

## **People Functions Redux: A New Approach to Profit-Splitting Factors**

by Ara Stepanyan and Steven D. Felgran

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In this report, Stepanyan and Felgran propose an approach to profit allocation or formulary apportionment that builds on the concept of people functions, using employees' measurable contributions on the supply side and consumers' measurable contributions on the demand side.

The views expressed in this report are solely those of the authors.

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*Order is not pressure which is imposed . . . from without, but an equilibrium which is set up from within.*

— José Ortega y Gasset

## I. Background and Introduction

With the second phase of the OECD's base erosion and profit-shifting project underway<sup>1</sup> and the OECD revising profit allocation rules to tax the digital economy (and perhaps the broader economy), the issue of how to fairly and equitably split profits among group entities in multiple tax jurisdictions — including market countries<sup>2</sup> — has come to the foreground. Numerous writers have opined anew about the pros and cons of two-sided methods such as a modified residual profit-split

<sup>1</sup>This second phase, so-called BEPS 2.0, is working toward reestablishing consensus among member countries, and rolling back unilateral measures such as digital services taxes.

<sup>2</sup>Market countries can be thought of as the jurisdictions in which businesses can generate profits without a physical presence through their remotely conducted user- and customer-related activities.

method versus one-sided methods such as the comparable profits method or the transactional net margin method. As consideration of compensation to market countries has progressed, we have even seen discussions of formulary, quasi-formulary, and fractional apportionment,<sup>3</sup> despite the challenge to the arm's-length principle posed by any formulaic mechanism.<sup>4</sup>

What is crucial in all discussions of methods and formulas beyond one-sided ones, whether profit split or formulary apportionment, is a direct link between the generation of value by location and the commensurate booking of taxable income by location. In those methods and formulas, it is implicitly assumed that value is created not at one location only but at multiple locations, so nonroutine or total profit must be split or allocated fairly and equitably among them. But what are the attributes or factors that cause value to be generated (or not) and nonroutine or total profit to be earned?

Recent thinking about value generation has gone beyond the classic view in transfer pricing that nonroutine value has its foundation in intellectual property or other valuable intangible assets. Due largely to political pressures, the concept of value generation has broadened to include the addition to enterprise value that is the result of people functions or a pool of users-customers in a market country. Putting aside discussions of ring-fencing the digital economy, there is clearly a need for a general understanding of who or what drives value and how that value can be measured and rewarded in a principled and practical way.

In this report, we outline an approach that builds on people functions and can serve as a guiding principle for the OECD's inclusive

framework<sup>5</sup> for measuring value among group entities spread across multiple tax jurisdictions. People acting as management, labor, and users-customers create value, and a broadened view of people functions can present an excellent and principled gauge to help determine a fair allocation of profits. Taking our cues from actual company practices, we discuss how profit allocation for tax purposes can be performed in a fair and practical manner if the profit allocation is based in part on measures of relative compensation of personnel by location and on the revenue derived from the user base in market countries (user-derived revenue). For the supply side of the equation, we would look to group companies and the aggregate employee compensation by tax jurisdiction. For the demand side of the equation, we would look to active users and the revenue they generate by tax jurisdiction where their usage or consumption takes place.

## II. The OECD's Acceptance of Profit Split

Much has been said about the inadequacy of traditional one-sided transfer pricing methods for measuring the value created by local multinational enterprise affiliates, which has been exacerbated in the increasingly digitized global economy. Various policymakers have argued for either application of multi-sided profit-split methods under the arm's-length principle (separate-entity accounting) or formulary profit apportionment as the most reliable way to measure value within controlled groups. The OECD has indicated its increased acceptance of profit split over one-sided methods through several statements in its final guidance on the application of the transactional profit-split

<sup>3</sup> The fractional apportionment method would apply fixed allocation factors to total profit.

<sup>4</sup> Cf. Christian Kaeser, Jeffrey Owens, and Sam Sim, "Going the Way of the Polaroid: Digital Taxation and the End of the Arm's-Length Principle?" *Tax Notes Int'l*, July 15, 2019, p. 211.

<sup>5</sup> The OECD is revising profit allocation rules for tax purposes and aims to finish by the end of 2020. Agreement has already been reached regarding the consideration of both intangibles and digital business models. According to its June roadmap, the OECD now seeks to obtain consensus on the allocation of taxing rights, including a new market-based taxing right, and associated nexus issues (pillar 1), and on global minimum taxation rules as a means to extend "BEPS 1.0" and further protect jurisdictions from aggressive tax planning (pillar 2). Methods under consideration for moving a portion of profit to market jurisdictions include: (1) modified residual profit split; (2) fractional apportionment, which would apportion all profit, removing the distinction between routine and nonroutine; and (3) distribution-based approaches, which would focus more on local factors such as physical presence and marketing.

