Which tax havens are the most central? Applying social network analysis to understand firm service interactions

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Abstract

Tax havens play an increasingly important role in the global financial system. Recent scholarship has focused on a number of interrelated aspects of tax havens, including the drivers of their formation, firm and industry based perspectives on taxation, corporate structures, and their geographical position within the global economy. This paper adopts a network-based approach to tax havens, focusing on the ‘interlocking’ services provided by local firms. It focuses specifically on how law firms in 15 global tax havens are networked through common tax-related legal services. The analysis suggests that there is a ‘rich club’ of jurisdictions whose tax-related services are broad and central to firm activity, namely in the European core of the Netherlands, Ireland and Luxembourg. Relating to the rich core are a number of cliques, including the ‘Bermuda Triangle’ of Bermuda, Cayman Island, and British Virgin Islands; the crown dependencies of Isle of Man, Jersey, and Guernsey; and Asian hubs of Singapore, Mauritius and Hong Kong. Ship registry hubs such as Panama, Liberia, and Cyprus were somewhat more peripheral to the network as specialization reduces the number of common services. The results indicate that there is a large degree of overlap between access to tax-related services in the European Union and in offshore financial centers, and that aside from a handful of jurisdictions in which general activity occurs, firms are more inclined to provide a narrow range of services tied to particular activities or regulatory frameworks.
Introduction

Firm organization within the global economy relies on complex, networked transactions of financial capital across borders (Henderson et al. 2002, Knight & Wojcik 2017). Financial transactions, however, have to a large extent become de-coupled from the productive activities of MNEs (Thrift & Leyshon 1994), with global financial centers and offshore financial centers as key nodes for mediating large-scale capital flows (Masciandaro 2017, Wojcik 2013). The globally networked structure of the modern multinational enterprise (MNE) is motivated by a range of factors, including producer and consumer markets, regulation, and taxation.

Given the disparities in tax regulation from one jurisdiction to another, MNEs utilize a number of interrelated strategies to minimize their tax-related liabilities (Palan & Nesvetailova 2013). Tax havens have emerged as no-tax or low-tax jurisdictions (Eden & Kudrle 2004) that mediate global financial flows (Cobham et al. 2015). Though MNEs often have little or no physical presence in tax havens, their significance cannot be understated; accumulated private wealth in registered offshore tax havens was estimated to be between USD 21 and USD 32 trillion in 2010 (Henry 2012), and approximately half of the global flows of foreign direct investment (FDI) are routed through tax havens (Palan & Nesvetailova 2013). Thus many MNEs do not consider tax havens to be an optional pursuit for financial benefit, but rather part of their basic operational strategy (Palan 2002).

This paper applies network analysis to better understand how tax havens are connected through networks of both firms and services. In the sections that follow, it introduces the global significance of tax havens, providing a rationale and selection criteria for the study sample, then presenting an analysis of interlocking services. The analysis focuses on law firms, which are critical to anointing corporate structures by bridging global presence with local institutional knowledge.

The Global Emergence of Tax Havens

Defining tax havens is notoriously difficult, as the term is broad and includes both ‘onshore’ (e.g. the Netherlands, Malaysia) as well as ‘offshore’ (e.g. Bermuda, Mauritius) financial nodes. Furthermore, ‘tax haven’ is a catch-all term referring to countries associated with any number of financial practices, which range from the (somewhat) transparent practices of global corporations and trusts, to secretive and potentially illicit activity by firms and individuals. Countries or territories are explicitly described as tax havens when they meet various criteria identified by the Organization for Economic Cooperation and Development (OECD) or other global organizations, often including a small population size, low to zero tax rates for foreign entities, high levels of financial and banking secrecy and large networks of double tax avoidance treaties and similar agreements (Gravelle 2009, Booijink & Weyzig 2007). In contrast to the
reputation that these are often ‘rogue’ operators on the economic margins, the
most prominent and successful of these tax havens are usually well-governed
with a high degree of political, legal and financial stability, as well as strong
relationships with larger, high tax countries (Dharmapala & Hines 2009).

