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Seabrooke, Leonard; Wigan, Duncan

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The governance of global wealth chains

Leonard Seabrooke^{a,b} and Duncan Wigan^a

^a*Department of Business and Politics, Copenhagen Business School, Copenhagen, Denmark;* ^b*Norwegian Institute of International Affairs, Oslo, Norway*

ABSTRACT

This article offers a theoretical framework to explain how Global Wealth Chains (GWCs) are created, maintained, and governed. We draw upon different strands of literature, including scholarship in International Political Economy and Economic Geography on Global Value Chains, literature on finance and law in Institutional Economics, and work from Economic Sociology on network dynamics within markets. This scholarship assists us in highlighting three variables in how GWCs are articulated and change according to: (1) the complexity of transactions, (2) regulatory liability, and (3) innovation capacities among suppliers of products used in wealth chains. We then differentiate five types of GWC governance – Market, Modular, Relational, Captive, and Hierarchy – which range from simple ‘off shelf’ products shielded from regulators by advantageous international tax laws to highly complex and flexible innovative financial products produced by large financial institutions and corporations. This article highlights how GWCs intersect with value chains, and provides brief case examples of wealth chains and how they interact.

KEYWORDS

global wealth chains; global value chains; offshore; financial governance; taxation; MNCs; inequality.

INTRODUCTION

In recent times, firms have changed their use of global value chains, disaggregating and allocating activities across jurisdictions to maximize competitive advantage and market position.

Some commentators have gone as far as to suggest that we are witnessing the era of the post-national or decentered multinational corporation (Desai 2008). In these terms the multinational company (MNC) has

transcended a dominant national imaginary of economic life (Cameron and Palan 2004). Paralleling these developments has been the increasing size, mobility, and fluidity of finance. Not only have financial markets grown so that the total value of financial assets now far outweighs global GDP, but the capacity of actors to shift assets, costs, profits, and liabilities across borders has increased exponentially. One result of these integrated processes is a notable disjuncture between territorially fixed fiscal and intrinsically fluid financial systems. The mobility of capital and its ability to switch asset identity and jurisdictional home has raised the specter of a permanent schism between the location of value creation and the geographical allocation of profits and wealth (Leyshon and Thrift 1997). These processes unfold through a variety of network forms ranging from suppliers offering simple off the shelf tax products to individuals, to highly complex financial structures produced within large firms. This article generates a theoretical framework for better understanding the governance and articulation of what we call 'Global Wealth Chains'. Global Wealth Chains (GWCs) are defined as *transacted forms of capital operating multi-jurisdictionally for the purposes of wealth creation and protection*. We seek to provide the most simple means of delineating forms of wealth chains to enable scholars and policymakers alike to understand their role in modern capitalism.

The evolution of GWCs affects not only the competitive position of firms within industries and specific value chains, but also circumscribes the distribution of wealth arising from increasingly globalized economic activities (Seabrooke and Wigan 2014). The capacity to utilize wealth chains changes opportunities for country-level development and who bears the fiscal burden across and within both developed and developing countries. For International Political Economy, GWCs refract on-going challenges to extant conceptions of relations between states and markets. They force us to confront the specificity of contemporary globalizing capital. Categorizing and specifying GWCs is an important step in investigating disjunctures between value creation and wealth allocation. As with the original aim of Global Value Chains research, our goal with GWCs is to identify opportunities for, as well as obstacles to, upgrading, learning, and development in the world economy.

SPECIALIZE, DIVERSIFY, NETWORK

We draw on three strands of literature, including scholarship in International Political Economy and Economic Geography on Global Value Chains (GVCs), literature on finance and law in Institutional Economics, and work from Economic Sociology on network dynamics within markets, product selection, and status relationships. Our pitch here is that research on GVCs usefully identifies types of market process, that the

work on finance and law highlights the institutional basis of wealth chains and drivers of product supply, and that Economic Sociology tells us how actors select particular products.

We use these three strands of literature to identify:

- (i) Power asymmetries and related degrees of transaction complexity between suppliers and clients;
- (ii) Incentives for innovation in finance and law through institutional forms, including the drive to specialize and diversify;
- (iii) The reasons why markets segment according to the status of the client and supplier, and what socio-economic relationships reinforce wealth chains in particular ways.

The literature on GVCs began on the premise that production across the globe is increasingly fragmented. As trade became more integrated, production became more disintegrated with the rise of component manufacturing and modularity. Fragmentation in production networks spurred demand for explaining the various processes through which production was coordinated, the cost of transactions between particular suppliers and buyers, and, most of all, the role of asset specificity in conditioning relations between suppliers and buyers. Easy to replicate assets can be produced through arm's length relationships while more complex assets require closer coordination (Gereffi, Humphrey, and Sturgeon 2005). The GVCs literature drew on transaction cost economics to explain why some processes are not outsourced but kept in-house to reduce cost and retain competitive advantages. The argument proceeds in telling us that information asymmetries between different levels of the chain – characterized as 'Market', 'Modular', 'Relational', 'Captive', and 'Hierarchy' – are important in determining the potential for genuine economic development, fostering human capital, and reducing trade barriers. A pro-development agenda has been taken up by a number of international economic organizations, with the World Bank, OECD, and others all promoting value chains as a strategy for development (OECD 2012). The World Trade Organization (WTO), in particular, has placed GVC analysis at the center of its research strategy, calling for policymakers and scholars to identify production processes to reduce information asymmetries and encourage growth and development. This focus has only increased with the emergence of a global wealth inequality agenda (Piketty 2014).

