The Governance of Global Wealth Chains

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Abstract

This introduction to the Special Issue creates a theoretical framework to explain how Global Wealth Chains 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 Global Wealth Chains 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 global value chain 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 Global Wealth Chains intersect with value chains and real economies, and provides three brief case studies on offshore shell companies, family property trusts, and global-scale corporate tax avoidance.

Introduction

The last decades have witnessed a proliferation of global value chains as industrial capabilities have spread to the developing world and firms have re-organized accordingly, disaggregating and allocating activities across jurisdictions to maximize competitive advantage and market position. Indeed, some commentators have gone as far as to suggest that we are witnessing the era of the post-national or decentred multinational corporation (Desai 2010; cf. Rafferty et al. this issue). In these terms, the multinational company (MNC) has transcended a dominant national imaginary of economic life. 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 asset, costs, profits and liabilities across borders has increased exponentially. One result of these, for us, integrated processes is a notable disjuncture between territorially fixed fiscal and intrinsically mobile financial systems. The mobility of capital and its ability to switch asset identity and jurisdictional home has raised the spectre of a permanent schism between the
location of value creation and the geographical allocation of profits and wealth. These processes unfold through a variety of network forms ranging from market interactions supplying off the shelf tax products for the individual consumer to highly complex financial structures produced on a bespoke basis for large financial and non-financial firms. The purpose of this article is to generate a theoretical framework for better understanding the governance and articulation of what we call ‘global wealth chains’ (Gereffi, Humphrey and Sturgeon 2005). Global Wealth Chains (GWCs) are defined as linked forms of capital seeking to avoid accountability during processes of pecuniary wealth creation. By accountability we mean fiscal claims, legal obligations, or regulatory oversight. We seek to provide the most simple means of delineating forms of GWC to enable scholars and policy makers alike to intervene in their operations, evolution and analytical appropriation.

The impacts emanating from the operation and evolution of GWCs are pervasive, not only effecting the competitive position of firms within industries and specific value chains, but circumscribing the distribution of wealth arising from increasing globalized economic activities. The capacity to utilize wealth chains will directly impact opportunities for country level development and who bears the fiscal burden across and within both developed and developing countries. For International Political Economy wealth chains refract on-going challenges to extant conceptions of relations between states and markets and force us to confront the specificity of contemporary globalizing capital itself. Our hope is that by providing a means of categorizing and specifying wealth chains this research can also feed into urgent unilateral and multilateral policy efforts to ameliorate the disjuncture between value creation and allocation and the on-going project of value chain research to identify obstacles to, and opportunities for upgrading, learning and development within the contemporary 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, literature on finance and law in institutional economics, and work from economic sociology on network dynamics within markets, product selection and the status of those engaged in these markets. Our argument here is that the work on value chains is useful in identifying processes in market, that the work on finance and law highlights incentives to maximize profit, and that economic sociology tells us how actors select particular products.
The literature on global value chains and how they are governed 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, asset specificity - the capacity to replicate particular assets at low cost or protect them through premium added value (Gereffi, Humphrey and Sturgeon 2005). The global value chains 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 - characterised (as here) as ‘market’, ‘modular’, ‘relational’, ‘captive’, and ‘hierarchy’ - are important in determining the potential for genuine economic development, fostering human capital, and reducing trade barriers. This pro-development agenda has been taken up by a number of international economic organizations, with the World Bank, OECD, and others all promoting the notion of global value chains. The WTO, in particular, has placed the analysis of global value chains at the centre of its research strategy, calling for policymakers and scholars to identify production processes and their relationship to trade to reduce information asymmetries and encourage growth and development. link to inequality agenda.

We suggest that what we call wealth chains are the yin to the yang of value chains. While actors in value chains share an interest in transparency and coordination, those in wealth chains thrive on rendering movements through the chain opaque. Wealth chains hide, obscure and relocate wealth to the extent that they break loose from the location of value creation and heighten 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 et al. 2005, Ponte and Sturgeon 2014). While the literature on value chains 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 Coe et al. 2012; Williams 2000; Milberg 2008). Of course scholars of value chains have a different empirical focus, but our claim here is that value chains must be understood alongside wealth chains. The rationale for doing so is straightforward: understanding the dynamics behind Multinational Corporations’ (MNCs) global strategies and the geography of offshore finance, and, in turn, the opportunities and constraints these may generate in
developed and developing countries, is incomplete if the legal and financial aspects which condition these dynamics and opportunities are neglected.

