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by Alistair Pepper, Jessie Coleman, and Thomas D. Bettge

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Alistair Pepper

Jessie Coleman

Thomas D. Bettge

Alistair Pepper is a managing director, Jessie Coleman is a principal, and Thomas D. Bettge is a manager in the economic valuation services group of the Washington National Tax practice of KPMG LLP. They thank Richard Collier and Shirley Sicilian for their helpful comments.

In this article, the authors consider why now is still not the time for the international adoption of formulary apportionment.

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The international corporate tax system is in a state of flux, with numerous reform initiatives being proposed by national governments and international institutions. Some academics, and even the European Commission, are asking (again) whether it is finally time to adopt formulary apportionment,[1] an alternate way to allocate taxing rights over multinationals first considered and rejected by the League of Nations in the 1930s. Indeed, some are pointing to the OECD/G-20 inclusive framework's work on pillar 1 as a first step toward formulary apportionment.

This article explains why that time has still not arrived and why it never will. It explores the challenges a country would face if it sought to adopt formulary apportionment unilaterally, from defining a multinational group to selecting an allocation formula that does not undermine its international competitiveness, as well as the substantial obstacles that make it unlikely for countries to reach a multilateral agreement to implement formulary apportionment. In short, formulary apportionment is unlikely to provide an acceptable way to allocate taxing rights between and among countries and risks distracting from — and ultimately frustrating — other, more serious reform initiatives.

Introduction

Over the past 10 years, corporate tax — or more precisely, the perception that multinationals do not pay their fair share of tax — has been headline news worldwide. That, combined with the slow growth in living standards and recent global pandemic, has led to a rise in calls for radical reform to the way multinationals are taxed.

Critics of the system have increasingly focused their ire on transfer pricing rules and the arm's-length principle that underpins them. Joseph

[1]For this article, formulary apportionment should be understood as a profit allocation system that uses a formula to apportion among countries the taxing rights over the consolidated corporate tax base of a multinational. For further discussion of formulary apportionment and its alternatives, see Walter Hellerstein, *International Income Allocation in the Twenty-First Century: The Case for Formulary Apportionment* (2005).

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Stiglitz, a Nobel Prize winner and former chief economist at the World Bank, described the transfer pricing system as "a fundamentally flawed and incorrigible status quo."[2] That criticism echoes the long-standing position of many who see transfer pricing as a tax avoidance scheme that leads to abusive or inappropriate intercompany pricing, rather than a way to protect against tax avoidance.[3] Some have even adopted the term "transfer mispricing."

To be sure, the transfer pricing system has its challenges. It is complex, resource-intensive, and open to interpretation. The implementation challenges have intensified as business models (and businesses themselves) have become more complicated, with practitioners and tax administrations needing to grapple with thorny issues such as hard-to-value intangibles. Tax administrations that nominally apply the same standard and follow the same guidance frequently take diametrically opposed positions, giving rise to difficult and protractive disputes. That the arm's-length principle has remained the cornerstone of the international tax system since the 1920s is in large part a consequence of the lack of consensus support for an alternative and the difficulty of changing a standard that has now been adopted by almost every major country. For Stiglitz (and others), that assessment ignores formulary apportionment, which is not only a better way to allocate taxing rights over multinationals, but the only approach "that will work at the global level"[4] to eliminate multinational income shifting.[5] Other proponents have described formulary apportionment as a new approach that with sufficient political will could establish a tax system "fit for the twenty-first century."[6]

Describing formulary apportionment as a new approach is not entirely accurate; or more precisely, it is entirely inaccurate. Formulary apportionment predates the arm's-length principle; it was developed in the late 19th century to divide taxing rights among U.S. states over transcontinental railroads.[7] In 1911 Wisconsin became the first state to use formulary apportionment to apply corporate income tax when it decided to calculate the taxable income of multistate enterprises by applying a formula based on property, cost of manufacture, and sales to the enterprise's total taxable income.[8] The international community even discussed and dismissed formulary apportionment as the primary method for allocating taxing rights over multinationals among countries when it first debated the question in the 1930s.[9] For much of the 20th century, support for formulary apportionment was limited to academics, as well as the U.S. states, where formulary apportionment is still a core part of corporate tax regimes.[10]

However, as support for the arm's-length principle has waned, interest in formulary apportionment has grown. The European Commission's common consolidated corporate tax base proposal, originally suggested in 2011 and relaunched in 2016, recommended the introduction of formulary apportionment to allocate taxing rights over corporate profits among EU members. In 2021 the CCCTB was subsumed within the European Commission's broader "Business in Europe: Framework for Income Taxation" — an attempt to rebrand rather than fundamentally redesign the earlier CCCTB proposal.[11] Formulary apportionment has also received backing from many IMF staff economists.[12] Even at the OECD, long the

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[2] Joseph Stiglitz, "No More Half Measures on Corporate Taxes," Columbia Business School: Chazen Global Insights (Oct. 7, 2019).

