obtained because $\alpha_1 \geq 1$ and $\delta t_1^H - t_1^{NH} \leq 0$.

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Online Data Documentation

The Historical Tax Haven Database (HTHD) collects information on the key regulations that made countries tax havens. It is based on the idea that to become a tax haven a country has to build an *offshore legal architecture*. In other words, the existence of specific legal technologies is necessary to the tax haven activity of a territory as it provides stability and predictability to its users. This dataset collects the date when these legal technologies are introduced through new regulations. It allows to track the offshore activity of tax havens over time, providing unique time-variation in the tax haven status of many countries. Table A.1 is a reproduction of table 1 of Laffitte (2024) that describes the different types of legal technologies collected in the database.

Which tax havens are included in the database? There exists several lists of tax havens that can serve as a point of departure for the collection of information. All these lists generally agree on a core set of tax havens and then are more are less conservative according to their definition of tax havens and their specific focus. This database is based on the list of tax havens of Dharmapala and Hines (2009). To this list, I added the Netherlands and Malaysia, which have been considered as tax havens but are not included in their list. I did not include Belgium due to conflicting information on its role as a tax haven. Watteyne (2022) argues that the history of Belgium as a tax haven stopped after WWI. I did not include U.S. States such as New Jersey or Delaware either. These states have mainly been considered as local tax havens (see for instance Dyreng et al., 2013) even though this might be changing. Palan et al. (2009) has created a meta-list of tax havens aggregating 11 different sources. Table A.2 compares this list to the list of tax havens included in my sample. Except for Costa Rica, which is absent from the list of this database, it covers all tax havens mentioned in at least 4 of the 11 sources.

Which reforms are included in the database The goal of this database is to record the important legislative events that made countries tax havens. It is constructed based on the idea that a country needs to develop its legal architecture to become a tax havens (see Laffitte, 2024 for details). This idea implies that only events that are substantially and structurally affecting the legal architecture of a country must be recorded in the database. Conjonctural adjustment to the legal architecture are out of the scope of this database.

This process of data collection involves making choices about the reforms to retain in the database. Thus, it contains a part of subjectivity. To provide transparency in the data collection process, I describe for each country which reforms were retained in the database and their source.

Table A.1 – Types of legal technologies

Category	Legal Technology	Description	Examples
Individual 38 reforms	- Trust laws	Allow legal disconnection between asset use and ownership	*Turks and Caicos Islands' Trust Ordinance 1990*
	- Other	Tax abolition for instance	*Monaco's Abolition of personal income taxes 1869*
Corporate 37 reforms	- MNE	Attraction of MNEs activities and profits	*Ireland's Export Profits Tax Relief 1956*
	- Holding	Special regimes for holding companies	*Luxembourg's Loi sur le régime fiscal des sociétés de participations financières (Holding companies) 1929*
	- Offshore Insurance and Captives	Self insurance allowing revenue transfers to tax havens	*Barbados' Exempt Insurance Act 1983*
	- Flag of convenience	Limited regulations and tax rates for ships registered in an offshore maritime registry.	*Panama's Law/63 on foreign Ships Registration*
Dual 65 reforms	- IBC	Tax-neutral companies with no domestic activities and limited legal requirements	*British Virgin Islands' International Business Companies Act 1984*
	- Other exempt companies	Similar as IBC	*Jersey's 1940 Corporation Tax Law*
Banking 38 reforms	- Offshore banking	Unregulated banks with limited taxation and legal requirements	*Anguilla's Banking Ordinance, 1991*
	- Bank secrecy	Protects account holders from investigations	*Switzerland's Banking Act, 1934*
Other 16 reforms	- Tax treaties	Limit bilateral taxation, allow conduit entities to benefit from treaties	*Netherlands Antilles' tax treaty with Netherlands (Belastingregeling Koninkrinjk) 1964*
	- Specific regulations	Country-specific rules, not classified elsewhere.	*Bahamas' Hawksbill Creek Agreement 1955*

Note: This table classifies reforms by legal technologies and broad categories. The number displayed after the category name counts the number of reforms that have been adopted in each category at the end of the sample in 2000. The total exceeds the number of reforms recorded in the database as some reforms belong to several categories.

Table A.2 – Comparing different lists of tax havens.

Country	Lists	Country	Lists	Country	Lists	Country	Lists	Country	Lists	Country	Lists	Country	Lists
Bahamas	11	**Vanuatu**	10	**Monaco**	8	**Samoa**	6	Latvia	2	Campione	1	Nigeria	1
Bermuda	11	**Gibraltar**	9	**Nauru**	8	**Seychelles**	6	Madeira	2	Egypt	1	Northern Cyprus	1
Cayman	11	**Hong Kong**	9	**St Kitts & Nevis**	8	**Lebanon**	5	**Netherlands**	2	France	1	Palau	1
Guernsey	11	**Singapore**	9	**Andorra**	7	**Niue**	5	Philippines	2	Germany	1	Puerto Rico	1
Jersey	11	**St Vincent & the Grenadines**	9	**Anguilla**	7	**Macau**	4	South Africa	2	Guatemala	1	Russia	1
Malta	11	**Switzerland**	9	**Bahrain**	7	**Malaysia**	4	**Tonga**	2	Honduras	1	San Marino	1
Panama	11	**Turks & Caicos Islands**	9	Costa Rica	7	**Montserrat**	4	Uruguay	2	Iceland	1	Sao Tome e Principe	1
Barbados	10	**Antigua & Barbuda**	8	**Marshall Islands**	7	Maldives	3	**US Virgin Islands**	2	Indonesia	1	Sark	1
British Virgin Islands	10	**Belize**	8	**Mauritius**	7	United Kingdom	3	USA	2	Ingushetia	1	Somalia	1
Cyprus	10	**Cook Islands**	8	**St. Lucia**	7	Brunei	2	Alderney	1	**Jordan**	1	Sri Lanka	1
Isle of Man	10	**Grenada**	8	**Aruba**	6	Dubai	2	Anjouan	1	Marianas	1	Taipei	1
Liechtenstein	10	**Ireland**	8	**Dominica**	6	Hungary	2	Belgium	1	Melilla	1	Trieste	1
Netherlands Antilles	10	**Luxembourg**	8	**Liberia**	6	Israel	2	Botswana	1	Myanmar	1	Ukraine	1

Note: This table counts the number of tax havens lists in which each country is reported. Countries used in the sample of this paper are highlighted in **bold** font. The list of countries comes from table 1.4 of Palan et al. (2009). The eleven lists are the following: International Bureau of Fiscal Documentation (1977), Charles Irish (1982), Hines and Rice (1994), OECD (2000), IMF (2000), FSF (2000), FATF (2000, 2002), TJN (2005), IMF (2007), STHAA (2007), Low-Tax.net (2008).

A Sources

Three main sources are used:

- Chambost (2000): Chambost, Guide Chambost des paradis fiscaux, Favre, 7th edition, 1999 (hereafter GC)

This book is constructed as a guide for tax havens' users. It is written by Edouard Chambost, a Swiss lawyer specialized in tax avoidance schemes. It has been published in 8 editions from 1977 to 2005. It proposes a description of tax havens along many dimensions including the regulatory one.

