

Network Topologies of Offshore Intermediaries and their Role in High-End, Individual Tax Avoidance

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Contents

List of Figures

List of Tables

Abstract

Intermediaries form the crucial links enabling tax haven use, contributing significantly to global tax avoidance and inequality. While analyses often focus on demand-side factors, this thesis challenges such perspectives by asserting the critical importance of the supply-side network structure and intermediary agency for understanding and regulating offshore finance. Extending the network analysis of Chang et al. (2023) and drawing on Harrington's (2016) micro-sociological evidence, I analyze International Consortium of Investigative Journalists (ICIJ) leak data. Although ICIJ data has limitations for estimating the overall scale of avoidance, it permits robust generalization about intermediary roles within these complex networks. A novel agentic method is employed, enriching ICIJ data by incorporating publicly available online information about intermediaries' professional roles and affiliations.

This thesis presents four key propositions: 1) The overall network exhibits structural vulnerabilities concentrated around central intermediaries. 2) Intermediaries often display cultural or national specificity, catering to distinct clienteles. 3) Different intermediary types occupy distinct network positions and vary in systemic importance, measurable via network centrality. 4) Network structures are dynamic, adapting in response to regulation and financial innovation. This analysis provides critical insights into the architecture and potential regulatory chokepoints within tax haven networks, viewed through the lens of intermediary action.

Introduction - why should we care about network topologies of offshore intermediaries?

1.1 Introduction

The phenomenon of 'escape from the state' through quasi-legal means, sometimes characterized provocatively as a form of 'anarchy for the rich,' presents a significant puzzle within contemporary political economy. Understanding the mechanisms and drivers behind the extensive use of offshore jurisdictions and complex financial structures is crucial. To address this, the present study attempts an interdisciplinary analysis, situated at the intersection of Political Sociology, Public Finance, and International Political Economy (IPE). The intention is to leverage the distinct analytical strengths inherent in each of these fields to provide a more comprehensive perspective.

While adopting an overarching neoclassical framework, this work endeavors to incorporate insights from these related disciplines, translating them where possible into the language and analytical tools commonly employed within neoclassical economics. This approach seeks to bridge theoretical perspectives often treated in isolation.

The central claim advanced throughout this thesis concerns the critical relevance of examining supply-side dynamics within the offshore financial system. Specifically, it argues that the role of intermediaries – the professional enablers and facilitators of offshore activity – is an incredibly relevant, yet often overlooked, factor. Traditional public finance literature, for instance, frequently emphasizes demand-side factors driving the utilization of offshore structures, such as tax rates or regulatory arbitrage opportunities. In contrast, the function and influence of the supply side – encompassing the specialized intermediaries and the specific services offered by various jurisdictions that actively enable and shape offshore activity – remains comparatively under-explored from an empirical standpoint. Building upon recent scholarship that increasingly highlights these supply dynamics (e.g., Laffitte 2024; Alstadsæter et al. 2019), this thesis seeks to extend and potentially generalize insights from qualitative work, such as Harrington's (2016) study

of wealth managers, through a quantitative analysis drawing upon the extensive data revealed by the International Consortium of Investigative Journalists (ICIJ) leaks.

1.2 Why Tax Evasion among High-income earners: The Scale and Impact of Individual High-End Tax Evasion (Alstadsæter et al. 2019, Zucman).

The issue of tax evasion among high-income earners, alongside the closely related phenomenon of tax avoidance, warrants significant attention within contemporary political economy and public finance. While considerable progress has arguably been made in curbing outright tax evasion, tax avoidance remains a substantial challenge, a point emphasized by commentators such as Stiglitz (cited in Alstadsæter et al., 2024 EU report). The persistence of avoidance, particularly among the highest earners, carries significant implications.

Specifically concerning the tax avoidance practices of individual high-income earners, several sub-optimality and inefficiencies are introduced into the economic system. These include the generation of a distinct class of rents accruing to the intermediaries who facilitate such schemes, the potential for poor allocation of resources as investment decisions are distorted by tax considerations rather than underlying economic merit, and, beyond these economic inefficiencies, a range of normative concerns regarding fairness and the integrity of the tax system that inevitably accompany widespread tax avoidance.

This topic has garnered considerable attention within academia in recent years, partly because it intersects with broader debates on inequality. A crucial distinction often highlighted is between income and wealth inequality. Income inequality can be somewhat ephemeral in nature; high-earners in one year may retire or experience income fluctuations in the next. Wealth, in contrast, tends to be more permanent, potentially distorting social outcomes over non-transient periods in a more meaningful way. Indeed, wealth accumulation is recognized as a critically important determinant of social mobility (as explored in the work of Chetty) and a key driver of overall inequality trends (central to Piketty's analyses). The focus here draws selectively upon the extensive literature concerning wealth, acknowledging the seminal contributions of these economists within the field, while recognizing the vastness of resources available on this subject.