[3] Prem Sikka, "Shifting Profits Across Borders," *The Guardian*, Feb. 12, 2009.

[4] Stiglitz, *supra* note 2.

[5] Jack Mintz and Michael Smart, "Income Shifting, Investment, and Tax Competition: Theory and Evidence From Provincial Taxation in Canada," 88(6) *J. Pub. Econ.* 1149 (June 2004).

[6] Sol Picciotto and Daniel Bertosa, *Taxing Multinationals: A New Approach* 6 (2019).

[7] Joann M. Weiner, "Using the Experience in the U.S. States to Evaluate Issues in Implementing Formula Apportionment at the International Level," OTA Paper 83, at 5-6 (1999).

[8] *Id*.

[9] *Id*. at 5.

[10] This article does not consider the merits and demerits of applying formulary apportionment in a U.S. state context. There are numerous factors, including the constraints imposed by the U.S. Constitution and lower corporate tax rates applied by U.S. states, that may help mitigate the challenges outlined herein.

[11] To date, there has been insufficient support in the EU to proceed with those types of proposals, and some member states have been particularly vocal in their opposition.

[12] Thornton Matheson et al., "Chapter 14: Formulary Apportionment in Theory and Practice," in *Corporate Income Taxes Under Pressure* (2021).

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strongest advocate of the arm's-length principle, there are discussions about introducing more formulaic allocation rules for a portion of the profits of the largest and most profitable multinationals under pillar 1.[13]

It is against that background, coupled with the ongoing debate about the continued relevance of the arm's-length principle, that it seems important to revisit the challenges of formulary apportionment and explain why the obstacles that have prevented countries from adopting it for the past 90 years remain insurmountable. Previous literature has focused on the numerous conceptual challenges with formulary apportionment.[14] This article explores many of those challenges, but from the perspective of a country seeking to adopt formulary apportionment. It focuses on the key policy design decisions that remain unresolved, the trade-offs that need to be made, and the unintended outcomes that can result from formulary apportionment.

Unilateral Implementation

To implement formulary apportionment unilaterally, a country would need to consider two questions. First, is there anything that prevents us from abandoning the arm's-length principle and adopting formulary apportionment? Second, if we do adopt formulary apportionment, what design decisions do we need to make, does this system deliver rational outcomes, and are there any broader economic consequences that we need to consider?

Tax Treaties: A Legal Obstacle?

Many countries, including the United States, have embedded the arm's-length principle into domestic law. Thus, introducing formulary apportionment would require a statutory amendment, which can often be accomplished via simple legislative majority.[15] Most countries are also bound to the arm's-length principle through their bilateral tax treaties, which typically limit their taxing rights over corporate profits to those that a resident enterprise or the permanent establishment of a foreign enterprise would earn at arm's length, following articles 5, 7, and 9 of the OECD, U.N., or U.S. model tax conventions.

In the United States, Congress can override the provisions of a treaty by simple majority. Under U.S. law, treaties and statutes share equal status; if they conflict, the latest in time prevails.[16] Yet the U.S. Constitution provides that a tax treaty can be ratified only with the advice and consent of two-thirds of the senators present, considerably more than the majority required to enact new legislation. That requirement is all the more daunting, given the Senate's reluctance to ratify new treaties during the last decade.

Commentators have suggested various ways a country could introduce formulary apportionment without amending its treaties. For example, some have suggested tax treaties can be read as being compatible with formulary apportionment,[17] while others have suggested that treaties could be amended through a competent authority agreement to permit formulary apportionment.[18] In their creative workarounds, those commentators miss the reality that the largest obstacles to the introduction of formulary apportionment imposed by tax treaties are political, not legal. In

[13] OECD, "Statement on a Two-Pillar Solution to Address the Tax Challenges Arising From the Digitalisation of the Economy" (Oct. 8, 2021).

[14] *See, e.g.*, Joe Andrus and Paul Oosterhuis, "Transfer Pricing After BEPS: Where Are We and Where Should We Be Going," 95(3) *Taxes* 89 (Mar. 2017); J. Clifton Fleming Jr., Robert Peroni, and Stephen E. Shay, "Chapter 6: Is Unilateral Formulary Apportionment Better Than the Status Quo?" in *The Allocation of Multinational Business Income: Reassessing the Formulary Apportionment Option* (2020); Eric J. Coffill and Prentiss Willson Jr., "Federal Formulary Apportionment as an Alternative to Arm's Length Pricing: From the Frying Pan to the Fire?" *Tax Notes*, May 24, 1993, p. 1103; Hellerstein and Charles E. McLure Jr., "The European Commission's Report on Company Income Taxation: What the EU Can Learn From the Experience of the US States," 11 *Int'l Tax & Pub. Fin.* 199-220 (2004); and Weiner, *Formulary Apportionment and Group Taxation in the European Union: Insights From the United States and Canada* (2005).

