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Alternatives to the Separate Entity / Arm's Length Principle for Taxation of Multinational Enterprises

This paper has been written by Tommaso Faccio and Sol Picciotto, with comments and contributions from Anne Brockmeyer, Kimberly Clausing, Michael Durst, Cliff Fleming, David S. Miller and Danuše Nerudová

SUMMARY

- Corporation tax avoidance by multinational enterprises (MNEs) is facilitated by the international tax rules, which have been little changed since they were devised over 80 years ago. MNEs are able to exploit this system to minimise their tax liability, by shifting profits to countries with low or zero tax rates, undermining the tax base of those where real activities take place. Such techniques for tax avoidance helped create the tax haven and offshore secrecy system, undermining the effectiveness and legitimacy of taxation, benefiting MNEs against domestic firms, and hitting government revenues worldwide, especially in developing countries.
- The ICRICT Declaration pointed out that this is due mainly to a fundamental flaw in the rules, the separate entity principle, which treats the various affiliates of a MNE as if they were independent of each other. This allows, and indeed encourages, MNEs to devise complex corporate group structures, taking advantage of exemptions, preferences and loopholes to reduce their overall tax paid. The Declaration provides an alternative: multinationals should be taxed as single firms in accordance with the economic reality that they operate as integrated firms under centralised direction.
- The G20 world leaders in 2013 gave their support to the OECD project on Base Erosion and Profit Shifting (BEPS), calling for reform of the rules to ensure that MNEs would be taxed 'where economic activities occur and value is created'. This implies treating MNEs as unitary firms. The reports from the BEPS project published in October 2015 included some provisions which move towards a unitary approach. In particular, a global template has been established for country-by-country reports (CbCRs) as well as more detailed transfer pricing documentation. This will for the first time enable tax authorities in each country to have an overview of each of the largest MNEs worldwide, as well as details of its profits, taxes due and paid, and employees in each country. Other BEPS project reports also adopted a unitary approach especially to the apportionment of costs.
- Regrettably, however, under the BEPS project proposals the allocation of profits would depend on transfer pricing rules, which still start from the independent entity principle and transactional analysis. This depends on ad hoc, subjective and discretionary evaluations of each taxpayer, requiring significant resources of skilled staff, and maintains the incentive for multinationals to create ever more complex group structures to minimise taxes, exploiting the various definitions of residence of legal persons and of the source of income. The revised Transfer Pricing Guidelines have become even more complex and difficult to apply, adding to the compliance costs for both MNEs and tax administrations, and will create a further growth in conflicts.

Tommaso Faccio, Head of Secretariat at ICRICT and Lecturer in Accounting at Nottingham University Business School
Sol Picciotto, emeritus professor of law at Lancaster University and coordinator of the BEPS Monitoring Group
Anne Brockmeyer, public finance economist at the World Bank
Kimberly Clausing, Thormund Miller and Walter Mintz Professor of Economics at Reed College
Michael Durst, Senior Fellow at ICTD
Cliff Fleming, Ernest L. Wilkinson Chair and Professor of Law at BYU Law
David S. Miller, tax partner - Proskauer
Danuše Nerudová, Professor at Mendel University in Brno

- However, work is still continuing in the BEPS project which could lead to a new approach. This includes proposals relating to the profit split method, as well as the apportionment of profits to permanent establishments. Furthermore, the work of the Task Force on the Digital Economy could lead to more radical proposals, with an interim report due in 2018 and a final one in 2020. At the same time, countries are adopting unilateral measures, such as the diverted profits tax in the UK (emulated in Australia and New Zealand), and an equalisation levy on internet advertising in India.
- Several alternative approaches are available which would treat multinationals as unitary firms, as well as some simplified methods which may depart from the separate entity approach.
- Under residence-based worldwide taxation (RBWT), the home country of a MNE applies home country tax directly on a current basis on the consolidated worldwide profits of a corporate group, but with full credit for foreign taxes paid. RBWT gives the firm's home country the residual right to tax the firm, but the initial right is given to the source country, so it could strengthen taxation where activities take place. It would remove the incentives both for the MNE to shift profits and for countries to offer incentives to attract inward investment, since any reduction of source taxation would lead to an equivalent increase of tax in the home country. However, it poses problems of definition of the ultimate country of residence and of how to prevent relocations, and gives the residence country the power to determine what foreign taxes are creditable. Although it could be adopted unilaterally, indeed countries have long applied regimes to tax controlled foreign corporations (CFCs), pressures of tax competition have in practice led to these becoming very limited or abandoned in recent years.
- Economists have also put forward the concept of a Destination-Based Cash Flow Tax (DBCFT), which was much debated in the US early in 2017. A DBCFT is a tax on profits, but economically equivalent to a Value Added Tax (VAT) with a payroll tax reduction, since it allows full and immediate deduction of both labour costs and other cash expenses, including investments. Applied with a 'border tax adjustment' (i.e. allowing deduction of domestic but not foreign costs) it would be regarded as trade distorting, and so conflict with world trade rules. Hence, it would lead to retaliation and could trigger a trade war, as well as causing large currency devaluations.
- With a DBCFT, internal transfers within a corporate group are ignored and the tax base is both defined and apportioned in terms of sales to third parties. Allocating the corporate tax base according to the location of final consumers has some economic attractions. Notably, corporations could make investment and employment decisions without being affected by the varying tax rates of the jurisdictions where the investments would be made or workers are employed. On the other hand, it raises concerns about the distributional effects on tax revenue for countries with relatively small consumer markets.
- Thirdly, there has been long experience in some federal states of unitary taxation with formulary apportionment. Under such a system, the profits of a MNE are consolidated and apportioned to individual jurisdictions on the basis of factors (e.g. employees, sales, and perhaps physical assets) that reflect the MNE's real activity in each. This ensures a direct link between a company's actual business presence in a country and its contribution through taxes towards the collective services and infrastructure that facilitate that activity. Work was initiated over 15 years ago within the EU for such a system, described as the common consolidated corporate tax base (CCCTB). A revised version of the proposal published by the Commission in 2016 is currently under evaluation by the European Parliament, and would then proceed to the Council of the member states.
- Historically, particularly in the United States, state apportionment formulas have applied three factors: employee payroll costs, sales and physical assets, equally weighted under the `Massachusetts' formula, and a similar method was proposed for the CCCTB. In choosing a suitable formula, states would need

to take into account interacting factors: not only the tax revenue it would produce, but also the effects on inward investment. Unlike the situation under current international tax rules, these decisions would concern real and not paper activities. The revenue-investment trade-off could create a basis for convergence or agreement between states in the choice of apportionment factors, since this choice is not a zero-sum game. Some criticise the inclusion of assets in the formula, since they are hard to value, create opportunities for avoidance, and are much less relevant in today's economy. More technically challenging would be the formulation of standards for group consolidated tax accounts, since international financial reporting standards are unsuitable for tax purposes. The work done on the CCCTB could be helpful, although under the CCCTB the adjustments to financial accounts are done at national level and then aggregated, instead of beginning from global consolidated accounts, which would be needed for a truly global system.

- RBWT could be adopted within plausible interpretations of existing tax treaty rules, whilst DBCFT and unitary taxation with formulary apportionment would require override (and hence renegotiation) of treaties. All involve collective action and hence require political leadership, to overcome the pressures of tax competition and short-termism. Some combinations of the three approaches are possible, and transitional measures could be adopted, for example building on the profit split method.
- Other alternatives are available, and some are currently being used especially by some developing countries. These alternatives can be introduced unilaterally and may be more appropriate, especially for developing countries, which find it hard to apply complex methods requiring considerable skill and judgment, and for which suitable comparables are simply not available.
- Brazil's approach to transfer pricing rules has aimed at administrative simplicity, by applying legislatively fixed margins for gross profits and mark-ups. These do not require detailed fact-based functional analysis and the use of specific comparables, so are not regarded as following the arm's length principle. Nevertheless, the application of these rules over the years seems to have been successful, at least in ensuring ease of administration because fixed margins are simpler to regulate, follow and inspect. Brazil's experience has received surprisingly little detailed attention, and may come under pressure if Brazil were to pursue the possibility of OECD membership.
- Other methods are aimed at ensuring that a minimum level of profits is retained by the local affiliate, regardless of intra-group pricing. A proposal has been made for a modified version of the Transactional Net Margin Method (TNMM), which would require each local affiliate of a MNE to earn a profit margin in proportion to that of the corporate group as a whole. The benchmark proposed is 25 per cent of the group's earnings before tax, suggested as appropriate based on experience of attempting to apply the TNMM to a wide range of distributors, manufacturers and service providers. Adopting this approach would prevent the very low levels of income that under current practice tend to be ascribed to 'risk-stripped' subsidiaries set up by BEPS planning. A variation of this approach might be regarded as adhering to OECD guidelines, for example by applying the approach as a safe harbour.
- With a similar aim of preventing the erosion of the corporate tax base, a number of developing countries have introduced "minimum tax schemes". This aims at the problem that firms can evade a (conventional corporate) profit tax by either under-reporting sales or over-reporting costs. If over-reporting costs is relatively easier than under-reporting sales, it may make sense to tax an alternative base that is harder to evade than profits. While various alternative tax bases are used, the simplest and most common base for the minimum tax is sales. A concern with minimum tax schemes is that they introduce a production inefficiency because firms with the same level of sales but different profit rates might face similar tax liabilities. This may discourage investment by relatively more productive firms. At the same time, there is clear evidence that these systems improve tax compliance in low compliance contexts.

INTRODUCTION

The ICRICT Declaration of June 2015 pointed out that the fundamental flaw in existing tax rules is their reliance on the separate entity approach and the arm's length principle (ICRICT 2015, p.6). This means that each country is supposed to tax those parts of a MNE within its jurisdiction as if they were independent entities. The Declaration called for a new approach, which would treat multinational enterprises (MNEs) in accordance with the economic reality that they operate as integrated firms under centralised direction.

Such a new approach was implicit in the mandate given by the G20 world leaders for the OECD project on Base Erosion and Profit Shifting (BEPS), when they called for reform of international tax rules so that MNEs could be taxed 'where economic activities occur and value is created'. This clearly states that profits and tax should be aligned with real economic activity. Regrettably, however, the OECD's BEPS Action Plan excluded consideration of formulary apportionment, which would be the most comprehensive form of unitary taxation.