Tax havens are diverse in composition and various lists include
approximately 60 jurisdictions in one form or another (Booijink & Weyzig 2007,
OECD 2000). Many of the most active and well-known tax havens are linked to
the United Kingdom as overseas territories or crown dependencies. 7 of the
UK’s 14 overseas territories are commonly considered to be tax havens, such
as Bermuda, Cayman Islands and the British Virgin Islands (BVI) as well as
several crown dependencies; Jersey, Guernsey and the Isle of Man. These
places are linked through a common language and similar legal system as well
as a broader connection to the Anglosphere, which includes major economies
such as the USA, Canada and Australia. Some lists (Gravelle 2009) include
European microstates including Andorra and Monaco, while others such as
Lebanon, Honduras, Malta, or Vanuatu are sometimes listed due to lax
regulation or financial practices.

While the instigation of tax havens can be traced back to the lax tax laws
of the states of New Jersey and Delaware, which were influenced by Wall Street
banking in the early 1890s and the secretive banking practices of Switzerland
in the interwar years (Conard 1973), tax havens in their current form began to
emerge over the past 75 years. One hypothesis as to the factors that caused
the emergence of tax havens is that substantial increases in state regulation by
the largest and most developed economies of the world in the wake of World
War II drove companies to look for ways to avoid these new regulations
(Financial Stability Forum 2000). Industries associated with tax havens such as
insurance, banking and shipping are among the most stringently regulated
industries in developed economies (Palan 2002). As the end of the gold
standard in the early 1970s demarcated a fundamental and gradual
deregulation of global finance, several microstates began offering low or zero
taxation rates and foreign business-friendly legislation in order to attract
businesses to their jurisdiction, such as the Cayman Islands where the number
of foreign banks active in the jurisdiction grew at an average rate of 23% for the
decade between 1972 and 1982 (Fichtner 2016).

Another theory as to how tax havens formed suggests that a key factor
was the purposeful attraction of ‘hot’ money (Hampton 1996, Cobb 2004), or
financial assets obtained from questionable sources by various aspiring
havens, which is an accusation that is still prominently levied (Palan 2002). For
example, lawyers and other individuals associated with mafia boss Meir Lansky
played a critical role in drafting the lenient financial legislation of many of the
Caribbean’s most well-known tax havens (Naylor 2004). In the BVI and other
British dependencies, the offshore sector originated in a double tax agreement
signed between the UK and the US signed immediately following WWII. This
was extended to various former British colonies and dependencies, and by the
1970s was attracting modest income from companies seeking to evade or avoid US taxation on foreign loans (Piccioto 1999). However the most attractive jurisdiction for this practice at this point in history was the Netherlands Antilles, which had a particularly lenient double taxation agreement with the US and allowed companies to entirely avoid a 30% withholding tax on interest income from an overseas loan, proving to win the business of most companies ‘treaty shopping’ for the lowest tax rates. The use of subsidiaries in the Netherlands Antilles for financial purposes grew enormously in the following decades, however English-speaking companies were unhappy with having to use the Dutch language and legal system to conduct business. This led to some moving operations to havens with more similar language and legal systems such as the BVI or Bermuda (Shaxson 2014).

The growth of British dependencies as offshore havens in the 1960s and 1970s as well as the emergence of regional tax havens such as Singapore, Hong Kong and Panama allowed for increased choice between havens, and the process of ‘treaty shopping’ based on language, legal or political links to determine which jurisdiction best suits the companies’ needs became increasingly important. As the sheer number of tax havens increased, so too did their uses and each jurisdiction sought to diversify and specialize in certain industries in order to attract a greater proportion of relevant businesses. For example, the BVI, in response to the double taxation agreement with the US (through the UK) being rescinded in 1981, introduced its International Business Companies Act in 1984. Companies incorporated under this act were forbidden from conducting business with BVI residents, however were exempted from all local taxes and even stamp duty, as well as being allowed to free reign over corporate operations as regulations were extremely lenient (Shaxson 2014). As a result, the BVI is currently home to 40-45% of the world’s offshore companies with approximately 500,000 companies active in the jurisdiction and 50-60,000 new companies being incorporated every year, meaning that there are over 16 companies incorporated in the BVI for each resident (Burns & McConvill 2011). The specializations of each haven differ and entities from different industries or seeking different services may turn to one tax haven over another due to these jurisdiction-specific factors.

