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Corporate Tax Reform and “Value Creation”: Towards Unfettered Diagonal Re-allocation across the Global Inequality Chain

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Abstract: Discussion of corporate tax reform loosely uses concepts like “value creation” and “economic substance” as a basis for systematic departures from the tax outcomes that would otherwise eventuate from computational artifacts based on price, but in fact mainstream economics does not have a theory of value creation as distinct from computational artifacts based on price. Corporate tax reform discourse is therefore an unacknowledged exercise in heterodox value theory. This article deploys global value chain theory to question a key assumption in that exercise; the assumption that while intra-group pricing may be modified or ignored for the purposes of reallocating the corporate tax base between jurisdictions for corporate tax purposes, prices arrived at between entities not under common control are sacrosanct. The article proceeds to deploy an expanded version of the global value chain analytic, the “global inequality chain”, to (i) investigate this question using a schematic illustrative case study based around Amazon’s UK/Luxembourg structuring, and (ii) to develop the beginnings of a concept of “unitary taxation by formulary apportionment of the entire value chain”, which would enable unfettered “diagonal” re-allocations across the space which the global inequality chain describes.

Keywords: corporate tax, global value chains, value theory, global wealth chains, unitary taxation by formulary apportionment

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Introduction

The system for taxing the profits arising from the business activities of companies in transnational groups is based on two interacting concepts: the separate entity approach, and the arm's length principle. Broadly, the idea is that the members of the group are taxed independently of each other, and intra-group dealings are treated for tax purposes as taking place at "arm's length" prices. There is of course no international tax jurisdiction imposing this system, but it constitutes an international consensus supported by the work of multilateral institutions such as the OECD and the UN; most states tax companies as separate entities and deem intra-group transactions to have taken place at arm's length prices, and tax authorities and tax professionals internationally have regard to the OECD's guidelines on how the arm's length principle should operate in practice. In principle this system should allocate the tax base represented by the group's business profits rationally, if not equitably, between jurisdictions. In practice, however, it does not work at all well for a number of reasons, and transnational groups are able to shift profits to low-tax jurisdictions artificially and consequently reduce their overall rate of tax on group profits. Since 2013 the OECD's G20-mandated Base Erosion and Profit Shifting (BEPS) process has been addressing this problem in great detail, and has been developing recommendations for improving the system.

The BEPS process has been clear from the start that its purpose is “to realign taxation with economic substance and value creation”.¹ “Value creation”, however, is not a phrase that has any meaning in modern economics. “Value” for an economist of today’s mainstream orthodoxy is subjective desire conceptualised in money terms; amounts a buyer might be willing to pay; amounts a seller might be willing to accept; amounts actually realised in exchange. It is not something brought into objective being when goods are produced or services performed. Broadly-speaking if amounts a seller realises in exchange exceed the seller’s costs then the seller has made money, but the real-world processes falling between incurring costs and making sales are not understood as productive of something called “value” of which price is an ontologically subordinate measure. On the contrary, “value” insofar as it is brought into being by business processes in the form of “value added” is existentially dependent on the computational artifact of prices realised in exchange less costs (or, alternatively, profits plus wages). And so if a real world business process does not make money, today’s mainstream economics does not provide the conceptual tools to characterise it as a process which nonetheless “creates value”. By the same token if a process makes money, today’s mainstream economics does not provide the conceptual tools to refute the proposition that it “creates value”.

Whatever else it is, BEPS is therefore an exercise in heterodox understandings of value. This is in contrast to the arm’s length principle, which merely hypothesises that subjective desire as between buyer and seller regarding price will result in a price having an arbitrary relation to the price imposed between associated enterprises. The arm’s length principle does not go so far as to posit, as BEPS does, that the difference between actual price and price for tax purposes is between price and “value” conceived as something which is actually created by real-world business processes. It is disappointing therefore that there is no statement anywhere in the thousands of pages of BEPS materials of how “value creation” is to be understood on a theoretical level. While it is clear that the BEPS outputs encode an outlook on how it is that profits arise through real-world processes, it is far from clear that reverse-engineering those outputs on a theoretical level would yield something approximating to a formal theory of value. The idea of “value creation” appears to amount to little more than the common sense intuition that value is in some sense brought into being when goods are produced and services

1 OECD (2013a).

performed, rather than a coherent alternative to a theory of value existentially dependent on price.