Nevertheless, some of the measures put forward in the BEPS project reports delivered in October 2015[1] did move towards a unitary approach, although others reinforced the separate entity principle. These measures will be summarised in Section 1 of this Briefing.

Several alternative approaches are available, either as unitary taxation approaches whereby multinationals are treated as unitary firms or other alternatives which depart from the separate entity approach to taxation.

Section 2 will outline the three main approaches to unitary taxation, while section 3 will explore some more immediate alternatives, especially for developing countries.

The purpose of this Briefing is to outline and examine these alternatives, to contribute to the continuing debate on reform of the international tax system.

1. THE LIMITATIONS OF CURRENT RULES AND REFORM ATTEMPTS

1.1 Hesitant moves towards a unitary approach

The major achievement of the BEPS project is the formulation of agreed templates for country-by-country reports (CbCRs) and for transfer pricing documentation. These will, for the first time, provide all interested tax authorities with a clear overview of MNEs as a whole, as well as details of the relationships between the different parts. The scheme takes effect as a chapter of the OECD *Transfer Pricing Guidelines* (OECD 2017), which are applied in practice even by countries which are not OECD members. Hence, it establishes a global standard which countries can adopt and implement in binding local law. OECD countries have moved quickly to do so, and developing countries should follow suit.

CbCRs will be required only for the largest MNEs (turnover higher than 750m euros), at least until the scheme is reviewed in 2020. Also, they are supposed to be delivered to the home country tax authorities, and shared with others subject to confidentiality and appropriate use protections. Unfortunately, these arrangements create unnecessary obstacles, especially for developing countries. Publication would be a far easier and better solution, and may be the eventual outcome.[2] Availability of the reports will allow tax authorities to evaluate MNEs as unitary firms, but the scheme insists that they should be used only for risk evaluation, and not as a basis for formulary apportionment.

In contrast to the CbCR, the Master File for transfer pricing documentation should be delivered to all relevant tax authorities directly, together with a specific country Local File. Also, these can be required from any firm with a taxable presence in more than one country; no threshold has been specified, although exemption for small firms is recommended. These reports will provide significant detail facilitating audit, and all countries should ensure that they have legislation in place which enables their tax authority to obtain this information.

Unitary approaches to apportionment were recommended by some BEPS reports, but of costs not profits. Companies themselves favour apportionment of joint and overhead costs, to ensure that such costs can be deducted somewhere. The BEPS proposals included adoption of a simplified method for pooling and allocating central service costs within a corporate group.[3] However, many tax administrations are reluctant to allow deductions for such charges, rightly considering that they can be used to undermine the tax base in source countries. Hence, the BEPS Actions 8-10 proposals on this point are limited to low value-adding services, and states may specify a threshold. It is also suggested that a profit element or mark-up could be included, trying to uphold the separate-entity fiction.

An important departure from the independent entity principle came in the proposals on limitation of interest deductions. The initial draft suggested a limit based on apportioning the group's consolidated net costs of interest paid to third parties by the MNE as a whole, in proportion to each affiliate's earnings before interest, tax, depreciation and amortisation (EBITDA). This was explicitly presented as not an arm's length rule.[4] However, the final report recommends a fixed cap of between 10-30 per cent of EBITDA, although combined with a group ratio rule, at the taxpayer's option.

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[1] Available at http://www.oecd.org/tax/beps-2015-final-reports.htm

[2] Momentum for public CbCR is growing, especially in the EU, where it has been proposed as a corporate disclosure rather than as a tax measure. However, there has been strong opposition to this by many MNEs, especially in the US. The strict confidentiality which has been insisted upon for these reports will also greatly hinder research both on the extent of the success of the BEPS project, and the design of improvements.

[3] Through revisions to chapter VII of the Transfer Pricing Guidelines (TPGs), in the BEPS Report on Actions 8-10.

[4] Discussion draft on Action 4, December 2014, paras. 21-24.

The inappropriateness of a one-size-fits-all fixed cap is evident from data put forward by business groups themselves. A survey for the period 2009-2013 showed wide variations in the debt ratio between economic sectors and even different firms, and revealed that 55-61 per cent of non-financial MNEs had net consolidated interest expense below 10 per cent of EBITDA, while 78-83 per cent had a ratio below 30 per cent.[5] A fixed cap of 30 per cent is evidently far too high.

Strong rules on limiting interest deductions could go a long way to ending BEPS. A combination of a low fixed cap and a group ratio rule would be a considerable improvement on methods still used by many, especially developing, countries, such as thin capitalisation rules. It would still involve some significant problems, especially the definition of interest. However, OECD countries, under the pressures of tax competition, generally are opting for the 30% cap,[6] and it would be difficult for other countries to diverge.

Regrettably also, the BEPS project had insufficient time to consider how to limit other types of deduction which erode the source tax base, such as fees and royalties for intellectual property rights. A more comprehensive approach to limit the effect of base erosion and profit shifting is suggested by Michael Durst, who has put forward a modified version of the transactional net margin method (Durst 2016), which is outlined in section 3.2 below.

Ensuring taxation of a group's worldwide profits could also be achieved by stronger rules on controlled foreign corporations (CFCs). Full-inclusion CFC rules would in effect treat a corporate group as a unitary firm, applying residence-based worldwide taxation, discussed in more detail in section 2.1 below. However, the final BEPS report on CFCs makes only cautious recommendations, remaining ambivalent about whether the main aim is to preserve the tax claims of the parent's home country or those of source jurisdictions, and emphasising the need to balance ensuring taxation with preserving 'competitiveness'. This is reflected in particular by the report's recommendation that CFC rules should apply only to subsidiaries which are subject to an effective tax rate 'meaningfully lower' than that in the parent's country. This gives a green light for countries to reduce their tax rates. Unfortunately, adoption of such weak CFC rules will continue to encourage competition between countries and motivate MNEs to shift profits.

Some measures, although relatively minor, are proposed to combat exploitation of the separate entity principle by fragmenting functions and assigning them to different entities in a group. Tax advisers have for some years been devising schemes for corporate restructuring of supply chain management to reduce liability to tax and other forms of regulation. Such structures have enabled a company such as Amazon to book sales to an affiliate in Luxembourg which has paid low taxes, while separate affiliates in each country dealing with parcel delivery and customer relations declared low levels of profit attributable to those activities. Similarly, Google has been booking its sales of advertising to an affiliate in Ireland, while it often has staff employed by local subsidiaries dealing with marketing, and in the UK also has substantial research and development activities (Bergin 2013, Public Accounts Committee 2016).

The current rules on taxable presence require a permanent establishment (PE), a fixed physical presence for six or twelve months. However, the rules in the OECD model treaty exclude from that definition activities

[5] See data in the survey done by PwC for the Business and Industry Advisory Group (BIAC) of the OECD: Comments received on Public Discussion Draft BEPS Action 4: Interest Deductions and Other Financial Payments, Part 1, p.136, available at <http://www.oecd.org/tax/public-comments-action-4-interest-deductions-other-financial-payments.htm>. The analysis was of public companies in Standard & Poor's GlobalVantage database, with over 20,000 entries.

[6] As in the EU Anti-Tax Avoidance Directive (ATAD) 2016/1164, article 4.

such as warehousing if they are merely preparatory or auxiliary to sales. The changes to article 5 in the model conventions[7] would remove this exemption if they 'constitute complementary functions that are part of a cohesive business operation' carried out by the MNE through other entities in that country. Yet, activities such as warehousing would still be considered to be separate from sales. Deeming that it constitutes a PE still leaves open the question of what profit should be attributable to it.[8] Another recommendation under Action 7 slightly narrows the scope for contracts to be booked outside the country, by allowing that a PE can be deemed to exist if the enterprise has an entity or agent there which 'habitually plays a principal role leading to the conclusion' of the contracts. It is not clear whether this would affect companies such as Google, since the marketing activities could be organised so that they do not directly involve conclusion of contracts. Indeed, this seems to have been the conclusion of the investigation of Google in the UK, which resulted in a settlement that has been sharply criticised (Public Accounts Committee 2016). Even if the sales contracts were considered to be concluded locally,[9] that activity would be regarded as separate from operating the search engine, and the activity of managing sales may be regarded as attracting low levels of profit.

These modest and incremental changes will further complicate international tax rules, especially as they will be adopted selectively even by OECD countries,[10] so considerable variations will remain. Most of the complexities would be swept away if a unitary approach were adopted.

1.2 Attribution of profits: transfer pricing and functional analysis

The greatest reluctance to abandon the independent entity principle is seen when it comes to the allocation of profits. Three of the fifteen BEPS Actions dealt with transfer pricing, and the reports on these have resulted in a substantial rewriting of the OECD *Transfer Pricing Guidelines* (TPGs), expanding them from 370 to 600 pages. The TPGs are important, because they are applied in practice in countries around the

[7] The proposals in the BEPS project reports which entailed changes to tax treaties were formulated in relation to the OECD model; and a draft of the revised model was issued in June 2017. The UN Committee of Tax Experts agreed revisions its own model in April 2017 which assimilated these changes. However, to speed up the process of revision of the network of bilateral treaties, under BEPS Action 15 a Multilateral Instrument (MLI) has been prepared by an Ad Hoc Group of states, and was opened for all states to join in January 2017. So far 70 states have signed (not including the US), but they have made many reservations, so unless these are withdrawn the MLI will fail to establish a harmonisation of basic provisions especially on treaty abuse.

[8] The proposed revision to para. 22 of the Commentary to article 5 states: 'Where, for example, an enterprise of State R maintains in State S a very large warehouse in which a significant number of employees work for the main purpose of storing and delivering goods owned by the enterprise that the enterprise sells online to customers in State S, paragraph 4 [the exemption] will not apply to that warehouse since the storage and delivery activities that are performed through that warehouse, which represents an important asset and requires a number of employees, constitute an essential part of the enterprise's sale/distribution business and do not have, therefore, a preparatory or auxiliary character'. The issue of attribution of profits to such a PE was left for further work, which should entail revisiting the so-called Authorised OECD Approach to article 7. The OECD issued a discussion draft on this issue in 2016 which was widely criticised; a new draft released in June 2017 will be discussed at a public consultation in November 2017.