[15] In the United States, a budget reconciliation bill would need only a simple majority in the Senate.

[16] *See, e.g.*, *Lindsey v. Commissioner*, 98 T.C. 672 (1992), *aff'd*, 15 F.3d 1160 (D.C. Cir. 1994). Naturally, U.S. courts are reluctant to find a conflict between a statute and a treaty provision: "A treaty will not be deemed to have been abrogated or modified by a later statute, unless such purpose on the part of Congress has been clearly expressed." *Toulouse v. Commissioner*, 157 T.C. No. 4 (2021) (quoting *Cook v. United States*, 288 U.S. 102, 120 (1933)).

[17] Picciotto and Bertosa, *supra* note 6, at 25-26.

[18] Reuven S. Avi-Yonah, Kimberly A. Clausing, and Michael C. Durst, "Allocating Business Profits for Tax Purposes: A Proposal to Adopt a Formulary Profit Split," 9(5) *Fla. Tax Rev.* 497, 523-524 (2009).

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many countries, including the United States and United Kingdom, legislatures are free to override international treaties through domestic legislation. In all other countries, such as France, where that is not possible, tax treaties can simply be revoked. Moreover, many developing countries have limited treaty networks — meaning they are largely free to implement formulary apportionment if they choose.

The real obstacle to implementing formulary apportionment unilaterally is the political pressure a country would face to reverse course — it would be criticized for violating international norms. Other countries would consider imposing sanctions if they perceived their businesses to be unfairly targeted. That threat is all too real: France, Italy, Spain, and the United Kingdom have recently been subject to section 301 investigations by the Office of the U.S. Trade Representative over their digital services taxes. Also, at least in the short term, unilateral action could result in a decline in business confidence and foreign direct investment — a critical concern for developing countries in particular.

Even setting aside the likelihood that countries would take steps to censure and sanction a violation of international tax norms, relinquishing the arm's-length principle would impose significant economic costs on the multinational enterprises that operate in that jurisdiction, potentially affecting their continuing operations there. Recent U.S. foreign tax credit regulations (T.D. 9959) deny a credit for any residence-based foreign tax that does not adhere to the arm's-length principle. That rule cannot be skirted by applying a hybrid approach that, while remaining nominally arm's length, applies formulary principles. To be creditable, a residence-based foreign tax must be "determined under arm's-length principles, without taking into account as a significant factor the location of customers, users, or any other similar destination-based criterion."[19] Other potential economic costs on MNEs include additional compliance burdens (needing to conform to the arm's-length standard in most jurisdictions while preparing unique formulary apportionment calculations for a single jurisdiction) and double taxation.[20]

So, coming back to the question of what prevents a country from abandoning the arm's-length principle: The constraints imposed by tax treaties are large, but not insurmountable. A country would simply need sufficient domestic political support to allow it to overcome the significant international fallout and economic costs it would inevitably face.

Key Design Decisions

Before introducing formulary apportionment, a country would need to make decisions on several difficult design issues for which there are no easy answers.

One of the biggest challenges is how to define the consolidated group[21] to which formulary apportionment will apply.[22] There are broadly two ways to do that: on a legal or economic basis. A legal definition would define a group as all entities linked by a specified degree of ownership (for example, more than 50 percent direct or indirect ownership, or all entities that are subject to consolidation under a relevant accounting standard). An economic definition would seek to identify group entities that performed integrated economic activities and would mean that if a conglomerate had three separate business units the profit allocation formula would apply to each business separately. The legal approach is undoubtedly simpler, but it creates opportunities for planning and has the potential to deliver odd outcomes. The economic approach would deliver more rational outcomes, but it would be more difficult to apply in practice because of the challenges in defining an integrated economic activity and the complexities regarding potential data segmentation.

For example, consider a conglomerate with interests in property, aviation, food processing,

[19] Reg. section 1.901-2(b)(5)(ii).

[20] Double taxation would be prevalent if jurisdictions adopted different apportionment formulas.

[21] As explained in Hellerstein, *supra* note 1, formulary apportionment can be applied on either an entity or group basis. However, for formulary apportionment to replace the arm's-length principle, it must be applied on a group basis, otherwise the arm's-length principle would still be required to determine an entity's profits.

[22] For further discussions, see Hellerstein and McLure, *supra* note 14, at 203-206.

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and marine services. In 2020 the group's aviation business incurred major losses because of the severe reduction in air travel caused by the pandemic. If formulary apportionment were applied to the conglomerate, it would result in the losses from the aviation business being allocated to jurisdictions where the group's activities may be limited to property, food processing, or marine services. That outcome does not make much sense and lends itself to tax planning. Taxpayers would be encouraged to combine highly profitable activities in high-tax countries with less profitable activities in low-tax countries or hive off profitable activities in low-tax countries from a broader group.