- Beauchamp (1992): Beauchamp, Guide Mondial des Paradis Fiscaux, Grasset, 8th edition, 1992 (hereafter AB)
  This book is similar to Chambost (2000).
- Palan et al. (2009): Palan, Murphy and Chavagneux, Tax havens - How globalisation really works, Cornell University Press, 2010 (hereafter PMC)

This book is a very complete assessement of the activity of tax havens around the world. Particularly two chapters describe the history of tax havens. It also provides important bibliographic references about the offshore history of several countries.

In addition to these three main sources, I use a variety of alternative sources to corroborate specific dates, add reforms not mentioned in the primary sources, and gain a broader understanding of the legal structures of tax havens. These sources include:

- **Tax haven guidebooks:** Other tax haven guidebooks such as Starchild (1994), Barber (2007), or Doggart (1975) have been used.
- **Tax Justice Network (TJN)**: The TJN website provides a comprehensive description of tax and financial sector regulations for a wide range of countries. These reports, known as "Narrative Reports", were originally compiled for the construction of the Financial Secrecy Index. Unfortunately, these reports are no longer available on the TJN website, but they can be accessed through the Internet Archive.
- **Documentation from Offshore Service Providers**: Companies specializing in offering offshore services, such as Trident Trusts or Palladium Trusts, often provide extensive documentation about the legal frameworks of various countries for their clients. This documentation can be valuable resources for constructing the database and confirming the timing of some reforms.
- **Offshore Industry Websites**: Specialized websites like lowtaw.net, Mondaq, or The Offshore Guide describe tax havens' offshore industry and provide insights into their legal structures.
- **Official Sources**: Official government websites and publications often contain relevant information about tax reforms and updates to legal frameworks. Corporate registries, in particular, can be valuable sources of information through their promotional materials.
- **Publications by International Organizations**: International organizations like the IMF and the WTO often conduct assessments of national tax and financial policies and provide valuable information regarding the legal architecture of tax havens.

- **Scholarly Articles**: Scholarly articles, particularly those focusing on specific countries or groups of countries, can offer in-depth analyses of the legal and regulatory aspects of tax havens.

Note that several sources cited in this description are Internet websites. Internet URLs are notoriously dynamic and may become inaccessible over time. Consequently, some of the links provided may no longer be functional. However, users can access archived versions of these websites through the Internet Archive (https://archive.org/). Additionally, I have archived the websites visited at the moment when they displayed the information used in this database. These files are accessible upon request.

B Country-by-country description

Andorra The main sources do not provide any date for Andorra. According to the TJN, Andorra transformed into a regional financial center in 1951, marked by the significant decision to eliminate all taxes on banking operations. Supporting this historical shift, the International Monetary Fund (IMF) further corroborates the transformative year in their "Assessment of Financial Sector Supervision and Regulation" in 2007 (International Monetary Fund, 2007). This pivotal reform is categorized as a *Banking* reform.

In addition, while Andorra does not facilitate the easy establishment of offshore companies, it has been historically recognized as a tax haven. This characterization is attributed to its notably low taxation policies and the absence of information exchange until 2009.

Anguilla According to GC, a set of laws that came into force in 1995 transformed Anguilla into a true tax haven. However, even before this date, numerous offshore corporations were established in Anguilla. The date of 1995 can be attributed to the *Anguilla International Business Companies Ordinance*.

The TJN attributes Anguilla's tax haven status to 1991, stating: "While Anguilla prohibits anonymous accounts, continues to seek offshore financial business, offering business and tax structures and company formation which allow some degree of anonymity. IBCs can be incorporated by company service providers in Anguilla without the requirement to publicly register shareholders or directors." The date of 1991 aligns with the *Offshore Bank and Trust Companies Ordinance*. This assertion is corroborated in USA IBP (2017).

In addition, GC notes that the trust law of Anguilla was modeled after Belize's 1992 trust law, while the law governing "trading companies offshore" was derived from those of the British Virgin Islands and the Bahamas.

Hines and Rice (1994) included Anguilla in their classification of tax havens, while Beauchamps (1983) also recognized Anguilla's status. This designation may be attributed to the lack of individual or corporate direct taxation in Anguilla, although there is insufficient evidence to identify a key reform prior to 1991.

Antigua and Barbuda Based on English common law, Antigua and Barbuda has a long-standing tradition of bank secrecy, as recognized by both GC and the TJN. This

tradition was further strengthened in 1982 with the enactment of the *Bank and Trust Confidentiality Act*, which enshrined the principle of bank secrecy.

According to GC, some legislation governing international business companies (IBCs) was introduced in the 1960s, but these early efforts were not particularly successful. The specific law referred to is the *The International Business Companies (Exemption from Income Tax) Act* of 1967 (see for instance global-regulation, n.d.).

This initial legislation was followed by the more comprehensive *International Business Corporation Act* of 1982, which provided a more robust framework for IBCs.[37] Subsequent amendments to this Act in 1984 and 1985 further enhanced the attractiveness of Antigua and Barbuda as an offshore financial center, according to GC and the TJN. GC also notes that personal income taxes were abolished in 1977, further contributing to the country's appeal for offshore financial activities.

Given the lack of detailed information regarding the specific impact of the 1984 and 1985 amendments, it is reasonable to focus on the key dates of 1967, 1977, and 1982. These milestones mark significant developments in Antigua and Barbuda's legal framework for IBCs and personal income taxation, shaping the country's evolution as an offshore financial hub.

Aruba Aruba formed part of the Netherlands Antilles until 1986. It enters the dataset at this time. According to GC (GC), Aruba was primarily used as a conduit for the "Dutch Sandwich" strategy before 1988. This strategy, which involves routing financial transactions through Aruba to benefit from lower tax rates in the Netherlands, was facilitated by the Double Taxation Treaty between the Netherlands and Aruba, signed in 1964. This treaty corresponds to the *RIJKSWET van 28 oktober 1964, houdende Belastingregeling voor het Koninkrijk* (article 11 in particular). This is also noted by van Beurden and Jonker (2021).

In 1988, Aruba enacted a law designed to compete with Panama's zero-tax regime, establishing the *Aruba Tax Exempt Companies (AVV)*. This legislation attracted a significant influx of companies seeking to exploit Aruba's favorable tax structure. The 1988 law is also mentioned by other sources, such as the Aruba tourism agency (Visit Aruba, n.d.).

The TJN dates Aruba's emergence as a secrecy jurisdiction to 1945, but it does not provide specific justifications. However, the TJN notes that Aruba's autonomy in 1986 coincided with a government initiative to develop the island as a financial center, fueled by favorable tax laws and the Belastingregeling voor het Koninkrijk (BRK) 2, a treaty with the Netherlands that effectively functions as a tax treaty.

Bahamas The Bahamas has a long history of tax-free status, with no corporate or personal income taxes levied since 1717, as noted by AB. According to PMC, the country's transformation into a tax haven began in the 1930s, when holding companies were established in the Bahamas.

A significant turning point came in 1955 with the signing of the Hawksbill Creek Agreement, which established a free trade zone in Freeport, exempting businesses from

37. Law number 28, also confirmed by Offshore Company (n.d.-a)

taxes until 1980, later extended to 2054 (Wikipedia, 2023). This agreement was crucial in attracting investment and solidifying the Bahamas' position as a tax haven (The Tribune, 2015). While PMC does not explicitly mention the Hawksbill Creek Agreement, they do discuss the Bay Street Boys, who played a central role in negotiating the agreement. I keep this date as it is a political decision that is noted by many sources and that is key to understand the offshore history of Bahamas. It is classified in the *Other* type of reforms.