With that said, quantifying the precise behavioral effects of tax evasion and avoidance on incentives – such as the incentives to work, save, or invest – remains a significant empirical challenge. While some studies have examined the effects related to Multinational Corporations (MNCs), often leveraging specific policy changes or contexts (such as the studies concerning Puerto Rico), isolating these effects for individuals proves considerably more difficult. A key complicating factor is the role of expectations; an individual's be-

havior is likely highly dependent on their expectation of being able to successfully evade or avoid taxes in the future. Obtaining credible quasi-experimental evidence on such expectations and their behavioral consequences is notoriously challenging.

1.3 Demand-side limited to understand this phenomenon - game of cat and mouse: Limitations of Traditional Demand-Side Models and Enforcement (Allingham-Sandmo critique, Audit limitations - Alstadsæter et al. 2019).

- Neoclassical Public Finance provides a very strong story for tax evasion for the majority of the income distribution, but not the high-end which is a huge problem by itself and a major source of tax revenue. Allingham-Sandmo doesn't get very far, nor the traditional audit studies (e.g. Kleven et al. 2011)

1.4 Supply-side far more relevant to look at: Intermediaries as Gatekeepers (Alstadsæter et al. 2019 model, Harrington 2016).

To fully grasp the dynamics of offshore tax evasion and avoidance, it is crucial to clarify what constitutes the "supply-side" in this context. Here, the supply-side refers specifically to the ecosystem of professional intermediaries – such as law firms, banks, trust companies, and specialized advisors – as well as the jurisdictions that provide the legal and regulatory frameworks enabling offshore financial activities. The central argument advanced in this thesis, building on insights from models like Alstadsæter et al. (2019) and qualitative work such as Harrington (2016), is that this supply-side dimension is far more relevant to scrutinize than often acknowledged, potentially offering more effective avenues for understanding and potentially curbing offshore practices compared to a sole focus on demand-side factors.

A primary reason for emphasizing the supply side relates to the concept of elasticity. It is argued here that the elasticity of supply of intermediaries is considerably higher, and therefore potentially more responsive to policy interventions, compared to the elasticity of demand from clients seeking offshore services. Several factors underpin this view:

First, the incentives structuring the behavior of intermediaries are arguably much more sensitive to changes in the regulatory or reputational environment. For these pro-

professionals and firms, the provision of offshore services is not merely an option but often a core component of their business model and career trajectory. Their professional existence and profitability are directly dependent on their continued ability to offer these specific services effectively and discreetly. Consequently, factors that threaten this ability – such as increased regulatory scrutiny, heightened enforcement risk, or significant reputational damage – can have a pronounced impact on their willingness and capacity to supply these services. In contrast, the demand for tax minimization or evasion among potential clients, driven by factors like high tax rates or a desire for secrecy, can be seen as a relatively persistent force. While demand might fluctuate, the fundamental desire among some wealthy individuals and corporations to reduce tax burdens is likely to remain, making demand potentially less elastic to targeted interventions than the specialized supply of enabling services.

Second, the micro-sociological account provided by Harrington (2016) offers compelling reasons why intermediaries are so central. Her ethnographic work illuminates the deeply personal, trust-based relationships that often form between wealth managers and their elite clients. These relationships, built over time and predicated on discretion and expertise, are difficult to replace. Clients rely heavily on their chosen intermediaries not just for technical execution but also for navigating the complexities and risks of the offshore world. The non-substitutable nature of these trust-based relationships means that disrupting the intermediary side can significantly impact clients' access to and ability to maintain offshore structures, further highlighting the critical role of the supply-side actors.

Third, the structure of the market itself points towards the strategic importance of intermediaries. There often exists a many-to-one relationship between clients and intermediaries; that is, a relatively small number of specialized intermediary firms or key professionals service a large number of clients seeking offshore solutions. This concentration means that the intermediary sector represents a point of leverage. Regulatory actions or enforcement efforts focused on these key intermediary players could potentially have a cascading effect, impacting a wide network of clients far more efficiently than attempting to identify and pursue each individual client separately. This structural feature makes the intermediary supply-side particularly vulnerable, and thus relevant, from a regulatory perspective.

Finally, and crucially, these intermediaries are the gatekeepers of information. By the very nature of their role in designing, implementing, and managing offshore structures, they are the ones in possession of much of the detailed information – regarding beneficial ownership, asset locations, transaction flows, and the legal architecture employed – that is essential for tax authorities to effectively enforce tax laws. Their position as informational hubs further underscores the critical relevance of focusing on the supply-side dynamics within the offshore financial system.

1.5 Research Gap: Understanding the *Network Structure* to Inform Intermediary Regulation

While the significance of intermediaries in the offshore financial system is increasingly recognized, a specific gap remains in our understanding, particularly concerning the *structure* of the relationships connecting these actors. Considerable valuable research, particularly micro-sociological accounts like Harrington's (2016) ethnography, provides rich insights into the dyadic relationships, motivations, and practices of individual wealth managers and their clients. However, generalizing from these detailed qualitative studies to broader systemic patterns presents significant challenges.