BEPS is not unique in being embarrassed about value theory; corporate tax reform discourse generally shies away from it. Take, for example, the much more radical reform route of unitary taxation by formulary apportionment. This proposal, which was ruled out by the BEPS project *ab initio* as a solution to the defects in the global corporate tax system,² involves adopting group profitability as a starting point and distributing it between the jurisdictions in which group entities operate not according to the value-adding functions of those individual entities as supposedly reflected in purportedly arm's-length intra-group pricing but according to a group-wide formula. The formula variables – headcount; assets; payroll &c.³ – are a smörgåsbord from which to choose as and when the nations of the world come to drop the arm's-length principle altogether and negotiate who the winners and losers will be upon a transition to unitary taxation by formulary apportionment. They do not, however, in any way reflect a formal theory of how value is created.

There is no great mystery as to why there should be this reticence about how value is to be theorised in corporate tax reform discourse. It is because the way the corporate tax reform question has been framed (in effect, “how can profitability be more realistically allocated within the group for tax purposes?”) yields a fundamentally compromised hybrid between an approach to value which is existentially dependent on price and an approach to value which sees it as being produced by real-world processes. The tax base is required to depart from price-based computational artifacts at the level of corporate entities within the group on the basis that “value” is something actually created by real-world processes, but (crucially) the amount of “value creation” to be so reallocated within the group is fixed at the amount of profit within the group as a whole – a computational artifact. A corporate group's profits might be pure economic rent, without any useful goods or services of any kind being produced or performed in any group entity, but for the purposes of the parameters of the current corporate tax reform debate those profits would nonetheless be treated as the proceeds of “value creation” and reallocated between entities within the group for tax purposes on the basis of real-world phenomena.

A theory of value aiming to provide a basis for the proper allocation of profits between corporate entities for tax purposes would not be constrained in this way; it would entertain the possibility that value might be created by

² OECD (2013b).

³ Cobham and Loretz (2014).

entities not under common control within the group in question; entities failing to realise in full by way of profits the value that they are creating because of rent-extraction elsewhere in the value chain. It is to value chain theory to which we therefore now turn.

Global value chains

The global value chain (GVC) is a well-established tool within the economic geography and sociology of global production. Broadly, it places in view a chain of market actors, one actor's output being another's input until a consumer product is purchased at the end of the chain. Inherent in the idea of the global value chain is that it operates across national borders. As a general rule processes such as raw materials extraction, agriculture and standardised manufacture are seen to take place at or towards the beginning of the chain in low- to middle-income countries and consumer retail at the end of the chain generally takes place where there is substantial purchasing power. Crucially, there is no presumption that any actor in the chain is under formal common control with any other; portions of any given chain may represent the internal processes of a multinational corporate group, while many links in the chain will be between entities which are, on a formal level at least, independent market actors.

A key feature of the GVC literature for present purposes is the attention that it gives to the control exercised by certain participants in the chain over other participants without formal mechanisms of legal control in place such as those which characterise membership of a corporate group: what the literature calls “chain governance”.⁴ The firms exercising control through these governance mechanisms are referred to as lead firms.⁵ Inter-firm relations of control tend to be exercised by lead firms located in nodes of a chain typified by concentration, centralisation and associated high barriers to entry.⁶ Lead firms occupy quasi-monopsonistic or quasi-monopolistic positions in the chain (for example through control of access to markets, resources or technologies, or by means of brand positioning, or by virtue of the chain being structured around some kind of “choke point” that gives rise to a tendency towards monopoly or monopsony) and are therefore positioned to exercise control over other participants in the

⁴ Gibbon, Bair, and Ponte (2008).

⁵ Gibbon et al. (2008).

⁶ Nolan, Zhang, and Liu (2008).

chain contractually or institutionally (either directly in the terms of exchange with other participants in the chain, or indirectly through, for example, systems of standards). The GVC model does not, therefore, operate a binary of wholly independent market actors on the one hand and sub-contractors on the other but, rather, sees these relations as falling on a spectrum of governance relations. These mechanisms of control can go directly to price, but they can also serve, for example, to pass on risks or costs to other members of the chain.⁷ It is for reasons such as these that GVC scholars often characterise certain participants in GVCs as extracting rent from other participants in the chain.⁸

Readers unfamiliar with critical GVC scholarship may nonetheless be familiar with this dynamic as it arises within domestic national value chains, from (for example) public debate surrounding large chain supermarkets and their impact on farmers' profits.

The phenomenon of rent extraction in GVCs clearly has serious implications for some of the concepts deployed in international corporate tax. First, it further undermines on a theoretical level the already-much-criticised⁹ arm's-length principle. If market pricing itself does not reflect value creation because of rent-extraction attributable to value chain positioning, imposing market pricing for tax purposes will clearly not have the effect that value creation is reflected in the profits of the entities in question: what will be reflected (even if the state of the market is accurately reproduced in the deemed pricing) will be market phenomena attributable to mechanisms of value capture rather than value creation.