The implementation of bank secrecy measures comparable to those in Switzerland in 1965 marked another milestone in the Bahamas' evolution as a tax haven (TJN). The *The Banks & Trust Companies Regulations Act, 1965* established strict confidentiality rules, fostering an environment conducive to tax avoidance. By the 1970s, the Bahamas had become one of the world's leading tax havens.

GC further corroborates this timeline, noting that the introduction of "non-resident societies" in 1965 further facilitated the country's status as a tax haven. Additionally, GC highlights the year 1990, when International Business Companies (IBCs) are introduced, as a significant development. IBCs, characterized by their ease of formation, anonymity, and tax-free status, quickly became a popular tool for offshore financial activities. The *International Business Companies Act of 1989* formalized the establishment of IBCs in the Bahamas and updates the previous law of 1965, less and less effective according to GC.

According to AB, the *Merchant Shipping Act* of 1976 played a crucial role in establishing the Bahamas as a flag of convenience, attracting foreign-owned ships seeking to register under the Bahamas' favorable tax regime. This designation is further supported by Mondaq (2012).

AB notes that the *Merchant Shipping Act* of 1976 helped to make Bahamas a flag of complaisance. This is also confirmed by a Mondaq publication. [38]

Barbados Barbados' designation as a tax haven stems from its favorable regulatory environment for international business companies (IBCs), as noted by AB. In 1977, a significant reform of the IBC regime made it more liberal than in other jurisdictions. The *Offshore Banking Act* of 1979 further enhanced Barbados' attractiveness as a tax haven by establishing offshore banks with a limited tax rate.

While GC suggests that the first IBC legislation dates back to 1960 and was amended in 1991. Both these dates are not corroborated by other sources. Trident Trust indicates that the first IBC regulation was enacted in 1965 (*Barbados International Business Companies (Exemption from Income Taxation) Act*), a date also supported by Zagaris (1981). Zagaris (1981) further confirms the significance of the 1977 IBC reform, stating that it "breathed a new life" (p. 676) into the IBC regulations.

GC incorrectly dates the offshore banking act to 1972. The correct date is 1979, as confirmed by AB, Zagaris (1981), and Carmichael (1992, 1995). GC identifies the importance of the *Exempt Insurance Act* of 1983 for captive insurance, a type of insurance commonly used in offshore jurisdictions. This date is also supported by the Barbados Financial Services Commission's website (Barbados Financial Service Commission (n.d.)) and Carmichael (1992).

38. https://www.mondaq.com/marine-shipping/193420/advantages-of-registering-a-vessel-under-the-bahamian-flag

Carmichael (1992) further highlights the Foreign Sales Corporation Act of 1984 as a significant component of Barbados' offshore infrastructure. Additionally, Alleyne (1986) notes that Barbados emerged as a flag of convenience in 1982 following the *Shipping Act* of 1981.

Bahrein In an effort to compete with the offshore financial system of Singapore, Bahrain "initiated a policy of licensing offshore banking units" in 1975 according to PMC. GC dates this law from 1973. He further points to the 1978 *Exempted Joint Stock Companies* law, which enabled the formation of companies exempt from Bahrain's local tax rates. The TJN indicates that the Bahrain Monetary Authority was established in 1973 and that offshore banking units were authorized in 1975. This date is corroborated by Gerakis and Roncesvalles (1983) and AB. I select the date of 1975 which is more backed in the sources.

According to a handbook on company law in the Middle East (USA, 2011), Bahrain's exempt joint stock companies were established through Ministerial Order 25 of 1977.

Belize PMC indicates that Belize introduced the *Offshore Banking Act* in 1996. GC mentions a law on trusts in 1992 but provides no further details. The existence of the *Belize Trust Act* is confirmed by Trusts and Trustees (Wilson, 2007) and Lowtax.net (n.d.-a), which also states that the law was inspired by similar legislation in Cayman, Panama, and Bermuda. AB identifies the *Belize International Business Companies Act* as the key legislation enabling the establishment of IBCs in 1990. The corporate registry of Belize also confirms the 1990 date (Belize International Corporate Affairs Registry, n.d.), and it is noted that the IBC legislation is heavily based on that of the British Virgin Islands (BVI). Belize is also considered a flag of convenience, according to the TJN. The *Registration of Merchant Ship Act* of 1989 is taken as the benchmark for the opening of the flag of convenience.

Bermuda According to PMC, Bermuda's reputation as a tax haven dates back to 1935, when the first offshore company was established (Archer, 1998). Ketcheson (1981) and Spurling (1992) also highlight the significance of the *Exempted Companies Act* of 1950, which introduced the concept of "exempted companies" and paved the way for Bermuda's transformation into a major offshore financial center.[39] The *Companies Act* of 1970 further simplified the incorporation process for exempted companies (Spurling, 1992).

In 1958, Bermuda enacted the *Exempted Partnerships Act*, further expanding its offshore financial options by enabling non-residents to operate through partnerships formed in Bermuda. Spurling (1992) underscores the importance of this law in Bermuda's offshore development. The TJN notes that the *Trustee Act* of 1975, along with the establishment of the Bermuda Stock Exchange in 1973, demonstrates Bermuda's commitment to providing secrecy services to non-resident clients.

39. "Bermuda's potential as an international business centre was recognised as early as the late 1940s and the first body of regulation for exempted companies became law in 1950, enshrined in The Exempted Companies Act 1950 (the 1950 Act). The 1950 Act introduced the concept of the 'exempted company' which is a Bermuda company formed primarily for the benefit of (and owned by) non-residents of Bermuda to carry on business outside Bermuda or with other exempted undertakings in Bermuda. The exempted company is exempted from the ownership requirements which apply to local companies." (Spurling, 1992, p. 9)

While AB mentions the *Exempted Undertakings Tax Protection Act* of 1966, which provided legal assurance that exempted companies would not be taxed, it's important to note that Bermuda has historically had no personal or corporate income tax. This is why Bermuda's reputation as a tax haven predates specific legislation, with notable usage as early as 1947 (PMC). Considering this historical context, the 1966 law is not considered a significant milestone in Bermuda's evolution as a tax haven.

British Virgin Islands The British Virgin Islands (BVI) are one of the world's leading provider of international business companies (IBCs), characterized by their tax-free status and minimal regulatory requirements. While the *International Business Companies Ordinance* of 1984 is widely recognized as the key legislation governing IBCs in the BVI (GC, AB, Garcia Pires, 2013), the *Trust Ordinance* of 1961 also played a significant role in establishing the BVI's reputation as a tax haven (Palladium Trusts, 2018, Pursall et al., 2023). This ordinance enabled firms and individuals to avoid taxes under certain conditions, paving the way for the island's emergence as a popular destination for offshore financial activity.

The TJN and GC also support the 1984 date as the defining moment for the BVI's status as a tax haven. Garcia Pires (2013) similarly indicates 1984 as the pivotal year. However, the *Trust Ordinance* of 1961, and its subsequent amendment in 1993, as noted by Palladium Trusts (2018), also played a crucial role in shaping the BVI's tax haven landscape.

Cayman Islands Freyer and Morriss (2013) credit the Cayman Islands *Company Law* of 1960 as the first piece of legislation specifically designed to promote the Cayman Islands as a financial center. They further highlight the importance of the *Exchange Control Law* of 1966, which they describe as a crucial step in establishing the Cayman Islands as an offshore financial center. This law was enacted in response to competitive pressures from other jurisdictions and was driven by the efforts of newly arrived expatriates and legal professionals.