GVCs are the yin to the yang of value chains. The emphasis in GVC research is often on how actors in value chains share a common interest in transparency and coordination. In wealth chains transparency is not typically a goal for those involved. Rather, wealth is often created and protected by rendering movements through wealth chains opaque. While

wealth chains can enhance development and growth, they are also used to hide, obscure, and relocate wealth in a manner that breaks from the location of value creation and heightens inequality. Research on value chains has provided important tools for locating value creation, allocation and capture, producing thick descriptions on how value chains work in practice that are nested in typologies of governance and transaction complexity and codification (Gereffi, Humphrey, and Sturgeon 2005; Ponte and Sturgeon 2014). Although GVC literature provides a number of important insights and has had a significant impact on transnational policy development, it has been largely silent on the link between value chains and financial and legal innovations created by firms, lawyers, and investors (with some notable exceptions, see Froud et al. 2014; Dörny 2016; IGLP, 2016; Milberg 2008; Williams 2000). Of course scholars of value chains have a different empirical focus, but our claim here is that GVCs must be understood alongside GWCs. The rationale for doing so is straightforward: understanding the dynamics behind MNCs' global strategies, as well as forms of wealth creation and protection used by elites and the 'mass affluent'.

Value chain research has been premised on the disaggregation of production processes across space. We suggest that in the era of the 'decentered corporation' (Desai 2008) research should incorporate the legal and financial disaggregation of the firm, as well as appreciating its institutional diversity (Morgan 2009). As capital becomes an increasingly abstract expression in the form of intellectual property and financial innovations our imaginaries of the corporation and its operations need revisiting (Arvidsson 2016; Bryan et al. 2016). The contemporary MNC has transcended the institutional complex of the Fordist era (Morgan 2014; Morgan 2016). MNCs are now risk managed as integrated productive and financial entities and the frontiers of capital are transcending nationality and the state. Our analytical tools for capturing these developments require improvement. What we need is a better understanding of how financial and legal innovations are articulated through wealth chains in ways that are separate from, but speak to, value chains. We also need to understand how wealth chains are maintained through professional and social networks.

Studies of finance and law provide a range of insights into the intellectual sources of those providing GWCs. There is a general silence about the 'offshore world' in economics, which stays firmly within the boundaries of established national and international law rather than the gray zones in-between. Conventional theories of finance focus on deposit-taking institutions, equities trading, and price formation, often with an emphasis on the welfare enhancing and market completing functions provided by new financial innovations (Allen and Santomero 1997). Economists interested in institutions have criticized the neo-classical

perspective for only dealing with functions as opposed to institutions, claiming that this narrow perspective distorts analyses of how change in markets really occurs (see Engelen et al. 2010). For example, insurance to protect against loss in the value of an asset could be provided in an options market, but also by an insurance firm. While the function of asset protection is equivalent in both choices, the institutional arrangements underpinning the activity may differ strongly (Merton 1995: 467). Financial innovation has blurred prior boundaries between institutions and assets as the key product of innovation has been the capacity to replicate assets and exposures synthetically. This has transformed the fluidity and mobility of finance and, in so doing, the capacities and character of ownership (Bryan and Rafferty 2006). Innovations permit rapid and, relatively, frictionless switching. An exposure to an asset or an ownership position can be transformed in terms of character, term and 'geopolitical locations' (Merton 1995: 463–4). Finnerty (1988: 18) famously proposed three criteria for financial innovation: innovation must reduce or reallocate risk to reduce the required offering yield (cost of credit), lower issuance expenses (cost of financial production), or create a tax arbitrage opportunity (cost of political geography). Recent accelerated innovations in finance have widened a disjuncture between the mobile and the fixed; here, in the form of financial assets and the fiscal apparatus of the state.

Understanding how institutional diversity emerges from different financial and legal innovations is an important aim for the study of wealth chains. While the more institutionalist literature does not explicitly address the 'offshore world', it provides pointers to the relationship between functional and institutional differentiation. As such, it holds keys to understanding the supply of wealth chains and the incentives suppliers have to differentiate themselves in the marketplace.

The institutional political economy of John Commons and Thorstein Veblen provides an entrance point in understanding the mutually constitutive role of finance and law in GWCs. In asserting the 'legal foundations of capitalism' Commons built on the earlier work of Veblen in outlining a theory of value based on the habits and customs of social life (Gammon and Wigan 2015). Commons elaborated his conception of 'reasonable value' from the formation of large US trusts at the end of the nineteenth century (1924: 1–65; 1934: 649–875). Drawing from hearings before the United States Industrial Commission, he argued that the value of an entity is neither a function of its physical property, its corporeal property, its incorporeal property, or its debts due. Business valuation rested instead largely upon 'intangible property' valorized in law. Andrew Carnegie's corporeal property in his omnipotent steel business was valued at US\$ 75 million, but he was paid US\$ 300 million by the holding company. Further, while the corporeal property of the combination had been estimated to be worth US\$ 1 billion its ultimate valuation

stood at US\$ 2 billion. The legally determined excess, above historic cost, strengthened ‘Carnegie’s threatening position in the market’ (Commons 1934: 649–50). The important point here is that reasonable value had its foundations in law and the differential advantages and constraints law imposed. Value, rather than a direct corollary of the production process, or prices spontaneously emerging on a hedonic gauge, was a function of machinations in the sphere of law and finance. For Commons every economic transaction occurs simultaneously in two spheres. One is the sphere of goods and labor articulated in a production process. The other is the sphere of law as every exchange is simultaneously an exchange of a property title. The holder of a property title does so on the basis of attachment to a sovereign space. Every company must be incorporated by law and every contract must by definition be located in a sovereign space. ‘Reasonable value’ then, or the legally sanctioned attribution of wealth, is generated by the interaction between the activity, the title, and the sovereign.

The relationship between a state’s capacity to provide a legal framework to permit credit and debt extension has long been noted as a source of power in the world economy (Strange 1975; Strange 1990). Work in International Political Economy and Economic Geography on the ‘offshore world’ (Hudson 1998; Palan 1998; most recently Fichtner 2016) has emphasized the constitutive significance of bifurcated sovereignty. States bifurcate law so that one set of rules applies to a domestic sphere and another to a virtual sphere, or, more prosaically, to internationally mobile people, entities, and assets. The bifurcation of the transaction and the bifurcation of sovereignty are inextricably entwined. The parallel legal construction of the transaction and processes of production and exchange create what Commons refers to as ‘goodwill’, and is the central foundation of who gets what, where, and when. This is the institutional basis of the concept of GWCs. Wealth chains flourish precisely because of capital’s dual spheres and how this bifurcation enables capital to effectively arbitrage and valorize sovereign bifurcation. Recent studies are mapping the global offshore network, noting their imperial legacies (most importantly Haberly and Wójcik 2015).