But the implications are more serious even than that. If part of the value added in a multinational group comes from forcing down the prices of squeezed suppliers further up the chain, it seems perverse or even positively unjust to say that the "value creation" is being effected in whatever jurisdiction the mechanisms of market domination are located: as a matter of economic substance the value is clearly being created by the suppliers and extracted from them by means of that dominance so as to be realised by the lead firm. It would follow that a corporate tax base which is truly aligned for tax purposes with "value creation" or "economic substance" might find itself in a different jurisdiction from any of the jurisdictions in which the group realising the profits has any kind of corporate footprint.

⁷ There is an extensive literature on these and related phenomena; by way of illustration, see Froud, Johal, Leaver, and Williams (2014).

⁸ See for example Kaplinsky (2013).

⁹ Picciotto (2013).

Case study: Amazon.co.uk

In order to explore what this means specifically in contrast both to the existing system, as inflected by BEPS, and to unitary taxation by formulary apportionment, let us suppose a hugely simplified two-node value chain comprising a company manufacturing clothing in, say, Bangladesh, and a transnational group retailing (among other things) clothing in the UK via the internet. Let us further adopt by way of an assumption, based on the value chain theory adverted to above, that Bangladeshi manufacturers take a hit in terms of wholesale price in order for their products to reach the consumer market via the internet retailer operating in the UK; in other words that the internet retailer’s dominant position in its market enables it (one way or another; the specific mechanism is not important for present purposes) to extract economic rent from its suppliers. This two-node value chain is illustrated in Figure 1. To emphasise, our illustrative value chain is highly schematic and it is intended to depict rent-extraction in value chains at the highest possible level of abstraction; in reality such chains often involve multiple entities and complex contractual arrangements, even just to get manufactured goods to the retail node. In addition, it should be recalled that the notion of the GVC to be found in the literature referred to above goes beyond relations with subcontractors: an independent party and a sub-contractor are both within the retailer’s value chain if they are supplying to it.

Figure 1: A two-node apparel value chain featuring rent-extraction.

Let us now suppose that the internet retailer in question has precisely the same UK tax structuring as Amazon circa 2012. Amazon is the number one internet retailer in the UK,¹⁰ and indeed the world. While it is famously the case that Amazon does not tend to distribute profits to its shareholders because it

¹⁰ IMRG.org (2015).

prioritises growing its business,¹¹ it can only reinvest profits that are not taxed, and so to the extent it avoids tax, its growth is effectively subsidised by the public exchequers of the jurisdictions where it would otherwise be paying that tax. The fact that it makes no profits should not, therefore, be treated as indicating that its tax structuring is fiscally inconsequential; as we shall see, a lot of revenue is potentially at stake.

Amazon's former UK tax footprint is usefully summarised in the following extract from the Parliamentary Accounts Committee's 2012/13 report on Tax Avoidance by Multinational Companies:

Amazon has a reported turnover of £207 million for 2011 for its UK company (Amazon.co.uk), on which it has shown a tax expense of only £1.8 million, however it shows a European-wide turnover of €9.1 billion for its Luxembourg based company (Amazon EU Sarl) and a tax of €8.2 million. Amazon.co.uk is a service company in the UK providing services to Amazon EU Sarl for which it receives payment. That company is owned by a holding company, which is a subsidiary of Amazon's group companies. Amazon subsequently provided a copy of the unaudited accounts for Amazon Europe Holding Technologies S.C.S for 2011 showing a profit of €301.8 million and no tax payments. Amazon also provided information showing that for 2011, £3.35 billion of sales were from the UK, 25% of all international sales outside the USA. Yet Amazon has over 15,000 staff in the UK, invoices UK customers from the UK, hires UK staff in the UK, has inventory physically in the UK for UK customers and to all intents and purposes has the majority of its economic activity in the UK, rather than in Luxembourg, but pays virtually no corporation tax in the UK.¹²

The arrangement behind this tax footprint was widely publicised, in particular by investigative journalist Tom Bergin of Reuters,¹³ and it was also considered in the UK High Court in a case only tangentially related to tax, *Cosmetic Warriors Ltd & Anor v amazon.co.uk Ltd & Anor* [2014] EWHC 181 (Ch). As the judge in that case explained:

The facts here are that the second Defendant, a Luxembourg company, operates the website at amazon.co.uk whereas the first Defendant, a UK company, operates fulfilment centres in various parts of the UK, through which goods sold by the website are dispatched to customers, and provides logistic services to the second Defendant. The first Defendant also leases offices in Berkshire and provides marketing, legal, accounting and other services which support the operation of the second Defendant's web business.