PMC identifies several other laws that have contributed to the Cayman Islands' status as a tax haven: "In 1966 Cayman enacted a handful of laws, including the Banks and Trust Companies Regulation Law, the Trusts Law, and the Exchange Control Regulations Law, and it also strengthened its 1960 companies law. In 1976, the Confidential Relationships (Preservation) Law (a codification of English common law) was enacted to protect confidential information in the possession of financial professionals from disclosure—this in response to aggressive action by the U.S. authorities to obtain information from offshore banks. All exchange control restrictions were abolished during the late 1970s. The Insurance Law was enacted in 1979 to enhance and regulate the growing captive insurance industry (driven initially by illfounded concerns about political stability in the Bahamas)" (p.137). GC notes the date of 1960 for the creation of exempted companies and the TJN notes 1965. Even if the law of 1967 seems important, the date of 1960 should be retained as the first Campany Law (as confirmed by the TJN and AB).

Jersey According to PMC, the Channel Islands have been known as tax havens since the 1920s. In 1928, Jersey enacted the *Income Tax Law*, which allowed foreign-controlled

firms to pay no taxes. This law, along with the *Corporation Tax Law* of 1940, which established the world's first exempt companies, marked the island's early transformation into a tax haven.

In 1983, Jersey introduced captive insurance, a type of insurance arrangement that is popular among offshore investors (Herbert, 1992). He also attributes the development of Jersey as a tax haven to the *Trust Law* of 1984. Trident, in its factsheet on Jersey's trusts (Trident Trust, 2021), also recognizes the importance of this law (p. 1).

Herbert (1992) and GC also mention the *(Exempted) Companies Law* of 1991. Finally, IBCs were created in 1993, further expanding the island's range of offshore financial vehicles (GC, Trident Trust, 2021).

Guernsey While the precise timeline for Guernsey's emergence as a tax haven is less clear than for Jersey, several key legislative developments stand out. In 1986, Guernsey enacted the *Insurance Business Law*, which established a regulatory framework for captive insurance (Le Marchant, 1999, p. 217). This law, along with the creation of the Financial Services Commission in 1988, marked a significant step in Guernsey's transformation into an offshore financial center (GC, Le Marchant, 1999).

Like Jersey, Guernsey introduced IBCs in 1993 according to GC, further expanding its range of offshore financial vehicles. Dyke and Simpson (2001) discuss the use of exempted companies according to the Companies Laws of 1994 to 1996. I keep only the date of 1994. Finally, an important innovation of Guernsey are the Protected cell companies (PCC) created in 1997 (see GC, PMC, and Trident Trust, 2018 for instance).

For Jersey and Guernsey. It is a bit difficult to follow the different sources on the precise date of the reforms around 1990 because of a large number of laws. I tried to keep the most significant but this is mainly based on the interpretation of sources. Both exempted companies and IBCs have been introduced around this date.

Cook Islands According to PMC (p.146) that cites Sharman (2008), the Cook Islands established a legislative framework to attract offshore business in 1981, specifically targeting tax-exempt structures. This development is corroborated by TJN, which cites a report by the International Monetary Fund (IMF) on the Assessment of the Supervision and Regulation of the Financial Sector in the Cook Islands (International Monetary Fund, 2004). The IMF report states: Offshore financial activity commenced in the Cook Islands (CI) in 1981 with the enactment of several laws, which provided, as a basic inducement, for all registered offshore entities to be exempt from all forms of tax." This information is further supported by AB and Van Fossen (2002b).

Cyprus According to GC, offshore societies were established in Cyprus through the article 28A of Law No. 15 in 1977. The TJN, citing lowtax.net, confirms this date and adds that Cyprus has been active in attracting offshore businesses since 1975, evidenced by the substantial number of offshore companies registered in the country. AB also mentions a prior law in 1975, which was later modified in 1977 to make it less restrictive and more conducive to offshore activities. I keep the date of 1975 as the one of 1977 seems to be a correction relative to the first one, not a real innovation.

The Merchant Shipping Act, which regulates the registration of foreign-owned ships in Cyprus, dates back to 1963 (Christensen, 2017).Offshore banking units in Cyprus are created in 1978 according to AB with a first autorisation granted to the Banque Nationale de Paris intercontinentale. According to Phylaktis (1994) (p. 125), Offshore Banking Units are created in 1981. This date is also found in Roussakis (1999). Note that AB was printed in 1981 which might explain why this date does not appear.AB, published in 1981, may not have included this later date due to its publication timeframe. The IMF's 2001 assessment of the offshore sector in Cyprus (International Monetary Fund, 2001) also supports the date of 1981, noting that the first OBU was licensed in 1982. I keep 1981 since it is more sourced and I was not able to find more information on the date of 1978.

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Dominica According to GC, Dominica implemented a system of IBCs based on the one enacted in the British Virgin Islands. It was passed in 1996 according to the TJN. In GC: "La Dominique est le dernier-né des Paradis fiscaux et réussit d'emblée à entrer directement dans la catégorie des «autres grands»." This is also confirmed by Suss et al. (2002) that adds the economic citizenship (golden passport) program. They also mention the *Offshore Banking Act* of 1996, and the *Exempt Insurance and Exempt Trust Act* of 1997.

Gibraltar According to GC, the *Companies Ordinance* of 1983 established a regime for exempted societies in Gibraltar, which are companies that are not owned by Gibraltarians and do not conduct business domestically. This reform is an amendment of the 1967 *Exempted Societies law*. The TJN confirms that Gibraltar has had an exempt company regime since 1967. Gibraltar's status as a tax haven was recognized as early as 1977, when it was blacklisted by the International Bureau of Fiscal Documentation. PMC also notes that Gibraltar was already a tax haven in the 1960s.

According to AB, in 1989, Gibraltar enacted the *Financial Service Ordinance*, which aimed to further develop its financial sector, including the insurance captive business. This law was intended to strengthen Gibraltar's competitiveness against other financial centers, such as Ireland. An IMF assessment document from 2001 also references this law (International Monetary Fund, 2011). Notably, Gibraltar does not impose withholding tax or income tax on investment fund revenues.

Although GC mentions the *Companies Act* of 1930 as a potential legal framework for exempted companies, AB indicates that Gibraltar's legal framework is primarily inspired by UK law. However, given the lack of definitive sources suggesting that the 1930 Act played a pivotal role in Gibraltar's offshore development, the 1983 date is considered more significant.

Grenada Grenada was considered as a tax haven in 1977 by the International Bureau of Fiscal Documentation. According to AB, there is no taxes on any revenues (individuals or corporations) since 1986. This is confirmed in an United Nations documents that mentions that "in a radical fiscal experiment Grenada abolished income taxes in 1986 and introduced a 20 per cent Value Added Tax (VAT) on goods and services imported or produced for sale in Grenada." (Ramsaran, 1999). In Effros (1998), it is noted that the

International Business Companies Act of 1989 provides the complete secrecy of offshore companies. This law also appears in a WTO document about Grenada (World Trade Organization, 2014). Suss et al. (2002) notes that the offshore sector began in 1997, which does not seem reliable given the above information. However the set of laws suggest an important reform of the offshore sector: *International Insurance Act*, *Companies Act*, *Offshore Banking Act*, *International Trusts Act*, *International Ccompanies Act* are set up in 1996.