Furthermore, the early promises of value chains are being confronted by empirical developments. Value chain research has been premised on the disaggregation of production processes across space. We suggest that in the era of the ‘decentred corporation’ (Desai 2011) research should incorporate the legal and financial disaggregation of the firm. As capital itself finds increasingly abstract expression in the form of intellectual property and financial innovations our imaginaries of the corporation and its operations requires some revisiting. It is already apparent that the contemporary MNC has transcended the institutional complex of the Fordist era. It also seems the the MNC is now risk managed as an integrated productive and financial entity (see Rafferty et al. this collection). However, our analytical tools for capturing these developments have not kept up. What we need is a better understanding of how financial and legal innovations are articulated through wealth chains in ways that harm value chains and development objectives. We also need to understand how wealth chains are maintained through professional and social networks (Harrington 2012), including how they are grounded.

Studies of finance and law provide an immediate insight into the intellectual sources of those providing global wealth chains. There is a general silence on the offshore world in economics, including within this literature, which stays firmly within the boundaries of established national and international law rather than the grey zones frequently seen in the offshore world. 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) and a commitment to the assertion that financial development is a positive determinant of growth (Allen and Gale 1994). 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 analysis of how change in markets really occurs (a review of disputes over innovation in economics vs. financial economics can be found in Engelen et al. 2008). For example, insurance to protect against loss in the value of 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 this activity differ (Merton 1995: 467). In effect 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. In consequence 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 innovation in finance then has served to widen what is perceived as a disjuncture between the mobile and the fixed; here, in the form of the fiscal apparatus of the state.

Importantly for the study of wealth chains, the logical consequence of argument from those considering the relationship between finance, law and institutions is rapidly evolving forms of institutional differentiation to provide similar functions to different clients, including geopolitical relocation to institutional conditions that maximize efficiencies. So while the more institutionalist literature does not 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 old 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. Commons elaborated his conception of ‘reasonable value’ on the basis of the formation of the large US trusts at the end of the 19th century (1924: 165; 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, or its incorporeal property, or debts due. Business valuation rested instead largely upon ‘intangible property’. 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, can only be imputed to the owners control over the industry, or, in the first instance, to ‘Carnegie’s threatening position in the market’ (Commons 1934: 649-650). Both are disingenuously named ‘goodwill’. 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 labour 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 worth, is generated by the interaction between the activity, the title and the sovereign. Work within International Political Economy on what is now widely termed the ‘offshore world’ (Palan 2003) has emphasized the constitutive significance of bifurcated sovereignty. States bifurcate law so that one sets of rules applies to a domestic sphere and another to a virtual sphere, or more prosaically, to internationally mobile people, titles and assets. The bifurcation of the transaction and the bifurcation of sovereignty are inextricably entwined. This is this institutional basis of the concept of wealth chains. Wealth chains flourish precisely because of capital’s dual spheres and how this bifurcation enables capital to effectively arbitrage and valorise sovereign bifurcation.

We also suggest that scholarship in economic sociology and what is known as ‘social studies of finance’ is important for explaining how global wealth chains are articulated and governed. This is particularly the case for understanding what types of information are important for clients and suppliers in wealth chains and how types of information reflect different relationships. As with value chain analysis and work on financial innovation, economy sociology literature has not really engaged the offshore world, but contains important lessons if we are to construct an analytical toolkit for investigating global wealth chains.

One key reason why the offshore world has been overlooked in this literature (for example, the showcase collected volume in this field, Knorr Cetina and Preda 2005, mentions offshore only once) is that many of these studies are situated in the trading room or ‘nerve centers’ in financial institutions. MacKenzie’s (2006) work, for example, has demonstrated how, when enacted, financial models act as ‘engines’ rather than ‘cameras’ in shaping rather than reflecting markets. Those applying particular financial theorems then engage in ‘performativity’ that directs markets in particular ways, heightening uncertainties while those doing the work are too blinded by faith to recognize them (ibid. 2011). Others have recently discussed the 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). Such work has also investigated the complex forms of communication and coordination between arbitrage traders who are
locating opportunities from their desks in Manhattan investment banks (Stark 2009). For obvious reasons of secrecy, access to the inner dealings of suppliers operating in offshore jurisdictions have been harder to accomplish. Still, this work provides important insights into why there is convergence on the provision of certain products for wealth chains.

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 the structure of the market more generally. 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: 72-79). In such networks those who can demonstrate high status and behave aggressively tend to do better.

Work on status signals in markets has demonstrated that information asymmetries are important in both egocentric and altercentric forms (Podolny 2005). Egocentric uncertainty about an actor’s capacity to provide services or products about a certain quality, while altercentric uncertainty 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 from a 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, or who are not attractive to suppliers, 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 safe and less likely to come under international 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 which 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 hemophilic information is particularly important among trust networks, including some of the forms of wealth chains we describe below.