Ethnography, as a methodology, certainly offers a powerful means of accessing and understanding micro-level dynamics that can illuminate macro-level phenomena or "mega-trends," as suggested in related organizational literature. Yet, translating these nuanced observations into a systematic, potentially quantifiable, understanding of the overall architecture of the intermediary market requires complementary approaches.

A nascent thread of literature has begun to explore these structural aspects, often spurred by the availability of large-scale leaked data. Work such as Chang et al. (2023), alongside policy-oriented research emerging from bodies like the EU following disclosures such as the Panama Papers (e.g., research from 2017), represents initial steps in this direction. However, this line of inquiry remains limited thus far, often focusing on specific subsets of countries or actors. The analysis of the network structures inherent in the offshore world is still in a highly exploratory phase. Consequently, the potential held within detailed micro-data sources, such as the ICIJ leaks which map connections between entities, officers, and intermediaries on a vast scale, remains largely underexplored in terms of systematic structural analysis.

The work by Chang et al. (2023) on "Secrecy Strategies" provides a pertinent example. While their primary focus was on analyzing the *demand* strategies employed by global elites, their findings crucially demonstrate that these strategies are shaped by, and interact with, the *supply* landscape – the available intermediaries, jurisdictions, and the institutional context of the elites' home countries. Their research, therefore, implicitly highlights the importance of the supply structure by showing how it influences demand patterns, effectively linking the two sides of the market through observable strategic choices.

This points towards the specific research gap addressed herein: the need for a more systematic understanding of the *network structure* of the supply-side itself. While we have compelling accounts of individual intermediary roles and incentives, a comprehensive picture of how these intermediaries connect to each other, to different types of clients, across various jurisdictions, and through specific service offerings – essentially, the topol-

ogy of the intermediary network – is lacking. Understanding this structure is potentially crucial for designing more effective regulation targeting these key players.

Therefore, the goal within this thesis is to contribute to bridging this gap, primarily through synthesis and systematization. Drawing upon the existing literature, including the rich ethnographic accounts, the aim here is not necessarily to conduct a novel quantitative network analysis but rather to attempt to codify some of the more loosely defined observations about intermediaries and their roles. By viewing these observations through the conceptual lens of network structures and positions, the objective is to formulate more general propositions regarding intermediary behavior, influence, and potential vulnerabilities within the broader offshore system. This effort seeks to systematize existing knowledge in a way that speaks to the structural relevance of the supply-side, even if the approach remains, in the interest of transparency, somewhat exploratory in nature.

Also a structural analysis of the network, is not very theory-driven and is interested in it more as a special kind of network, with distinct properties. Its authors note: "I don't know how anyone would try to bring this down, and I'm not sure that they would be able to. The system seems unattackable"

1.6 Core Research Question(s): What role do offshore intermediaries play in networks of high-end tax avoidance?

1.7 Roadmap of the Thesis.

Having gone through what motivates the pursuit of this question and situate this thesis, will proceed to the bulk of the paper. First, outline the key concepts and theories I will draw on, then moving on to outline the key propositions this paper will seek to set forth about the role of intermediaries. Then, a brief section will cover the data sources

Theory

2.1 A Note on Philosophy of Science and Methodological Approach

This study investigates the structure and vulnerabilities of offshore intermediary networks using quantitative network analysis. The methodological approach adopts a logic common in **mixed-methods research**, specifically leveraging insights from qualitative, in-depth studies to inform large-scale quantitative analysis (cf. Creswell & Plano Clark, 2017; Tashakkori & Teddlie, 2010). While not conducting new ethnographic fieldwork, the research builds conceptually upon the rich insights generated by such work, particularly Harrington's (2016) seminal study of wealth managers. Harrington's ethnographic approach, aimed at achieving deep contextual understanding (*verstehen*), provides an invaluable foundation for identifying key actors, understanding their functional significance, and generating plausible hypotheses about the mechanisms shaping the offshore financial ecosystem.

In line with perspectives advocating for methodological pluralism and the use of qualitative insights for broader theory development (e.g., **George & Bennett, 2005**), this thesis leverages Harrington's findings for **concept formation and hypothesis generation**. Her work helps define the "intermediary" phenomenon and suggests the importance of factors like trust and expertise, which likely underpin the network structures we observe. This study then seeks to assess the **generalizability** and **structural manifestations** of these insights across a large dataset, moving from micro-level understanding to macro/meso-level patterns. The objective shifts from *verstehen* to identifying and analyzing recurrent structural patterns within the network revealed by the ICIJ Offshore Leaks Database, aiming for what George & Bennett might term **contingent generalizations** – patterns potentially dependent on specific contexts (like governance).