Hong-Kong Both PMC and the TJN identify 1978 as the moment when Hong Kong became a tax haven. This shift is linked to the Chinese Open Door policy and the end of a moratorium on the establishment of new banks in Hong Kong. These developments created a more permissive environment for offshore financial activities, contributing to Hong Kong's ascent as a key destination for tax-evading businesses. Schenk (2003) supports the 1978 date by confirming the removal of the moratorium on new bank licenses. Jao (2003)) notes "Although the Hong Kong colonial government adopted a permissive attitude towards the financial sector, it also did not pursue an active IFC policy, at least in the 1950s and 1960s."

I retain these policy changes in 1978 as the first dat after WW2. Note that this is subject to debate. Some reasearchers think that Honk-Kong played the role of an OFC before this date. In particular, an important feature of the tax system put in place in Hong-Kong in 1940 is that it only taxes income based on source. It means that companies registered in Hong-Kong but with no local revenues will not pay taxes there (see Littlewood, 2010). This is described as an important feature of the tax haven status of Hong-Kong. Therefore, I keep this date.

PMC, citing Jao (2003), also highlights two key tax policy changes that further enhanced Hong Kong's attractiveness as a tax haven: the abolition of interest withholding tax on foreign currency deposits in 1982 and the complete elimination of all forms of interest taxation in 1989. Schenk (2020) corroborates the date of 1982.

Ireland Shaxson (2018) argues that Ireland's tax haven strategy has never been driven by secrecy, but rather by aggressive corporate tax cuts. He cites the 1956 Export Profits Tax Relief as a prime example of this strategy, which effectively exempted export sales of manufactured goods from taxes. This policy, when combined with the subsequent Shannon export processing zone established in 1959 (see PMC), laid the foundation for Ireland's transformation into a tax haven. PMC further highlights the establishment of the Irish Financial Services Centre (IFSC) in Dublin in 1987. This center attracted multinational corporations seeking to minimize their tax liabilities.[40] The same dates are highlighted by the TJN.

The Tax Consolidation Act (TCA) of 1997 has been identified as a significant step in consolidating Ireland's tax haven status. According to O'Boyle (2022), the section 110 of

40. PMC writes: "Following the success of its Shannon export processing zone, established in 1959, Ireland established the Irish Financial Services Centre in Dublin in 1987. With its favorable tax regime for certain financial activities, low corporate tax rate (12.5% in 2008), and no withholding tax, the IFSC still flourishes, according to the Irish economist Jim Stewart (2005), in what he calls global treasury operation, managing international funds and flows of funds within MNEs."

this act works as a debt-based tax avoidance instrument (see also O'Donnell, 2017 that interprets the law similarly). The Double Irish sandwich is also associated to this piece of legislation.

Isle of Man PMC indicates that the Isle of Man began to compete for tax revenues with its neighboring jurisdictions in 1970. According to PMC, two significant legislative milestones were the *Income Tax (Exempt Companies) Act* of 1984 and the combined *Shipping Law* and *Insurance Law* of 1986. A government communication further confirms the establishment of the Isle of Man's shipping registry in 1984 (Isle of Man Government, 2007).

GC, while not specifying the exact dates, suggests that the Isle of Man's legal framework for exempt companies dates back to the 1930s. The TJN notes that the *Companies Consolidation Act 1931* laid the foundation for the Isle of Man's current company law, which is based on the U.K.'s *Companies Act 1929*. This Act has undergone several modifications such that it is called 1931-2004 law. GC also note this law as being at the origin of Manx Exempted Companies.

Based on these sources, the dates of 1931, 1984, and 1986 appear to be the most significant in the Isle of Man's offshore development.

Jordan Jordan appears to be a relatively minor tax haven with limited information available on its offshore history. According to GC, the first attempt to attract foreign investors through tax exemptions was made in 1975 through the *Temporary Law Number 46*. This was followed by two additional laws in 1989 and 1992: *Law 1* and the *Offshore Companies Regulation*. AB identifies two types of tax incentives: those provided by the *Registration of Foreign Companies Law* of 1975 and those offered by the *Encouragement of Investment Law* (1984) and the *Industrial Estates Corporation Law* (1980). However, GC notes that the 1975 law was not widely used due to administrative challenges. The existence of the 1975 law is further corroborated by a document from the US Bureau of Domestic Commerce (United States Bureau of Domestic Commerce, 1977, p. 122).

Lebanon PMC suggests that Lebanon's transformation into an offshore haven began in 1943 following its independence. However, this date is too vague and requires further confirmation. Different sources such as Gates (1998) or Kardahji (2015) explain that the reforms taken in 1943 where dergulating and opening the economy and that the main source of the offshore attractivity is the absence of banking regulation rather than actual laws. Therefore, I do not keep this date. More specific evidence points to the establishment of the *Decret loi 45 on holding societies* and the *Decret-loi 46 on offshore societies* in 1983, indicating a more recent origin for Lebanon's offshore development. In addition, the TJN pinpoints the adoption of a bank secrecy law in 1956 as a key milestone in Lebanon's emergence as an offshore financial center.

Liberia The TJN identifies Liberia as a secrecy jurisdiction since 1951, but does not provide specific evidence to support this claim. They add that the shipping registry was created in 1948 (confirmed by Liberian Corporate Registry, n.d.). This is also the date of creation of the Liberian Corporate registry that plays an important role in the Liberian

Tax haven (see the brochure of Liberian Corporate registry, Liberian Corporate Registry, 2015 for instance).

The TJN notes that the *Commercial Code* of 1956 was modeled on Delaware regulations, further indicating Liberia's alignment with established offshore jurisdictions. This is also confirmed by AB and TJN. Finally, in 1975 there seems to be a law that limits the possibility of registrering ships for non-residents (*Liberian Maritime Law*, see AB). This law is not recorded in the database as it decreases the extent to which Liberia is a tax haven.

Liechtenstein The establishment of a tax haven regime in Liechtenstein can be traced back to 1926 with the introduction of the *law on Anstalt* (PMC). This legislation enabled individuals to form companies that offered them the advantage of incorporation and secrecy. AB and GC provide additional dates that mark Liechtenstein's evolution as a tax haven: 1960 for the enactment of a banking secrecy law and 1992 for the introduction of a new banking law that was deemed of high quality by GC.

Luxembourg The introduction of holding companies in Luxembourg in 1929 marked a turning point in the country's transformation into a tax haven. This is the most important law that makes Luxembourg a tax haven and among the first holding legislation in the world. It exempted these companies from various taxes, including income tax, fortune tax, tax on the transfer of shares, and withholding taxes. This legislation attracted foreign investors seeking to shelter their assets, paving the way for Luxembourg's emergence as a major tax haven in the 1970s. The Luxembourg then emerges as a major tax haven in the 70' according to PMC and GC.

According to Chavagneux (2021), the three most important dates in the offshore of Luxembourg are 1929 (law on holdings), 1963 when the first emission of an Eurodollar obligation was done in Luxembourg, providing secrecy and launching the deregulated Eurodollar market, and 1981 when it officialy puts banking secrecy in place. According to PMC, the Luxembourg maritime register is opened in 1990 to make it a flag of convenience. In addition, the first captive insurance law dates from 1984 (see PwC, 2012 or Captive Insurance Times, 2013).