We also suggest that scholarship on ‘financialization’ is important for explaining how GWCs are articulated and governed. The extensive research on financialization has focused on processes through which finance is changing market and everyday relationships (see Aitken 2007; Christophers 2013; Engelen 2008; Langley 2008; Lagna 2016; Martin 2007; Zwan 2014). Here the focus has been on how financialization prompts the construction of subjectivities in everyday life (Langley 2008), as well as how financialization is changing corporate and public organizational forms and discourses (Faulconbridge and Muzio 2009; Palan et al. 2010; Robertson 2014). A related literature increasingly known as ‘Social

Studies of Finance' also carries vital insights into the building blocks of what we call wealth chains. These studies focus on the plumbing and wiring of financial markets, as well as the social environments that propel them, with research often situated in the trading room or 'nerve centers' in financial institutions. MacKenzie's (2006; Mackenzie and Millo 2003) work, for example, has demonstrated how, when enacted, financial models act as 'engines' rather than 'cameras' in shaping rather than reflecting markets. In options markets models do not mirror some pre-existing financial reality, but instead prefigure what financial realities can emerge. Those applying particular financial theorems then engage in 'performativity' that directs markets and heightens uncertainties. Others have recently discussed performativity in international microfinance markets (Henriksen 2013) and credit rating agencies (Paudyn 2012). There has also been a focus on global or transnational 'microstructures' that create convergence on how particular assets, products, and identities are viewed in European and American financial markets (Knorr Cetina and Bruegger 2002; Stark 2009). Insights from this literature help us understand what types of information are important for clients and suppliers in wealth chains and how types of information reflect different relationships.

Scholarship in Economic Sociology has a lot of important lessons for the analysis of wealth chains when it comes to explaining the role of client perception, client and supplier status, and market structure. For example, the notion of structural equivalence in markets suggests that suppliers do not perceive demand independently but act in interdependent relationships where they perceive how other suppliers are pricing themselves (White 1976; White 2002). Research on entrepreneurship within networks has demonstrated that information sharing is more rapid in sectors that are transnational and less likely to be 'Balkanized', with a clear difference between transatlantic investment banking and US domestic supply-chain management (Burt 2010: 72–9). In such networks those who can demonstrate high status and behave aggressively tend to do better, as do those who are able to engage in 'epistemic arbitrage' in exploiting differences in knowledge between professional groups (Seabrooke 2014).

Work on status signals in markets has demonstrated that information asymmetries are important in both egocentric and altercentric forms (Podolny 2005). Egocentric uncertainty is about an actor's capacity to provide services or products of a certain quality, while altercentric uncertainty is about the capacities of others. High altercentric uncertainty increases the high-status value of products, while high egocentric uncertainty undermines it (Podolny 2005: 227–9). Similarly, Phillips and Zuckerman (2001) provide solid grounds for why financial markets are differentiated not only on the basis of capacity for innovation, but from

the capacities of clients to recognize differences in what the supplier is providing. Those who are not aware of in-product differences will tend to choose the most market conforming products available. Products that are considered to be extreme will be avoided for fear of being spotted by regulators, while middle of the road products will be identified as less likely to come under regulatory scrutiny. This scholarship is also helpful in identifying types of information, with information that has a high 'homophilic' value prized more than that from sources that are distant and unknown. This includes not only the source of the information but shared vocabularies, practices, and assumptions about how markets operate (Reagan and Zuckerman 2008). Such homophilic information is particularly important among trust networks, including some of the forms of wealth chains we describe below. It is particularly important in maintaining elite networks and integral to their organization (Murphy and Willmott 2015). This includes formal and informal regulatory 'clubs' (Tsingou 2015).

As recognized in International Political Economy scholarship, it is not only access to information that counts, but understanding what the information means that provides the key problem for governance (de Goede 2001). Uncertainty may not only present a problem for governance but a resource for those who seek to avoid governance (Seabrooke 2007; Wigan 2008). There are a number of ways to examine how information is treated, including interviews with practitioners and policymakers, participant observation in trade fairs and training, content and network analysis, and, recently, experimental methods that provide evidence on how suppliers positively respond to information requests that infringe national and international financial regulations (Findley et al. 2013). We embrace all of these as means to investigate information asymmetries in GWCs.

TYPES OF GOVERNANCE IN GLOBAL WEALTH CHAINS

What we term GWCs have been partly studied under the rubric of the 'offshore world' within International Political Economy (Palan 2003). This broad literature has provided insight into the structural and institutional determinants of GWCs, regulatory processes surrounding their evolution, the size and impact of capital's movement through offshore spaces, and a rich tapestry of case studies which shed light on aspects of GWCs. This includes issues as diverse as money laundering, financial intermediation, tax avoidance, tax evasion, transfer pricing, intellectual property management, and multilateral and unilateral policy development.

Research on the 'offshore world' emphasizes the bifurcation of sovereignty, the 'virtuality' of transactions, fundamental challenges to the capacity of states to harness global capital, and regulatory conflicts and

paradoxes. International Political Economy work on structural determinants of the 'offshore world' has focused on commercializing sovereignty (Palan 2003), and offshore finance as a vehicle for the expression of capital's specificity and internationalization (Coates and Rafferty 2007). These divergent analyses draw our attention to system-level implications. Institutional explanations elaborate origins in sovereignty, law, accounting, and international business taxation. Here the role of accounting technologies in the globalization of capital are crucial (Sikka and Wilmott 2010), including the role of large accounting firms as an effective 'pinstripe mafia' (Mitchell and Sikka 2011). From a legal perspective Picciotto (1992, 2011) has provided the most comprehensive historical analysis of the interaction of international business with diverse national legal and fiscal systems, explaining the grounds upon which corporate tax abuse is executed. Both structural and institutional analyses have been important in highlighting system-level prerequisites for the operation and proliferation of wealth chains.