Commentators who have considered how to define a consolidated group have generally concluded that following a legal definition is the best option.[23] A country that adopts formulary apportionment is likely to reach the same conclusion and would therefore have to accept the potentially odd outcomes that result. An alternative — as applied in many U.S. states — is to allow formulary apportionment to be applied to the overall combined group, except when it gives rise to a material distortion. That approach would require a country to develop rules on when a material distortion arises and would be difficult to apply in an international context.

The most interesting — or at least most headline-grabbing — design question is: What should the formula used to allocate profits be? The formula could be made up of one or more allocation factors, such as employee headcount, payroll, property, and sales, which can be weighted in different ways. For example, a country could select a formula that weights payroll, property, and sales equally, it could double-weight sales, or it could use just sales. There is an infinite range of possible combinations.

A country adopting formulary apportionment might ask whether there is an objectively right or fair formula. Unlike the arm's-length principle — which is, well, principled — there are varying policy rationales that can support different formulas in different circumstances. For example, it could make sense for extractive industries to allocate most profits to countries where the relevant oil, gas, or minerals are extracted. That would suggest that property (or potentially intangible assets, such as mining licenses) should be prioritized over other factors. In contrast, for the pharmaceutical industry one might want a formula that splits profits among countries where the customers are located, that conducted the initial research and development, and performed the manufacturing. That speaks to a formula that includes payroll, property, and sales in some selected proportion. (We will return to the challenges that arise from the lack of a single objectively fair formula in the section multilateral implementation.)

So what formula would a country implementing formulary apportionment unilaterally choose? It might select the Massachusetts formula, which places equal weight on payroll, property, and sales (the formula most U.S. states with corporate income taxes used in the 1970s).[24] Or it could choose a different formula, prioritizing whatever factors it considers most appropriate. The problem for a country adopting any formula that contains payroll and property is that the formula effectively converts a corporate income tax into a tax on payroll and property.[25] If a business increases its payroll or property in a country, it ends up paying more corporate tax; conversely, if it reduces its payroll or property, it pays less. That means there would be an incentive for businesses to reduce the amount of labor and capital they use in any country that adopts formulary apportionment unilaterally using payroll or property as allocation factors to reduce their tax burdens.

To illustrate the point, consider a few simple examples. Imagine that a country with a large mine adopted formulary apportionment based on the Massachusetts formula. The company that owns the mine could cut its corporate tax bill by outsourcing the operation of the mine (including equipment and employees) to a third party or by insourcing activities in other countries. Either

[23] *Id*. at 205.

[24] *Id*. at 208.

[25] Weiner, *supra* note 7, at 14.

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change would reduce the share of the company's payroll or property used in the country where the mine is located. Whether the country itself would be concerned by that restructuring is another question, and it would depend on the extent to which the third parties and insourced activities were subject to tax in its jurisdiction.

Similarly, a fast-food business could cut its tax bill by shifting its activities in a country with formulary apportionment to a franchise model, while a fashion business could outsource its manufacturing. Even if businesses do not undergo such major transformations, it would be relatively easy to change payroll and property numbers by shifting employment contracts to third parties or selling and leasing back property to reduce the relative payroll and property numbers in a country where formulary apportionment applies. Countries could try to address the potential for artificially shifting the production factors used in the formula to low-tax jurisdiction with some sort of antiavoidance rules. Some U.S. states, for example, have adopted rules to address issues such as leased employees. However, it is not clear that countries could fully resolve the problem, and in any event, the incremental rules that would be needed require a facts and circumstances type of analysis that the adoption of formulary apportionment is meant to avoid.

The history of the U.S. state corporate income tax is a powerful demonstration of the pressure a country adopting formulary apportionment would face to decrease the weighting of payroll and property and increase the weighting of sales, which is considered relatively immobile. In 1986, 80 percent of states that taxed corporate income used the Massachusetts formula; however, by 2004 a double-weighted sales formula had become the most common.[26] That trend has continued in recent years: By 2012 over 80 percent of states had formulas with a larger weight on sales, and by 2021 more than 60 percent used sales as the sole factor in their allocation formula and only 10 percent (or five states) used the Massachusetts formula (ironically, Massachusetts is not one of them).[27]

So back to the original question: What formula would a country adopting formulary apportionment unilaterally choose? A country that adopted a formula incorporating headcount, payroll, and property components would face an economic incentive to reduce the weighting of those factors and increase that of sales. Some countries might be able to withstand that pressure, particularly those that can pressure their own businesses. But most would be pushed almost inexorably toward a sales-based allocation formula (and all the associated sales sourcing challenges).