The SoParFi, companies exempted from capital gains taxes, are created in 1990. A report from the French Assembly (about limits to fiscal control , financial crimes and money laundering in Europe) notes that these companies have been "deliberately created to attract, through important tax advantages, capital to the Grand-Duché" (own translation).

Macao It is difficult to find information about Macao as a tax haven. It is a port-franc (no taxes on trade) and ensures a corporate taxation between 0 and 15 percent according to the negociation with tax authorities. According to AB1, Macao is known to be a place with low taxes and facilities since a long time but is considered as a second-zone tax haven. In particular, it is noted that the government created an advantageous tax regime in 1978. According to the Global Forum cited by the TJN, the Macao Offshore Legislation was introduced and became effective on November 1999. It corresponds to the Decret-

Loi 58/99/M that has been revoked 2018 to follow OECD guidelines (see also World Trade Organization, 2013 IFLR, 2018).

Malaysia and Labuan According to AB, the *Income Tax Act* of 1974 exonerates from income tax revenues sourced outside of Malaysia for individuals and companies. Besides, in 1990, Malaysia decided to create a tax Haven in Labuan with a set of laws (including the *Offshore Companies Act*) that allows for offshore companies (see GC).

Maldives Maldives are not mentionned in GC. The TJN notes "The absence of any meaningful third-party information (IMF, FATF-style, Lowtax.net, etc.) may suggest that the Maldives only recently opted for a secrecy jurisdiction strategy. Maldives mentions on its website that "According to World Bank's 2006 Investment Climate Assessment, Maldives ranked highest in the region in terms of World Banks' ease of doing business index." (Invest Maldives)." However it was listed as a tax haven by Hines and Rice (1994) and by the OECD (2000).

No date is found for this country. Therefore, I do not use it in the database.

Malta Malta was considered as a tax haven by the IFBD in 1977. The *Banking Act* of 1970 allows for the creation of offshore banks according to AB. It is not ocnfirmed by other sources that offshore banks are created by this act. This date is not kept yet, since many sources talk about the *Banking Act* of 1970 but do not link it to offshore banks. According to AB, the 1980 treaty with the United States allows for treaty shopping strategies, explaning why it is closed by the U.S. in 1997.

In 1988, Malta implemented a series of reforms to reduce taxes on offshore activities. According to GC there is a limited tax rate of 15% on foreigners. Besides, the *Offshore Trust Act* is enacted in 1988, as well as the Amendment to the *Merchant Shipping Act* of 1973 that establishes Malta as a flag of convenience according to AB. Fabri and Baldacchino (1999) further note that the 1988 reforms included trading, holding, banking, and insurance offshore companies and offshore trusts under the *Malta International Business Activities Act*. Additionally, this act granted tax reductions for specific businesses, especially banks. Fabri and Baldacchino (1999) also confirm that the *Merchant Shipping Act* of 1973 opens the door to being flag on convenience.

The *Malta Companies Act* of 1995 created International Trading Companies that could be used as International Business Companies (IBCs), according to the Offshore Company website (Offshore Company, n.d.-b). This regime was phased out in 2007.

Marshall Islands The Marshall Islands emerged as a tax haven with the enactment of a set of laws in 1990 that included provisions for zero or near-zero taxation for exempt and non-residential companies, Swiss-style bank secrecy laws, trust companies laws, offshore insurance laws, flags of convenience for shipping and aircraft leasing, and, in the early 21st century, laws aimed at facilitating e-commerce and online gambling. This date is confirmed by PMC, GC, TJN, and Van Fossen. Van Fossen (2002) specifically identifies 1990 as the year the Marshall Islands re-established itself as an offshore financial center, although he does not mention any previous reforms. According to AB, the *Association*

Law is the key legislation that transformed the Marshall Islands into a tax haven. In addition, the establishment of a maritime registry in 1988 marked the first step towards becoming a flag of convenience, according to AB. This date is also confirmed by a promotional tract from the Marshall Islands (International Registries, 2020), which adds the *Maritime Act* of 1990 as a milestone in the country's development as a maritime center.

Mauritius PMC, citing Sharman (2008), indicates that Mauritius became a tax haven in 1990 with legislation specifically targeted towards Indian residents. GC acknowledges the importance of the 1992 and 1994 laws but does not specify the first law that established Mauritius as a tax haven. According to the TJN: "The Mauritius Export Processing Zone (EPZ) was set up in 1970, and has become one of the country's biggest centres of employment, particularly in the garment manufacuring trade. The EPZ is meant for manufacturers and food processors who export 100% of their output, although permission is sometimes available for 10-20% of output to be sold locally [...] the following incentives apply: No customs duties or sales taxes payable on raw materials and equipment; No corporate taxes payable and no withholding tax on dividends; No capital gains tax; Free repatriation of dividends, profits and capital". However, EPZs are outside the scope of the current data collection, so the focus will be on other reforms.

Sharman (2008) provide further details: in 1990, the first offshore banking and management company license was granted; in 1992, a treaty with India significantly accelerated the development of the offshore system; and in 1994, International Business Companies (IBCs) were introduced.

Monaco According to PMC, since 1869, Monaco has exempted every firm and individuals from income taxation. This is the only relevant information its offshore legal architecture that I was able to find for Monaco.

Montserrat Montserrat established a law in 1985 that created International Business Companies. According to AB, the 1980 *Income Tax Ordinance* established zero taxes on offshore banking operations. In addition, offshore banking was subsequently legislated in 1991 through the *Offshore Banking Ordinance*.

Nauru According to PMC, Nauru enacted a set of offshore laws in 1972. It is confirmed by GC and the TJN. This corresponds to a law on societies and a law on trusts. GC also adds that the banking secrecy was enacted in 1975. Note that AB dates it from 1973: "C'est la loi sur les sociétés de 1973 et une loi spéciale sur les trusts, successions et testaments qui ont fait de Nauru un paradis fiscal". AB also states that Nauru is not a tax haven for individuals due to the restrictions imposed on immigration.

Netherlands Historical information about the Netherlands as a tax haven is surprisingly limited in the tax haven guidebooks.[41] According to AB1: "C'est, en effet, au régime des *holdings substantielles* que les Pays-Bas doivent d'être l'un des rares pays industriel pouvant être qualifié de paradis fiscal". According to PMC: "Similar notions can

41. In an academic article about Netherlands as a tax haven, Vleggeert and Vording (2019) notes: "The early development of the Dutch tax planning industry is not well-documented."

be traced to an earlier innovation, the holding company, in 1893 in the Netherlands. The Dutch exempted from tax all income earned by foreign subsidiaries of local companies in an attempt to help Dutch firms expand in Asia. Over time the Dutch holding company evolved into a very lucrative tax avoidance scheme." These two quotes indicate that the regime of exemption put in place in the Netherlands in 1893 is an important landmark in the history of the country as a tax haven.

An important feature of the Netherlands as a tax haven is also its reliance on its treaty network, in particular the treaty with the Netherlands Antilles in 1964 (Weyzig et al., 2006, Vleggeert and Vording, 2019). Thanks to treaty shopping, it is possible to reduce the withholding taxes to 5% or 15% instead of 25%.

Finally, Weyzig et al. (2006) notes that the liberalization of exchange controls in the mid 1970 participated to make the Netherlands "a 'conduit' country for capital flows of MNE wishing to avoid taxation". As a consequence, in 1983, the Netherlands created the special financial institutions.