[9] The Google settlement was soon followed by an announcement by Facebook that from April 2016 it would begin to book some of its advertising contracts in the UK – those of large clients with account managers. However, commentators pointed out that this would not result in a major increase in the tax payable. The Facebook move seems to have been in response to the UK's diverted profits tax (DPT), introduced in 2015. HMRC 's Annual Report in 2017 stated that the DPT had resulted in its first year 2016-7 in £281 of additional corporation tax receipts, of which £138m was directly from DPT charge notices. It seems that £107m of this was from one company, Diageo (Stupples 2017).

[10] Of the 70 states which have so far signed the MLI, only 22 have accepted the article amending the PE definition; this may be because work has not been completed on the implications for attribution of profits to such a PE.

world, and not only by OECD members.[11] Despite the extensive rewriting of the TPGs, they still stress that the starting point should be the various entities in the MNE group and the transactions between them.

There is nevertheless a significant reorientation of the rules, with a new emphasis on accurately delineating the true nature of these transactions, based on an analysis of the facts and circumstances of each business. This 'requires a broad-based understanding of the industry sector in which the MNE group operates ... including its business strategies, markets, products, its supply chain, and the key functions performed, material assets used, and important risks assumed'.[12] On the basis of such an analysis, a tax authority may recharacterise, or in some circumstances even disregard, the ostensible terms of the related party transactions. Once recharacterised, the pricing of the transactions should be evaluated by applying the accepted transfer pricing methods, as far as possible by reference to suitable comparable transactions between independent firms.

This creates enormous problems for tax authorities, especially in developing countries. To apply this approach they must carry out individual audits of firms, analysing the firm's group structure and business model, which requires specialist knowledge of each industry. The F-A-R (functions-assets-risk) analysis is now elaborated in greater detail in the revised TPGs, especially as regards the functions relating to intangibles, and to risks. A key intention is to ensure that an affiliate that is used simply as a 'cash box', either for owning and receiving income from intangibles, or for group financing, should receive only a minimal return, based on the assumption that it assumes no risks. However, the revised Transfer Pricing Guidelines issued in July 2017 are still missing an intended chapter on intra-group finance, which remains under discussion (Sheppard, 2017).

The logic behind functional analysis is to try to identify the specific functions performed by different affiliates. In practice this is difficult or impossible when it comes to knowledge and risk, both of which are spread through the firm as a whole, and are managed collectively. This understanding flows from the basic theory of the firm, and is also borne out in practice. Interestingly, a submission by BASF, the German-based chemicals firm, explained:

> Quality management and controls relating to the risks, functions and assets employed are to a wide extent part of corporate procedures which are generally valid group-wide and are fully integrated in the business processes. The research and development process is managed by electronic systems which track the allocation of projects to specific research centres, the adherence to budgets, the sign-off processes and the registration of IP rights. 'Control' is therefore to a large extent built in to group-wide guidelines and operating systems, and can therefore be performed anywhere as such systems enable a decentralised, collaborative organisation.[13]

[11] The OECD Council approved the BEPS reports presented in October 2015, and its member states are considered to be committed to applying them. In some states they are given statutory status to be used as guidance for tax treaty interpretation, e.g. the UK. Some non-OECD countries, including Nigeria and Tanzania, also have statutory provisions giving the TPGs such status, although along with the UN Manual on Transfer Pricing (UN 2013). Some national courts have relied on the TPGs even without statutory support: for example in *Unilever Kenya Ltd* (2005), Judge Alnashir Visram rejected transfer price adjustments made by the Kenya Revenue Authority on the grounds that they were contrary to the OECD Guidelines, although the Kenyan legislation at that time made no reference to them. Other countries (e.g. India, US) implement the TPGs through their own rules. Corporate tax advisers generally rely on the TPGs to justify their practices, so that tax authorities generally need to do so as well. Although in most countries the taxpayer in principle has the burden of justifying its accounts, in practice if a structure and pricing scheme have been devised and documented by specialist advisers, the tax authority faces a difficult task to challenge them.

[12] New para. 1.34 in chapter 1 section D of the TPGs.

Indeed, as this statement makes clear, MNEs pride themselves on being both global and local, able to benefit from their coordination of activities worldwide, while their central management teams may be relatively small.

Also, the revised TPGs apply a control test for the location of key functions, which clearly favours the home countries of MNEs. In relation to intangibles they identify the especially important functions as 'design and control', 'direction of and establishing priority', and 'management and control' (revised TPGs para. 6.56). Similarly, for identifying the location of risk the key test is the 'capability and authority to control' (para. 1.67). It is likely that countries where the corporate headquarters, chief financial officer, or main research centre are located will assert that the control over functions such as finance and research is exercised there, even if the firm operates in a decentralised way. Hence, an MNE could employ large numbers of people in research and development activities in affiliates around the world, but each entity could be treated as having only routine research functions, to which relatively low profits would be attributable.[14]

At the same time, the aim to end tax avoidance by attribution of profits to cash-box affiliates may have limited success. A company could relocate a few senior people to carry out control functions in a country which offers low effective tax rates for such activities. Indeed, countries are already competing to attract research hubs by offering low tax rates on structures such as the 'patent box', and trying to attract corporate headquarters and holding companies by offering generous treatment of foreign-source income.

Some revisions have also been made that could strengthen the claims of source countries when conducting this type of functional analysis. This is a response to pressure from non-OECD G20 countries, especially China and India. These revisions deal with 'location advantages', and 'assembled workforce' (revised TPGs Chapter 1, sections D.6 and D.7). However, these provisions are worded very carefully and cautiously. The UN *Manual on Transfer Pricing* in its 2010 edition provided a chapter on approaches used in developing countries which includes sections covering Brazil, China and India and South Africa, and the 2017 edition now also includes Mexico.

Following the functional analysis, an appropriate price must be identified for the (recharacterised) transaction. Although the TPGs in principle state that the most appropriate method can be used, it is generally assumed that there should first be a search for suitable comparables – that is, market prices between independent entities. The normal practice is to use databases that are available commercially (though at significant cost). These usually contain data collected from filings of company accounts, so generally do not include details of transactions, only of company profits by industry sector. So although the methodology stresses the need to start from transaction prices, in practice the focus is on the level of profit.

Data from company filings is, in any case, not available for most developing countries – where there is coverage, experience shows that it is hard or impossible to identify suitable comparables. This is especially likely for small economies that may have few significant independent local firms, but transfer pricing specialists in large countries also confirm this.[15] To deal with this, specialists have developed econometric

[13] In its submission to the Revised Discussion Draft on Transfer Pricing Aspects of Intangibles, September 2013, <http://www.oecd.org/ctp/transfer-pricing/basf-intangibles.pdf>.

[14] BASF in its evidence cited in the previous footnote stated that it has 'numerous research hubs, located primarily in Germany, USA, China and India'. Google employs some 1000 research engineers in the UK, but the income of its UK affiliate is apparently calculated on a cost-plus basis, as if the research had been out-sourced (Public Accounts Committee 2016).

[15] A rare occasion when this was frankly recognised occurred during the consultations in the BEPS process on special measures (19 March 2015), when the Chinese delegate (Xiaoyue Wang, deputy director-general in the International Taxation Department) boldly stated that 'the arm's length principle does not work', because in her experience true comparables cannot be found (see <https://www.youtube.com/watch?v=hjuhPtmTx64&feature=youtu.be>).

techniques to use data from elsewhere, adjusting for differences in economic conditions. However, these produce only a range of possible prices, generally very wide (Gonnet et al. 2014).

Indeed, although all the five accepted transfer price methods are described as transactional, only the Comparable Uncontrolled Price method (CUP) directly involves comparing and adjusting transaction prices. The Resale Price Method (RPM) begins from prices of sales to unrelated parties, but reduced by an appropriate gross margin to arrive at a price level used to estimate profits. The Cost Plus Method (CPM) also uses an appropriate margin, but as a mark-up on operating costs. In both cases these calculations are supposed to involve adjustments to the original transfer prices, but clearly the focus is on the profit. Two methods were added in 1995 to these traditional ones, focusing more explicitly on profit, but still described as transactional profit methods. The Transactional Net Margin Method (TNMM) is a refinement of Cost Plus, but is based on the net profit (rather than gross margin), which is calculated in relation to a suitable base, such as costs, sales or assets.

It has become increasingly clear that these methods are inadequate, because they attribute at most a routine profit to operating affiliates. They are described as one-sided methods, since they focus only on the local affiliate, and compare its profits with those of firms conducting activities that could be said to be similar. This ignores the business reality of the advantages of scale and scope, and the synergy resulting from the integrated operations of MNEs. The problem is most evident in relation to intangibles, which benefit the firm as a whole, but can be treated as assets, ownership of which can be transferred to an affiliate in a low-tax country.[16]

In response, a fifth transfer pricing method was included in the 1995 TPGs, the profit split method (PSM). This explicitly abandons the focus on transaction prices since it apportions the combined profits, although only those from a series of transactions (hence it is still described as a transactional profit method, like the TNMM). The TPGs recognise the strength of this method especially in relation to 'highly integrated operations', particularly where both parties make 'unique and valuable contributions' (para. 2.109), or to achieve 'a division of the profits from economies of scale or other joint efficiencies' (para. 2.113). The PSM poses technical problems, mainly to deal with the differences between the accounts of the entities whose profits are to be combined. It also requires identification of suitable criteria or 'allocation keys' for apportioning the profits. These questions are also central to formulary apportionment. However, work on the PSM was not completed in the first phase of the BEPS project, and this is one of the key issues which remains outstanding. The OECD issued a discussion draft in June 2017, which was debated at a public consultation in November.

This very brief account of the principles and procedures for transfer pricing audits shows their complex and technical nature. It is clearly far easier for large MNEs than for tax authorities to employ consultants skilled in these techniques. If these advisers produce suitable analyses backed by appropriate documentation, it is hard to mount a challenge to the transfer pricing arrangements they design that would be upheld by a court.[17] There is some evidence that when a country creates a specialist section and strengthens transfer pricing audits, additional tax revenue can result. It is easy to understand that

[16] The revised chapter VI of the TPGs now states that one-sided methods are generally not reliable for valuing intangibles (para. 6.142).

[17] In late 2014, the US Internal Revenue Service (IRS) hired specialist consultants at a cost of $2 million to assist the IRS audit team in the examination of the transfer pricing arrangements of Microsoft (Gupta 2014). In the UK, HMRC increased its transfer pricing specialists from 65 to 81 between 2012 and 2016; its 6-year investigation of Google's tax affairs involved between 10 and 30 specialists at any one time, and eventually resulted in a settlement agreeing an additional payment of £130 million covering the period 2005-15 (£18 million for interest, and including a change in the treatment of share-based compensation: see Public Accounts Committee (2016), paras. 4-6).