Problems With Sales-Based Allocation

A country seeking to adopt formulary apportionment using a sales-based allocation key would need to think about how to source sales. That might seem like an easy task — surely all companies must know where their customers are located. However, sourcing sales becomes very difficult very quickly, especially with digital commerce, which makes it challenging to reliably identify the ultimate destination of goods and services.[28]

Let's start with a simple example. If a French customer buys a phone from X Co. in France, it seems clear that when applying formulary apportionment to X, the revenue should be sourced to France. What happens if the French customer buys a phone from Y Co., a third-party distributor resident in Spain that previously purchased the phone from X? Does that mean that X should source the revenue from the sale to Spain where Y purchased the phone, or should it still be sourced to France? It would obviously be simpler to source the revenue to Spain where Y purchased the phone, because otherwise X would need Y to provide it with commercially sensitive

[26] Weiner, *supra* note 14, at 10-14.

[27] Federation of Tax Administrations, "State Apportionment of Corporate Income" (Jan. 2021); and Clausing, "Lessons for International Tax Reform From the U.S. State Experience Under Formulary Apportionment," SSRN (June 29, 2014). *See also* Clausing, "Formulary Apportionment and International Tax Reform: Lessons From the U.S. State Experience," in *U.S. State Tax Considerations for International Tax Reform* 63 (2014).

[28] For further discussion, see Andrus and Oosterhuis, *supra* note 14, at 99-101.

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sales data. However, that would create an obvious distortion whereby independent distributors could be used to shift sales among countries.

Consider a more complicated example (illustrated in the figure). A Group manufactures cameras for phones in Vietnam and sells them to B Group's procurement hub in Singapore. B ships the cameras from Vietnam to mainland China, where they are incorporated into cellphones. It then sells the phones to C Group in the United States, which then sells a finished phone to a customer in Brazil.

Where should the sales A generates from selling its cameras be sourced? Is it Singapore, because that is where B's procurement hub is located (and the first point of sales)? It seems difficult to rationalize why A's profits should be taxed in Singapore just because it is where B contracted to buy the cameras. What about China, where the camera is incorporated into the phone? That approach would benefit China, which remains the workshop of the world, but is unlikely to be well-received by other countries. What about Brazil, where the phone containing the camera is ultimately sold? For those inclined to see that as the right answer, that approach is not practical from a data standpoint; A will not have the information, nor is it feasible to think that B or C would collect the information on A's behalf.

In short, globalization and the modularization of international supply chains make developing effective sourcing rules for tangible goods very difficult.

Implementation becomes even more complex with the sourcing of revenue from services or the license of intangibles. Again, take a simple example. Streaming companies spend hundreds of millions of dollars licensing content from other media companies. It would not be atypical for both the streaming and media companies to be based in the United States with a single global license for content agreed between them. How should the media company's revenue from the contract be sourced? Should the full amount be sourced to the United States? Or should the company be required to source the revenue among countries based on how much their citizens watch the licensed content or pay to watch it? If you think the revenue should follow the contract and be sourced solely to the United States, are you concerned that where businesses sign contracts will determine where they pay tax? If you want to source the revenue among countries based on how much their residents watch the licensed content, how would you compel the streaming company to provide the media company with such commercially sensitive information?

Sourcing revenue from services creates similar challenges. After content, streaming companies' next largest costs are the money they spend on cloud computing services, again typically provided by U.S. companies. As above, should the cloud computing company source its sales to the United States (assuming that is where its service contract was signed), or should it be required to source its sales based on where the streaming company's customers are resident? Given that streaming companies and companies providing cloud computing services might compete with one another, there is obviously information the streaming company would be unwilling to provide.

The difficulties that sourcing sales pose to the application of formulary apportionment are not new. Some commentators have described sales as the allocation factor that has generated "the most practical controversy" in a U.S. state context.[29] U.S. states have individually and collectively generated sourcing rules that a country implementing formulary apportionment could adopt. For example, the Multistate Tax Commission, which is responsible for promoting uniform and consistent tax policies across state boundaries, has developed model general allocation and apportionment regulations that include 48 pages of guidance on sourcing sales. While no doubt helpful, that guidance also has limitations. For example, when it is difficult to source revenue from electronically delivered advertising services, the rules suggest that population data could be used to approximate sales — hardly a scientific approach.

Where does that leave a country thinking about unilaterally implementing formulary apportionment using sales as a single allocation factor? Developing good sourcing rules seems

[29]Hellerstein and McLure, *supra* note 14, at 212-213.