Thus tax havens have evolved from relatively peripheral to global corporate operations to central to a number of major MNEs financial operations. Tax haven activity in fact comprises a number of complex and interrelated activities, with the majority of money flowing through them legally obtained by MNEs seeking to minimize the taxes they pay on profits, debts and other transactions (Dharmapala 2008). Tax avoidance, especially of the international variety, is one of the most prominent functions. This generally involves a great deal of secrecy and concealment of information that blurs the already unclear line between tax avoidance and tax evasion, which refers to the illegal non-payment or underpayment of taxes, usually by making a false declaration or no declaration to authorities (van Dijk 2006). Another one of the most common
functions of tax havens is ‘round-tripping’ whereby residents of a (usually high-tax OECD) country channel money through an offshore account and then subsequently reinvest back into their home country’s capital market as a foreign investor (Andreff 2016). This occurs in many countries, particularly in China, where local firms seek to take advantage of tax benefits afforded to foreign investors (Wei 2005).

Other ways in which tax havens are used by foreign investors include incorporation for the purposes of shifting assets and conducting transactions, an area in which the BVI has developed a specialty (Shaxson 2014). Additionally, firms may decide to move their official headquarters to a tax haven or simply declare that the firm is based in the haven while having nothing more than an address, minimizing the tax that the company must pay. Related to this is profit shifting, a practice where profits earned in one jurisdiction are transferred to a tax haven where lower or no tax is required to be paid (Krautheim & Schmidt-Eisenlohr 2011). Transfer pricing is one form of profit shifting, in which two arms-length companies sell to one another at a markup in a jurisdiction with tax lower rates (Desai et al. 2006), or in territories such as tax-free zones. A related practice is referred to as base erosion, as the tax base of the higher-tax jurisdiction is reduced by the shifting of profits (Dharmapala 2014). Merchanting and merchandising are particular variants of this, and widely practiced in Hong Kong; these refer to the purchasing of goods outside a country for re-export without ever entering the jurisdiction (Sung 2006).

The histories of various countries play an important role in their contemporary financial network positionality. For example, the Cayman Islands has developed into a center for the establishment of hedge funds, acting as a domicile for up to 60% of these funds worldwide (Fichtner 2016). Meanwhile in Bermuda, the industry of captive insurance has grown into one of the key areas of the island’s economy, with over 1000 licensed operating captive insurance companies in the jurisdiction, making Bermuda the world leader in this area (Bermuda Monetary Authority 2009). Captive insurers can be described as a limited purpose subsidiary of a company or organization designed to provide full or partial insurance to its parent company, so as to avoid the need for traditional insurance companies which may not properly suit a company’s needs due to volatile pricing, refusal to insure against certain risks etc. (Kloman & Rosenbaum 1982). Another haven to have developed a specialty is Jersey for trust management and securitization (Christensen & Hampton 2005).

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1 The concept of captive insurance was essentially created by Frederic Reiss in the 1950s to help insure the Youngstown Sheet and Tube Company, which he moved to Bermuda after deciding that it was too expensive and the regulations too much of a burden to continue in the U.S. The industry has flourished there ever since (Maeda 2012).
Methodology
The study methodology is based on the assumption that corporate networks are a reflection of the interconnections between places. This assumption has been widely applied in the ‘global cities’ literature (Taylor and Derudder, 2015), which ties urban connectivity to the inter-office connections of advanced producer services (APS) firms. APS comprises a broad range of services, including consultancy, law, insurance, brokerage, etc. (Wojcik 2013). Though APS play a strong role in supporting global financial networks across a range of activities, their role in tax strategy in particular is well-documented. Many MNEs utilize the ‘big four’ consultancy firms of EY, KPMG, PriceWaterhouseCoopers (PwC) and Deloitte (Christensen & Murphy 2004), which have been referred to as “the masterminds of tax avoidance and the architects of tax schemes which cost governments and their taxpayers an estimated $US 1 trillion a year,” (Rozvany pp. 1, quoted in West 2016). PwC for example, was revealed in the ‘LuxLeaks’ scandal to have negotiated hundreds of deals with the Luxembourg tax administration for more than 300 MNEs allowing them to save billions of dollars through legal tax avoidance (EURODAD 2017).