A second stream of 'offshore' literature investigates actors in regulatory and market processes. Where the structural analyses noted above have highlighted origins in mutually exclusive and competing territorially bound sovereignty, this literature emphasizes the constraints placed on regulatory traction by the competing interests of states. Here international tax competition is a corollary to the rational maximizing behavior of competitive states (Rixen 2008), placing micro-states, in particular, in the crosshairs of international organizations like the OECD (Eccleston 2013; Hampton and Christensen 2002; Palan et al. 2010; Rawlings 2007; Sharman 2006; Webb 2004). For instance, that Europe's members include some of the largest 'offshore' provider states means European policy traction faces considerable obstacles (Wigan 2014; see Sharman in this forum). Recent work on anti-money laundering policies has discussed power asymmetries in the determination of anti-money laundering policies and how they are often poorly targeted and administratively expensive (Jakobi 2013; Sharman 2011; Tsingou 2010). Novel natural experiment methodologies have been deployed to gauge provider compliance and reveal the central role of providers in many OECD countries (Findley et al. 2013; Sharman 2011). Work on the regulation of terrorist financing has highlighted mechanisms driving the securitization of money and the constitutive role of risk in regulatory design and social exclusion (Amoore 2013; de Goede 2004; Vlcek 2008). New research on how family trusts and wealth managers operate has peeped into the complex trust networks behind trustee and estate management (Harrington 2012; Rawlings 2011). Scholars have also sought to relabel 'onshore-offshore' to 'secrecy jurisdictions' to highlight that they are present in the heart of the OECD (Leaman and Waris 2013; Seabrooke and Wigan 2015). The cartographic imagery of 'offshore-onshore' alludes to a spatial

demarcation that is not tenable for our conception of GWCs. Rather, an inclusive conception of GWCs can contribute to a comprehensive picture of the ‘onshore-offshore’ ecology, the identification of the drivers of niche formation within that ecology and the patterns of cooperation, conflict, and dependence that shape finance, law, and accounting in modern capitalism.

We build on the above literature to flesh out a conception of GWCs. To do so we draw directly from the well-established typology on global Value Chains provided by Gereffi, Humphrey, and Sturgeon (2005). The value chains typology is built on the notion that between ‘pure’ Markets and Hierarchies within firms there are also network relationships they characterize as Modular, Relational, and Captive (Gereffi, Humphrey, and Sturgeon 2005: 83–4). Market value chains refer to when information is easily communicated and transactions are governed with little explicit coordination. Modular value chains occur from the provision of products to a customer’s specification but with generic machinery. Relational value chains comprise complex interactions and high levels of specificity in what is being supplied. Captive value chains refer to when small suppliers rely on larger suppliers. Hierarchical value chains are vertically integrated with high levels of managerial control. These types of value chain governance provide the framework for this now substantial body of literature, which has gained the attention of international policy-makers (Baars 2016; Bair 2005; Coe 2014; Coe and Yeung 2015; Gereffi 1994).

We adapt these five types of governing value chains to our interest in wealth chains. Our types of governance for GWCs are analytical types. As with all ideal types they are constructed for the purpose of learning and should be broken down and reconstructed where appropriate. Our five types are not silos but can interact with each other. The types of governance in GWCs are:

- (1) *Market* linkages occur through arm’s length relationships with low complexity in established legal regimes. Products can be accessed from multiple suppliers who compete on price and capacity.
- (2) *Modular wealth chains* offer bespoke services and products within well-established financial and legal environments that restrict supplier and client flexibility. Products involve complex information but can be exchanged with little explicit coordination. Bespoke suppliers are commonly associated with a lead supplier.
- (3) *Relational wealth chains* involve the exchange of complex tacit information, requiring high levels of explicit coordination. Strong trust relationships managed by prestige and status interactions make switching costs high.

- (4) *Captive wealth chains* occur when lead suppliers dominate smaller suppliers by dominating the legal apparatus and financial technology. Clients' options are limited by the scope of what can be provided by small suppliers and, in turn, lead suppliers.
- (5) *Hierarchy* wealth chains are vertically integrated. A high degree of control is exercised by senior management, such as a Chief Financial Officer. Clients and suppliers are highly integrated and coordinate intensely on complex transactions.

Figure 1 illustrates these five types following the definition of the different types of wealth chains given above. The figure identifies the lead suppliers of financial products and services, the secondary suppliers (be they bespoke, relational or simply smaller), and the clients and the basic relationships in the transfer of capital from its source to facilitate wealth creation and protection. We also note the flow of capital from the source through wealth creation mechanisms and back again, as well as that coordination in these different forms of governance becomes more complex and explicit as we move from the left to the right of the diagram.

A THEORY OF GLOBAL WEALTH CHAIN GOVERNANCE

Our conception of GWCs shares many similarities with Gereffi, Humphrey, and Sturgeon's (2005) typology of value chains, but contains important differences. These authors provide a theory of GVC governance that is premised on three factors: the complexity of information to sustain transactions, the ability to codify transactions, and the capabilities of potential suppliers to meet the requirements of the transaction (Gereffi, Humphrey, and Sturgeon 2005: 85). These three factors are appropriate for value chains because they concentrate on identifying transaction complexity, efficiency, and capacity. However, an important problem here when applying this thinking to GWCs is much of the activity is explicitly intended to avoid codification by third parties. We replace codification as means of distinguishing chains with a focus on regulatory liability. Given that our interest is in *global* wealth chains, we specify that liability is assessed through the lens of multi-jurisdictional regulatory interventions, requiring interaction between two or more authorities, or supranational or international organizations (see OECD 2013). This raises a number of bilateral and multilateral coordination issues that are well known to International Political Economy scholars (most recently Hakelberg 2015). Furthermore, the capabilities for those supplying products and services are less about the capacity to meet the requirements of the transaction and more about mitigating challenges to cope with uncertainty about the status of the transaction. These considerations lead to the following factors in wealth chain governance:

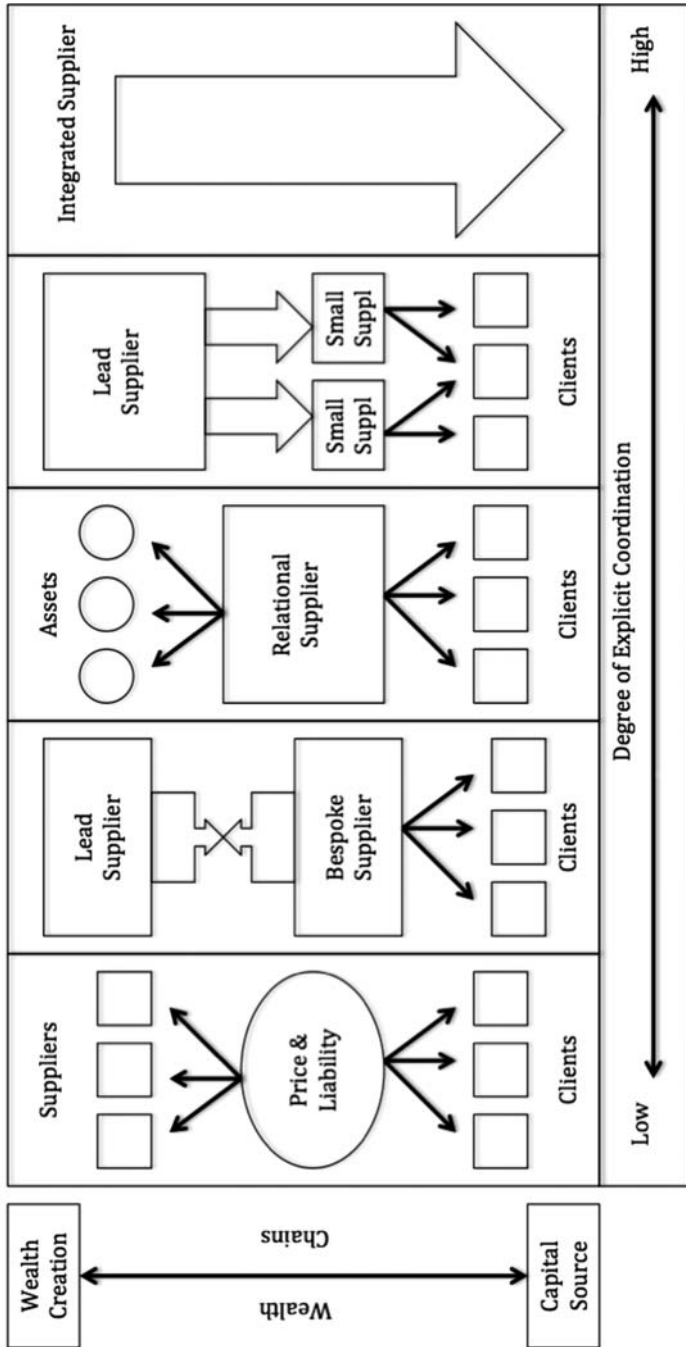


Figure 1 Five global wealth chain governance types.

- (A) The *complexity* of information and knowledge transfer with regard to the product or service being provided by the supplier to meet the client's requirements;
- (B) The *regulatory liability* involved in transactions and the ease of multi-jurisdictional regulatory intervention;
- (C) The *capabilities* of suppliers to create solutions to mitigate challenges to the status of the product or service by regulators.

These three factors explain a great deal of variation in GWC governance, as well as reasons for differences in function and institutional form. They also encourage us to view wealth chains as comprising not only clients and suppliers but also regulators. Figure 2, below, provides a series of illustrations on information asymmetries between Suppliers, Clients, and Regulators in the GWC governance. The length of the line between the three different points represents how opaque information is between these actors. Information asymmetry provides a source of innovation and protection from regulation.

For the Market, Figure 2(a), an example is a standard 'off the shelf' offshore shell company established in Delaware or the British Virgin Islands. The Client and Supplier both have a good understanding of what is being provided by the product and the required information about both parties (in many cases the Supplier has very little information about who the client actually is, see Findley, Nielson, and Sharman, 2013, and Sharman in this forum). The key information asymmetry here is between the Client and the Regulator. The distance between the Supplier and the Regulator is less than that between the Client and the Regulator because that is the main point of such tax evasion operations – to hide the real identity of the Client. As such the Supplier acts as a buffer between the Client and Regulator, as condoned by law that permits pervasive offshore activity. The main way of being discovered within this system is via a whistleblower that has a list of clients. We have seen a spate of these in recent years. However, contract specifications that oblige a Supplier to relocate titles or assets subject to regulatory interventions may permit the Supplier to mitigate challenges.

Information asymmetries are less in the Modular form, Figure 2(b), because this is an active regulated market with clear anti-money laundering legislation and reporting requirements on the source of income. This is, in part, because Modular forms of GWCs are commonly well-established schemes used by the 'mass affluent' in national middle classes and transnational and expatriate communities. In principle they are not difficult to trace. For example, someone who holds an offshore account with a major international bank can use this service to avoid or evade taxes but there is quite a lot of information known between this Client, the Supplier, and the Regulator, be they the authorities in the offshore

S = Supplier

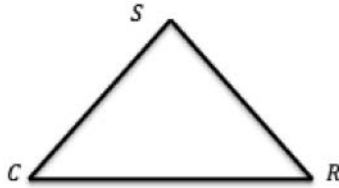
C = Client

R = Regulator

(a) Market



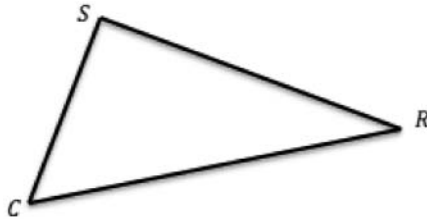
(b) Modular



(c) Relational



(d) Captive



(e) Hierarchy

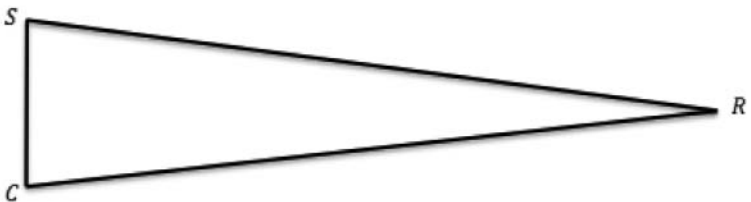


Figure 2 Information asymmetries in the governance of global wealth chains. S = Supplier; C = Client; R = Regulator.

jurisdiction or in the country where the Client is resident. Given the lack of information asymmetries here the governance of these wealth chains comes from a lack of political will rather than from capacity (for a comparative case see Thiemann and Lepoutre, 2017), although there has recently been a lot of momentum from US authorities to plug some of the fiscal leaks created by Modular wealth chains (Palan and Wigan 2014).