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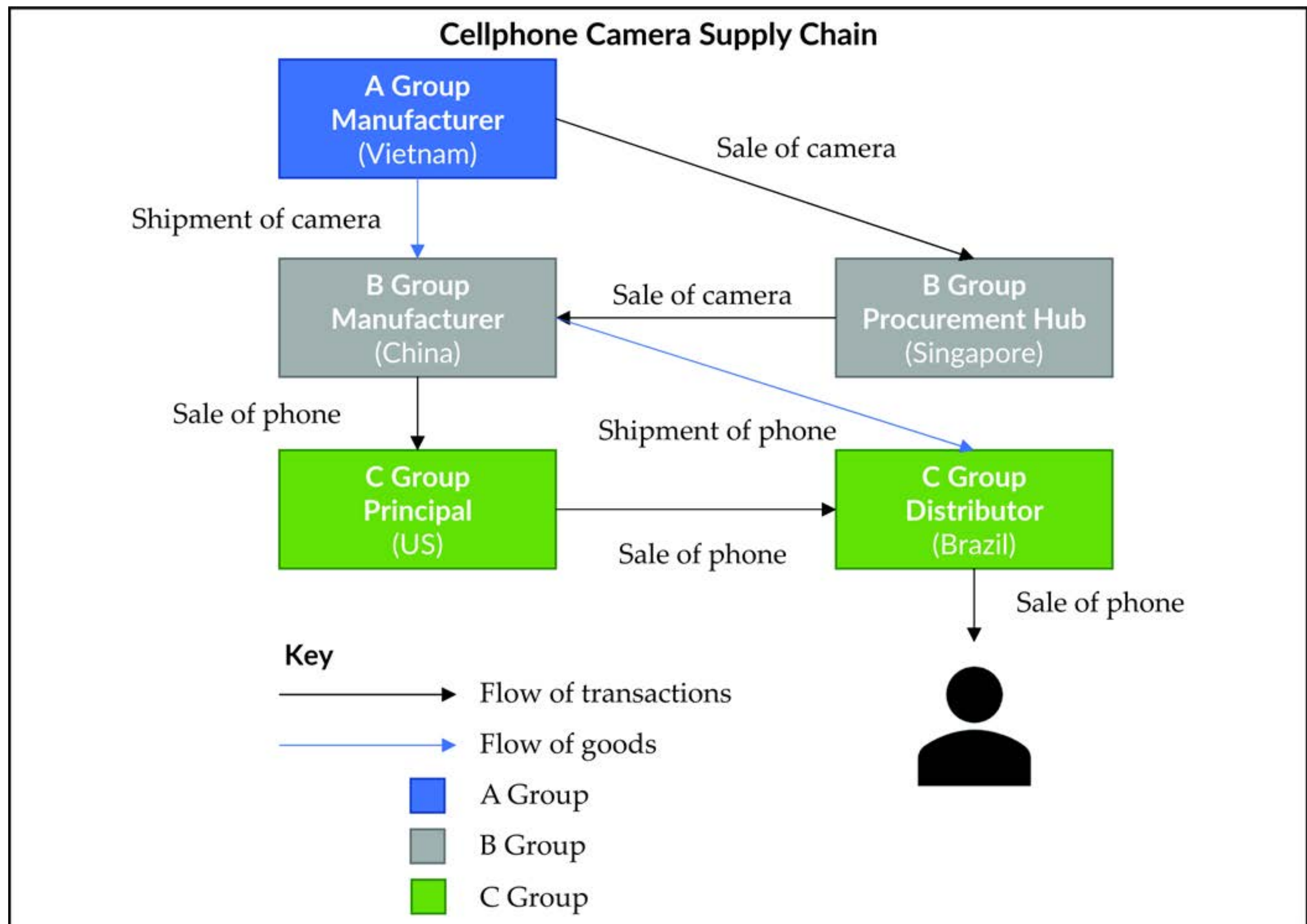

impossible, and even developing functional rules would be challenging. A country would need to strike a delicate balance between the pressure to adopt simple rules that taxpayers could apply (and tax administrations could effectively audit) and the need for those same rules to protect against odd outcomes and planning opportunities that simple rules would create.

Unilateral Implementation?

For all the reasons discussed above, it is difficult to foresee any country adopting formulary apportionment unilaterally.

A final thought on unilateral implementation: Even if it were introduced as a cure for the ills of transfer pricing and the arm's-length principle, there are other tax regimes, such as VAT and customs and excise taxes, that require taxpayers to price transactions between related parties. That raises the question of how those taxes would be administered in a country that chooses to adopt formulary apportionment for corporate income tax purposes.

Multilateral Implementation

The prospect of countries implementing formulary apportionment under a multilateral agreement seems similarly unlikely. Many commentators are skeptical about the idea that countries could reach that kind of multilateral agreement. Some have gone so far as arguing that "this hope was dashed in 1648 when the Peace of Westphalia gave rise to today's sovereign nation states."[30] Although such skepticism is understandable (and ultimately seems justified), the European Commission is continuing to explore the idea of implementing formulary apportionment at an EU level, so it is important to understand why it will be extremely difficult for countries to reach a multilateral agreement implementing formulary apportionment (and some of the reasons the commission has not made headway on its proposal during the last decade).

[30] Fleming et al., *supra* note 14, at 172-174.