[18] http://www.oecd.org/tax/platform-for-collaboration-on-tax.htm#Comparables

companies are likely to react to the initial threat of enhanced audits by making adjustments to their accounts to pay some more tax. The question however is whether such gains will be sustainable.

More seriously, it is evident that the elaborate and subjective nature of the evaluations involved create considerable potential for conflict, both between tax authorities and firms, and between different tax authorities. Concern about the likelihood of increased conflicts led to pressure for strengthening the dispute settlement procedure. It seems far preferable to try to devise rules which would be simpler and easier to administer than to rely on dispute resolution procedures to remedy the defects of these contentious and subjective regulations.

1.3 Possible Solutions Especially for Developing Countries

The Platform for Collaboration on Tax (PCT) – a joint initiative of the International Monetary Fund (IMF), Organisation for Economic Co-operation and Development (OECD), United Nations (UN) and World Bank Group – issued a toolkit in June 2017[18] to provide practical guidance to developing countries to better protect their tax bases.

The Toolkit identifies a number of key challenges in conducting comparability analyses by tax administrations, such as the lack of appropriate data, challenges and costs associated in accessing databases, and the inability of tax administrations to effectively audit the comparability analyses prepared by taxpayers.

Available statistics and academic research on the availability of information on comparables also corroborate the difficulties reported by many developing countries. Often, the information relevant to a jurisdiction can only be accessed through the purchase of a licence from database providers, where little relevant information relating to a specific jurisdiction or even region exists. Where the information does exist, it may exhibit differences compared to the transactions under review.

The Toolkit reports that for more than 164 countries in 2013 there was not sufficient comparable data, a key flaw in the use of this method as the basis to allocate profits to an associated enterprise. The problem is not just a lack of data, but because true comparables generally do not exist. This is due to the real competitive advantages enjoyed by MNEs resulting from their economies of scale and scope and the synergy resulting from their internationally integrated operations.

With a view to mitigate the problems caused by poor availability of access to relevant data, the toolkit sets out a number of policy options that developing countries could consider. Of relevance, the toolkit suggests the use of carefully constructed safe harbours, the use of transactional profits split method and Advanced Pricing Agreements ("APA").

Safe harbours are a mechanism to allow a tax administration to specify an appropriate transfer pricing method, and an associated level or range of financial indicators, that it considers fulfils the requirements of the transfer pricing rules or to specify a transfer pricing process that, when applied in respect to a defined category of transaction, is considered to produce a result that fulfils the requirements of the transfer pricing rules.

Safe harbours have the potential to provide increased certainty and simplicity for business and tax administrations alike. A more fruitful way forward would be the use of safe harbour prices or margins, particularly if these are based on information available to tax authorities through taxpayer-lodged

[18] http://www.oecd.org/tax/platform-for-collaboration-on-tax.htm#Comparables

information. The experience of countries which have created safe harbours is positive, as it provides certainty of revenue and simplifies and reduces compliance and auditing costs.

However, safe harbours that assume only routine activities should not apply to MNE situations where each member uses group IP and contributes to the profitability of the group. In such cases, safe harbours encourage BEPS planning. Rather, the profit split approach as earlier described will provide a more appropriate transfer pricing result.

Brazil's prescriptive rules in this area, as further outlined in Section 3.1 of this document, are a useful example of a system that works. The rules fix the gross profit margins for a number of types of transactions and ensure that interest and royalty payments to overseas tax residents are subject to high withholding taxes. This has effectively reduced BEPS opportunities for MNEs in Brazil. Most importantly for many developing countries, Brazil's approach provides a system which is predictable and easy to administer, and creates few conflicts.

A refinement of Brazil's approach would be to develop an industry specific Advanced Pricing Agreements ("APA") program. Such an approach has been successful in relation to the package holiday industry in the Dominican Republic. This program set out a general framework for companies in the all-inclusive hotel sector, on the basis of which to establish individual APAs including the selection of the transfer pricing method and based on different rates depending on the category and geographic location of the taxpayer.

1.4 Digitalisation and the need for more radical changes

A wider approach was opened up by the work of the Task Force on the Digital Economy (TFDE) under Action 1. This could be potentially far-reaching, especially as the TFDE rightly concluded that digitalisation has affected all economic activities to different degrees, so it would be inappropriate to apply different rules to a digital sector ring-fenced from the whole economy. In particular, digitalisation is transforming many service sectors, making it even easier to shift the tax base away from the place of performance, which has long concerned developing countries. However, no conclusion was reached on Action 1, and a further five years was requested for the work of TFDE to continue. In the meantime, all countries are facing major problems posed by taxation not only of internet giants such as Google, but many MNEs, especially in key services sectors, which can use digital technologies to minimise their CIT liability. Developing countries have long been concerned about the limitations on their powers to tax services performed in a host country, since the minimum physical presence requirements can be easily avoided. They have now also become aware of the problems posed by the spreading use of digital platforms to deliver both goods and services.

The report on Action 1 of the BEPS project recognises that digitalisation means that MNEs have come 'closer to the economist's conception of a single firm operating in a co-ordinated fashion to maximise opportunities in a global economy' (BEPS Action 1 report, para. 232). Furthermore, it shows that digitalisation undermines the concepts of residence and source on which traditional international tax rules are based, due to two main factors (para. 273). First, firms may make extensive sales of goods and services in a country without the need for any significant physical presence there. Professionals such as lawyers or business advisers can visit clients just for short periods while providing services for much longer, while the delivery of many goods and services can be organised through the internet, though they may be sourced or supported locally. This renders the traditional physical concept of a PE obsolete. Yet the OECD consideration in 1999-2005 of the implications of electronic commerce rejected any significant changes to the PE definition.[19]

Secondly, and more importantly, despite needing a minimal physical presence, firms can now have much closer relations to customers and users. Companies reap enormous value through the systematic collection of data about and from users. Supply relationships are no longer one-way, and users can also contribute considerable value, including content such as comments and reviews. Some digital platforms create a base for linking users around the world into a virtual community, e.g. for games. Paradoxically, therefore, such firms are more closely bound to their customers, but may not need a significant physical presence in countries where they sell.

The report identifies some far-reaching possible reforms to deal with these challenges, but which will require continuing work over the next five years. First would be a new taxable nexus based on 'significant economic presence'. This could result in a greater allocation of the taxable base to the country of sales – for example, if operating a local digital platform were accepted as an activity taking place in the country. The implications of this are even more extensive. It would attribute profits to the entity in the country where the sales take place, although the costs may be borne mainly by affiliates located elsewhere. This makes it essential to adopt a unitary approach, or as the report says it entails a 'substantial rewrite of the rules for attribution of profits' (para. 286). The report canvasses several possibilities, including fractional apportionment, deemed profit methods, a withholding tax on digital transactions, and an equalisation levy.

Digitalisation has also greatly facilitated the fragmentation and restructuring of MNE operations around global value chains. This has also led to a recognition of the potential role of the profit split method. Although accepted by the OECD since 1995 as within the arm's length principle, this method clearly entails apportionment of the aggregate profits of related entities. However, it is regarded by many as unsatisfactory in practice, unsurprisingly since no work has been done since 1995 to regularise and systematise the approach. Work was begun on it during the BEPS project but not completed. A discussion draft on this was issued in summer 2016, together with one on the related issue of attribution of profits to a permanent establishment. These were heavily criticised by many commentators. New drafts were issued a year later, and were discussed in a public consultation in November 2017.

A final report is not expected from the TFDE until 2020, but it is preparing an interim report for 2018, at the request of the G20. In the meantime, some countries are taking their own measures. India introduced an 'equalisation levy' on payments for digital advertising in 2016. The diverted profits tax (DPT) introduced by the UK in 2015, and emulated by Australia, aims to deter reduction of the source tax base by payments which would be taxed at a lower rate (80%) in the destination country, by applying a higher tax rate to such 'diverted profits'.[20] The draft reports for the European Parliament's ECON committee on the CCTB and on the CCCTB[21] have proposed amendments so that a 'digital platform' would constitute a PE, and to include data collection and exploitation in the apportionment factors. In parallel, the government of France, supported by nine EU member states, called for an initiative for an 'equalisation tax' on turnover aimed at internet companies. This was also supported by a UK Treasury Position Paper in November 2017,[22] and in December 2017 Italy approved a 3% web tax on online advertising and sponsored links embedded in web pages.[23] In September 2017 the European Commission issued a Communication outlining policy options for bother short-term and longer-term solutions. It called for 'a strong and ambitious EU position

[19] See Annex A of the BEPS Action 1 report.

[20] The UK also introduced in 2016 a withholding tax on royalties, and in November 2017 published a proposal to extend that to royalty payments made between entities not resident in the UK, if made in connection with sales in the UK; see https://www.gov.uk/government/consultations/royalty-withholding-tax .

[21] ECON_PR(2017)608050 (rapporteur Paul Tang) and ECON_PR(2017)608035 (rapporteur Alain Lamassoure), available from http://www.europarl.europa.eu/committees/en/econ/draft-reports.html

[22] Available at https://www.gov.uk/government/consultations/corporate-tax-and-the-digital-economy-position-paper.

on taxing the digital economy, which should feed into ongoing international work on the issue', and indicated that it could put forward proposals in spring 2018.[24]

1.5 Conclusions on the BEPS project

Overall, the BEPS project outputs could provide stronger powers to national tax administrations. However, they also involve considerably increased complexity of the rules to be applied. They include some significant moves away from the separate entity principle, and some towards treating MNEs as unitary firms, but mainly for apportionment of costs. The allocation of profits depends on the transfer pricing rules, which still start from the independent entity principle and transactional analysis. This requires subjective and discretionary evaluations, requiring significant resources of skilled staff.

Evidently the tax experts engaged in the BEPS project could not agree on clear criteria or principles to decide how to allocate profits based on how value is created. Hence, this has been left for case-by-case determination, based on functional, risks and assets analysis. At the same time, this continues to incentivise MNEs to create complex structures by splitting up functions and allocating risks in a tax efficient manner. Nevertheless, this key issue will receive further attention, both in the work on the profit split method and on the digitalised economy. As already mentioned, these issues involve consideration of the MNE as a unitary firm. The next section will outline and analyse some of the options that have been put forward for moving towards a unitary approach.