method (TPSM).<sup>6</sup> One statement notes the absence of a requirement to undertake exhaustive analysis of every transfer pricing method:

While there is no requirement in these Guidelines to undertake exhaustive analysis or testing of every method in each case, the selection of the most appropriate method should take into account the relative appropriateness and reliability of the selected method as compared to other methods which could be used.<sup>7</sup>

Although likely intended to simplify the analytical burden on taxpayers, this has opened the door to treating the TPSM as the default method of choice. The TPSM guidance further states:

In the case of associated enterprises that engage in highly integrated worldwide trading operations, if the accurate delineation of the actual transaction determines that the shared assumption of risks and level of integration does not extend to operating costs, it may be appropriate to split the gross profits from each trading activity, and then deduct from the resulting share of the overall gross profits allocated to each enterprise its own operating expenses incurred.<sup>8</sup>

Given that transfer pricing practitioners are well aware that inferring the level of integration from costs is typically a complex and subjective exercise that often invites scrutiny and potential controversy, this guidance seems to favor the TPSM over one-sided methods.

The OECD work plan released on May 31<sup>9</sup> for reforming rules for the taxation of multinational groups goes even further. It states that under the fractional apportionment method, one of the three proposed methods discussed as part of the revised nexus and profit allocation rules (pillar 1), “simplifying conventions (including those that

diverge from the arm’s length principle)” could be used to reduce compliance costs and disputes.<sup>10</sup>

### III. Profit-Splitting Factors

A common yet fundamental challenge across both the profit split and formulary approaches is the choice of profit-splitting factors. Although the formulary approaches typically include some combination of supply-side and demand-side factors believed to generate taxable profits, the choice of profit-splitting factors is often left to practitioners in the field. That in turn opens the door wide to arbitrary and subjective opinions about the relative importance of various factors in value creation and invites disputes with tax authorities.

The TPSM guidance provides a healthy list of profit-splitting factors, including:

factors based on assets or capital (e.g. operating assets, fixed assets (e.g. production assets, retail assets, IT assets), intangibles), or costs (e.g. relative spending and/or investment in key areas such as research and development, engineering, marketing) [which] may be used where these capture the relative contributions of the parties to the profits being split and they can be measured reliably.<sup>11</sup>

The TPSM guidance goes on to say that “while costs may be a poor measure of the value of intangibles contributed, the relative costs incurred by parties may provide a reasonable proxy for the relative value of those contributions where such contributions are similar in nature.”<sup>12</sup> Note that although the TPSM guidance mentions other profit-splitting factors, such as “incremental sales, or employee compensation (relating to the individuals involved in the key functions that generate value to the transaction . . . ) [and in] other situations . . . headcount or time spent,”<sup>13</sup> it

<sup>6</sup> OECD, “Revised Guidance on the Application of the Transactional Profit Split Method — BEPS Action 10” (June 21, 2018) (TPSM guidance).

<sup>7</sup> *Id.* at para. 2.118.

<sup>8</sup> *Id.* at para. 2.164.

<sup>9</sup> OECD, “Programme of Work to Develop a Consensus Solution to the Tax Challenges Arising From the Digitalisation of the Economy” (May 31, 2019) (roadmap).

<sup>10</sup> *Id.* at section 23.

<sup>11</sup> OECD, TPSM guidance, *supra* note 6, at para. 2.171.

<sup>12</sup> *Id.* at paras. 6.142 and 8.27-8.28.

<sup>13</sup> *Id.* at para. 2.172. Headcount is one of the items in the country-by-country reporting filings.

provides no specific guidance on when each of the profit-splitting factors should be applied.

Similarly, the OECD work plan lists quite a few profit-splitting factors — including “employees, assets, sales, and users, that could be taken into account in constructing the formula that would be used to apportion the relevant profit” — under its proposed fractional apportionment method,<sup>14</sup> but again with no additional specifics. What is abundantly clear from the sheer number of potential factors is that this buffet of proposed factors apparently lacks a solid conceptual basis.

The U.S. transfer pricing regulations under reg. section 1.482 are similarly nonspecific when it comes to the choice of profit-splitting factors, and the guidance on profit-splitting keys (both asset-based and cost-based) remains too broad to be practical. Thus, ample room is left for the selection of profit-splitting factors based on taxpayers’ subjective representations or tax authorities’ unsubstantiated views of various value drivers.

#### IV. Guiding Principles for Profit-Split Methods

We believe that multi-sided methods under both the arm’s-length principle and formulary apportionment can result in profit splits that most reliably reflect value creation by an MNE’s constituent entities. However, for this to be true, profit-splitting factors must, in our opinion, be rooted in the following guiding principles:

- they must be connected to first principles of how companies actually operate rather than built on ad hoc and subjective theories about how MNEs could operate;
- they must be a readily available and observable product of the MNE’s non-tax-related managerial decision-making;<sup>15</sup> and
- they must either not be subject to manipulation or their manipulation must be consistent with economic substance.