In other words the Luxembourg entity (LuxCo) conducted the business of selling stuff to UK customers, and the UK entity (UKCo) was a service-provider to the

¹¹ See for example Clarke and Young (2013).

¹² Public Accounts Committee, *HM Revenue and Customs: Annual Report and Accounts* (2012).

¹³ See for example Bergin (2013).

Luxembourg entity. This contractual separation of functions between UKCo and LuxCo was wholly unreflective of commercial reality. We know this because the claimant in the *Cosmetic Warriors* case pleaded that Amazon’s UK operations, which included the tortious acts in question in the case, were jointly entered into by UKCo and LuxCo. Amazon vigorously asserted the separation of the two entities’ functions, but the High Court was far from persuaded:

Having heard the evidence I have no doubt that the first and second Defendants have joined together and agreed to work together in the furtherance of a common plan which includes doing the acts which are complained of by the Claimants in these proceedings. I regard the protestations that the first Defendant is not involved at all or is merely facilitating the doing of the infringing acts as distinct from sufficiently participating in them as being wholly unreal and divorced from the commercial reality of the situation. In my judgment the allegation of joint tortfeasance succeeds.

Why would Amazon institute a contractual separation of functions between UKCo and LuxCo that was “wholly unreal and divorced from the commercial reality of the situation”? The answer is it was trying to get the profits of its UK business to arise in LuxCo rather than UKCo by virtue of the LuxCo’s role in concluding contracts with customers, and it was trying to get the operations performed by UKCo within paragraph 3 of Article V of the UK-Luxembourg double tax treaty. Where a UK operation of a Luxembourg company only conducts activities within certain exemptions in that paragraph for preparatory or auxiliary activities, the UK operation will not constitute a “permanent establishment” of the Luxembourg company and by reference to the treaty (as implemented for the purposes of UK domestic law) the UK abjures taxing rights over the profits of that operation.

The reason Amazon was so keen to have its UK profits arise in Luxembourg for tax purposes rather than the UK was because Luxembourg has been in the habit of granting to Luxembourg-resident members of transnational corporate groups favourable rulings to assist their group tax structuring.¹⁴ In Amazon’s case a favourable ruling was obtained in relation to the pricing of a deductible royalty payable by LuxCo to a Luxembourg limited liability partnership also within the Amazon group structure (LuxLLP). Since LuxLLP is “transparent” for Luxembourg tax purposes (meaning that the royalty is treated as arising to its members, which are resident outside the jurisdiction and are therefore not taxable in Luxembourg in respect of that income), the overall effect of the ruling was that only a small residual profit after deduction of the royalty was taxable in Luxembourg.¹⁵

¹⁴ Marian (2016).

¹⁵ State aid SA.38944 (2014/C) – Luxembourg, Brussels, 7 October 2014 C (2014) 7156 final.

Three further components require to be added in order to complete the picture of our schematic internet retailer's tax structuring for the purposes of an expanded version of the two-node value chain depicted above. First, so as not to leave the tax structuring hanging in mid-air, we shall complete the chain of ownership above the Luxembourg entities with a "group parent" entity. Details of Amazon's structuring at this higher level are in fact in the public domain¹⁶ but the increasing complexity is subject to diminishing analytical returns for present purposes; hence the stand-in single notional parent entity. Secondly, a locally-resident owner of the Bangladesh-resident manufacturing company is included so that both nodes have a superstructure showing where the profit component of value added accumulates. Thirdly, workers are depicted in connection with the UK and Bangladesh companies, so as to show where the wages component of value added goes. The two-node value chain expanded to include UK/Luxembourg tax structuring based on Amazon's, and in addition these other elements, is illustrated in Figure 2.

Figure 2: The same value chain with the internet retailer's tax structuring and other exit routes for value added from the chain also depicted.

¹⁶ Davies and Marks (2016).

Before addressing what the impact of different conceptions of “value creation” might be in these circumstances, it is worth considering what has actually happened in practice to this tax structuring, as deployed by Amazon, in the context of the widespread hardening of attitudes to corporate tax avoidance of which the BEPS project forms part.