[23] https://www.ft.com/content/9151f7ef-7bc4-3438-b45d-1044690399c1

[24] *A Fair and Efficient Tax System in the European Union for the Digital Single Market* COM(2017) 547 final.

2. OPTIONS FOR ADOPTING A UNITARY APPROACH

The term 'unitary taxation' is often treated as synonymous with formulary apportionment, which is confusing. Several alternative approaches are available that involve treating transnational corporate groups as unitary firms. Indeed, as already discussed above, the existing rules already include unitary elements. Hence, some of these approaches could be compatible with current rules. This section will briefly outline and evaluate some of these unitary taxation methods that do not involve formulary apportionment.

2.1 Residence-based worldwide taxation (RBWT)

Under residence-based worldwide taxation (RBWT), the home country of a MNE applies home country tax directly on a current basis on the consolidated worldwide profits of a corporate group, but with a full credit for foreign taxes paid.[25] This would in effect treat all foreign affiliates on a full-inclusion basis as Controlled Foreign Corporations (CFCs).

RBWT gives the residual right to tax to the firm's home country, but the initial right to the source country. Hence, it can be seen as strengthening source country taxation, by removing the incentive for the MNE to shift profits, since any reduction of source taxation would lead to an equivalent increase of tax in the home country. It also removes the temptation for the source country to offer tax advantages to attract inward investment, for the same reason. However, this can also be seen as an infringement of source country tax rights, if those rights are understood as including a right **not** to tax. This goes to the heart of the issue of the nature of tax sovereignty raised by the aim of ending double non-taxation.

Such provisions could, from a legal perspective, be formulated and implemented unilaterally, without the need for agreement between states, and probably also without alterations to tax treaty rules. Indeed, strengthening of CFC rules was Action 3 in the BEPS project but, as mentioned in the previous section, the final proposals were very weak. In practice, however, unilateral adoption of strong CFC rules is difficult, especially for a country with a high corporate tax rate. Since MNEs headquartered there would be subject to that high rate on their worldwide profits, it would create an incentive for them to relocate or 'invert'. This could be counteracted legally, through appropriate residence rules. However, as many have argued, corporate residence is increasingly hard to define. Place of incorporation is obviously ineffective, and place of central management may also be prone to avoidance since it involves identifying where key central management decisions are taken.

Fleming, Peroni and Shay opt for a test based on shareholder residency with a 50 per cent threshold, and a rebuttable presumption for place of incorporation (Fleming et al. 2014). This is supported by their view that the incidence of the tax is essentially on shareholders. They counter criticism that determining shareholder residency is impractical, by claiming that it is technologically possible, and such information should be increasingly available 'in a post-FATCA world'.[26] They also argue that RBWT is superior to the formulary apportionment variety of unitary taxation, on the grounds that the latter is a territorial system, and hence would affect – they say distort – investment decisions. They concede that, unlike traditional

[25] This has been advocated by a number of US-based commentators, see especially Kleinbard (2011a), Kadet (2013), Fleming et al. (2009, 2014) and Avi-Yonah (2016).

[26] FATCA refers to the US Foreign Account Tax Compliance Act 2010, which requires US taxpayers to report any foreign bank accounts, and foreign financial institutions doing business in the US to report accounts held by taxpayers or foreign entities in which US taxpayers hold a substantial ownership interest. The BEPS Action 3 report on CFC rules discusses how to define a CFC, suggesting a combination of legal and economic control tests; but it does not address the question of how to define the ultimate parent.

territorial systems, formulary apportionment would not create incentives for artificial profit shifting, but argue that applying the three-factor apportionment formula based on labour, assets and sales would encourage firms to shift assets and employment to low-tax countries. This concern may weigh especially heavily for the US, where the fear of job losses due to outbound investment runs deep, especially for blue collar workers. This is discussed in more detail in sub-section 2.3, in the context of the issues affecting the selection of formula factors in a formulary apportionment system.

A shift towards RBWT would also be facilitated if a more coordinated approach could be developed, despite the failure to do so in the BEPS project. Adoption of RBWT by both the US and the EU could make the approach effective, although there should be some coordination, which would be hard to achieve. The BRICS countries are now also the home of large MNEs, and could be potential adopters of RBWT. However, in the present climate, there seems little appetite for such coordination. The Anti-Tax Avoidance Directive adopted by the EU in January 2016 as part of its anti-tax avoidance package proposed measures to apply some of the BEPS proposals. These included common CFC rules, but aimed only at defined types of passive income, and confined to entities with very low tax rates (a threshold of 50 per cent of the home country rate).[27] A similar provision was included in the Commission's draft CCTB of October 2016 (COM(2016) 685, article 59).

Edward Kleinbard has recently put forward a proposal which would incorporate the RBWT approach, with new principles for tax base definition, which he describes as a dual business enterprise income tax (Dual BEIT). It would combine worldwide super-consolidation and replace deduction of interest by a cost-of-capital-allowance (COCA) deduction covering debt and equity, excluding from the tax base the economy-wide average risk-adjusted normal rate of return. It would be a comprehensive and integrated business tax system covering all forms of capital income, not just business profits, since individual investors would also be taxed, at the business tax rate, on the same expected normal return on investment, regardless of whether they receive this as income from the firm in which they invest, but would generally not be subject to any capital gains tax on gains beyond their expected normal return (Kleinbard 2017).[28]

However, the US tax reform approved by the Congress in December 2017 opted for a more 'territorial' system, with exemption of dividends received from foreign affiliates, combined with two types of minimum tax, one to prevent shifting of profits out of the US, and one on low-taxed foreign income. This entailed abandonment of the historical US approach of worldwide taxation, which had in any case become greatly weakened in recent years.

2.2 A destination-based corporate tax

Another approach is the concept of a Destination-Based Cash Flow Tax (DBCFT). This has long been advocated by some economists (Auerbach and Devereux 2013, Auerbach et al., 2017), although others have criticised it (Cui 2017, Avi-Yonah and Clausing 2017, Becker & Englisch 2017). A pure DBCFT is not a tax on profits, but akin to a Value Added Tax (VAT), except that full and immediate deduction is

[27] Defined as follows: 'the actual corporate tax paid on its profits by the entity or permanent establishment is lower than the difference between the corporate tax that would have been charged on the entity or permanent establishment under the applicable corporate tax system in the Member State of the taxpayer and the actual corporate tax paid on its profits by the entity or permanent establishment' (Council Directive 2016/1164 of 12 July 2016, article 7).

[28] A variation on this would be to tax the individual residents on a mark-to-market basis with respect to publicly-traded stock, and use the revenue generated to reduce the corporate tax rate for publicly-traded corporations, and apply pass-through treatment for all nontraded businesses (see Miller 2016, applying the approach to the 0.1% richest and highest-income taxpayers). The RBWT could also be extended to nontraded companies through an interest charge or a yield based tax (Miller 2016).

allowed both of labour costs[29] and other cash expenses including investments (Weisbach 2017). Applied with a 'border tax adjustment' (i.e. allowing deduction of domestic but not foreign costs) it would be regarded as trade distorting, and hence conflict with world trade rules (Cui 2017). However, its proponents argue that this is only for formal legal reasons, as it is economically equivalent to a subtraction-method VAT with a payroll tax reduction, which would be WTO-compatible (Auerbach et al. 2017, pp. 82).

Nevertheless, from the perspective of international tax rules this approach has the merit that it is in effect a unitary approach, since internal transfers within a corporate group are ignored, and the tax base is both defined and apportioned in terms of sales to third parties (Avi-Yonah 2015). Allocating the corporate tax base according to the location of final consumers may have economic attractions. Notably, corporations could make investment and employment decisions without being affected by the varying tax rates of the jurisdictions where the investments would be made or workers are employed. On the other hand, it raises concerns about the distributional effects on tax revenue for countries with small consumer markets.

It also raises considerable practical problems. First, it requires identification of the location of customers, which is difficult in the era of electronic commerce. However, some solutions are being developed in relation to the shift of VAT to a destination basis, by both the EU and the OECD. The report on BEPS Action 1 suggests the possibility of taxing sales transactions, enforced through intermediaries such as banks. This would require foreign firms to register and maintain identifiable accounts, payments into which would be taxed. This mechanism could be used either for a sales transaction tax, or as a withholding tax on sales credited against a corporate income tax liability.[30] A stronger objection is that a high proportion of exports consist of sales of intermediate goods to businesses, and not finished products to final consumers. This could encourage the location of assembly industries in countries with low CIT rates, to reduce the cost of inputs.

Another major problem is that, since its tax base is entirely on sales, the DBCFT brings into sharp relief the problem that taxing rights could be allocated to countries where a company has little or no physical presence. To deal with this, Devereux and de la Feria (2014) suggest a clearing house system, modelled on the one-stop-shop being trialled in the EU, to enable the VAT to move to a destination basis. This is clearly more than just a practical issue. It would entail considerable cooperation among states, in effect a joint system of collection and enforcement of corporate taxes, with a netting-out procedure, including an element for the costs of collection (Devereux and de la Feria 2014). In view of the experience to date of attempting to reach agreement between states, this seems to be an extremely ambitious undertaking.

The DBCFT came to wider public attention in the first part of 2017, as a proposal made in June 2016 by Republicans in Congress (the Brady-Ryan plan) gained traction under the Trump administration. It drew considerable support, including from a group of CEOs of large US MNEs, and also from some commentators (e.g. Sullivan 2017). However, the debate drew attention to the very disruptive effects of such a unilateral move by the US. These would include an appreciation of up to 25% of the USD, and a probable complaint by the EU and others under WTO rules, which could result in counter-measures on trade valued at hundreds of billions. Following a Hearing in Congress, and the refusal of the White House to support the proposal, it was not included in the Joint Statement on US tax reform released by Congressional leaders and the White House on 27 July 2017. The tax reform approved by the Congress in December 2017 largely abandoned this approach.

[29] The payroll tax reduction is a distinctive feature of the DBCFT and what makes it roughly distributionally neutral (relative to corporate tax).

[30] Cui argues that the destination basis for a VAT is not the same, or economically equivalent to, the place of final consumption (2017, 29).