We further believe that two key profit-splitting factors are available that satisfy those principles: (1) employee compensation as a supply-side factor; and (2) user-derived revenue

as a demand-side factor. There are several reasons for this view, as described in the following sections.

### V. Compensation as a Profit-Splitting Factor

#### A. Relevance of People Functions

The idea that intangible assets are the main creators of value rather than people has ruled supreme for years in the transfer pricing discipline. Although that idea is superficially true, economists are in general agreement that intangibles themselves are the product of cumulative investments in human capital. Irving H. Plotkin and Dan Axelsen provide a thorough synopsis of the economic literature on the role of intangibles in economic growth and the importance of human capital (including education, creative talent, experience, and decision-making ability) in developing intangibles.<sup>16</sup> The intangibles-centric view often distracted transfer pricing practitioners from the importance of the work entailed to develop, enhance, maintain, protect, and exploit intangible assets (the so-called DEMPE functions<sup>17</sup>) and the location of that work, and (until the BEPS project) it led them to overemphasize the tax jurisdiction of legal ownership of intangibles.

However, despite the long-term dominance of the intangibles-centric view, the importance of people functions to transfer pricing has markedly increased in recent years, starting as a concept connected to permanent establishments.<sup>18</sup> In fact, the people functions concept advanced considerably the understanding of the somewhat elusive idea of economic substance. The people

<sup>16</sup> Cf. Plotkin and Axelsen, “The Three-Factor Formula vs. the Sources of Income in the New and Weightless Economy,” *Tax Mgmt. Int’l J.* (Jan. 2013).

<sup>17</sup> These DEMPE functions were described in the 2017 edition of the OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations.

<sup>18</sup> People functions first came into widespread use when the OECD introduced the concept of “significant people functions” in connection with the attribution of profit to PEs. A December 2006 OECD report, “The Attribution of Profits to Permanent Establishments, Parts I (General Considerations), II (Banks) and III (Global Trading)” states: “The authorised OECD approach attributes to the PE those risks for which the significant functions relevant to the assumption and/or management . . . of risks are performed by people in the PE and also attributes to the PE economic ownership of assets for which the significant functions relevant to the economic ownership of assets are performed by people in the PE. . . . It should be stressed that a particular enterprise may have one or more significant people functions.” *Id.* at paras. 18-19.

<sup>14</sup> OECD roadmap, *supra* note 9, at section 1.3.

<sup>15</sup> The requirements for CbC reporting filings could be amended to include the necessary company financial data.



functions concept is now widely viewed as critical to transfer pricing because it is instrumental in allocating risks within a controlled group and in determining whether economic substance is present. The study of people functions is also a key component of a so-called functional analysis in transfer pricing, which determines the functional makeup of legal entities.

## B. Headcount Versus Employee Compensation

Despite the increased importance of people functions to economic substance within value chains in the post-BEPS world, there has been surprisingly little discussion about which profit-splitting keys would best capture these people functions. In particular, headcount is now included in the country-by-country reporting filings, but employee compensation is not.

Because the primary purpose of a corporation is to maximize profit and not employment, we believe that the focus on headcount alone is misguided. Headcount is only a partial measure of people functions because it provides a quantity metric that does not reflect the financial value of employees to a company. By contrast, employee compensation, under a sufficiently broad definition that recognizes the total amount paid to employees (including wages, salaries, commissions, benefits, incentive compensation, and in-kind payments) is a much more comprehensive measure of people functions because it reflects both the quantity and the price of those functions.

## C. Compensation in Decision-Making

Employee compensation is superior to other potential profit-splitting factors for several reasons. The first is that it is connected to first principles of how companies actually operate. Employee compensation is a key metric within an MNE's own internal performance measurement process used to identify the sources of value and the locations where value is created.<sup>19</sup> In particular, when management decides the annual all-in compensation for employees, it does not

factor in the abstract value of intangibles “owned” by a low- or no-substance entity (cash box) located in a low- or no-tax country. Instead, management looks at which business units generate how much profit, and whether they can keep employee compensation levels in line with market levels. For this reason, having the correct managerial transfer prices among various divisions or business units within MNEs (also referred to as “functional units” or “management units”) is critical for managerial decision-making, even in a world without taxes. These transfer prices determine each business unit's profitability, which in turn determines the compensation paid to employees.<sup>20</sup> Thus, managerial transfer prices, profitability, and employee compensation are closely interrelated.

If an MNE were to set its managerial transfer prices incorrectly, it would be unable to set a competitive level of pay for its employees (underpaying some employees in some business units and overpaying other employees in other business units). For this reason, any distortion to employee compensation caused by managerial transfer pricing would be short-lived given the existential necessity of every MNE to set competitive levels of compensation for its employees. Put differently, the value of employees is dictated by local labor markets, which constantly test this value. Competitive local labor markets determine employee compensation, and companies cannot deviate from market compensation levels for sustained periods. As a result, employee compensation is a backstop for managerial transfer prices and, for this reason, can also serve as a natural measure of the value of an entity in the MNE's internal value chain. By contrast, stories about value creation written for tax authorities have no external natural benchmarks to be evaluated against.