Methodologically, this involves integrating insights across different traditions, a process supported by several strands of contemporary social science methodology:

- **Ontology: Compatibility within Constructivism and Relationalism.** Operating within a constructivist framework compatible with Harrington's focus, this research

assumes that social structures, like intermediary networks, arise from the interactions, roles, and shared understandings of actors. This aligns with **relational sociology** approaches that view structures as emergent from social relations (Emirbayer, 1997). While ethnography explores the micro-dynamics, this study focuses on the **emergent structural properties** amenable to quantitative network analysis. The ontological stance posits that these socially constructed networks possess measurable characteristics and real-world consequences, bridging micro-level interactions with macro-level patterns (cf. Hedström, 2005, on mechanism-based explanations which often link micro and macro).

- **Epistemology: From Interpretive Understanding to Pattern Identification via Abduction.** This study explicitly distinguishes its epistemological goal from *verstehen*. Following a logic akin to **abductive reasoning** (Peirce; Timmermans & Tavory, 2012), Harrington’s rich observations suggest plausible theoretical models (e.g., intermediaries acting as specialized hubs). This research then seeks to evaluate the empirical adequacy and generalizability of these models by testing for **observable, structural patterns** in large-N data. Knowledge is generated through the systematic analysis of network topology, centrality, and correlation with external factors. This aligns with the broader scientific goal, emphasized by scholars like **George & Bennett (2005)**, of using rigorous methods (whether qualitative or quantitative) appropriate for the specific type of inference being made – in this case, descriptive and correlational inference about network structures across many cases.
- **Axiology: From Thick Description to Generalizable Systemic Analysis.** The primary value pursued remains the generation of **generalizable knowledge** about system-level properties relevant to understanding systemic vulnerabilities and the influence of context (e.g., governance). This focus on identifying broader patterns and their correlates, potentially informing policy or comparative theory, is a widely recognized goal in social science research, complementing the indispensable value of deep contextual understanding provided by ethnography.

In essence, this study employs a **theory-building strategy** that starts with concepts refined through qualitative research (Harrington) and proceeds to quantitative testing and generalization across a large dataset (ICIJ). This reflects established practices in mixed-methods research and aligns with calls (e.g., George & Bennett, 2005) for integrating diverse methodological strengths to build more robust and comprehensive social scientific knowledge. The approach explicitly acknowledges the different forms of knowledge generated by ethnographic versus large-N quantitative analysis but frames them as complementary rather than incompatible.

2.2 Conceptual foundations

Covering the necessary conceptual foundations preceding the concrete propositions asserted here in the thesis. These are analytically requisite to understand the propositions in the following section, 2.2.

2.2.1 Role of Intermediaries as Professionals (Seabrooke, Wigan, Christensen, Tsingou, Harrington) - the whole CBS cartel

- Goal: background of why we should think professionals ot be important.

2.2.2 Weaponised Interdependence for importance of the supply-side as chokepoints (Farrell & Newman, 2019, Christensen 2024, Zucman 2019) and Network Vulnerability through Intermediaries (Harrington 2016, Alstadsæter et al. 2019, Chang et al. 2023)

Goal: Why it's relevant to specifically understand these networks for regulatory

2.2.3 Network Theory as a Lens for Understanding Illicit networks (Chang et. al 2023, Newman textbook, Newman 2003 overview paper, Barabási, A.-L., & Albert, R. (1999))

Goal: briefly elaborate how network studies have been used to explore this general type of network

2.2.4 The specific roles of "intermediaries" and a Typology of Intermediaries (EU 2017 paper, Harrington 2016)

Goal: Clarify conceptually what exactly we mean by an "intermediary"

Harrington (2016) focusing on Wealth Managers as the specific intermediary. FIGURE OUT WHAT THEIR RELATION OT OTHER INTERMEDIARIES ARE. ARE THEY COORDINATING TO REACH OUT TO THE OTHERS? A WHOLE DIFFERENT CLIENTELE?

Using EU (2017) paper on the role for advisors and intermediaries in the Panama Papers as the one to build on. Typology of Advisors in Offshore Schemes (Based on Primary Expertise). This is also the one we'll be following to start enriching the ICIJ dataset, trying to classify the different intermediaries into thsi schema.

Tax Experts:

Core Function: Primarily involved in advising on tax positions (planning) and preparing tax returns (compliance) related to offshore structures. Key Activities: Designing strategies to legally lower effective tax rates (tax avoidance), potentially crossing into illegal evasion. Helping UBOs navigate tax laws across jurisdictions. Preparing necessary tax documentation. Distinctions: While sometimes involved in tax disputes, formal representation in court is often exclusive to lawyers. Tax advice itself is often not a protected or specifically regulated profession, though advisors might be part of regulated firms (like accounting firms). Can include internal experts, accountants, auditors, or other external preparers. The aggressiveness of tax planning advice can vary.

Legal Experts:

Core Function: Providing expertise on the legal aspects of designing, creating, maintaining, and enforcing offshore structures across relevant jurisdictions. Key Activities: Structuring entities to comply with (or exploit) laws in onshore and offshore jurisdictions. Handling incorporation and registration (where legally permitted, e.g., via licensed trust companies). Drafting legal statutes and documents. Arranging or acting as nominee directors/shareholders. Representing clients in legal disputes/litigation. Providing legal opinion letters. Sub-Types Mentioned: Lawyers: Typically regulated professionals, advise, prepare documents, represent clients, often bound by confidentiality. Notaries: Can play a role in drafting/recording founding documents, managing share transfers, and record-keeping, often seen as performing a public service. Distinctions: Require deep knowledge of multiple legal systems. Certain activities (like court representation or specific registration tasks) are often restricted to licensed lawyers.