Due to their large global presence, APS firms assist smaller firms with various aspects of tax haven operations, including establishment, cross-border transactions, service contracts, and domiciling, and provide valuable research and access to both local knowledge and contacts, as well as a broader global trends (Jacobs et al. 2016). In this study, international relations were assumed to be a function of law firm service connectivity. Law firms provide services that include domiciling, tax law, and advisory, among others. These services are particularly valuable in tax havens, where tax code and local customs may be opaque or difficult to navigate for MNEs. Perhaps most importantly, given the importance of various firm strategy as it relates to regulation, law firms adapt changing legislative conditions, and it is widely observed that jurisdictions often shape new policies in collaboration with dynamic firm needs.

Many law firms are specialized in operating in tax havens and financial centers and as a result may have a presence in several of these jurisdictions. For example, one Bermuda-based firm investigated in this study maintains offices in the Cayman Islands, BVI, Guernsey, Jersey, Isle of Man, Mauritius, the Seychelles, Hong Kong and Shanghai as well as a large presence in its original home of Bermuda. This firm and other similar firms tailor their expertise and services offered to each specific location and as a result offer differing services in each jurisdiction. This may entail offering niche services that a jurisdiction is specialized in such as shipping registration in Panama or captive insurance in Bermuda.
To investigate the connectivity of tax havens, service firm interactions were proxied based on a sample of 10 firms from each of 15 tax havens identified based on a representative sample derived from a preliminary desktop survey. Of the 15, British overseas territories make up the ‘Bermuda Triangle’ of Bermuda, Cayman Islands and BVI and three more island nations around the United Kingdom, which are legally considered crown dependencies: Jersey, Guernsey and the Isle of Man. The list includes four countries within the European Union: Luxembourg, the Netherlands, Cyprus and Ireland. The Asian city-states of Hong Kong and Singapore make the list, as do Panama and Liberia, in addition to the island nation of Mauritius in the Indian Ocean. 11 of these 15 are included on the OECD list of tax havens published in 2000 and re-evaluated in 2006, with Singapore, the Netherlands, Luxembourg and Ireland avoiding the list (though the latter three were all described as having ‘potentially harmful tax regimes’). In addition, all 15 were included in the Tax Justice Network’s (TJN) list of tax havens published in 2005 (Booijink & Weyzig 2007).

Law firms were selected for inclusion based on the size of the staff and industry reputation, however other factors were considered including offshore or foreign investment specialization and high rankings by organizations such as the Legal 500 (Legal 500, 2018). The website of each law firm identified was then investigated in order to determine the services that they offer to clients and any specializations that they declared.

In terms of the services offered by these law firms, ten different categories were identified as important and indicative of tax haven and offshore activity and the number of law firms that listed these services was recorded for each jurisdiction. These include: company incorporation, tax law, corporate/financial/tax (re)structuring, investment funds, hedge funds, cross-border transactions, IPOs and stock exchange listing services, shipping & aircraft registration and finance, captive insurance, and foreign investment/international real estate. These ten categories were chosen due to the capability of entities to decrease their taxes and increase their financial secrecy in these areas with the help of these law firms.