In the UK, ahead of the completion of the BEPS project, a unilateral measure against tax avoidance by transnational groups called the “diverted profits tax” was enacted,¹⁷ which attracted significant censure from the US government.¹⁸ The diverted profits tax attracts a punitive rate of 25 %, the gap between which and the headline rate of UK corporation tax is of course increasing as the latter drops year on year. On the face of it the tax would appear to apply to the profits shifted to Luxembourg by virtue of Amazon’s UK/Luxembourg structuring, and sure enough not long after Amazon announced that it would begin booking UK sales in the UK rather than Luxembourg,¹⁹ no doubt so as to avoid this punitive charge. Amazon did, however, later suggest that deductible expenses in the UK might wipe out any UK taxable profit.²⁰

Meanwhile Luxembourg itself is under attack from the European Commission. In a move attracting significant censure from the US government,²¹ the Commission is proceeding against Luxembourg on the basis that the favourable tax rulings constitute, in the case of Amazon alongside certain other instances, illegal state aid.²² In the event that the outcome is in accordance with the Commission’s preliminary findings, which are (in essence) that the principles of arm’s-length pricing were not deployed in Luxembourg’s granting of the ruling in relation to the royalty paid between LuxCo and LuxLLP, Amazon will have to pay into the Luxembourg exchequer corporate tax which Luxembourg does not want to collect.

The US government’s concerns are that this Luxembourg tax will then be creditable against US tax, with the consequence that the US taxpayer effectively foots the bill. In the meantime, the arrangements whereby intellectual property was transferred into LuxLLP at the outset (and in relation to which presumably LuxCo is paying its disputed royalties) are the subject of on-going tax litigation in the United States.²³ Essentially, the US Internal Revenue Service’s case is that

¹⁷ Sections 77 to 116 Finance Act 2015.

¹⁸ Sheppard and Johnstone (2015).

¹⁹ Bowers (2015).

²⁰ Hiscott (2015).

²¹ Houlder and Oliver (2015).

²² State aid SA.38944 (2014/C) – Luxembourg, Brussels, 7 October 2014 *C(2014) 7156 final*, available at http://ec.europa.eu/competition/state_aid/cases/254685/254685_1614265_70_2.pdf

²³ Davies and Marks (2016).

too little was paid for the intellectual property, according to a conventional arm's-length pricing analysis.²⁴

To be clear, none of these attacks on Amazon's Luxembourg arrangements is directly referable to the BEPS process. More or less simultaneously with them, however, the OECD has (a) included plans to deal with artificially avoided permanent establishment status by means of amendments to their model tax treaty (and to associated guidance) in the BEPS outcomes,²⁵ and (b) published a series of amendments to their all-important transfer pricing guidelines expressly intended to better align the outcome of transfer pricing exercises with "value creation".²⁶ The application of prospective changes in tax treaties and international tax norms to a historical arrangement is purely hypothetical. The best that can therefore be said is that the contractual separation of functions between UKCo and LuxCo may not have been effective to avoid permanent establishment status on UKCo's part (assuming that they were so effective in the first place, which looks questionable in view of the findings in the *Cosmetic Warriors* case) if the UK-Luxembourg double tax treaty had read as the OECD intends that treaties should read in the future. Likewise, to the extent that the royalty paid by LuxCo to LuxLLP was excessive, it may be that it would appear even more excessive if the approach in the amended guidelines were adopted.

Each of the interventions in the Amazon case by those various authorities is consistent with a narrative whereby the tax outcome is intended to align with where value creation, as effected by some specific process or group of business processes, is situated. So, for example, the UK's intervention is consistent with a narrative whereby the allegedly preparatory/auxiliary activities undertaken by UKCo are in fact substantive business processes *creating* value, value which is merely *realised* in LuxCo on a computational level. Likewise the European Commission's intervention is consistent with a narrative whereby the activities of LuxCo and UKCo taken together are substantive business processes creating value out of all proportion to the residual profit left in LuxCo after it has paid its royalty to LuxLLP. Again, the US's intervention is consistent with a narrative whereby value creation in the form of the production of intellectual property took place in the US in excess of that which was rewarded upon the transfer of that property to LuxLLP. And each of these interventions is intended to yield an outcome whereby the jurisdiction where the alleged value creation is situated is rewarded (albeit in Luxembourg's case unwillingly) with more tax.

²⁴ A formal "Trial Memorandum" is available at <http://static.guim.co.uk/ni/1455711788380/IRS-Trial-Memorandum.pdf>

²⁵ OECD (2015a).

²⁶ OECD (2015b).

These narratives would, however, necessarily be bogus, viewed in the context of our schematic value chain, for the simple reason that there is no intervention available by reference to which Bangladesh would be able to assert that the value captured on a computational level in LuxLLP was being created not just by the business processes in LuxCo itself, and the business processes in UKCo, and the intellectual property in LuxLLP, but also by the manufacturing taking place in the Bangladesh-resident company. The mechanisms for adjusting tax outcomes that apply to our case study recognise the porosity of the entities within a corporate group for the purposes of locating value creation for tax purposes, but (notwithstanding everything we know about the effect of lead firms on the markets with which they interface along value chains) the boundaries of the corporate group continue to be sacrosanct.