Administrators:

Core Function: Primarily involved in the ongoing maintenance and financial record-keeping of offshore structures. Key Activities: Preparing financial accounts. Potentially preparing tax returns (overlapping with Tax Experts). Examining/auditing financial accounts (if required or requested). Providing opinion letters on financial constructions. Managing day-to-day administrative tasks. Sub-Types Mentioned: Accountants: Focus on preparing financial accounts and often tax returns; may advise on tax planning. Often not a protected profession, but may belong to professional bodies. Auditors: Independently examine financial accounts. Assess accuracy and control processes. Increasingly subject to independence rules restricting non-audit services. Review tax provisions within financial statements. Distinctions: Focused on financial recording, reporting, and verification. Auditors specifically require independence from the client. Offshore entities in key Panama Papers jurisdictions often lacked mandatory audit requirements.

Investment Advisors:

Core Function: Advising UBOs on how to manage and invest the assets held within the offshore structures. Key Activities: Developing strategies for wealth preservation

or growth using assets (e.g., shares, debt securities, derivatives) held by the offshore entity. Organizing wealth held in various forms (financial assets, property, yachts, art etc.). Distinctions: Role is specifically focused on the management of assets within the structure, rather than the creation or legal/tax compliance of the structure itself. Less critical if structures primarily hold non-financial assets like personal luxury goods

2.2.5 Different financial instruments and legal innovations - secrecy strategies (Chang et al. 2023, Lafitte, 2024)

Goal: Understanding the different financial instruments they use and how they can be innovated on, and used for different purposes. E.g.

2.3 Propositions

Proposition 1: Offshore Intermediary Networks Exhibit Scale-Free Centrality and Targeted Vulnerability.

- **Core Idea:** The network connecting clients to the intermediaries who facilitate offshore structures is characterized by a high degree of centrality, where a few "hub" intermediaries serve a disproportionate number of clients, making the overall network susceptible to targeted disruption aimed at these key players.
- **Building on:** Network science principles (Barabási & Albert, 1999), empirical findings on offshore networks (Chang et al. 2023 - Complex Systems), supply-side vulnerability arguments (Alstadsæter et al. 2019), and sociological insights on trust concentration (Harrington, 2016).
- **Contribution:** While Chang et al. (2023) identified scale-free properties in specific contexts (e.g., sanctioned oligarchs), this proposition aims to *systematically quantify* these structural properties across the broader Offshore Leaks Database, explicitly link intermediary centrality to network vulnerability, and test if specific intermediary *types* dominate these central positions.
- **Sub-propositions:**
 - **1a. Power-Law Distribution of Intermediary Connectivity:** The distribution of the number of clients served per intermediary will follow a power law, indicating the presence of highly connected "hub" intermediaries. *Contribution:* Confirms and quantifies the scale-free nature specifically for the *intermediary* nodes across the comprehensive ICIJ dataset.

- **1b. Hub Intermediary Dominance and Network Fragility:** The overall connectivity and integrity of the client-intermediary network are disproportionately dependent on a small number of high-degree intermediary hubs. Simulated or observed removal of these top intermediaries (ranked by centrality metrics) will lead to significantly greater network fragmentation compared to random node removal. *Contribution:* Explicitly tests the vulnerability implication of the scale-free structure by focusing on intermediary removal, linking network science to Alstadsæter et al.’s (2019) supply-side control argument.
- **1c. Functional Specialization of Hub Intermediaries:** Certain *types* of intermediaries (as defined in 2.1.2 - e.g., Legal Experts, Administrators) will be significantly over-represented among the high-centrality network hubs, suggesting that specific functions are critical bottlenecks in the offshore facilitation process. *Contribution:* Adds a functional dimension to the structural analysis of hubs, investigating *which kinds* of intermediaries become central.

Proposition 2: Intermediary Network Structures and Vulnerabilities Vary Systematically with Client Home Country Governance.

- **Core Idea:** The way clients connect to intermediaries, the resulting network structure, and the vulnerability of key intermediaries are not uniform globally but are shaped by the political and institutional environment (rule of law, regime type, corruption) of the clients’ home countries.
- **Building on:** Chang et al. (2023 - Secrecy Strategies), Alstadsæter et al. (2019 - inequality/evasion links), comparative institutionalism, and sociological work on trust in different contexts (Harrington, 2016).
- **Contribution:** Extends Chang et al.’s work on secrecy *strategies* by systematically examining how client home country governance shapes the *measurable network structure* centered on intermediaries (e.g., intermediary centrality distributions, clustering, specialization) and the *differential vulnerability* of these intermediary networks, using comprehensive governance indicators (WJP, VDEM) across the full dataset.
- **Sub-propositions:**
 - **2a. Governance-Dependent Intermediary Network Topologies:** Key intermediary-centric network metrics (e.g., parameters of the intermediary degree distribution, average intermediary clustering coefficient, network density around intermediaries) will differ significantly and predictably based on the governance indicators (WJP Rule of Law, V-Dem Regime Type, TI CPI) of the client cohorts’ home countries. *Contribution:* Quantifies the link between macro-level governance and the micro-level structure of intermediary networks.