Social network analysis was applied to visualize, interpret, and understand the patterns underlying the data. Analysis was conducted in SocNetV, a freely available social network analysis software. International relations were based on common services of law firms, framed by an ‘interlocking’ relationship. Thus if the same service was found in two countries through any combination of five or more firms in each, they were assumed to be related through ‘cognitive proximity’ (cf. Balland 2012), in that they performed the same function in the global financial network. These ‘ties’ were converted from two adjacency tables (firm-to-service and country-to-service) to

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2 Only five law firms could be identified for Liberia, as these were the only firms with a suitable website from which to extract the information necessary for analysis.
3 Hong Kong is a semi-autonomous Special Administrative Region (SAR) of the People’s Republic of China.
two one-mode matrices (country-to-country), and analyzed by degree centrality. The resulting visualization and metrics were used to discern groupings based on network distance rather than formal ‘community’ graph partitioning, though the latter was consulted in informing decisions.

Service Specialization in the Tax Haven Network

The distribution of law firms in tax havens and their respective corporate specialization reveals a highly interconnected financial circuit. Though the needs of firms and industries are indeed varied, the commonalities within the overall network reveal some distinct patterns. Firm services can be industry based, particularly where client activity is highly internationalized (e.g. mining) or occurs in international territory (e.g. aviation, shipping). In terms of the specializations of various havens, the most common service listed across all jurisdictions was investment funds (82/145), followed by tax law (68).

Tax law and its related services (e.g. transfer pricing) were advertised by every single law firm investigated in Ireland, Luxembourg and Cyprus, which along with the Netherlands comprise the network’s core. Many of the world’s largest corporations are housed in these countries, including Skype and the European hub for Amazon in Luxembourg, and in Ireland, technology giant Apple, who in 2016 was found to have avoided €13bn of Irish tax by using two Irish registered, non-resident subsidiaries. The effective tax rate for one of these entities was just 0.005% in 2014 (Tax Justice Network 2017), showcasing the innovative configurations that the tax laws of Ireland have allowed companies to implement.

Investment funds were another near-ubiquitous service, though no particular jurisdiction stood out. Hedge funds, in contrast, were rarely advertised by law firms in any jurisdiction, with Ireland again topping the frequency count and the most well-known hedge fund jurisdiction, the Cayman Islands, following along with the BVI. This corroborates the fact that the Cayman Islands is the world leader in domiciled hedge funds by some margin, hosting up to 60% of such funds worldwide (Fichtner 2016).

Cross-border transactions was dominated by Luxembourg as a financial conduit between other jurisdictions, particularly between the EU and elsewhere (Tax Justice Network 2017). IPOs and the listing of companies on various exchanges was a service not frequently offered in most havens, and the law firms advertising it most frequently occurred in jurisdictions with their own stock exchange. These were the Bermuda (Bermuda Stock Exchange) and Guernsey (The International Stock Exchange), for example, which are in particular known for ‘innovative’ practices that allow for unconventional financial vehicles such as real estate investment trusts (REITs) and special purpose vehicles (SPVs) to be listed.

Panama featured the highest proportion of firms listing company incorporation as a service offered, followed by Bermuda, the BVI and Cyprus.
Panama was also the jurisdiction with the most firms offering shipping & aircraft registration and finance, re-affirming its status as the world leader in maritime services (Cullinane & Robertshaw 1996). In a similar vein, Bermuda was the leader in terms of firms advertising captive insurance services, an area in which it is recognized as the globally dominant hub (Bermuda Monetary Authority 2009). The jurisdiction with the highest number of firms advertising foreign investment and international real estate services was Ireland, perhaps another indication of its status as a financial conduit for large MNEs.

Geographical assumptions are also built into the services offered by each law firm, explaining Hong Kong’s relationship with China or Cyprus’s with Russia (Wei 2005, Andreff 2016). In other words, this may influence the range of services available or the specific nature thereof. Mauritius is commonly associated with India and to a lesser extent Africa, while European havens such as Luxembourg and the Netherlands are strongly associated with larger economies within the EU (Lane & Milesi-Ferretti 2011) as well as North American multinationals conducting international business.