The pricing between lead firms and their suppliers is, as we saw when we looked at value chain theory, just as arbitrary relative to real-world value creation as the pricing between corporate group members, and yet that former pricing is treated as determinative of where value creation is situated between entities not under common control while the latter pricing is readily seen as susceptible to intervention for tax purposes so as to yield improved tax outcomes as between the jurisdictions where entities under common control are situated. On the assumption that value creation (whatever it is) creates at least theoretically (if not empirically) determinate quantities of value, the attribution of value creation to the UK, Luxembourg and the US in our case study must in aggregate (if all the available value creation is attributed) constitute an over-attribution because of the under-attribution to Bangladesh.

The more traditional complaint regarding the kinds of interventions described above is that, with autonomous sovereign entities each claiming portions of value creation for themselves (or, in Luxembourg’s case, effectively having it claimed for them) on an uncoordinated basis, and with some of them (as is illustrated by Luxembourg in our case study) deliberately underclaiming, the outcome is unsystematic and liable to tend to a combination of double-taxation, double-non-taxation, or (as is illustrated by the possible impact of the EU state aid proceedings in relation to Amazon on the US taxpayer) what can only be described as chaos. Depending on political persuasion the answer to this complaint is usually either that we should stop trying to tax companies altogether, or that corporate groups should be taxed on a unitary basis (i. e. the group pays tax on its group profits rather than each entity being an independent taxpayer), and the tax base should be allocated between jurisdictions by means of a formula.

This proposal of unitary taxation by formulary apportionment, however, suffers from precisely the same defect as we have identified in connection with the existing chaotic system. Unitary taxation by formulary apportionment

would, in our case study, allocate the retailer's group profits between the US, Luxembourg and the UK, and (assuming the formula to reflect real-world features of their business such as payroll, sales, tangible assets &c) that allocation could plausibly be said to reflect value creation in some sort of "common sense" (*i. e.* untheorised) understanding, but it offers no way of allocating any of the retailer group's profits to Bangladesh.

Of course our case study discloses no corporate tax footprint of any kind in Bangladesh on the internet retailer's part, and so on any conventional understanding of how corporate profits are taxed, there would be no basis for allocating any of its profits to Bangladesh for tax purposes. But if the allocation of corporate profits to jurisdictions for tax purposes is to be conceptualised as an allocation rewarding value creation in that jurisdiction, then that allocation should in principle reflect the possibility that there might more value created by manufacturers of clothing than is reflected in the prices at which that clothing is exported from the countries where it is manufactured, in the same way as there might be more value created by UKCo's activities than is reflected in the fee paid to it by LuxCo.

Unitary taxation of the entire value chain

Under a system which recognised that lead firm profitability might in part reflect not "value creation" but value extraction at the expense of other chain participants (for example by squeezing the prices of those selling into the wholesale market like the Bangladesh entity), the total profits of the group *and* of the Bangladesh entity would constitute the tax base, and they would be reallocated for tax purposes between all of the jurisdictions in question including Bangladesh. We are therefore, in effect, talking about unitary taxation by formulary apportionment of the entire value chain. Under such a system the profit-squeezing suffered by low-income jurisdiction firms by virtue of their value chain positioning would not result in a concomitant revenue-squeezing on the part of low-income-jurisdiction exchequers, and by the same token the exchequers of high-income countries would not be rewarded for presiding over a global economy in which mechanisms of market domination are more profitable than actual production.

In order to conceptualise unitary taxation by formulary apportionment of the entire value chain, it is helpful to adopt a schematic analytic which resembles the global value chain but which is expanded to reflect the tax dimension. The Amazon-based case study anatomised above illustrates the kind of expansion required, insofar as LuxCo, LuxLLP and their parent group (and indeed the owner of the Bangladesh company) belong not in the value chain as such, but in what is coming to be known as the "wealth chain".

Global wealth chains are a new concept which is being developed by political economists Leonard Seabrooke and Duncan Wigan.²⁷ These chains are analogous to global value chains, but instead of tracking commodities from raw materials to consumption, they track money from raw profitability to beneficial ownership of passive wealth. Key topics in global wealth chain analysis are secrecy, abusive tax behaviour, and the use of “offshore”, although onshore tax breaks benefiting wealth form part of the picture. As with global value chain analysis, global wealth chain analysis seeks to investigate information asymmetries between actors along the chain, and to map governance structures, but the concern is with wealth eluding tax and regulatory control, rather than commodities reaching consumers.