- **2b. Contextual Variation in Intermediary Hub Fragility:** The "super-fragility" observed by Chang et al. (2023) will manifest as heightened network fragmentation upon removal of top *intermediary hubs* specifically for client cohorts from countries with weaker rule of law or more autocratic regimes, potentially reflecting concentrated trust patterns or higher reliance on specific "gatekeepers" in such contexts. *Contribution:* Tests the fragility hypothesis specifically on intermediary hubs and links it systematically to governance indicators.
- **2c. Intermediary Specialization Based on Client Governance Profile:** Intermediaries will exhibit measurable specialization, tending to serve clusters of clients predominantly from countries with similar governance profiles (e.g., intermediaries specializing in clients from high-corruption countries vs. those specializing in clients from strong rule-of-law countries). *Contribution:* Moves beyond geographic specialization to test for intermediary specialization based on the *political-institutional* context of their clientele.

Proposition 3: The Functional Roles and Network Positions of Intermediary Types Vary with Client Governance Context.

- **Core Idea:** The *types* of intermediaries (Legal, Tax, Admin, Investment) that are most prominent, central, or interconnected within the network depend on the governance context of their clients, reflecting varying demands for specific forms of expertise (e.g., legal protection vs. sophisticated tax planning vs. basic administration).
- **Building on:** The intermediary typology (EU 2017; Harrington 2016), qualitative insights on intermediary roles, and the logic linking governance to secrecy needs (Chang et al. 2023). **Contribution:** This proposition quantitatively tests the relationship between client governance context and the *functional composition* of the intermediary network. It moves beyond simply identifying types to analyze their *relative prominence, centrality, and interplay* within the network structure as shaped by client origin.
- **Sub-propositions:**
 - **3a. Governance-Driven Prominence of Intermediary Functions:** The relative share of network activity (e.g., number of connections, aggregate centrality) accounted for by different intermediary *types* (Legal, Tax, Admin, Investment) will vary significantly and predictably based on the governance indicators of the client cohorts' home countries. *Contribution:* Quantifies how client context shapes the demand for specific intermediary functions within the network.
 - **3b. Contextual Determination of Critical Intermediary Hub Types:** The *type* of intermediary most likely to occupy a high-centrality hub position (as identi-

fied in Prop 1c) will differ based on client home country governance. For instance, Legal Experts may be more central hubs for clients from weak rule-of-law states, while Tax Experts may be hubs for clients from high-tax/strong-enforcement states. *Contribution:* Integrates network structure (hub status) with intermediary function (type) and client context (governance).

- **3c. Varying Intermediary Ecosystems by Client Context:** The patterns of co-occurrence or collaboration *between different types* of intermediaries serving the same client will vary based on the client’s home country governance. For example, clients from complex regulatory environments might exhibit denser connections involving multiple specialist intermediary types. *Contribution:* Explores how governance shapes the functional ecosystem and potential division of labor among different intermediary types.

Proposition 4: Intermediary Network Dynamics are Driven by Supply-Side Factors and Regulatory Shocks.

- **Core Idea:** Changes in the offshore landscape, such as the introduction of new legal vehicles by tax havens or major international regulatory initiatives (like CRS), significantly impact the structure and activity within the intermediary network, influencing which intermediaries are active, their centrality, and how they connect to clients.
- **Building on:** Laffitte (2024) on legal innovations, Alstadsæter et al. (2019) on detection probability/costs, Christensen (2024) and Farrell & Newman (2019) on regulatory shocks/weaponized interdependence, and O’Donovan et al. (2019) on market reactions to transparency shocks. **Contribution:** While prior work studied the *impact* of these factors, this proposition specifically analyzes their effect on the *intermediary network structure*. It aims to quantify how supply-side changes reshape intermediary activity, centrality, specialization, and overall network topology, potentially using event-study or difference-in-differences approaches applied to network metrics over time.
- **Sub-propositions:**
 - **4a. Intermediary Response to Legal Innovation:** Following Laffitte (2024), the introduction of significant new legal vehicles in offshore jurisdictions will be associated with measurable changes in the activity levels, client base composition, or network centrality of *intermediaries* specializing in or operating from those jurisdictions. *Contribution:* Links macro-level legal changes (Laffitte) to observable shifts in micro-level intermediary network roles.
 - **4b. Regulatory Shocks Reshape Intermediary Network Topology:** Major regulatory shocks, particularly the phased implementation of the Common Reporting Standard (CRS), will lead to detectable shifts in the intermediary network

structure, such as changes in overall network density, shifts in the centrality ranking of intermediaries, potential exit of certain intermediary types, or altered geographic patterns of intermediary-client links. *Contribution:* Applies event analysis logic (O'Donovan et al.) to track the evolution of the *intermediary network itself* in response to major regulatory interventions (Christensen, Alstadsæter).