In Relational wealth chains, depicted in Figure 2(c), the greatest information asymmetry is between the Supplier and the Regulator, since the point of the relationship between the Supplier and the Client is to ensure that the Client's wealth cannot be touched by the Regulator, even if the Client comes under scrutiny. A good example here is the well-told tale of the US surgeon who has an Asset Protection Trust in the Cook Islands, to ensure that if he is sued or a divorce occurs then assets cannot be taken by the Regulator, even when the Regulator has some information. To access the Client's wealth the Regulator (or the Client's wife) needs to pay extraordinarily high costs to go to court in the Cook Islands, which has commercialized its sovereignty in a pact with Suppliers. Other forms of Relational wealth chains focus on Suppliers' use of legal and financial innovations to invest globally on behalf of Clients, creating a network of investments that Regulators find difficult to obtain information on. Such wealth chains are popular with High Net Worth Individuals (HNWIs), with a notable rise in their use by elites from emerging markets (Sharman 2012).

The Captive form, Figure 2(d), shows greater information asymmetries than in the Modular form but also less than in the other forms. This is again a function of the size and scale of activity that is linked back to domestic jurisdictions where Regulators can attempt to keep an eye on what is going on. An example here is the relationship between the Big Four accountancy firms (the Supplier) and a firm (the Client) over the best strategies to avoid and minimize corporate taxes. Regulators have clear information on how this takes place and the likely revenue lost, and the Client and Supplier have clear lines of communication to share information on their needs. The Supplier is also in frequent contact with the Regulator, establishing professional expertise and best practices for both Regulators and Suppliers (Gendron, Cooper and Townley 2007). The lead Supplier also establishes the expertise and technologies to smaller Suppliers, dominating both the profession and market. In our illustration the Regulator is a bit more distant from the Client than the Supplier, since a large part of the service provided by the Supplier is to provide professional and legal reasons to Regulators for the Client's activities. The Supplier's multi-jurisdictional and cross-disciplinary (accounting, law, tax, supply chain management) expertise is a great asset in avoiding regulatory interventions (as also the case in shadow banking, see Helgadóttir 2016).

Finally, the Hierarchy form, Figure 2(e), shows a short distance and low information asymmetries between the Supplier and the Client while clear and significant information asymmetries between the Client and the Regulator and the Supplier and the Regulator. A key reason here is that relations between the Client and Supplier are often ‘in house’ and intensely connected, reducing information asymmetries (but not addressing the performativity issue raised earlier). Their collective dominant position in the market means that the pace of financial and legal innovation can increase, which is assisted by superior information sharing. This innovation seeks to obscure information going to the Regulator, which has little capacity to keep pace with innovations or to know the intricacies of Client–Supplier dynamics. Hierarchy wealth chains are coordinated by large MNCs who assume a dominant market position. Their wealth chains are very distinct from their value chains types in how they source and create products for the market.

These five GWC types and the three variables that determine the form of information asymmetries between Client, Suppliers, and Regulators are listed in Table 1, below. Only the Modular form of governance has low capabilities in being able to mitigate uncertainty. The Modular and Captive types are the only ones where regulatory liability is high. This can be explained by a strong regulatory focus on large institutions that can be monitored, or attempts to be monitor them, compared to the Market and Relational types that can rely on, respectively, faceless contracts or strong trust relationships as the key forms of completing transactions without going through traditional financial intermediaries. The Hierarchy form is only one able to provide comprehensive schemes that mix conventional and shadow banking with products and services in jurisdictions that, via complexity, minimize tax exposures.

Table 1 Key determinants of Global Wealth Chain governance.

Governance type	Complexity of products and services	Regulatory liability	Capabilities to mitigate uncertainty	Degree of explicit coordination
Market	Low	Low	High	Low
Modular	Low	High	Low	
Relational	High	Low	High	
Captive	High	High	High	
Hierarchy	High	Low	High	

The degree of explicit coordination increases as we move down the right hand side column in the table. Ordering a shell company can be done online without unnecessary fuss. Buying large denomination bills is also a simple Market transaction. Clients engaging in Modular forms of governance will only receive a private banker who can assist them with international taxation issues only once they have invested above a high income/wealth threshold. Families dealing with trust and estate planners or asset protection trusts have even more significant sums to pay for highly customized Relational services (Harrington 2016). Clients and Suppliers in Captive markets engage in a range of complex transactions to create wealth chains and rely heavily on professionals and experts from particular lead firms. Professionals linked to lead firms have a strong interest in maintaining their expert community by limiting the terms of debate over what can be governed (Seabrooke and Tsingou 2014), and activist challenges to them are forced to address them on their own terms (Seabrooke and Wigan 2015). Those engaged in the Hierarchy form have extremely complex systems of governance to ensure that transfer pricing anomalies and tax avoidance and evasion cannot be sufficiently traced by regulators.

THE FUTURE RESEARCH AGENDA

The five GWC types are not silos but often mixed in the articulation of wealth chains. Interactions may occur across wealth chain types and Clients and Suppliers may switch, under regulatory or competitive pressure, from one chain to another. A brief examination of some of the various wealth chains now in operation can illustrate the potential traction of our framework and the salience of the dynamics we identify as conditioning elements.