As recognized in IPE scholarship, it is not only access to information that counts, but understanding what the information means that provided the key problem for
governance (de Goede 2001). 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, and, recently, experimental methods that provide hard evidence on how suppliers positively respond to information requests that infringe national and international financial regulations (Findley, Nielson and Sharman 2013). We embrace all of these as means to investigate information asymmetries in wealth chains.

THE GOVERNANCE OF GLOBAL WEALTH CHAINS

We suggest that the literature on the ‘offshore world’ can be combined with the insights noted in the previous section on global value chains, finance and law, and economic sociology to propose a typology of global wealth chains. In creating this typology 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 markets between firms and hierarchies within firms there are also network relationships they characterize as modular, relational, and captive (Gereffi, Humphrey and Sturgeon 2005: 83-4). The five basic types of value chain governance are Markets, Modular, Relational, Captive, and Hierarchy. Market value chains refers 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 there are complex interactions and high levels of specificity in what is being supplied. Captive value chains refers 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, including the active interest from policymakers in applying it to the international trading regime, as well as using it to inform discussions about corporate social responsibility.

We adapt these five types of governing value chains to our interest on global wealth chains. Our types of governance for global wealth chains 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. The types of governance in global wealth chains are:

1. Markets. Market linkages occur through arms length relationships with low complexity. Dependence between the transactors is low and a client can switch supplier at little or low cost. The market form depicts the exchange of products that are easily accessed from multiple suppliers who compete on price in a crowded competitive environment. Products exchanged are often ‘off-the-shelf’. Market
forms of wealth chain governance rely heavily on legal frameworks, particularly for rules concerning incorporation, corporate personality, and access to client information.

2. **Modular wealth chains.** Suppliers in these chains offer more bespoke services to clients but within financial and legal environments that are well-established and restrict the amount of flexibility given to both supplier and client. Products involve complex information but can be exchanged with little explicit coordination, and so, like simple market exchange, the cost of switching to new partners remains low.

2. **Relational wealth chains.** This form of governance involved the exchange of complex tacit information that requires high levels of explicit coordination, which makes the costs of switching to new suppliers high. Relational wealth chains are highly dependent on strong trust relationships that are managed by prestige and status interactions. Suppliers in relational chains are often concentrated in communities that have a tradition for providing ‘offshore’ services.

3. **Captive wealth chains.** These wealth chains occur when smaller suppliers are dependent on larger suppliers, who are therefore ‘captive’ due to the high cost of switching. Lead suppliers, be they large international banks or accounting giants, have a great degree of control over smaller suppliers and their clients, in part by dominating the the legal apparatus and financial technology.

5. **Hierarchy.** This form of governance is characterized by vertical integration and the in-house management of capital allocation and use. A high degree of managerial control is exercised by senior management in the firm, such as a Chief Financial Officer. While investments and flows of capital may be spatially widely dispersed control goes back to the top.
Figure 1: Types of Governance in Global Wealth Chains

Figure 2 provides a series of illustrations on information asymmetries between Suppliers, Clients, and Regulators in the governance of global wealth chains. 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 the Cayman Islands. The Client and Supplier both have a good understanding of what is being provided by the product and required information about both parties (in many cases the Supplier has very little information who the client actually is, see Findley, Nielson, and Sharman, 2013). 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 international law that permits pervasive offshore activity.

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 wealth chains are more popular, as with expatriate communities (see de Carvalho and Seabrooke, this collection), and easier to trace. For example, an expatriate who holds a HSBC offshore account can use this product to avoid taxes but there is quite a lot of information known between this Client, the Supplier (HSBC), and the Regulator, be they the authorities in the offshore jurisdiction or in the country where the Client is resident. Given the lack of information asymmetries here the lack of forward moving regulation on these wealth chains comes from a lack of political will rather than from capacity, 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).

Figure 2: Information Asymmetries in the Governance of Global Wealth Chains

\[ S = \text{Supplier} \quad C = \text{Client} \quad R = \text{Regulator} \]
(a) Market

(b) Modular

(c) Relational

(d) Captive

(e) Hierarchy
In Relational wealth chains, depicted in Figure 2(c), the greatest information asymmetry is between the Supplier and the Client, since the point of the relationship between the Supplier and the Client is to ensure that the Client’s assets cannot be touched by the Regulator, even if the Client comes under scrutiny. A good example here is the surgeon who has an Asset Protection Trust in the Cook Islands, to ensure that if he is sued or a divorce occurs then the assets cannot be taken by the Regulator, even when the Regulator has some information.