It may be useful to think of global wealth chains as existing orthogonally to global value chains: as the chain of material production and distribution passes horizontally from raw materials to consumption adding value on the way, it moves through different regions reflecting the ultimate beneficial ownership of the firms adding value, and profitability rises vertically out of the value chain up a series of wealth chains of one kind or another. Adding tax to the picture, it is clear that each jurisdiction through which the value chain passes is required by the effect of wealth chains to fund itself predominantly out of labour’s portion of value added (by means of tax on wages and, increasingly,²⁸ value added tax on wage goods) rather than the portion that accrues to asset-owners. It is for this reason, and the consequent systemic tendency towards regressive taxation and underfunded states worldwide, that the combined two-dimensional analytic comprising the global value chain on the horizontal axis and global wealth chains rising up the vertical axis has been labeled elsewhere by the author the “global inequality chain”.²⁹

A schematic global inequality chain is depicted in Figure 3 below. Raw materials start on the left and travel to the right. Money starts on the right and travels back down the chain, either splitting upwards towards capital or downwards towards labour, as the value added along the chain is shared out. The portion that accrues to asset owners (depicted in the figure as accruing to “capital” in contrast to wages which accrue to labour) does its best to escape tax one way or another up the wealth chains that are (presumptively) draped like a curtain across the length of the value chain. In the schematic figure there is a single wealth chain rising from two market actors in different jurisdictions.

²⁷ Seabrooke and Wigan (2014).

²⁸ OECD (2014).

²⁹ Quentin & Campling (forthcoming).

Figure 3: The “global inequality chain”.

This reflects the fact that two market actors can be under common ownership and/or control, for example in the case of a multinational corporate group.

The global inequality chain analytic allows us to generalise the tax base reallocation dynamics we identified in our case study. An anti-avoidance intervention such as a transfer pricing adjustment (assuming it takes place in connection with a low-tax jurisdiction entity inserted for tax structuring purposes) *vertically* reallocates the tax base for tax purposes, back down the wealth chain and into a jurisdiction through which the actual value chain is passing. Unitary taxation of transnational groups by formulary apportionment goes further; it can also reallocate the tax base *horizontally* between jurisdictions.

Crucially, however, such horizontal movements are arbitrarily bounded by the intersections between multiple jurisdictions and unitary corporate groups. To illustrate using the schematic global value chain in Figure 3, the only horizontal movement available under unitary taxation by formulary apportionment is the reallocation of the corporate tax base between the two jurisdictions where the multinational group has subsidiaries. Where control of cross-border pricing is exercised through (for example) market dominance rather than formal

ownership, unitary taxation by formulary apportionment as ordinarily conceived is barred from horizontally reallocating the corporate tax base for tax purposes. Only some kind of unitary taxation of the entire value chain can reallocate the tax base horizontally in such a way that is not limited by the arbitrary obstacle of a computational artifact based on price. In summary, the global inequality chain shows how very far we are from being positioned to realise the purported BEPS goal of aligning corporate tax outcomes with “value creation”; unitary taxation of transnational corporate groups by formulary apportionment would be just the first step.

Given that unitary taxation of transnational corporate groups by formulary apportionment was (as noted above) ruled out *ab initio* in the BEPS process, it may be premature to ask what unitary taxation of the entire value chain would look like in practice, but a few observations may be made. First, the key practical impediment is very similar to the impediment in the way of an optimal implementation of unitary taxation of transnational corporate groups by formulary apportionment: the huge political hurdle in coming to a global agreement as to how the corporate tax base should be defined and the formula by which it is to be apportioned between jurisdictions. Secondly, there would need to be an internationally agreed mechanism for passing tax collected in one jurisdiction to the exchequer of another jurisdiction where the formula says it should be allocated (this problem does not arise if the subject of the unitary taxation is the corporate group because in that case there may be expected to be a taxable presence of one kind or another in every jurisdiction to which the groups profits might be allocated).³⁰

Thirdly, and on a more positive note, it would not actually be necessary to identify specific value chains, in the same way that it is not necessary for value added tax to identify specific chains in order to tax value as it is added along the chain. In effect, operating formulary apportionment across the entirety of global corporate taxation is the same as unitary taxation by formulary apportionment of each value chain. What is therefore required is a taxable profit computation for each stand-alone company or corporate group (which does not represent a significant additional administrative burden as compared to the existing system,