2.3 Unitary taxation with formulary apportionment31

This is the most comprehensive approach, but it would need to address a number of important technical challenges, especially to be applied effectively in the international sphere. Such a system would require: (i) combined reporting, based on a template for both worldwide consolidated accounts and country-by-country data on revenue, employees, sales, and perhaps physical assets; (ii) the selection of appropriate factors for apportioning the profits; and (iii) a conflict resolution procedure. There is long experience on these issues from formulary systems in federal states, especially the US, and more recently from the work on the EU's proposed CCCTB.

(i) the Combined Report

The aim of a combined report is to establish the appropriate tax base of the corporate group concerned, and provide the data necessary for apportioning that base among the relevant countries in which it has a taxable business presence. The first issue here is the delimitation of the relevant tax base. Two approaches to this issue have been adopted. The US state system focuses on the business activities, and allows apportionment only of income which derives from a 'unitary business', due to US constitutional considerations. This has made the US system complex and fraught with conflicts.

The administratively much simpler approach, which has been adopted in the EU's proposal for a CCCTB, is to apply formulary apportionment to the entire combined income of a commonly controlled group that performs business in the taxing state (combined-income apportionment). This avoids the often-tricky debates over what constitutes a unitary business that have bedevilled the US state system (Durst 2015). However, it would also seem necessary to treat full inclusion as a presumption, and provide tax authorities with anti-avoidance powers to exclude activities which may have been brought within a corporate group to seek a tax advantage, by 'gaming' the apportionment formulas applicable.

The whole-income approach runs counter to the principles of attribution of profits to a PE developed by OECD countries, culminating in the authorised OECD approach adopted in 2010 by a majority of OECD countries. However, this has been generally rejected by developing countries, and has so far been incorporated into only a few actual treaties. Indeed, the issue of attribution of profits to a PE has been reopened by the changes to the PE definition agreed in BEPS Action 7, and remains to be resolved in the continuing work.

The enterprise whole-income approach to tax base delineation also points to the need to reconsider the current definition of PE for establishing a taxable nexus. This is clearly now urgent, and indeed has been recognised in the BEPS project in the final report under Action 1 on the tax consequences of the digital economy. One of the options it identifies is a new criterion for taxable nexus based on significant economic presence. However, as the report points out, current rules on attribution of income would not be appropriate for a wider concept of a PE. Moving towards a modernised concept of PE for the new economy would be much easier under a unitary approach, which would either apportion joint costs proportionately against gross income, or simply apportion net income.

Indeed, the draft report to the European Parliament released in July 2017 by its rapporteur on the CCTB, Paul Tang, has proposed an amendment to include a 'digital platform' as a permanent establishment. The text specifies that a non-resident would be considered to have a PE if it 'provides access to or offers a digital platform such as an electronic application, database, online marketplace, storage room or offers

[31] This section draws extensively on Picciotto (ed.) 2017.

search engine or advertising services on a website or in an electronic application' which results in remote transactions generating over 5m euros per year.[32]

Probably the greatest technical challenge of formulary apportionment is posed by the divergence between financial and tax accounting. A company's books and records, and the accounts based on them, are necessarily the starting point. There has been considerable international convergence of financial reporting, especially through the International Financial Reporting Standards (IFRS), although some significant national differences remain, both in the formal rules and in local culture and practices. MNEs already prepare group consolidated accounts based on these reporting standards, including criteria for defining the group based on control, and rules for consolidation.

However, tax authorities around the world generally require financial accounts to be restated for tax purposes. This divergence has become greater in recent years, as financial accounting standards have increasingly focused on the needs of financial markets, and hence are primarily concerned with forecasting of future cash flows. This results, notably, in asset valuations based on market prices rather than actual historical costs, and recognition of unrealised rather than received income.[33]

The CCCTB does not begin from the consolidated financial accounts of MNEs, but from the individual national accounts of the various affiliates of the group, which are then required to be adjusted to the tax standards stated in the CCCTB, and only then aggregated. This is because such consolidated accounts are not usually required for a group at EU level, and also there are some divergences in how IFRS have been applied in EU states.

For an international system of combined-income unitary taxation, the natural starting point should be the group's global consolidated accounts. These would need to be converted to tax accounting standards, since few tax administrations would be willing to accept financial accounts as a tax base. Conversion to national tax accounting rules of a variety of countries would involve complications, although Michael Durst suggests that this would mainly entail an exercise of programming the accounting databases already used by MNEs (Durst 2015). In practical terms, even with a high degree of difference among countries' tax accounting rules, available technology should permit the accomplishment of the necessary accounting conversions, especially if statutes allow taxpayers reasonable scope for approximation in converting book into taxable income.

However, it would be preferable if there could be international convergence or harmonisation of tax base definitions. The work on the CCCTB suggests that an acceptable consensus can relatively easily be reached on a substantial proportion of the relevant book and tax accounting standards, using a transaction-based approach to the recognition of revenue and deductible costs, and recognising only realised profits, with its associated capital maintenance concept of maintaining financial capital. Significant differences remain, of course, essentially in relation to allowances for capital expenditure and certain investments such as research and development. These could perhaps simply be left to individual states. The corollary is that the apportionment formula should not include assets. Many consider this desirable in any case, since valuation of assets raises difficult issues.

The BEPS template for a Country-by-Country Report already provides a basis for the kind of Combined Report needed for Formulary Apportionment. It is mainly deficient in not requiring (i) a statement of consolidated profits, (ii) adjustment of the profits statements to tax rather financial accounting standards, and (iii) a statement of payroll costs as well as employee numbers. Also, of course, under the BEPS project countries are expressly prohibited from using CbCRs for apportionment (and in any case, the limitations of the profits statements make them unsuitable for this).

[32] Document PE608035, amendments to article 5.

[33] For this reason, IFRS have been criticised as encouraging trading practices which contributed to the financial crisis.

(ii) The Apportionment Formula

The basic underpinning of a unitary approach is the understanding that the profits generated by an integrated firm result from the synergy of its activities as whole. Hence, this approach does not attempt to *attribute* particular parts of the profit to specific affiliates or entities within it. Instead, the aim is to *apportion* the profits, on the basis of factors which reflect the firm's real activity in each country. This ensures a direct link between a company's actual business presence in a country and its contribution through taxes towards the collective services and infrastructure that facilitate that business.

Historically, especially in the United States, state apportionment formulas have applied three factors: employee payroll costs, sales and physical assets, equally weighted under the `Massachusetts' formula. For the CCCTB a similar three-factor formula has been proposed, but with the employee factor equally weighted between payroll costs and headcount.

It is often argued that it would be impossible to reach political agreement on the apportionment formula, and that without such agreement there would be an unacceptable level of double taxation. A second argument is that unitary taxation would not end tax competition between states, or tax planning by companies, but shift them onto new ground, focusing on the factors in the formula. However, these overlook the point that, in choosing a suitable formula, states would need to take into account interacting factors: not only the tax revenue it would produce, but also the effects on inward investment. Also, the relevant factors reflect in different ways actual economic activity, while the separate entity principle encourages tax breaks for paper profits.

(iii) The formula and tax competition for investment

Countries will, of course, evaluate the likely effect on their ability to attract foreign direct investment of both the formula they apply and their corporate tax rate, and firms would obviously consider these same factors in their location decisions. Hence, a state would need to balance the effects of the formula on tax revenue with those on investment. The incentive effects on both national tax policies and corporate strategies could therefore be mutually supportive, and potentially benign. In particular, firms would have an incentive to shift labour-intensive activities away from countries which emphasise labour in the apportionment factors. As a corollary, countries would have to consider the effect of emphasising the labour factor not only on tax revenue, but also on investment. Indeed, in practice US states have perceived the inclusion of employee compensation and property factors as discouraging companies from locating employment and physical plant in their jurisdictions, and have moved towards a higher weighting for sales.

Unlike the situation under current international tax rules, these decisions would concern real and not paper activities. This has important implications. It means that this revenue-investment trade-off would create a basis for convergence or agreement between states in the choice of apportionment factors, and that this choice is not a zero-sum game. States with a labour-intensive economy would not necessarily choose a high labour weighting in the apportionment formula, for fear of driving away investment, and discouraging investment to improve productivity. Hence, even in the absence of agreement on the apportionment formula, double taxation is unlikely to result. Indeed, there is perhaps a bigger danger of double non-taxation, unless states can learn from experience and agree to coordinate.

This can be seen from the experience in the United States. There, whereas 80 per cent of states used an equal-weighted three-factor formula in 1986, this had fallen to 17 per cent by 2012 (Clausing 2014). States instead moved to increase the weight on the sales factor, with 30 per cent of states in 2012 going so far as to use a single-sales factor formula. The reasoning has been that this would encourage investment for production, and hence increase employment in the state. Clausing shows that, although increasing the sales factor may attract investment in the short run, it ceases to have a significant effect over a longer

period, presumably as competitor states adopt similar policies. It will be interesting to observe whether this experience will stop, or perhaps even reverse, the trend towards the sales factor.

More serious is the trend to an overall reduction of tax revenue. Adoption of a single sales factor could mean that the tax base may be apportioned to states where the company has no taxable presence, simply exporting to independent customers. However, states have dealt with this problem in two ways. First, a state adopting the sales weighting can couple it with a 'throw-back' rule under which, if profits are not taxable in the destination state, the sales are attributed to the source state. Around half of US states which moved to a sales-only factor adopted a throw-back rule, and the proposed CCCTB also includes one. Secondly, US states have adopted wider taxable presence rules, although federal legislation and court decisions require a more significant presence than simply solicitation of sales.

Adoption of a wider taxable presence standard in international tax would indeed be desirable, especially in response to the digitalisation of economic activity, as pointed out in Section 4 above. The taxable nexus criteria could be extended beyond the physical requirements for a PE in current tax rules, by adoption of a concept of Significant Economic Presence, as suggested in the BEPS Action 1 report. This could include, for example, selling through a website in the local language, using local agents for activities such as order fulfilment, and selling locally-sourced products or services. This should ensure that virtually all the profits of MNEs would be taxable somewhere, without extending the net too widely to include the many small and medium enterprises with foreign sales from a purely home base. Wherever they have significant sales, MNEs generally require some business presence, such as local assembly, sourcing of inputs, distribution, packaging, marketing, and other close engagement with customers.