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 Ernst and Young (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 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.

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’, reducing information asymmetries. 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. An example here is Apple’s fiscal model, or that adopted by Starbucks. We provide details on both below.

### Hierarchy

One firm that has accumulated large amounts of intangible capital is Apple Inc. While the origins of Apple can be traced back to 1976, it was really from the early 2000s, thanks to a series of highly successful and innovative mass market computing and communication technology products that the company grew in spectacular fashion. As Lazonick et. al. (2013, 4) recently noted, ‘It is fair to say that Apple (for now at least) ... has gone further than any other company in integrating information and communication technologies for use in everyday life’. As a result, Apple is now one of the most famous and currently the largest corporation by market value on the planet.
Apple Inc. has also attracted sustained attention about its global assembly and tax planning activities. In May 2013, for instance, following investigations into Microsoft[1] and Hewlett Packard[2], the US 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 $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 $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)[3]. The effective tax rate on Apple’s international earnings was 2.5%, and estimates of lost tax revenue range considerably, with some suggesting $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 U.S. (U.S. PSI 2013). The remainder of this section discusses Apple’s international organization as a way of illustrating the links between IP and finance.

Spinning out the corporation – The case of Apple
Following two years of billion dollar losses in 1996 and 1997, Apple undertook a major global restructuring. Manufacturing was outsourced from Cork, Ireland and Colorado and California in the U.S. to third party manufacturers, while global treasury functions were concentrated in Ireland. This marked the onset of a strategy, which deploys global production networks, the inherent mobility of intangible assets, the capacity to duplicate assets across legally differentiated space and loopholes in fiscal systems and between them to maximize after tax profits. Bifurcation and replication have been the operational principles here.

Apple Operations International (AOI) and Apple Sales International (ASI) take economic ownership of a large share of Apple’s IP via a cost and revenue sharing arrangement, wherein for a contribution towards the development of IP the purchaser gains economic rights accruing to the revenue accruing to 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 IP to Ireland. A licensing agreement on the other hand means that the IP investment and return on investment remain in the U.S. (Sullivan 2013). Richard Harvey, former senior adviser to the U.S. Inland 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 significant manufacturing activity in Ireland. What is especially noteworthy about that subsidiary company, however, is that to date AOI has not declared tax residency in any jurisdiction. Thus despite an income estimated at about $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 the fact that Ireland establishes tax residency on the basis of the location of management and control while the U.S. bases determination of tax residency on place of incorporation. Hence, much like Google above, AOI by virtue of the arbitrage offered by different juridical bases of tax and corporate nationality is effectively not tax resident anywhere. For the U.S., AOI is Irish, for Ireland it is a U.S. entity. In this way, AOI operates in the spread between these different national jurisdictions, and arbitrages that spread.
Ireland it is a U.S. entity. In this way, AOI operates in the spread between these different national jurisdictions, and arbitrages that spread.

Similarly, the second Irish affiliate, ASI was established as the repository of Apple’s IP to manage sales to Europe and Asia and relations with Chinese third party manufacturers, particularly Hon Hai Precision (who operate in China under the name Foxconn, and are the key node in Apple’s product supply chain). Over the four years