There are also connections between tax havens and relatively distant jurisdictions, such as China’s relationship with the BVI, which is actually its second largest foreign investor after (money diverted through) Hong Kong (Burns & McConvill 2011). The majority of this investment is ‘round-tripped’ from China to take advantage of laws aimed to benefit foreign investors, however the reason that the BVI has become the jurisdiction of choice is due to a relationship that grew out of a business delegation sent to Hong Kong in 1996, preceding the 1997 handover to China in which there were concerns over property confiscation (Shaxson 2014). There is now a deep linkage between the countries due to the ‘no questions asked’ approach and ease of creating companies in the BVI. Additionally, entities are commonly able to complete the process without leaving China and entirely in Mandarin meaning that the BVI remains a favorite jurisdiction for the rich and powerful of China. Many BVI law firms promote their ability to work in Mandarin, or at times of day that suit those in Asia, and ensure that their websites have a Chinese language option.

Firm Services Intersections in the Global Tax Haven Network
The resulting analysis confirms that – just like with other studies reliant on producer services – the network of tax havens indicates a ‘rich club’ of key jurisdictions. As Figure 1 indicates, the ‘rich club’ of the network is occupied by the continental European conduits of Ireland, the Netherlands, and Luxembourg. As Garcia-Bernardo et al. (2017) have elucidated, conduits mediate flows of financial capital, whereas sinks act as repositories. In Figure 1, the central position of these conduits confirms that Ireland and the Netherlands act as intermediaries for firms seeking a broad range of services.
Figure 1. Network Graph of interlocking services connectivity

The Europe ‘rich club’ is flanked by a variety of sub-networks. The Asian hubs of Singapore, Hong Kong and Mauritius provide corporate restructuring and various tax law services to firms in the region, or to those looking to conduct transactions in other tax havens. The orientation of Hong Kong law firms toward Chinese companies mirrors the engagement of Mauritius firms toward Indian businesses. Singapore’s network graph position is explained by its role as an Asian conduit, with connectivity primarily to the rich club rather than elsewhere in Asia.

Panama and Liberia, which are strongly connected to Cyprus, are distinguished by their peripheral position. This stems from a limited number of core services, and in particular an orientation toward shipping and aviation registry. Two sub-network cliques are comprised of British sovereign territories including on one hand the crown dependencies of Isle of Man, Jersey and Guernsey and on another the ‘Bermuda Triangle’, whose firms focus mainly on company incorporation, investment funds, captive insurance as well as corporate and tax restructuring.

Conclusion
As financialization renders the global economic system ever-more complex, firm strategies adapt the presented strategies in order to remain competitive.
The emergence of tax havens as integral components of the global financial circuitry mirrors this process. Tax havens have gone from being peripheral nodes associated with ‘rogue’ activities to major financial centers mediating approximately half of global FDI in the span of four decades.

This paper has demonstrated the importance of advanced producer services to firm tax strategy. The broad range of services offered by law firms provides an indication of the activities of MNEs within tax havens, and the geographical distribution of how and where these services are offered. Each tax haven offers a unique combination of services that reflects the underlying advantages of that jurisdiction and the specialization offered to MNEs. For example, Bermudian firms specialize in captive insurance, Luxembourg in funds and cross-border activity, and Panamanian firms in registry and incorporation.

At the same, the large degree of overlap in firm services suggests considerable commonalities between tax havens, particularly in the ‘rich club’ of the network. Social network analysis reveals that the European core of the Netherlands, Ireland and Luxembourg are central to the entire network. Sub-relations included the ‘Bermuda Triangle’ and related crown dependencies, which serve as ‘sinks’ for MNE capital that tie directly to activities in core countries. Ship registry hubs such as Panama, Liberia, and Cyprus offered a smaller range of services, as did the Asian hubs of Singapore, Mauritius and Hong Kong, though differing significantly in their individual connectivities.

This analysis adds to an emerging body of work investigating the importance of tax havens to the global economy. In demonstrating how tax havens are networked to MNEs as well as one another, we draw into sharper relief how ‘networked’ perspectives of geo-economic connectivity can help us better understand the elusive meta-geographies resulting from global financialization.

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