- **4c. Heterogeneous Intermediary Reactions to Supply Shocks:** The impact of legal innovations (4a) and regulatory shocks (4b) on intermediaries and their network position will vary significantly depending on the *type* of intermediary (e.g., Tax Experts vs. Administrators might react differently to CRS) and the *governance context* of the clients they primarily serve (linking back to Prop 2 & 3). *Contribution:* Examines differential effects, recognizing that intermediaries are not a monolithic group and serve diverse clienteles facing different pressures.

Data and Methodology

3.1 The ICIJ Offshore Leaks Database as "proxy" (EU, 2017 paper): Structure, Content, Strengths, Limitations (Nodes, Relationships, Leaks included, `sourceID`, `valid_until`, incompleteness).

- Numerical estimates will surely be biased, but the qualitative nature of interactions less so

3.2 External Data Sources: Country-Level Indicators (WJP RoL, TI CPI, Regime Type, GDP, etc.), Jurisdiction-Level Data (FSI, Regulatory status).

Lafitte 2024: Legal innovatoins

Laffitte, S. (2024). The Historical Tax Havens Database (HTHD).

World Justice Project (WJP) Rule of Law Index.

VDEM Regime Type Data. Coppedge, Michael, John Gerring, Carl Henrik Knutsen, Staffan I. Lindberg, Jan Teorell, David Altman, Fabio Angiolillo, Michael Bernhard, Agnes Cornell, M. Steven Fish, Linnea Fox, Lisa Gastaldi, Haakon Gjerløw, Adam Glynn, Ana Good God, Sandra Grahn, Allen Hicken, Katrin Kinzelbach, Joshua Krusell, Kyle L. Marquardt, Kelly McMann, Valeriya Mechkova, Juraj Medzihorsky, Natalia Natsika, Anja Neundorff, Pamela Paxton, Daniel Pemstein, Johannes von Römer, Brigitte Seim, Rachel Sigman, Svend-Erik Skaaning, Jeffrey Staton, Aksel Sundström, Marcus Tannenbergh, Eitan Tzelgov, Yi-ting Wang, Felix Wiebrecht, Tore Wig, Steven Wilson and Daniel Ziblatt. 2025. "V-Dem [Country-Year/Country-Date] Dataset v15" Varieties of Democracy (V-Dem) Project. <https://doi.org/10.23696/vdemds25>

- World Inequality Database with data on wealth inequality.

3.3 Using Agentic AI to Scrape data on intermediaries.

Using an AI-loop to classify the type of intermediary. ICIJ data just classifies them generically. For our purposes, it is useful to get more information on them, and put them into the typology from the EU (2017) paper.