Nevertheless, a drift toward sales-only formulas may constitute a problem under formulary apportionment, especially since much foreign investment in developing countries involves production or extraction for export without significant local sales. Strong arguments can be made for a distinctive approach for extractive industries, applying a source basis for sales of minerals and hydrocarbons, since these are anyway heavily taxed at and after processing in the countries of consumption. Taxation of profits is in any case not a very effective way of capturing natural resource rents, and should be supplemented by other levies, such as a price-based sliding-scale royalty (Clausing and Durst 2015).

Aside from this special case, sales-based apportionment could provide developing countries much better revenue results than current arm's-length transfer pricing rules. It should also be borne in mind that developing countries too are significant importers of goods, and especially services, from multinationals, often with little or no local value added, so that such activities contribute little or nothing to the tax base under current rules. Thus, the net effect of a sales basis for apportionment for them would depend on the balance of exports to imports by MNEs, taking account also of whether MNEs responsible for imports have a taxable presence in the country. These countries should apply the destination basis also to sales of services, provided the services supplier has a significant business presence. Developing countries have been disadvantaged by the shift towards a services economy, due to the difficulty of taxing profits of foreign service suppliers under current tax rules, even though such a claim to tax can be justified by the importance for services of close relations with clients.

Another advantage is that emphasising the sales factor removes the temptation for states to reduce corporate tax rates. As Clausing (2014, 2016) shows, US state tax rates have remained stable even as there has been a shift towards the sales factor in apportionment. Thus, any reduction in the tax base resulting from a shift towards the sales factor could be compensated for by increasing the tax rate.

(iv) Effects of the formula on tax revenue

Probably the main political obstacle to adoption of unitary taxation is that states fear the possible effects on redistribution of the tax base. This fear is probably all the more potent because the effects are very difficult or impossible to quantify with any accuracy. Firstly, such analyses are likely to be static, since it would be hard or impossible for a model to take account of the possible dynamic effects on investment, which were discussed in the last sub-section. Secondly, there are significant problems of lack of data, especially relating to developing countries. Cobham and Loretz (2014) show the severe limitations in this respect of the main large commercially-available dataset of corporate accounts (Orbis from Bureau van Dijk). The data is collated from filings of corporate financial accounts, so not only is there no data at all from most developing countries, Cobham and Loretz were obliged to use turnover as a proxy for the sales apportionment factor instead of sales by destination.[34] Hence, as is generally the case, quantitative findings must be used with great care, and in conjunction with qualitative analyses.

A primary consideration is the likely effect on the overall corporate tax base. Firstly, using consolidated accounts as the starting point would mean some overall reduction in the tax base, since this would allow international offsetting of losses.[35] This indeed is a significant attraction especially for small and medium-sized MNEs, which do not have the resources to devise complex avoidance structures. This seems to be an important reason for the support from many of them for the CCCTB proposal. Cobham and Loretz (2014) estimated this reduction at 12 per cent overall, with some significant differences between countries. As they point out, international loss-offsetting would reduce the disincentive to make risky investments in new countries. The numbers should be treated with caution, particularly as they are based on financial accounts, and as discussed above the recognition of profits is very different under tax rules. Nevertheless, there would undoubtedly be such an effect.

This will, of course, be counterbalanced by the main intended effect of unitary taxation, which is to counteract the artificial attribution of profits to low-tax countries. Cobham and Loretz show that this also has a significant impact on the overall tax base, under any apportionment formula, as more profits are attributed to countries with higher tax rates. They estimate that, overall, under almost any formula there would be a slightly positive effect on overall tax revenue, cancelling out the overall reduction from international offsetting of losses. The exception is their finding that apportionment based on number of employees redistributed revenue to lower-income countries that also had lower tax rates (in their sample, in eastern Europe). This had the effect of slightly lowering overall revenue. However, this assumes that those countries would maintain the same tax preferences and rates as at present, which is unlikely to be the case. Importantly, also, their data covers countries with substantial economies which are in some respects tax havens, such as Ireland, Luxembourg and The Netherlands, but not the smaller tax havens: notably, their sample includes only 186 affiliates in Caribbean countries. The overall impact of formulary apportionment in reducing BEPS is highly likely to result in a very significant increase in the overall tax base. Although the report on BEPS Action 11 found the losses from BEPS hard to measure, it gave estimates of between 4-10 per cent of the global CIT tax base – that is, between $100 billion and $240 billion. This would generate higher overall corporate tax revenue, which could be used to reduce tax rates.

Aside from the expected and intended redistribution of artificially-booked profits, different apportionment factors would, unsurprisingly, result in some redistribution between countries. The calculations by Cobham and Loretz suggest that the physical assets factor would tend to benefit low-income countries, and the

[34] The same problem was faced by the illustrative calculations attempted by the IMF (IMF 2014); the text emphasises the big difference in the redistributional effects if payroll costs are used as against headcount for the labour factor, but perhaps even more significant is the redistribution away from 'conduit' countries under any apportionment formula.

[35] Under the independent entity principle losses incurred by one affiliate, for example in the early years of a green-field investment, could not normally be off-set against profits in another jurisdiction.

turnover factor high-income countries; in the case of employment, a factor based on number of employees would benefit low-income countries, but this would be much less on the basis of payroll costs (to the extent that data is available). This clearly supports a balanced formula using both production factors (employees, and perhaps assets) and consumption factors (sales by destination), along the lines of the traditional US formula. This was adapted in the proposed CCCTB to split the employment factor 50:50 between employee numbers and payroll costs, which seems appropriate to use internationally in view of large differences in wage levels. Another means of adjusting for wage disparities is to compare payroll data using purchasing power parity.

Some have argued that account should be taken of the 'immaterial labour' in the digital economy, resulting in unpaid contributions to value creation (Colin and Collin 2013, 35 ff.). Reflecting this view, the draft report for the European Parliament on the CCCTB of July 2017 proposed adding data collection and exploitation as a fourth apportionment factor. The data factor would be equally made up of the proportion in that country of the 'volume of personal data of online platform and services users' collected and exploited.[36]

Some suggest that the physical asset factor should be dropped, since it is now much less relevant; also, as pointed out above, it may be difficult to quantify accurately. This would suggest a two-factor formula, balancing sales by destination and employees (equally weighted by headcount and payroll costs). The argument that intangible assets should be included misunderstands the fundamental argument for a unitary approach. As already stressed, this rejects the view that profits can be attributed to particular assets or activities, but treats them as generated by the operations of the firm as a whole, and apportions them according to its real presence in each country. The high value added by, for example, research and development teams, should be reflected in the employee factor, and apportioned to where the people are physically based. Attributing the profits to the intangible assets is both inappropriate and a recipe for BEPS.

Finally, the possibility that different competitive concerns might lead countries to adopt different formulas should not be seen as a prohibitive concern. Diverging apportionment formulas should pose no greater problem for international investors than, for example, differences among countries in tax rates or in depreciation allowances, provided that the investor knows each country's formula in advance and is able to calculate its effective tax rate in each country (Durst 2015). Today, under arm's-length pricing rules, the investor has no reliable means of predicting its effective rates. Under apportionment formulas set in advance, however, the investor will have greater certainty than is available under arm's-length rules, even if different countries' formulas differ. It would nevertheless obviously be desirable if formulas could be aligned.

2.4 Adoption of a Unitary Approach

These approaches are not necessarily mutually exclusive, but to some extent overlap. For example, adoption of the CCCTB within the EU would entail formulary apportionment among the participating states, but could be combined with a form of RBWT towards the rest of the world (full inclusion CFC rules with a foreign tax credit). Application of RBWT could use formulary apportionment in place of source and transfer pricing rules to distinguish income that carries foreign tax credits from income that does not.

RBWT could be adopted within plausible interpretations of existing tax treaty rules, the other two approaches would require override (and hence renegotiation) of treaties, while the DBCFT with border adjustment would also conflict with WTO rules. Reuven Avi-Yonah has formulated a legislative draft to

[36] Document PE608035, amendments to articles 3 and 28.

adopt formulary apportionment into the US system, with a sales-only formula, and proposing a 5-year transition to allow renegotiation of international rules.

A move towards formulary apportionment within existing international rules could be possible by building on the profit-split method of transfer pricing. This allows aggregation of the profits of transactions between affiliates in specified circumstances, e.g. if they both make 'unique and valuable contributions', or if the operations are 'highly integrated', and splitting these profits according to appropriate 'allocation keys'. Revisions to the relevant section in the OECD Transfer Pricing Guidelines are currently under consideration in the BEPS project. However, the proposals issued in June 2017 are very cautious, confining the use of the method to very limited circumstances, and refraining from specifying suitable allocation keys.

RBWT and DBCFT could be adopted unilaterally, whilst unitary taxation with formulary apportionment would require a coordinated approach, either globally or regionally.

3. SHORT-TERM ALTERNATIVE POSSIBILITIES

A more pragmatic way forward could be to sacrifice some purity for achieving simplicity in allocating the consolidated tax base of a unitary enterprise. This may be especially important for developing countries, which would experience considerable difficulty in applying complex methods requiring considerable skill and judgment. An overview of three short-term alternatives which developing countries could consider is presented below.

3.1 The Brazilian approach

Brazil has adopted a distinctive system since 1997 which departs from the OECD Guidelines. This is based on legislatively fixed margins, and seems to have been successful – at least in ensuring ease of administration and guaranteeing juridical certainty towards the way transfer pricing rules are applied. By removing the need for subjective evaluation by tax officials, it greatly reduces administrative costs, removes the temptation for corruption, and virtually eliminates litigation. However, setting profit margins by broad industry sector is a very broad-brush approach. It has also been considered by the OECD countries as contrary to the arm's length principle, although Schoueri has put forward proposals for bringing it into line, by allowing companies a genuine opportunity to propose a more appropriate margin (Schoueri 2015).

The Brazilian transfer pricing system is unique in that Brazil has developed an objective method that allows the taxpayer to mathematically determine and prove its pricing benchmark without having to go through a search for comparables. By not requiring a comparables search—which is the basis of the OECD's Guidelines - the Brazilian transfer pricing rules provide a simpler alternative to the OECD guidelines. The search for comparables is one of the main concerns of developing countries, which do not have wide and open markets providing accessible information and reports about competing companies commercializing comparable or similar products. Sometimes, a company might be the only producer of a specific type of product, making the search for comparables impracticable if not impossible (Falcão, 2012).