Netherland Antilles According to PMC, the Netherlands made its Antilles a tax haven during the WW2. They were largly used in the 1960s and 1970s.

The main reference is van Beurden and Jonker (2021) (VBJ hereafter) that retraces the offshore history of Curacao. Here we consider the whole Netherland Antilles. VBJ shows that contrary to what is generally written, the offshore history of Curacao begins in 1951: "We therefore date the beginning of Curaçao as an OFC to that first purposeful legislation in April 1951, rather than May 1940, as the literature often does". This year, a legislation that grants shell companies a 90% tax exemption is enacted. Note that the Netherlands Antilles are formed in 1954/1955. In absence of other source, we can consider that this legislation only applies to Curacao at the moment it is taken. The tax rate is reduced the next year but this is not considered as a major structural reform for the purposes of this database. In 1955, the benefits of the tax treaty between the Netherlands and the US are extended to Curacao. In 1965, *Belastingregeling Koninkrijk* (BRK, Tax Arrangement for the Realm) is signed with the Netherlands and gives the Netherlands Antilles the exemption of dividend taxes at source. This agreement was in negociation since 1954. In addition, VBJ describes many reforms at the beginning of the offshore history of Curacao: 1957 (revised law on patent holding companies), 1958 (long-term - 10 years - legal guarantees of shell companies tax rate), 1967 (individual and confidential tax rulings for offshore companies), 1972 (low entry requirements and exemption from supervision for offshore banks) (see p.11). Informal banking secrecy is adopted in 1965, but such informal decisions are not considered for the purpose of this database. The laws of 1967 and 1972 are added to the database as they are the ones really contributing to the construction of the legal architecture. The one of 1957 is a revision of a law (extending the exemption to patent-holding firms) and the one of 1959 provides certainty but does not really participate to the legal architecture in itself. [42]

Niue The Financial Times reportedly identified Niue as a tax haven in 1994. A specialised website notes that "The legislation—The International Business Companies Act

42. A similar decision has been taken in the case of Seychelles, see below.

of 1994—is very similar to other IBC (international business company) jurisdictions." (International Man, 2013) Niue's Prime Minister reportedly stated that the law was modeled after the regulations of the British Virgin Islands and the Cook Islands and was aimed at promoting Niue's independence from New Zealand.

Norfolk Island According top PMC, Norfolk Island is the first Pacific tax haven. It was established in 1966. This is based on Van Fossen (2002a). Fossen and Chambers (2012) confirms in an other article that the offshore history of Norfolk began in 1966. However, the specific laws that were implemented to facilitate offshore activities are not explicitly stated. While it is likely that these laws were modeled after those of successful Caribbean tax havens, further research is needed to identify the exact legislation. Following Van Fossen (2002a) reasoning, the reforms appear to have attracted numerous offshore companies. The reforms are therefore classified under the category of companies regulation.

Panama Panama has been a center for shipping registration since the 1920s. In 1970, Panama "introduced a series of rulings that liberalized its banking laws, adopting Swiss-style banking secrecy, abolishing currency controls, and setting up exempt companies" (Warf, 2002). The date of 1927 is also proposed for the adoption of Delaware-like incroporation laws. Another source, Garcia Pires (2013) confirms the date of 1927 and suggests that Panama's emergence as a tax haven can be traced back to 1919, when the country began providing facilities for foreign ship registration. The actual law establishing Panama's Flag of convenience was passed in 1917 (Law/63, dated December 15, 1917), with the first foreign ship registration occurring in 1919 according to Piniella et al. (2017).

Saint Kitts-et-Nevis Information about Saint Kitts-et-Nevis is very limited. According to GC, Saint Kitts-et-Nevis developed a trust system in 1994, through the *Nevis International Exempt Trust Ordinance* (see also Lowtax.net, 2021b).IBCs are created with the *Nevis Business Corporation Ordinance* of 1984 (Lowtax.net, 2021a), revised in 2000. According to Suss et al. (2002), an *Offshore Banking Ordinance* has been passed in 1996.

Saint Lucia According to the TJN, it began as a secrecy juridiction with the *Exempts Trust Act* and the *IBC Act*. According to the TJN archive of 2013, the *IBC Act* is also from 1999. This information is confirmed in Suss et al. (2002).

Saint Vincent-et-les-Grenadines The TJN notes that Swiss lawyers introduced offshore finance in St. Vincent and the Grenadines in 1976, and further improves its regulations in 1996 (see also Offshore Protection, 2023). [43]. According to AB, the 1976 regulation

43. "Atrium-Incorporators further provides some interesting details about the beginning of the 'offshore finance' in St. Vincent and the Grenadines: "Swiss lawyers introduced St. Vincent and the Grenadines (SVG) to the international financial services sector in 1976. Three years later the country gained independence from Britain and embarked on the process of nation-building – setting up the foundations of an independent nation state. When the country was more mature it was able to take a second look at the international finance industry in 1996 and take the policy decision to move this sector into the forefront of the national economy. The international finance legislation was overhauled and a package of financial laws was introduced. Regu-

is about international companies and also creates a Trust authority to attract trusts, international companies, shipping companies, catives and pension funds (see also Mondaq, 1999). Suss et al. (2002) also identify the 1996 law as a key milestone in St. Vincent and the Grenadines's transformation into a tax haven.

Samoa According to PMC, the story is the same than for the other Pacific Attols. The first tax-haven style legislation dates back to 1988 (confirmed by the TJN). GC (probably refering to the same laws) dates this moment to 1987. A significant modification happenned in 1991 according to GC (the modification is also noted as substantial in Betham-Annandale, 1998, note 64). The website International Man confirms the date of 1987 and gives the name of the law: the *International Companies Act* (International Man, 2014).

San Marino Information about the tax haven history of San Marino is difficult to fnd. GC only writes one sentence to say that San Marino is not a tax haven. AB notes that the reputation of San Marino as a tax haven is old, and not necessarily justified anymore because of a lack of investment in the tax haven structure of the country. Due to the lack of information, no date is collected about San Marino.

Seychelles It was listed as a tax haven in 1977 by the IBFD. Ellis et al. (2022) refers to the creation in 1978 of the Seychelles Trust Company.[44] According to the Offshore Trust Guide, the Seychelles passed the *International Trusts Act* in 1994 (Offshore Trusts Guide, n.d.-a). Trident trust also refers to the *International Business Companies Act* of 1994 (Trident Trust, 2016).

According to PMC and GC, the Seychelles also passed the *Economic Development Act* which granted foreign investors (investing more than 10 million dollars) a judicial immunity. This law was repealed in 2000 due to international pressure. This law is also a bit different from our purposes and will not be incorporated in the database.

Singapore The Asian Currency Unit (ACU) introduced by Singapore in 1968 is the first type of international business facility in Singapore according to PMC. It is confirmed by the TJN. Hodjera (1978) explains clearly that the creation of ACU is linked to the development of an offshore financial center ("The willingness of the Singapore Government to provide the incentives necessary for attracting international banking business was the key to the development of an international financial center on the island"). Also confirmed by Schenk (2020): "The goal was to isolate the offshore market from the

lated and licensed agents and trustees, known in SVG as Registered Agents, provide international financial services."