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Allocation Formula

The main issue in any international discussion on formulary apportionment would be the formula itself. As outlined above, there is no objectively right or fair way to allocate profits — a view that a committee of the U.S. National Tax Association reached almost a century ago, when it concluded that all methods of apportionment are arbitrary and that the only correct rule is one "on which several states can and will get together as a matter of comity."[31]

Given the lack of an underlying principle, it is easy to envisage how international negotiations on formulary apportionment might work. Countries with high trade deficits, such as France, the United Kingdom, or the United States, will set out all the reasons why sales should be used as the primary allocation factor. Countries with trade surpluses, such as China or Germany, will argue that payroll and property should be given a higher weight than sales. They will be supported by countries whose economies are structured around the export of natural resources, which will also argue that a special formula should be developed for extractive industries. Developing countries will argue that headcount, rather than payroll, should be used as an allocation key for labor and that the translation of property and sales data should be based on purchasing power parity, rather than market exchange rates. Finally, investment hubs will see an international deal on formulary apportionment as a threat to their current economic model and will be encouraged to stir up trouble (for which there will be a lot of opportunity).

What will make discussions more difficult is that it is possible to make reasoned arguments in support of all those positions. France, the United Kingdom, and the United States can reasonably argue that sales is the most stable allocation factor and so should be given primacy in an internationally agreed formula, despite the problems of sourcing sales. China and Germany can argue that taxing rights over corporate profits should be allocated to countries where activities are performed, rather than where goods or services are consumed, and that VATs already allow countries to raise revenue from the sale of goods and services. Resource-rich countries can make a strong argument that tax on the profits generated from the sale of their oil, gas, gold, and diamonds should benefit their citizens, rather than the citizens of countries where those commodities are consumed. Developing countries will argue that even though labor for the same work receives less compensation in their borders than in developed countries they should be allocated an equivalent amount of profit and pay a similar amount of tax. Developed countries will no doubt push back, arguing that payroll cost, rather than number of employees, is a better way to assess the relative contribution of two countries to a multinational's profits.

As the U.S. National Tax Association concluded, just because it is impossible to agree on a principle does not necessarily mean the international community could not reach an agreement on the formula to allocate taxing rights among countries. After the horse-trading, one could envisage an agreement on an equally weighted payroll, property, and sales formula, balancing the competing views of countries with trade deficits and surpluses. There could be special rules for natural resources to protect the taxing rights of countries where those resources are located. Developing countries may be willing to accept that headcount should not be included in the allocation formula, provided that payroll, property, and sales figures were standardized based on purchasing power parity, rather than market exchange rates.

Is it feasible that such a deal could be reached? It seems very unlikely. Without a guiding principle, the stakes are simply too high. Countries will model the effects of different formulas and find it difficult to move away from the formula that is in their best fiscal interest, particularly when they can see who will benefit at their expense. IMF research on the distributional effects of different formulas has shown that the allocation factors used can have a significant effect on whether a country wins or loses in a shift to formulary apportionment.[32] For example, the

[31] Hellerstein and McLure, *supra* note 14, at 210.

[32] Ruud De Mooij, Li Liu, and Dinar Prihardini, "An Assessment of Global Formula Apportionment," IMF Working Paper WP/19/213, at 22-26 (Oct. 2019).

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United States would gain under most allocation formulas but might lose if headcount were used as an allocation key: Thus, we can assume it would strongly oppose the inclusion of that factor in any formula.[33] It is difficult to imagine Congress signing on to a formulary apportionment formula unless it was a clear revenue winner for the United States — and equally difficult to imagine the rest of the world agreeing to a formula that was of significant benefit to the United States but to their detriment.

Two other factors will make the negotiating dynamic difficult. First, higher-tax countries will know that agreeing to a formula that includes payroll and property will encourage multinationals to shift jobs and factories to lower-tax countries. Concerns about the real economic effects of a shift to formulary apportionment could make higher-tax countries reluctant to agree to any formula that includes payroll and property as an allocation factor or lead them to adopt complex rules designed to eliminate the benefits of that behavior — thereby eroding the simplicity that formulary apportionment is supposed to achieve.

Second, all countries will be aware that it will be very difficult to revisit and revise any deal they reach. Formulary apportionment provides a way to slice up the pie of corporate profits. Having reached a deal, any change to the formula that makes one country better off will necessarily make another country worse off. The strength of the status quo can be seen in Canada, where, as in the United States, its 10 provinces use formulary apportionment to divide their taxing rights over corporate income. Unlike the United States, the Canadian provinces agreed to apply the same equally weighted payroll and sales formula in 1961, and they still apply that formula today.[34]

The European Commission would argue that it would be considerably easier to reach agreement on formulary apportionment among EU states, and it would be right — but easier is not the same as easy. Reaching agreement among the 27 EU members will be easier than reaching agreement among the 193 countries recognized by the United Nations. The EU also has various tools at its disposal, including a large budget, which would help smooth potential disagreements.