A hierarchy-relational global wealth chain

Apple Inc. has attracted sustained attention for its global assembly and tax planning activities (see Bryan et al., *forthcoming*, in this forum; Fernandez and Hendrikse 2015). In May 2013, following investigations into Microsoft and Hewlett Packard, the U.S. Senate's Permanent Subcommittee on Investigations conducted formal hearings into Apple's global tax planning which was alleged to enable the firm to reduce US taxes by US\$ 10 billion a year. For instance, in 2011 under a 'cost sharing agreement' (CSA) with a subsidiary in Ireland, Apple was able to route approximately US\$ 22 billion (or 64% of global pre-tax profits) into its Irish holding company (by way of comparison its Irish operations employs 4% of its global workforce and accounts for about 1% of its worldwide sales). The effective tax rate on Apple's international earnings was 2.5%, and

estimates of lost tax revenue range considerably, with some suggesting US\$ 100 billion. The hearings found that Apple's global activities were being arranged in ways that not only affected the U.S. Treasury, but many other tax jurisdictions. Only 6% of Apple's pre-tax global income is allocated to jurisdictions other than Ireland and the USA (U.S. PSI 2013a; see also U.S. PSI 2013b).

Apple's multi-jurisdictional tax planning activities constitute a Hierarchy GWC. Here products are made either in-house or in close relationships between Supplier and Client. The ability to gain regulatory traction on these wealth chains is severely circumscribed by product complexity, flexibility via the iterative re-design of products, and low information asymmetry between Client and Supplier. Levels of coordination are extremely high. Regulatory liability is lowest in these wealth chains as the high levels of capacity between the Client and Supplier ensure that Regulators are in a constant game of cat and mouse. Bryan et al. (*forthcoming*, in this forum) suggests that conceptual ambiguity surrounding the definition, identification and valuation of intangible assets mitigates against the traction of regulatory apparatus built in an earlier era and for other purposes. Apple Operations International (AOI) and Apple Sales International (ASI) take economic ownership of a large share of Apple's intellectual property via a CSA, wherein for a contribution towards the development of intellectual property the purchaser gains economic rights accruing to the revenue from that ownership worldwide. Even if the price paid to the parent is 'correct' a CSA, as opposed to a licensing agreement, transfers the economic rights to the intellectual property to Ireland. A licensing agreement, on the other hand, means that the intellectual property investment and return on investment remain in the USA (Sullivan 2013). Richard Harvey, former senior adviser to the U.S. Internal Revenue Service, explained in his testimony to the Apple hearing: 'Even if the payment from the tax haven affiliate to the U.S. parent is at true fair market value for the intangible assets transferred, ... the U.S. parent has effectively shifted income to the tax haven affiliate by virtue of the equity contribution' (Harvey 2013).

Apple established AOI in Ireland to act as a group holding company as early as 1980. At the time Apple also conducted substantive manufacturing activity in Ireland. What is especially noteworthy about that subsidiary company is that, to date, AOI has not declared tax residency in any jurisdiction. Despite an income estimated at US\$ 30 billion in the 3 years between 2009 and 2012, AOI filed no corporate income tax returns and paid no taxes. AOI, the first amongst many offshore affiliates, is able to take advantage of that Ireland establishes tax residency on the basis of *the location of management and control* while the US bases determination of tax residency on *place of incorporation*. Like Google, AOI, by virtue of the arbitrage offered by different juridical bases of tax and corporate

nationality, is effectively not tax resident anywhere. For the USA, AOI is Irish, for Ireland it is a US entity. In this way, AOI operates in a spread between these different national jurisdictions, and arbitrages that spread. Such complex corporate structures pose the challenge to regulators of a complete overhaul of accounting, tax and legal rules which are multi-jurisdictional and offer universal purchase (see Bryan et al. in this forum). Without such intervention the capacity of the Client–Supplier will ensure this type of Hierarchy wealth chain outruns piecemeal regulatory interventions.

A second type of Hierarchy wealth chain shares features with some characteristics of Relational wealth chains. Financial derivatives can be designed so as to alter where, when and on what definitional basis a tax charge is levied or tax credit afforded (Bryan et al. 2016; Donohue 2012; Wigan 2013). A recent hearing in the U.S. Senate investigated how two global banks, Barclays Bank PLC and Deutsche Bank AG, supplied tax efficient (and leverage enhancing) trading vehicles to hedge fund clients. Barclays sold basket options products to the hedge fund Renaissance Technologies LLC, which converted short term capital gains (subject to up to 39% tax in the USA) to long term capital gains (subject to 20% tax in the USA). The hedge fund maintained a trading account at Barclays where Barclays owned the assets and conducted the hedge fund’s trading strategies, which involved many thousands of short-term positions. The basket options account, also formally owned by Barclays, was used to conduct option trades that mirrored the trades in the brokerage account. Effectively the hedge fund was able to buy an option from Barclays on its own trading. The maintenance of equivalence between the brokerage and basket options account would require extremely close coordination between Client and Supplier, with little gap between them. The bank appointed a hedge fund partner to act as investment advisor to the trading account. In effect, this is a hedge fund inside a bank. The structure allowed the hedge fund to claim tax due at the point at which the option on the basket was exercised. As long as the option was exercised more than 12 months after its inception, the hedge fund was able to claim that the profits came from exercising the option rather than the underlying trades. Accordingly, it paid the reduced long-term capital gains tax (U.S. PSI 2014).

A modular-captive global wealth chain

A different kind of GWC can be seen in the growing market for expatriate, ‘Expat’, international banking (de Carvalho and Seabrooke 2016). This wealth chain uses both the Modular and Captive types of wealth chains. The targeted population are expatriate ‘mass affluent’,

those who can move between domestic fiscal jurisdictions and who can avoid higher tax burdens through the use of ‘offshore’ services provided by large international banks and their affiliates (Beaverstock and Hall 2016; Sharman 2012). This population is wealthy enough for financial institutions to help them minimize tax liabilities, but not sufficiently wealthy to enlist, or afford, their own autonomous trustees and wealth managers, where Client-Supplier client relationships may span generations (see Harrington 2016). Instead the ‘mass affluent’ choose different forms of offshore products via a bespoke financial institution that offers these choices and has economies of scope and scale. The presentation of Expat banking by large international banks, such as HSBC and Lloyds, assures clients that offshore banking is not illegal or dishonest and can provide significant tax advantages. The wealth chain is articulated by hosting client’s capital in a subsidiary in an ‘offshore’ jurisdiction, with access to the capital controlled by the subsidiary and parent institutions, and with the client having information and access via internet technologies. For example, HSBC Expat’s operations are organized primarily through Jersey, which is in close cooperation with the UK Financial Conduct Authority and conforms with OECD standards on international tax agreements.