1. Apple divides its sales operations, one headquartered in the U.S., serving the Americas, one in Ireland, serving the rest of the world. IP rights are split between the U.S. and Ireland. The legal ownership of the IP remains in the U.S where it is afforded strong protection. A cost sharing arrangement gives Apple Sales International (ASI) economic rights to revenue streams from the IP worldwide.
2. Apple Operations International (AOI) is an Irish resident holding company sitting at the top of Apple’s extensive offshore structure. It is not tax resident anywhere. Ireland establishes tax residency on the basis of the location of management and control. The U.S. establishes tax residency on the basis of place of incorporation. AOI received $30 billion between 2009 and 2011 from affiliates lower in its offshore structure. It has no employees and has not paid income tax to any government for 5 years.
3. ASI manages sales to Europe and Asia and relations with third party manufacturers, particularly Hon Hai Precision in China. ASI buys manufactured products from the Chinese manufacturer and sells them on to affiliates worldwide at a large markup. The goods do not enter Ireland but are shipped directly from the manufacturer to sales subsidiaries or customers worldwide. The ‘transfer’ of the goods occurs only in terms of legal title. ASI is similarly resident nowhere for tax purposes. ASI is subject to a negotiated tax rate in Ireland of 2% or less. Between 2009 and 2012 ASI received U.S.$14 billion in sales revenue from affiliates worldwide.
4. Both ASI and AOI are controlled and managed from the U.S. and in 2011 95% of Apple’s research and development was conducted in the U.S.
5. Foreign Based Company Sales Income rules are intended to prevent U.S. companies from setting up offshore affiliates to buy goods and sell them to related entities in other countries to concentrate income in low or no tax environments. Apple used check the box rules so that the affiliates below AOI in the offshore structure who sold the products were treated as part of the Irish subsidiary. Consequently, AOI was considered to be receiving active, rather than passive income, which would be subject to U.S. tax under Subpart F rules. Similarily sales between ASI and worldwide affiliates were not treated as sales at all since they were construed to occur within the same company.
6. Foreign Holding Company Income rules are intended to tax passive income, such as dividends and royalties made between related subsidiaries. Again, by deploying check the box rules these payments effectively disappear as no income transfer is construed to take place within what now appears as a single entity. From 2009 to 2012 AOI received U.S.$29.9 billion in income almost all in dividends issued by lower tier affiliates worldwide. (Source U.S. PSI 2013)
from 2009 ASI had an income of $74 billion. ASI is also tax resident of no country. American authorities regard the entities as Irish, while under common law criteria of management and control the entities are not tax resident in Ireland, where they pay very little in tax. The long-standing research and development CSA between Apple Inc. and ASI transfers the development rights to Apple products outside the Americas to the Irish subsidiary. Hon Hai is in turn a Taiwanese firm registered in the Caymans – the unbundling of assets and revenues not only transcends borders, it crosses or effectively dissolves the finance-industry divide.

Apple’s profits increased from 20% in 2007 and 45% in 2011 (U.S. PSI 2013). Over the same period, the profits of Apple’s first tier electronics supplier, Hon Hai, steadily declined. Unbundling of production and trade (and associated IP management) are here accompanied by, ‘enclave industrialization’ (Baldwin 2011) wherein tier one suppliers in global commodity chains find little opportunity for upgrading, learning or value appropriation. Every iPhone and iPad sold in the United States increases the U.S. trade deficit with China by $229 and $275 respectively. However, only $10 is captured in China by the assembly of these products (Kraemer et al. 2011). While this gap is partly a result of IP management and that, ‘The iPhone example also highlights that, beyond trade flows, more information on royalty payments and income flows is required to answer the question of who benefits from trade’ (Miroudot and Yamana 2013) it is also a function of Apple’s isolation of its contract assembler in an extended, largely Asian, supply chain. Japan, Taiwan and South Korea capture 10% of profits on the iPad (Kraemer et al. 2011).

One of Apple’s key suppliers is its main rival, Samsung. The relationship between the firms clearly demonstrates the significance of unbundling across corporate functions. Samsung supplies the flash memory, music and operating software, working memory and application processor for the iPhone, which account for 26% of all component costs (The Economist 2011). Simultaneously Apple and Samsung have been in Asian, European and American courts fighting over intellectual property rights with both companies accusing the other of infringing core smartphone and tablet patents (Decker 2011; Reuters 2013). In the era of asset abstraction and the unbundled corporation it is perhaps not aberrant when different aspects of the firm, in this case production and R&D, act in a contradictory fashion.

On March 19, 2012 Apple announced a $10bn share repurchase programme and plans to begin a quarterly dividend at $2.65 without bringing any of the approximately $102bn the company holds offshore back to the United States. Peter Oppenheimer, Apple’s CFO, cited U.S. tax laws and the fact that repatriating Apple’s overseas cash would result in a ‘significant tax consequences’ as reasons for the domestic funding of these programmes (Jaworski 2012)(4). At the same time Apple
raised $17bn, the largest corporate issuance on record, with maturities ranging from three years, yielding 0.45%, and thirty years, yielding 3.85%. Apple was able to satisfy investors by improving its return on assets and shareholders by returning a small portion of profits on the basis of its’ unbundled structure. Apple can borrow in U.S. markets at astonishingly low rates on the basis of global profits which are a function of successful unbundling and which under current law cannot return to the U.S. without incurring a tax charge at a headline rate of 35%. The principle of bifurcation applies here. While Apple is a borrower in the U.S. it is a creditor in the rest of the world. Legally Apple is its myriad separate entities. Economically, as reflected in its borrowing price, it is one economic entity.

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<th>Global Taxes Paid by ASI, 2009-2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Pre-Tax Earnings</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>$22 billion</td>
</tr>
<tr>
<td>Global Tax</td>
</tr>
<tr>
<td>Tax Rate</td>
</tr>
</tbody>
</table>

Source: Apple Consolidating Financial Statements, APL-FSI-000130-232 [Sealed Exhibit]