The appendix contains an example of mapping employee compensation at the management unit level to relative shares of employee compensation at the legal entity level and applying those to an MNE's system profit to produce a compensation-based profit split.

<sup>19</sup> The use of information contained in managerial transfer pricing as a foundation for tax transfer pricing was previously proposed in Mihir A. Desai and Dhammika Dharmapala, “An Alternative Transfer Pricing Norm,” working paper (June 2011).

<sup>20</sup> The appendix illustrates in more detail the links among managerial transfer pricing, tax-related transfer pricing, management unit and entity profitability, and employee compensation.

Knowledge of the exact mechanisms used by MNEs to set their managerial transfer prices is not important (for example, they may be set based on trial and error or other price-setting mechanisms) because competitive local labor market forces keep managerial transfer prices in check.

#### D. Data Are Available and Observable

The second reason employee compensation is superior to other potential profit-splitting factors is that employee compensation data are readily available and observable. The human resources function in any organization keeps track of every penny paid to employees in any form, including cash, in-kind, stock, or any other financial instrument. Those data can be made available by HR to transfer pricing practitioners or tax authorities as needed. For profit-splitting or formulary apportionment purposes, typically only aggregate employee compensation levels by tax jurisdiction would be needed, thus eliminating any privacy concerns around disclosing individual compensation levels or compensation levels by title.

#### E. Compensation and Tax Avoidance Strategies

The third reason for employee compensation's superiority as a profit-splitting factor is that tax avoidance strategies based on choosing the location of compensation-related costs can be easily discouraged by linking employee compensation to the jurisdictions of employees' tax residences. Manipulation of payer-entity locations can be kept in check by comparing those locations to employees' tax residences. If an entity that pays employees is incorporated in a low-tax jurisdiction but the payees are tax resident in a high-tax country, the payees' tax residence can be used to determine the location of taxable income. This is consistent with the observation that most employees performing people functions generally do not reside in tax-advantaged jurisdictions.

For example, a typical real-life scenario might involve employees of an MNE group entity working in a high-tax country where they prefer to live, while all the hard-to-value intangibles are on the books of a cash box entity located in a tax

haven. Profit allocation in such a scenario is typically viewed in tax transfer pricing as an exercise in allocating routine or "benchmarkable" value to the entity with employees, and allocating nonroutine or residual value to the cash box entity that owns the intangible assets. It is easy to see why this approach is deeply flawed, given that legal and economic ownership of assets (that is, costs related to people functions) can easily be transferred to a cash box. Any concerns about people functions inadequately capturing the value of nonroutine assets in profit splits are unwarranted because intangibles registered to a cash box should rightfully receive zero compensation.

By contrast, the location of employees performing various functions and their associated costs of compensation cannot be transferred to a cash box without changing the very nature and economic substance of the cash box. Moreover, as mentioned earlier, the value of employees' time is determined by labor markets,<sup>21</sup> whereas the value of hard-to-value intangibles is indeed hard to value because there is no market-based price correction mechanism.

Of course, if the employees truly lived in tax havens long enough to claim tax havens as their residence jurisdictions for tax purposes, then, consistent with the prevailing economic substance/people functions doctrine, the allocation of profits to those tax havens would not constitute tax avoidance. This "BEPS strategyproofness" of employee compensation is a key characteristic that, in our opinion, makes it superior to all other supply-side cost- or asset-based profit-splitting factors. Unlike profit splits based in part on the ownership of intangibles, profit splits based on the tax residence and compensation of employees do not leave open potential avenues for large-scale tax avoidance. Employee compensation and the tax residence of employees receiving compensation are quantifiable and difficult to game.

<sup>21</sup> Payments to independent contractors can be ignored as long as MNEs do not exercise control over those contractors (*i.e.*, they are truly independent).

## F. Current Use of Payroll in Profit Splits

We recognize that payroll is already included as a profit-splitting factor in profit apportionment formulas used by individual U.S. states (for example, the “Massachusetts formula”)<sup>22</sup> and in the common consolidated corporate tax base proposal developed by the European Commission for the EU.

Although payroll is only one component of employee compensation, a common criticism of using payroll in formulary apportionment (which can also be directed at employee compensation) is that the more mobile the factors of production, the more easily they can be adjusted in response to interregional differentials in taxation.