This GWC is primarily Modular because what clients have access to depend on what they are investing, with a clearly demarcated decision-tree in operation for the large international financial institutions operating in this market. For example, a client with Lloyds Bank with less than £25,000–£49,000 to invest will be offered multi-currency banking and Internet and phone banking. Clients with £50,000–£249,000 are offered ‘premier’ services with a call from a Premier Relationship Manager and potential to meet with International Financial Managers to discuss investment strategies. Those with more than £250,000 to invest are provided with private banking services and a Private Banking Relationship Manager with a direct phone line and email access. Premier and private banking clients also have access to an International Tax Service that is tasked with tax optimization.

This is where this wealth chain also reflects a Captive type, since the international tax services are provided by one of the Big Four professional accountancy firms. The Big Four provide an excellent example of the Captive type of GWC. Institutional change and reform within this ‘mature organizational field’ is particularly difficult, since there is a high degree of consensus from the professionals involved on the appropriate technologies and standards for governing financial transactions (Seabrooke and Wigan 2016; Suddaby, Cooper, and Greenwood 2007). Innovation within this Captive type is through transnational professional interaction, and what is generally offered

to clients is limited by consensus among the Big Four, the lead suppliers. As such, Expat banking provides an example of how capital moves from Clients who are assessed and then streamed into an appropriate service structure, with lead Suppliers brought in when greater complexity is required.

A Market-Relational global wealth chain

A less-discussed form of Market wealth chain is the circulation of 'big bills', such as the US\$ 100 bill, the Swiss 1000 chf note, the €500 bill, etc. (Henry 2014). Large bills denominated in reserve or quasi-reserve currencies such as Singaporean dollars, Canadian dollars, Euros, and Swiss francs account for close to US\$ 2 trillion outstanding 'offshore'. This wealth, in cash form, is easily hidden, stored, and transported, and difficult to tie to a specific owner. The larger the denomination of the note the less space and weight required. Notably this phenomenon complicates the supplier base. In this case, the state is the supplier in the form of note issuing central banks, and the state is a supplier of an asset form most suitable to criminal and illegal activities. While there are legitimate reasons that large denomination bills are used, such as in markets without payment infrastructures, the majority of this cash is thought to be deployed in the pursuit of illicit activities; the arms trade, drugs, the sex trade, smuggling, etc. (Grondona et al. 2016). Large banks and international currency businesses supply large denomination bills to those lower down the chain, such as front companies and currency exchange bureaus. These notes then form the basis of a means of circulation, parallel to money in regulated circuits. Caches of large bills, sometimes amounting to millions of dollars, are located when the parallel circuit is broken. A drug deal is interrupted or boxes of cash are discovered when crossing borders. This is rare (see Ali and Palan [forthcoming](#)). The Regulator is relatively impotent until the deed is done. Of course, given political will the bills can be taken out of circulation with relative ease. In 2010 the UK ceased the sale of the €500 note.

There can also be slippage between GWC forms when regulators intervene. As J.C. Sharman (this forum) shows, in Europe, the Savings Tax Directive created a boon for Liechtenstein-based Market forms of wealth chains as it encouraged corporate and trust formation, as opposed to a previous system of individuals relying on more Relational forms of tax evasion where Liechtenstein firms provided wealth management. The 2003 European Savings Tax Directive pushed EU member states and European 'offshore' havens to supply information regarding non-resident bank interest income or impose a withholding

tax on this income and transfer the proceeds to the client's jurisdiction of residence. As the Directive only targeted individuals and not companies and trusts, Liechtenstein suppliers quickly switched to Market wealth chains to provide corporate entities to clients that required little to no coordination nor connection between Client and Supplier. Clients continued to evading taxes and hiding wealth in the name of the entity, rather than their own. More recent drives to improve information exchange through the Liechtenstein Disclosure Facility has seen a switch back to more Relational wealth chains. The Disclosure Facility enabled UK residents to regularize their affairs with UK tax authorities by declaring assets held in a Liechtenstein bank in return for much reduced penalties. Clients with hidden assets in other jurisdictions took advantage of the facility and Liechtenstein banks saw an influx of funds with Clients required to form lasting relationships with the local Suppliers that have been able to sell them a range of auxiliary services.

Moving forward on global wealth chains

In closing, our aim is to provide an original theoretical framework for understanding how GWCs are governed. We argue that an analysis of GWCs is essential for understanding the integration of production and finance. GWCs are the yin to the yang of Global Value Chains. Many value chains, which do have the potential to reduce information asymmetries and enhance development, exist alongside wealth chains that operate multi-jurisdictionally to protect and create wealth. While wealth chains can certainly be positive and boost transparency and development, often wealth is created and protected through opaque structures and secrecy. Here we argue that GWCs can be understood by the complexity of transactions, the regulatory liability implied, and the capacities of suppliers to provide certain kinds of financial instruments. We have outlined how GWCs can be seen in five types: Market, Modular, Relational, Captive, and Hierarchy. These types are often mixed as firms, groups, and individuals engage in innovative forms of multi-jurisdictional wealth creation and protection. Future research can use these types to investigate and reflect on how GWCs are articulated, including locating what kinds of actors and organizations are involved and what kind of processes permit their existence. Finally, we suggest that analyses of GWCs are essential for understanding not only how finance is changing but core changes in finance and production in modern capitalism.

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NOTES ON CONTRIBUTORS



Leonard Seabrooke is a professor in International Political Economy and Economic Sociology at the Department of Business and Politics, Copenhagen Business School, and the research professor in the Norwegian Institute of International Affairs.



Duncan Wigan is an associate professor in International Political Economy at the Department of Business and Politics, Copenhagen Business School. He is co-author, with Leonard Seabrooke, of *Global Tax Battles: The Fight to Govern Corporate and Elite Wealth* (Oxford, 2017) and editor, also with Seabrooke, of *Global Wealth Chains: Governing Assets in the World Economy* (Oxford, 2017).

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