44. "Ricci became President Rene's friend and unofficial financial advisor. In 1978 he set up a company, the Seychelles Trust Company, in a joint venture with the Seychelles government. The government granted to the Seychelles Trust Company sole rights to incorporate off-shore companies and to act as resident agent for foreign companies and foundations registered in Seychelles, which could operate free of tax. The granting of this right to a private company was unique in that it made the Seychelles Trust Company the only private offshore business registration company in the world, and, in effect, Seychelles became the world's first socialist tax haven."

domestic market, thereby attracting regional funds inward rather than channelling domestic savings outward." It comes with "the 10 per cent withholding tax on interest income from nonresident foreign currency deposits". According to the TJN, the Monetary Authority of Singapore (MAS), created in 1971, boosted its regulatory capacity. Hodjera (1978) notes that different regulations where put into place in 1972 (abolishment of reserve requirement, described as important because it allows an "increase in earnings from offshore credits") and 1973 (where "the corporate tax on net income from offshore lending and other offshore activities was reduced from 40 per cent to 10 per cent"). The date of 1973 as it is also noted (informaly without refereeing to the date) by GC. This is classified as a banking regulation.

In 1998, Singapore reformed its regulatory regime by making it more light touch and liberalising the financial market (according to PMC: "The second stage in the development of Singapore as a tax haven began in 1998 (Juan, 2008)."). It is not clear when the law was passed though. I attribute it to 2001, year of the revision of *the Banking Act*. Therefore, it does not appear in the paper's database.

Switzerland The history of Switzerland as a tax haven has been documented in several books and articles. This history is long and contested among historians (see for instance Guex, 2000, 2021, Farquet, 2016, 2018, 2021). The goal of these notes is not to contribute to this history but to isolate key reforms that participated to the construction of the Swiss tax haven.

The most well-known reform that participated to the legal architecture of the Swiss tax haven is probably the Swiss banking Act. It was enacted in 1934 (many sources discuss it such as PMC, GC, or Guex, 2000). It is important to note that banking secrecy was already the norm in 1912 according to PMC, citing Fehrenbach (1967). [45] According to the TJN, the banking secrecy dates back to 1713 when Switzerland prohibited bankers from revealing details about their clients. Guex (2021) also supports the idea that the construction of the Swiss tax haven was largely completed before 1914. PMC notes that since 1848 when modern Switzerland was established, the taxation at the levels of the cantons opens the door to "an orgy of fiscal evasion and dissimulation" (see PMC, p.111, citing Guex, 1998, p. 105). These early accounts of a construction of a legal architecture in Switzerland prior to the 20th century makes me consider that Switzerland is a tax haven before 1900 without attributing a date since that data collected here is restricted to the period 1900-2000.

According to PMC: "In fact, it was not until 1934 and 1944 when, respectively, Switzerland introduced its bank secrecy laws and Zug introduced taxation laws that in effect set it up as a tax haven." According to PMC, in 1944, the Canton of Zug decreased its tax rate to 17.8% but also introduced loopholes by allowing "business control centers" (havning thir activity mostly out of Switzerland) to beneficiate from preferential tax rates.

45. Even though Farquet (2021) argues that this law might not be very important in practice for the Swiss tax haven, he acknowledges that it is an important step in the construction of the Swiss legal architecture: "Even if there is no doubt that preserving banking secrecy played a major role in the fiscal attractiveness of the Swiss financial centre from the 1920s onwards, this precise article had almost no influence on it, at least until the Second World War. The article reinforced banking secrecy by providing a penal protection against any infringements, which was exceptional at the time in Europe."

The Canton of Zug offers incorporation facilities from the 1920s ("incorporation haven") and Farquet (2021) observes that the number of holding companies in Switzerland increased by large numbers at this period. [46] However, I was not able to identify a precise date of a reform that come with this increase in offshore activity in Switzerland.

It is surprising to note, that no major reforms of the Swiss legal architecture happenned after the World War II according to the sources used in this database. Rather, it seems that the development of this tax haven was largely based on the practices of the authorities and of the tax evasion/avoidance industry. [47]

Tonga According to PMC, the story is the same as the one of the other Pacific Attols. The first tax-haven style legislation dates back to 1984. According to Fossen and Chambers (2012), Tonga was already a (not very successful) tax haven before 1984. According to this paper, this date corresponds to an offshore banking legislation. No information on a previous regulation has been found.

Turks and Caicos Islands The Turks and Caicos Islands began its transformation into a tax haven in 1971 with the passage of the *Company Law*, followed by the *Confidential Relations Ordinance* of 1979, which established banking secrecy. According to GC, the *Company Ordinance* of 1981 played a significant role in facilitating tax avoidance. AB further highlights the *International Financial Institutions Exemption Ordinance* of 1979, which promoted the offshore financial sector and enabled the establishment of offshore banks. The *Trust Ordinance* of 1990 further solidified the Turks and Caicos Islands' position as a tax haven by facilitating the formation of trusts for tax evasion purposes. AB also notes that trusts can be created in the Turks and Caicos Islands under common law principles, although he advises against using the Turks and Caicos Islands for trust registration.

According to GC, the Turks and Caicos Islands its transformation into a tax haven in 1971 with the law on exempted companies (amended in 1981). The TJN also notes the date of 1981. According to GC the *Company Law* of 1971is followed by the *Confidential Relations Ordinance* of 1979 that guarantees banking secrecy. The *Company Ordinance* of 1981 is cited in the GC as an important law to do tax avoidance in the Turks and Caicos Islands. According to AB, the *International Financial Institutions Exemption Ordinance* of 1979 provides services for the offshore financial sector and allows the creation of offshore banks. The *Trust Ordinance* of 1990 is also an important law to form trusts in order to avoid taxation (see AB and Offshore Trusts Guide, n.d.-b). AB also refers to the company law of 1971, which he sees as similar as the one in other Caribbean tax havens.

US Virgin Islands The US Virgin Island Exempt Companies Act of 1986 (in force in 1987) seems to be the initial date according to the Trident Trust Key Facts (Trident Trust, 2017). Information from other sources is very limited.

46. PMC: "A Zurich- Zug-Liechtenstein triangle took shape in the 1920s as the first genuine tax haven to draw the great bulk of its funds from nonresidents."

47. Farquet (2021) writes: "Swiss banking secrecy thus remained protected not by article 47, but rather by fiscal laws and practices, and by the lack of international convention against tax avoidance." PMC writes: "Fehrenbach (1967) believes that Switzerland never intentionally meant to serve as a tax haven".

Vanuatu According to PMC, has a similar oggshore history as the other Pacific Attols. The first tax-haven style legislation dates back to 1970-1971. Rawlings (2004) identifies three important laws: the *Banks and Banking Regulations* of 1970, *the Companies Regulations* of 1970 and the *Trust Companies Regulations* of 1971. This information is confirmed by the TJN, with a slightly different timing. [48] I only keep the first Company Regulation (the one of 1970) as I keep the first law when two laws similar laws closely follow each other. Several websites promoting offshore jurisdictions note that the *International Company Act* of 1992, similar to other IBC laws around the world, is an important step in the building of the tax haven in Vanuatu (Lowtax.net, n.d.-b, Offshore Protection, n.d.).

According to the a Washington Post article, Vanuatu passed laws in order to become a flag of convenience in 1981 (Lippman, 1981).

48. "The Asia/Pacific Group on Money Laundering wrote in 2006: "Vanuatu created an offshore tax haven in 1971 with a very liberal financial regime." Connell and Pritchard (1990) writes that three regulation where important: the *Banking Regulation* (1970), the *Company Regulation* (1971) and the *Trust Company Regulation* (1971)."

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