Kimberly A. Clausing provides an insightful account of how state policymakers systematically altered profit apportionment formulas by lowering the weights on payroll and assets and raising the weight on sales in an attempt to lure tax-sensitive jobs and investments to their states.<sup>23</sup> In 1986, 80 percent of states that taxed corporate income used equal weights for payroll, assets, and sales in their formulas.<sup>24</sup> By 2012, however, only 17 percent of states had an equal-weighted formula, choosing instead formulas with higher weights on sales and lower weights on assets and payroll.<sup>25</sup>

Although it is certainly true that employee mobility is an important factor and that human capital is very mobile within the United States (hence the low weight on payroll in state-level formulas), it is nevertheless a fact that international labor mobility is low. For example, about 2.5 percent of the U.S. population moved from one state to another in 2010, whereas less than 0.5 percent of Europe’s population moved from one EU country to another.<sup>26</sup> The difference is significant considering that since 1990, the

percentage of the U.S. population moving from one state to another in a given year has fallen by approximately half.<sup>27</sup>

## G. Purchasing Power Parity Adjustment

As a technical note, if employee compensation were to be adopted as a profit-splitting factor, we recommend expressing its levels in purchasing-power-parity-adjusted “international dollars” to accurately capture value specific to a given location within an MNE. For example, two engineers working for the same MNE and performing similar functions but employed by legal entities resident in two different countries with vastly different costs of living would typically be paid very different amounts in terms of local currencies converted into U.S. dollars using the market exchange rate. An engineer in the United States might be paid \$100,000, whereas an engineer in India with comparable functions might be paid the market exchange rate equivalent of \$30,000. However, their intrinsic contribution to the company’s profitability or value creation is the same and therefore should be valued similarly. International dollars equalize the purchasing power of different currencies and make it possible to compare value contribution in real terms — that is, controlling for price-level differences among countries.

## VI. Revenue as a Profit-Splitting Factor

As noted, the OECD is studying various mechanisms for moving a portion of MNE profits to market jurisdictions. It will need an objective and verifiable metric, such as user-derived revenue, to translate that into a profit-splitting factor.

Unlike employee compensation, user-derived revenue is not connected to internal performance measures (beyond what is captured by the compensation of sales and marketing employees) and is not part of a company’s production function. However, user-derived revenue is a strong indicator of external performance. Moreover, the users themselves represent an intangible asset that the MNE exploits.

<sup>22</sup> According to Plotkin and Axelsen, *supra* note 16, in the United States most states use the method specified in the 1957 Uniform Division of Income for Tax Purposes Act to apportion corporate taxable profits. That method uses a formula based on a combination of three factors — tangible property, sales, and payroll — and is known as the “three-factor formula.” Formulas used by states vary by the factors used, the weights attached to each factor, and the characteristics of the activity to which they are applied.

<sup>23</sup> Clausing, “The Effect of Profit Shifting on the Corporate Tax Base in the United States and Beyond,” 69 *Nat’l Tax J.* 905 (2016).

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

<sup>26</sup> Ryan Avent, “America Settles Down,” *The Economist*, July 5, 2012.

<sup>27</sup> *Id.*



Users perform another kind of people function, although not the kind envisioned in the standard use of that term. For example, users (consciously or not) contribute to the creation of intangible value through such activities as market research, test marketing, product trials, consumer testing, and other marketing and information-gathering strategies, and through customer referrals, often through social networks that companies tap into. Digital MNEs and other MNEs assign great value to the personal information they obtain from their users. The benefits reaped transcend any single MNE but provide growth opportunities to affiliated companies (business-to-business customers) of the MNE, thus creating additional value. The intangible value created by users is akin to customer lists and distribution channels under the OECD guidelines' definition of intangibles.

The technical or accounting challenge here is that moving some profit to market countries requires user-derived revenue and location identification, both in the business-to-business and the business-to-consumer/end-user space. Digital MNEs already track average revenue-per-user data but will require guidance on how to measure user-derived revenue by tax jurisdiction in an objective and verifiable format that will be transparent to tax authorities. As a policy matter and to satisfy jurisdictions that are losing taxable income to market countries, some minimum revenue thresholds by location will need to be established and applied.

## VII. Conclusion

The OECD is now in the process of revising profit allocation rules for MNEs for tax purposes, giving new consideration to the allocation of some taxable income to market countries. This effort requires a reconsideration of the factors or attributes that cause value to be created by group entities and their employees and users-customers and thus the income to be earned by the MNE and taxed by the appropriate jurisdictions. According to its June roadmap, the OECD is exploring potential solutions for determining where tax should be paid and on what basis.

In the process of searching for a better mechanism to allocate taxing rights to an MNE's global income, the OECD and other tax

authorities have opened the door a bit wider to the use of profit splits over one-sided methods, and possibly even to the use of formulary or fractional apportionment. That in turn requires a careful examination of the creation of value by an MNE that, in addition to historically including IP and other valuable intangibles, now includes value stemming from users-customers in market countries. The identification and performance of value drivers must be translated into profit-splitting factors capable of measuring and rewarding value in a fair and equitable manner.