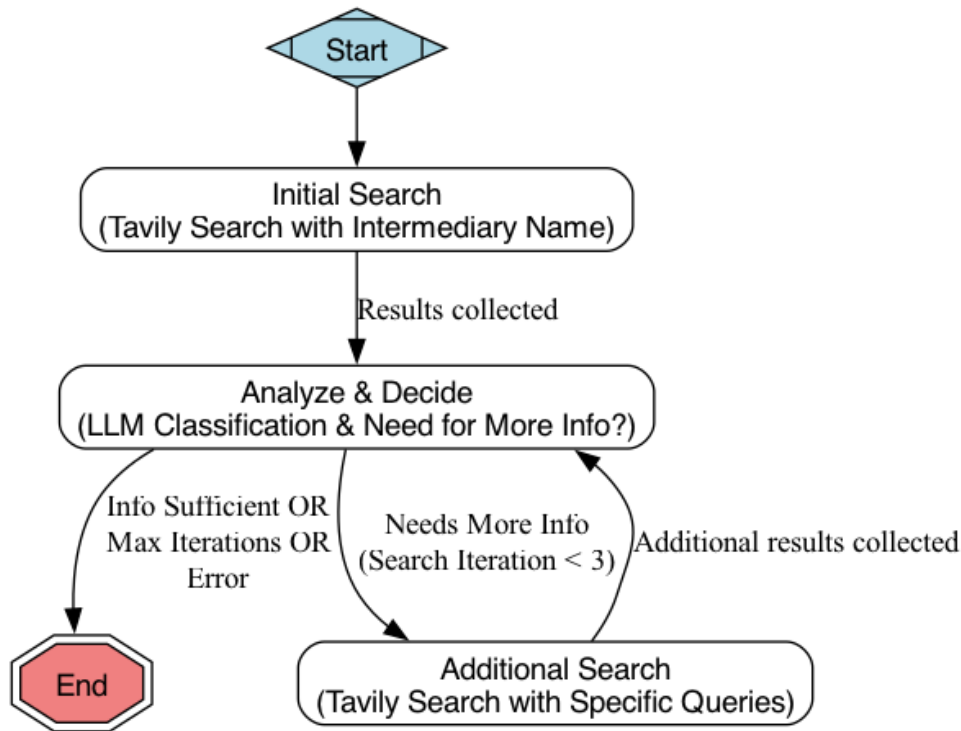


Figure 3.1: Basic Agent Loop for Intermediary Classification

In brief, an AI-agent orchestrates searches for these people, online first generically reading the results, then coming up with more specific ones based on the information it discovers or lacks, searching up to 3 queries, and scouring 15 most relevant results based on query-result embedding similarity (Tavily). Effectively, replaces the need for individually searching for each person

For each, it then classifies it accordingly with a few additional fields as well as listing the confidence of its judgement.

There are a few obvious issues with such a proposal, that I wish to assuage

Temporally misaligned All of the searches necessarily today, and on the information found here.

1. This immediately biases it towards those intermediaries that are more current, and

2. retrospectively assumes that the role they played then is equivalent to what one gets when one scours them today.

This issues aren't too big however. To the first point, there isn't an obvious reason why this should be a problem beyond limiting power. If we can only identify 50% of them, so be it. This only becomes problematic if there should be a systematic bias in the way it's used. E.g. it's easier to identify tax experts compared to legal experts, one may ofr exampel have a reason to stay more covert. This is when it becomes a very real threat to any potnetial infernece.

To the second, this shuoldn't be too bad a problem either. Most firms/individuals woudl likely not switch between these roles, considering the highly specialised nature of each of the functios and the considerable barriers to entry to each.

General trouble with using LLMs Certainly there is also issue with using large-language models as a substitute for human annotation and research. This is experimental, but similar processes have been used to great effect in e.g. (INSERT SOME CITATION HERE).

If there is a systematic direction of bias, I cannot think of it.

Empirical Analysis

Ordering it just as in the theory-section by the different propositions asserted, and testing each.

4.1 Proposition I

4.2 Proposition II

4.3 Proposition III

4.4 Proposition IV

Discussion

Conclusion

Appendix

Replication code all provided here on GitHub. Tried to centralise it all into one Makefile, though it's far more intuitive to go through the jupyter notebooks instead.

because it's through an agentic ai that the scrapign has been done, it's fo a non-deterministic nature. Where able I've put a seed to 42 and used gemini-2.0-flash-001, though this is not extendable to the use of Tavily. There, however, the dataset provided includes all the search links and content scraped, so one can apply the classifying model on it directly.

Categories:

Tax Expert: Focuses on tax planning, compliance, and advisory. Legal Expert: Focuses on legal structuring, compliance, incorporation, and representation. Administrator: Focuses on accounting, auditing, financial reporting, and company administration. Investment Advisor: Focuses on managing financial assets and investments.

Instructions:

Analyze Website Content: Thoroughly review the intermediary's website, paying close attention to sections like:

"Services" / "What We Do" / "Expertise" / "Solutions" "About Us" / "Our Firm" Team descriptions / Professional profiles (if available) Case studies / Client examples

Look for Keywords and Service Descriptions: Identify the primary services offered and look for keywords associated with each category:

For Tax Expert: Search for terms like "tax advisory," "tax planning," "international tax," "tax compliance," "tax returns," "transfer pricing," "VAT," "tax structuring," "tax disputes," "tax minimization." For Legal Expert: Search for terms like "legal services," "corporate law," "commercial law," "entity formation," "incorporation," "company registration," "contracts," "litigation," "legal opinions," "regulatory compliance," "M&A legal," "due diligence (legal)," "lawyer," "attorney," "solicitor," "notary." For Administrator: Search for terms like "accounting," "bookkeeping," "audit," "assurance," "financial statements," "reporting," "company secretarial," "payroll," "administration services," "domiciliation," "accountant," "auditor." For Investment Advisor: Search for terms like "investment management," "wealth management," "asset management," "portfolio management," "financial planning," "investment strategy," "securities," "funds," "derivatives," "financial

advisor."

Determine Primary Focus: Based on the emphasis in the service descriptions and overall website messaging, determine the single most dominant role the intermediary presents itself as fulfilling.

Overlap Handling: Many firms offer multiple services (e.g., accounting firms often provide tax advice). Prioritize based on the firm's core identity or the most prominently featured service area. If a firm strongly presents itself as an "Accounting and Tax Firm," lean towards "Administrator" if accounting/audit seems central, or "Tax Expert" if tax advisory is the main thrust. If it's a "Law Firm" that also offers tax advice, classify as "Legal Expert." If it equally emphasizes multiple areas and a single primary focus isn't clear, note the ambiguity but still choose the best fit based on overall impression or self-description (e.g., "Wealth Manager" points to Investment Advisor). Output: Provide the single best-fit category classification: Tax Expert, Legal Expert, Administrator, or Investment Advisor.