Brazil aims to achieve the arm's length standard by making use of a series of safe harbors and fixed formulas (further discussed below) that are made available to the taxpayer for import and export transactions, respectively. Because the Brazilian method approaches the arm's-length price objectively, through the use of alternative mathematical formulas, while the OECD transfer pricing regulations provide evaluative approaches to achieve the arm's-length price in a transaction between related parties, sometimes the taxpayer is faced with the tough practical reality that it would need to apply one price in order to comply with the Brazilian transfer pricing rules, and another, different price, in order comply with an arm's-length price compatible with the OECD guidelines.

Since Brazil has never issued any rules or regulations providing for reconciliation between the Brazilian and OECD approaches, it is up to the taxpayer to resolve this issue which most of the time leads to double taxation. It might be that this issue will be finally solved, should the OECD accept the Brazilian request to accede to the OECD – which is likely to be the case, as recently stated by Mr. Saint Amans himself, during the 2017 International Fiscal Association Conference in Rio de Janeiro, Brazil.

Much like in the rest of the world, in Brazil, the transfer pricing rules were designed to prevent Brazilian legal entities from evading taxes or shifting profits by under or overcharging amounts. The rules apply not only to transactions by Brazilian entities with foreign related persons, but also to some foreign entities that are not related to the Brazilian entity, if they are located in tax havens or privileged tax regimes and have therefore been in line with the OECD's BEPS Project objectives, even before the project was launched.

Brazil's transfer pricing rules also define maximum price ceilings for deductible expenses on inter-company import transactions and minimum gross income floors for inter-company export transactions. The rules address imports and exports of products, services and rights charged between related parties. Through the provision of safe harbours and exemptions, the rules were designed to facilitate the monitoring of inter-company transactions by the Brazilian tax authorities while they develop more profound technical skills and experience in the domain.

As of 2011, four methods may be used to calculate transfer pricing adjustments in acquisitions and imports of assets, goods, services, or rights:

- comparable independent prices (PIC);
- resale price less 20 percent profit (PRL 20, for goods imported and resold without undergoing any industrial process in Brazil);
- resale price less 40, 30 or 20 percent profit (for imported goods which undergo further industrialization in Brazil – the margin varies depending on the sector); and
- production cost plus profit (CPL).

In addition to the above methods, Brazil has more recently also adopted the commodities price method, commonly referred to as the sixth method, which allows the tax authorities to use the prices posted in open commodities markets as benchmarks on which to set the commodities price for certain commodities, specified by law.

If the benchmark reached by the application of one of these methods (the most favorable method at the option of the taxpayer, provided that such option is validly made before a tax inspection) is greater than the acquisition or import prices subject to transfer pricing control, no adjustment is required when calculating the corporate income tax and social contribution on net profits.

On the other hand, if the benchmark is lower than the acquisition or import prices and this difference exceeds the variations accepted by the legislation, the difference must be added to the tax base.

The Brazilian tax administration chose to adopt a hybrid system in applying transfer pricing rules for exports. Under this system, a company need not search for comparables if it meets one of the safe harbor provisions. If it meets none of those provisions, it may have to search for comparables. Any of the following four methods can be used to calculate the benchmark for exports:

- export sales price method (PVEX);
- wholesale price in country of destination less profit method (PVA);
- retail price in country of destination less profit method (PVV); or
- purchase or production cost plus taxes and profit method (CAP).

The Brazilian transfer pricing system allows companies to determine a transfer pricing benchmark without having to resort to external and sometimes unobtainable data—that is the main advantage over the OECD transfer pricing rules.

The Brazilian system could be marketed as an initial, simpler and more realistic approach to developing countries through which they may get acquainted with the transfer pricing regulations and build domestic capacity on the subject. Developing countries then could decide, on a more definitive basis, how to further develop their transfer pricing regulations, in line with country practices and with the domestic resources.

3.2 The Shared Net Margin Method

With such aims in mind, Michael Durst puts forward a proposal for a modified version of the TNMM (Durst 2016). This would avoid the need for a detailed audit based on functional analysis and attempting to identify comparable independent firms, by simply establishing a benchmark for the local affiliate's profitability. This would require the local affiliate to earn a profit margin in proportion to that of the corporate group as a whole. The benchmark he suggests is 25 per cent of the group's earnings before tax (Durst 2016), based on experience of attempting to apply the TNMM to a wide range of distributors, manufacturers and service providers. The fraction is chosen to arrive at a profit allocation which could be acceptable to both the revenue authority and the taxpayer. It would generally prevent the very low requirements of income that under current practice tend to be ascribed to 'risk-stripped' subsidiaries in the course of BEPS planning.

This suggested method would require a minimum level of income, consistent with group-wide profitability, even after payment of interest, thereby limiting base erosion through the use of related-party loans, as well as other deductions of payments to related parties. Such a provision could be applied as a 'safe harbour', although to be most effective it should not be optional for taxpayers. It is evidently not a fully satisfactory or theoretically pristine approach, but is put forward as a pragmatic solution, aimed mainly to provide developing countries with a method which is easy to administer and could adequately protect their tax base.

A variation of this has been suggested by Alex Cobham. He suggests that developing countries could maintain a nominal adherence to OECD transfer pricing methods, while introducing a simple backstop. He describes this as a formulary alternative minimum international corporate tax (FAMICT). It could operate on the basis of information disclosed under the OECD standard on country-by-country reporting or equivalent if firms are under the 750m global turnover threshold. This would allow tax authorities to say to multinationals, in effect, 'Set the transfer prices/intra-group interest rates/etc that you want, recognising that we don't & won't have the capacity to challenge them effectively; but know that if the overall effect is to take your taxable base here below (say) 80% of what would be apportioned under a (say) Canadian/CCCTB basis, then we'll draw a line there.' Global adoption would obviously lock in substantial double *non*-taxation, so it's not immediately inconsistent with multinationals' demands; but at the same time provides a simple protection for the lower-income countries that tend to suffer disproportionate revenue losses due to profit shifting (Cobham and Jansky 2017).

3.3.3 An Alternative Minimum Tax

A significant departure from the separate entity principle is the use of a "minimum tax schemes". Minimum tax systems are widely used around the world to prevent the erosion of the corporate tax base in low and middle-income countries (see Best et al 2015 for a list of countries using such a minimum tax scheme). The idea is that firms can evade a (conventional corporate) profit tax by either under-reporting sales or over-reporting costs. If over-reporting costs is relatively easier than under-reporting sales, it may make sense to tax an alternative base that is harder to evade than profits. While various alternative tax bases are used, the simplest and most common base for the minimum tax is sales.

In Pakistan, for instance, all corporations are required to calculate their tax liability based on profits (at a tax rate of 35%) and based on sales (at a tax rate of .5%). Firms are then required to pay whichever liability is higher. That means that firms can evade taxes by under-reporting their profits only up to a certain point. When the profit rate falls below a certain threshold (which is the ratio of the two tax rates, i.e. 0.5 divided by 35 equalling 1.43% in Pakistan), the firm has to pay the tax on sales. Consistent with this, empirical evidence shows that a large share of firms under-report profits until the profit rate reaches around 1.43%, and then 'bunch' at this level. The degree of 'bunching' in the distribution of the profit rate can be used

to estimate the evasion response to the minimum tax. Using this approach and firm-level tax records from Pakistan, Best et al (2015) show that the minimum tax in Pakistan reduces evasion by about 70%.[37] In Guatemala and Hungary, the alternative tax base is also sales, and the scheme generates a very similar bunching response to the one observed in Pakistan.

A concern with minimum tax schemes is that they introduce a productions inefficiency, as firms with the same level of sales but different profit rates might face similar tax liabilities. This discourages investment by the relatively more productive firms. In addition, a tax on sales would cascade through the production chain and thus generate additional distortions, particularly in economies with long production chains. A paper by Caprettini and Ciccone (2015) using data from Brazil suggests that this is not a major concern in middle and lower income economies, where production chains are relatively short. However, empirical evidence on the production distorting effects of minimum taxes is still scarce.

Some countries have chosen alternative tax bases other than sales, for instance fixed assets, in the hope of limiting distortions. The alternative tax in Ecuador is particularly sophisticated, being constituted of the sum of .4% of assets, .2% of wealth, .4 of taxable profits and .2 of deductible costs. This algorithm seems intended to address both the production efficiency and the secondary concern that sales could still be evaded. In some contexts, including the Ecuador system, the minimum tax is in fact not an alternative tax but rather an advance payment that is creditable against the corporate tax liability calculated at the end of the fiscal period. If the advance tax payment is higher than the final corporate tax liability, the taxpayer can request a refund of the difference. If requesting a refund generates a hassle cost for the taxpayer, or an increased (perceived) audit probability, refund requests might be rare and the minimum tax can effectively increase tax payments.[38]

In addition to minimum taxes, withholding of taxes on firms' sales, for the purpose of enhancing compliance with the corporate income tax and sales tax/value-added taxes is common in low and middle-income countries. In such withholding schemes, the buyer in a transaction withholds tax from the seller, and remits it to the tax authority as an advance tax payment for the seller. Withholding agents can be larger firms, state institutions that purchase from the private sector, or financial institutions such as credit/debit card processing companies. Although tax withholding does not change the tax liability, it creates a compliance default and thus reduces evasion, in much the same way as minimum taxes. Brockmeyer and Hernandez (2017) provide empirical evidence for this from Costa Rica, illustrating that withholding increase compliance through two channels: small firms do not reclaim the tax withheld and thus remit a higher amount of tax, while larger firms interpret withholding as an enforcement signal and increase reported tax liabilities, despite the fact that the audit probability has not changed.

While there is little empirical evidence on the production distortions generated by minimum taxes and withholding schemes, there is clear evidence that they improve tax compliance in low compliance contexts. However, it should be highlighted that a minimum tax on turnover is ineffective if turnover can be as easily manipulated as input costs. The minimum tax relies on alternative tax base that is less evasion prone. In addition, it is important to keep in mind that the empirical findings apply to within-country tax evasion/avoidance in low income countries that is likely to take relatively unsophisticated forms, i.e. the fabrication of receipts for non-existent inputs. Translating these findings to a context of international tax evasion and avoidance by sophisticated MNEs may thus require a large degree of caution.

[37] For more details, see also the Microeconomic Insights Blog by these authors, at http://microeconomicinsights.org/designing-tax-policy-high-evasion-economies/ .

[38] Policy recommendations that would reduce the potential distortionary effects of the tax are facilitating the procedure to reclaim a refund and delaying the payment deadline for the advance payment, to reduce the liquidity cost imposed on firms.

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