In this report, we offer a potential solution for allocating MNE profits, whether in a modified residual profit split or formulary apportionment, based on an expanded use of people functions. The people functions view implies that it is not the location of ownership of intangibles (or other forms of capital, excluding human capital) that determines the location of taxable income, but rather the work that goes into operating the business and creating these intangibles, regardless of contractual relationships. Moreover, the existence of people functions at a location in the supply chain guarantees economic substance.

People create and maintain intangibles and otherwise contribute to an MNE's value both in production-supply countries, where people are engaged in labor, and in market-demand countries, where people are engaged in use or consumption. Our view is that both the supply and demand sides can be measured using actual MNE financial and market data to produce a profit split that is fair and equitable and practical to implement.

In particular, the supply-side MNE data would come from employee compensation as a profit-splitting factor, measured in total and aggregated by tax jurisdiction. We explain in this report and demonstrate in the appendix how employee compensation by location is an objective metric that flows out of actual company practices and is not subject to potential tax avoidance. Employee compensation is a natural measure of the value of an entity in an MNE's value chain, and data on aggregate employee compensation are available in any MNE's HR organization. To avoid confusion, we note that compensation for the performance of the DEMPE functions is a subset of total employee

compensation, and it is total compensation that is of interest here.

To further increase simplicity and transparency, we propose that consideration be given to expanding the CbC reporting filings to include not just headcount but total employee compensation. As we have discussed, headcount is only a partial measure of people functions, whereas employee compensation is a comprehensive measure that reflects both the quantity and the price of those functions and thus the value of employees to the company. The use of employee compensation avoids the need to assign any weights to functions deemed more or less valuable as might be needed in any exercise using headcount.

The demand-side MNE data needed to appropriately reward MNE activities in market countries would come from user-derived revenue as a profit-splitting factor, measured in total and aggregated by tax jurisdiction.

As with any new approach to profit allocation, particular design features would need to be worked out concerning the application to total or just nonroutine (residual) profits, the application to all or just particular industries or MNEs, the threshold levels for market country user-derived revenue, the treatment of losses, and dispute resolution.

In conclusion, we have shown in this report that the people functions concept can be used to create a workable mechanism for a profit split or formulary apportionment among MNE group entities in multiple tax jurisdictions, including market countries, using actual and observable company data. In our view, the use of employees' measurable contributions on the supply side and consumers' measurable contributions on the demand side adds a principled and practical framework for consideration as the profit allocation debate continues.

### VIII. Appendix: Conceptual Framework

As discussed in this report, managerial transfer prices exist even in the absence of any corporate taxation because they are necessary for measuring the profitability of various organizational-business units, for assessing their performance in relation to organizational goals, and ultimately for helping determine a company's

overall profit. The example in this appendix illustrates how employee compensation is linked to managerial transfer pricing and why it should also be linked to tax transfer pricing.

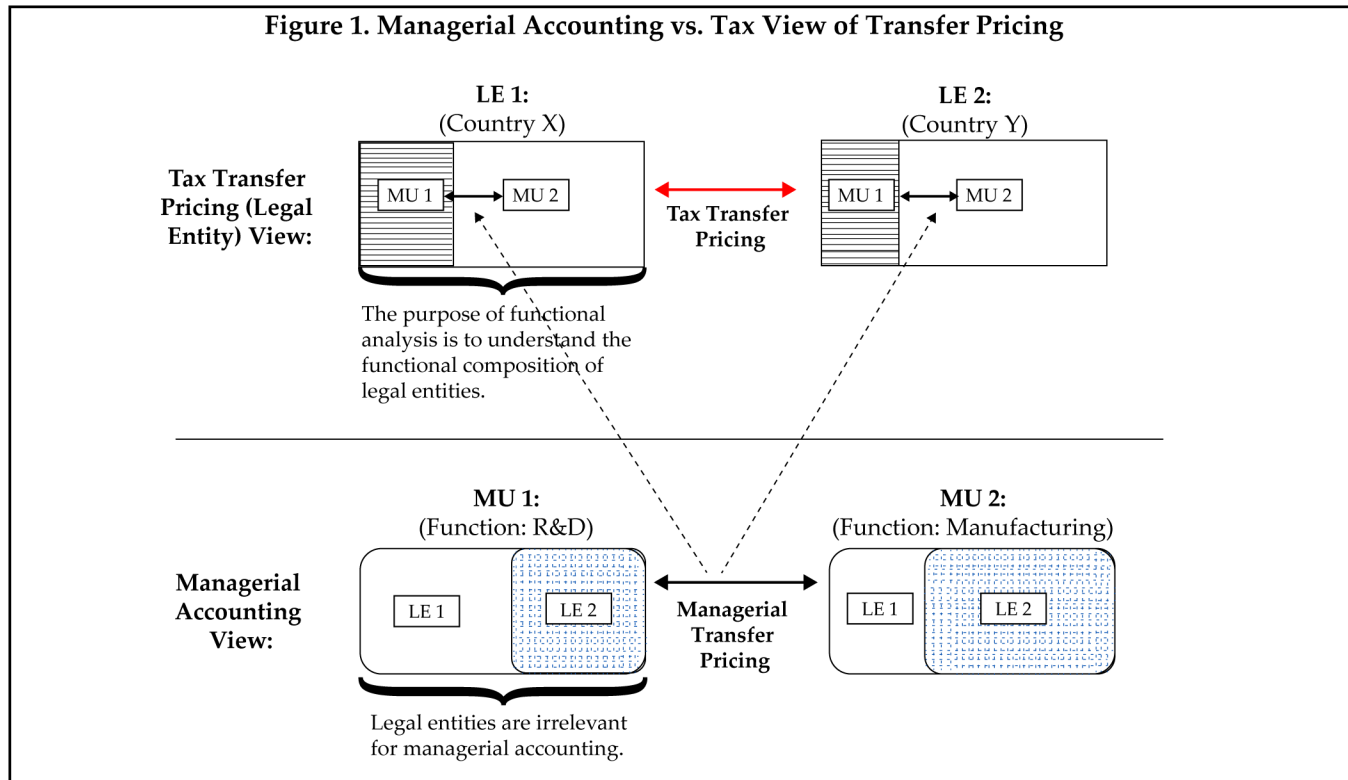
Figure 1 shows the connection between managerial and tax transfer pricing. Suppose an MNE consists of two management units, MU 1 and MU 2, and two legal entities, LE 1 and LE 2. Each of the legal entities consists of parts of MU 1 and MU 2, and each management unit comprises parts of LE 1 and LE 2.