Even so, the European Commission would still face the same issues outlined above. Germany and France would be scared that using payroll and property as allocation factors would encourage multinationals to shift more jobs to Eastern Europe, where corporate tax rates are typically lower. Various members would advocate special formulas for their special interest groups. Ireland would oppose formulary apportionment, as Finance Minister Paschal Donohoe has already made clear, and because EU tax matters require full consensus, Ireland would enjoy a de facto veto.[35] Finally, nationalist lawmakers in all member states would paint the adoption of formulary apportionment as a threat to national sovereignty, which would make the path to a political agreement particularly fraught.

If a group of counties like the EU moved toward formulary apportionment, multinational corporations would then be subject to a two-tier system: traditional transfer pricing rules when dealing outside the EU and formulary apportionment in the EU. That would increase complexity and compliance costs and the likelihood of double taxation.

For formulary apportionment to be taken seriously, it is not enough to say that the formula would need to be agreed on internationally or to identify the allocation factors that could form part of the formula. Instead, it would be necessary to spell out what formula (or formulas) should be used and how the various obstacles could be overcome, which would likely prove impossible.

Administration

A final and oft-overlooked challenge of formulary apportionment is administration. The administration of today's corporate tax systems, even at the EU level, is primarily the

[33] *Id*. at 23.

[34] Weiner, *supra* note 14, at 14-15.

[35] Padraic Halpin and Kevin Liffey, "Ireland Opposes Much of EU Corporate Tax Plan — Minister," Reuters, May 19, 2021.

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responsibility of national tax administrations. Tax authorities can audit multinationals' operations in their jurisdictions by reviewing the tax accounts of MNEs' local entities and the PEs of any nonresident entities. In contrast, if formulary apportionment were adopted, a national tax administration would need both the power and resources to review a multinational's entire international operations.

For example, imagine the Namibian tax administration were to audit a multinational mining group operating in the country. It would first need to check whether the group had correctly calculated its taxable profits in all countries where it operates because Namibia's tax revenue could be adversely affected by the underreporting of revenue in one country or claims for excessive deductions in another. Namibian tax authorities would also need to check that the group had correctly reported the payroll, property, or sales figures for each country where it operates because the country's tax revenue would also be reduced if those figures were underreported or if the figures for any other countries were overstated. For those reasons, Namibia is also unlikely to trust the all-clear from another tax administration that would stand to benefit if its overstated payroll, property, or sales figures were allowed to stand. It is questionable if developed — let alone developing — countries would have the resources to reliably enforce formulary apportionment.

While mining groups typically do not operate in that many countries, many multinationals have a much broader footprint. For example, the largest consumer goods groups typically sell their products in more than 150 jurisdictions. It is simply not feasible that any national tax administration could conduct an effective audit of the entire international operations of a large multinational operating in more than 50 countries, let alone 150.

One could see the possibility of expanding country-by-country reporting to include all the needed details for formulary apportionment and having the data exchanged in the same manner as CbC data. However, issues with countries auditing the data remain.

In the rare instances when tax authorities have assessed the feasibility of adopting formulary apportionment, they have reached the same conclusions. In its 2019 proposal to amend the rules for attributing profits to PEs, the Indian Central Board of Direct Taxes concluded that formulary apportionment was not feasible because of "practical constraints in obtaining details related to operations in other jurisdictions."[36]

Tax administrations would be able to audit a large multinational's profit allocation formula effectively only if they pooled resources and conducted multilateral audits, which is difficult to envisage many, if any, countries supporting. In an EU context, that also means that the adoption of formulary apportionment might need to be accompanied by the establishment of an EU tax administration, which again seems unlikely that many members would support.

In developing tax policy, policymakers do not always speak as much as they should to their tax administrations. If they were to ask those administrators to assess the practical implications of adopting formulary apportionment, they would quickly understand why the system could not work.

Conclusion

So is it finally time for formulary apportionment? We believe the answer is a resounding no. The obstacles to introducing formulary apportionment remain as insurmountable as they were 90 years ago. There are so many challenges: from the key design decisions that even advocates of formulary apportionment are unable to agree on to how a national tax administration could administer global formulary apportionment when applied to the largest multinationals.

In many ways the advocates of formulary apportionment are their own worst enemies. Formulary apportionment has long been presented as the boogeyman and is used to justify opposing any and all changes to transfer pricing and the arm's-length principle. If the world were finally to accept that formulary apportionment is

[36]Central Board of Direct Taxes, "Proposal for Amendment of Rules for Profit Attribution to Permanent Establishment," at 72 (2019).

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not feasible, that would open the way to more serious discussions of much-needed simplifications of transfer pricing without giving rise to the fear that simplification is merely a start on the slippery slope to full-blown formulary apportionment.[37] ■

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