30 The suggestion of one jurisdiction collecting another's tax is generally met by foreboding references to the “revenue rule” whereby it is a common law rule in certain jurisdictions that states do not enforce each other's tax law. Clearly the collection mechanism in contemplation could run foul of that rule in those jurisdictions absent implementing legislation, but implementing legislation would in any event be necessary, and there is no part of the “revenue rule” jurisprudence (in the UK at least) which suggests that the rule cannot (as is in the nature of common law rules) be abrogated by statute.

except insofar as concerns companies in tax havens) and a return for each company or group in relation to the apportionment factors. Tax would be collected from each company or group in accordance with its taxable profit, and the revenue would be distributed between jurisdictions in proportion to each jurisdiction's aggregate of the apportionment factors reported within it. The only major conceptual wrinkle is with inputs from sole traders or unincorporated family producers; their value creation will be to some extent realised within the system (in the same way that suppliers' value creation is to some extent realised within lead firms), and such inputs would need to impact upon apportionment factors if the system is to be fair in respect of jurisdictions where the phenomenon of unincorporated producers supplying inputs into global value chains is more prevalent.

It should be noted that the idea of unitary taxation by formulary apportionment of the entire GVC does not arise in a complete vacuum as regards policy prescriptions for improving outcomes horizontally along the global inequality chain. The assumption appears to be, however, that it is only necessary for tax reform to bring about vertical movements down the wealth chains (or, at most, vertical movements plus diagonal movements which are constrained in their horizontal extent by the boundaries of corporate groups), because the substantive horizontal redistribution will be a result of firms in low-income countries capturing increased value out of the GVC by "upgrading" their roles within it (for example by introducing an original design function or adding packaging services).³¹ It is unclear, however, whether "upgrading" can take place systematically on a global scale; critical GVC scholarship suggests GVCs are as likely to reproduce structural inequalities as they are to eliminate them through opportunities for "upgrading".³² Alternatively, it may be suggested that better regulation of global markets will yield more equitable outcomes horizontally along the inequality chain; again, however, there is little cause for optimism that this is the actual overall direction of travel.

Stepping back from these two approaches, in any event, it seems that they are predicated on a two-movement conception of (1) improving value capture locally, and (2) improving tax outcomes locally. It is not at all clear that there is any positive rationale for this two-movement process and indeed general principles of parsimony would militate against it – certainly it is only as strong as its weakest component. The diagonal movements proposed in the form of unitary taxation by formulary apportionment of the entire GVC, by contrast, yield a

³¹ See for example OECD (2013c).

³² Quentin and Campling (forthcoming).

direct route towards the widely stated objective of aligning tax outcomes as between jurisdictions with the actual location of “value creation”. It leaves the question of which asset-owners get to accrue the *net* profits to the imbalances and vicissitudes of the markets and relationships on which they rely, rather than deferring the equitable allocation of tax revenues until those markets and relationships are fair. There is, after all, no particular need to enrich the asset-owning elites of low-income countries, still less to make that enrichment a precondition of equitable allocation of tax revenues to the locations where value is actually created. Funding the huge worldwide public expenditure required to tackle such issues as climate change, and the fact that over a billion people still do not have access to a flushing toilet, is significantly more urgent.

Concluding remarks

Two key points emerging from the discussion in this article are offered by way of conclusion:

First, in discussions of corporate tax reform, the profits of individual entities may be allocated to other group entities in order to better reflect which jurisdiction “value creation” takes place in, but the overall profitability of the group is (in direct contrast) not susceptible to allocation elsewhere. As “value creation” is neither recognised as a meaningful concept in mainstream economics nor theorised for the purposes of these discussions, there exists no theoretical basis for operating such a distinction. Indeed the literature on “rent extraction” and other forms of disproportionate value capture within global value chains makes clear that boundaries between separately-owned entities are as porous as regards “value creation” (insofar as substantive productive activity takes place somewhere other than where arithmetical value added arises) as boundaries within groups.

Second, the foregoing would suggest that the ultimate direction of travel for corporate tax reform should not be towards unitary taxation by formulary apportionment of corporate groups, but towards unitary taxation by formulary apportionment of entire value chains. Such a system would reallocate revenues back along value chains to low income countries where they are badly needed, rather than rewarding already wealthy countries for facilitating disproportionate value capture out of the chain. In order to explore this concept, it is necessary to expand the standard conception of the global value chain so as to include tax phenomena. This article suggests using the “global inequality chain”, which is a two dimensional analytic deploying a global value chain as the horizontal axis and

global wealth chains as the vertical axis. True alignment of revenues with value creation could occur without reliance on the realisation of wider (and arguable over-optimistic) “development” goals if unfettered diagonal reallocations across the space described by the global inequality chain are made possible.

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