Managerial transfer pricing focuses on measuring the performance of MU 1 and MU 2. This is depicted in the lower part of Figure 1. Suppose that MU 1 (which for illustrative purposes is assumed to be the MNE's research and development unit) provides services to MU 2 (which for illustrative purposes is assumed to be the MNE's manufacturing unit). The internal price at which those services are sold by MU 1 to MU 2 (that is, the managerial transfer price) determines the profitability of both MU 1 and MU 2 because the transfer price determines the level of revenue for MU 1 and the level of cost for MU 2. Thus, to determine the profitability of the management units, managerial transfer pricing must correctly price the transactions that take place between the two management units. The concept of legal entity performance is irrelevant for managerial transfer pricing purposes and does not factor into it.<sup>28</sup>

The profits of the management units in turn determine the funds available for compensation (salaries, bonuses, etc.) of the employees of each management unit. For example, if the transfer prices are set such that they decrease the profits of MU 1, the average compensation of MU 1's employees will have to decrease. Assuming that MU 1 paid competitive compensation to its employees before the decrease in its profitability, any decrease in compensation will eventually lead its employees to leave for better-paying jobs, and MU 1 will be unable to hire new employees. MU 2 will experience the opposite — the increased profits of MU 2 will increase (on average) the compensation of its employees, causing employment by MU 2 to be financially

<sup>28</sup> Legal entity profitability affects only tax-related expenses and, consequently, the after-tax profitability of an MNE as a whole.

Figure 1. Managerial Accounting vs. Tax View of Transfer Pricing



more attractive. In other words, if the MNE sets its transfer prices incorrectly, it will not be able to set a competitive level of pay for its employees (underpaying one category of employees and overpaying the other).

By contrast, the starting point for a typical tax transfer pricing analysis is the legal entity view of a company, depicted in the upper part of Figure 1. Through the laborious, inherently subjective, and imprecise process of functional analysis, tax transfer pricing analysis seeks to understand and rank the functions performed by a given legal entity. It then uses that information to determine arm's-length tax transfer prices between legal entities.

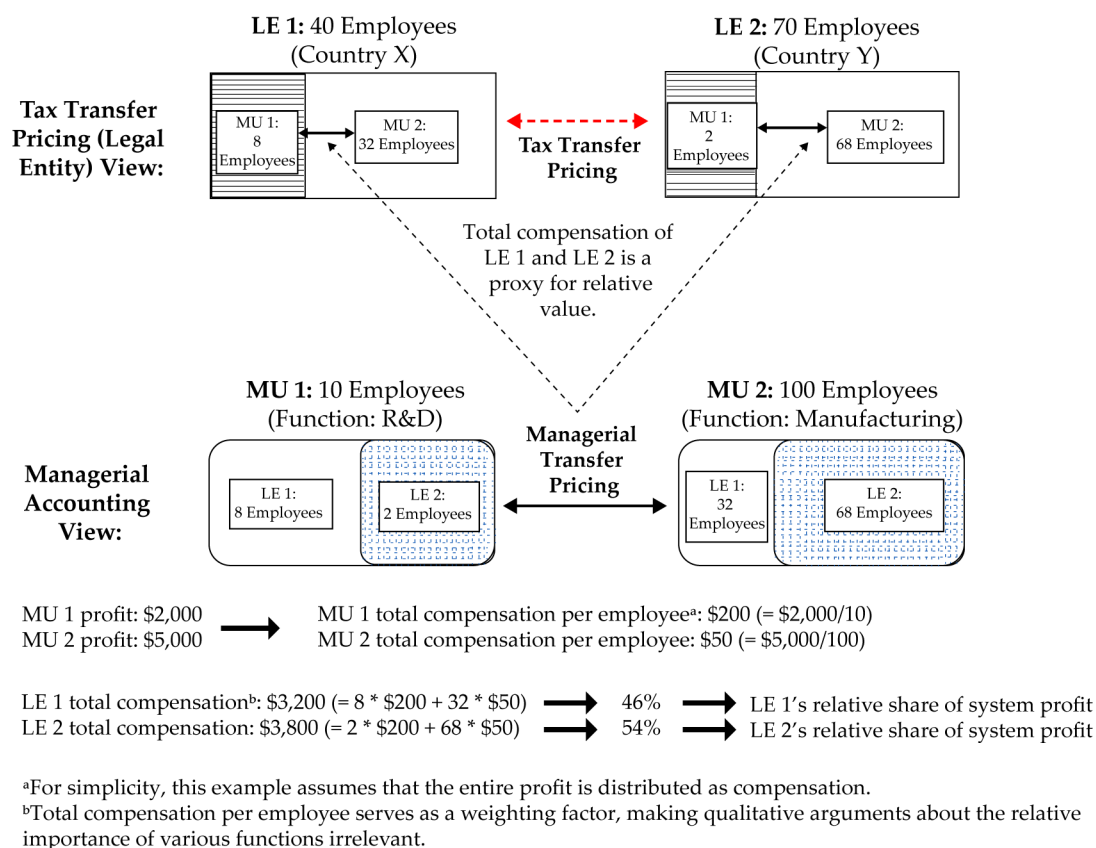
Although tax transfer pricing tries to value various functions taking place within an MNE, it does so by using theoretical constructs that are not anchored in the inner workings of an MNE's business. As a result, tax transfer prices based on theoretical constructs could be right or wrong, and there is no way of knowing that either *ex ante* or *ex post* because those constructs are not tested using the MNE's own data. Instead, tax transfer pricing often assumes that each management unit of an MNE can be compared with a third-party

company performing similar functions, an assumption that has been at odds with the economic theory of the firm<sup>29</sup> since the inception of the functional comparability paradigm implied by the arm's-length standard. Managerial transfer prices, on the other hand, cannot be consistently wrong in their valuation of various functions because these valuations determine the level of compensation for employees, and competitive compensation is critical for the survival of business.

Recognizing that the compensation determined for each management unit by managerial accounting is informationally equivalent to the managerial transfer prices allows for a practical way to connect managerial transfer pricing to tax transfer pricing. In particular, the relative value of each legal entity in an MNE's value chain can be proxied by the level of total compensation paid to the employees of

<sup>29</sup> Cf. Bengt Holmstrom and Jean Tirole, "The Theory of the Firm," in 1 *Handbook of Industrial Organization* 61 (1989).

Figure 2. Employee Compensation as a Profit-Splitting Factor



management units that comprise a given legal entity.<sup>30</sup> This is effectively equivalent to apportioning the global profits of an MNE proportionally to aggregate compensation paid to its employees.

Using a simple example of an MNE with 110 employees in total, Figure 2 demonstrates how a single-factor compensation-based profit split can be done.

As depicted in Figure 2, LE 1 has 40 employees consisting of eight from MU 1 (R&D employees) and 32 from MU 2 (manufacturing employees), whereas LE 2 has 70 employees consisting of two from MU 1 and 68 from MU 2. The performance of MU 1 and MU 2 is determined by the managerial transfer prices set between those two units. This

performance then determines the compensation levels for MU 1 and MU 2 employees. Information on aggregate compensation is readily available and observable in any organization.<sup>31</sup> Based on that information, it is straightforward to calculate the relative share of compensation earned by each legal entity. In the above example, LE 1's share is 46 percent, and LE 2's share is 54 percent. The relative shares of the overall taxable income allocated to LE 1 and LE 2 are then based on the shares of total compensation paid to employees of each legal entity. ■

<sup>30</sup>To mitigate potential abuses related to booking payroll in offshore shell entities, it might be necessary to assign employees to legal entities in accordance with the employees' declared tax residences. That is a separate discussion beyond the scope of this report.

<sup>31</sup>As noted, it is aggregate and not individual compensation that is required for this exercise. Therefore, any privacy-based criticisms of the proposed profit split are unfounded.