

International Vertical Equity

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This Essay considers the role of equity in the international tax context. While much has been written about the importance of equity in the domestic context, the conversation around international tax has failed to recognize the importance of the concept of equity. While tax policy in the domestic context has historically prioritized equity over efficiency, tax policy in the international context has not equally prioritized equity, at least not in the same way. In particular, this Essay addresses this question by revisiting the classic and dominant theory of equity in international tax policy, inter-nation equity, and its traditional roots in efficiency models focusing on the concepts of “source” and “residence.” By doing so, inter-nation equity can indirectly incorporate some of the pro-efficiency biases inherent in those concepts into international tax policy. International vertical equity attempts to remove those biases by reinvigorating the conception of ability to pay in the international context, much like in the domestic tax context. While there are still significant hurdles to implementing such a system—most notably limited data and the competing nationalistic interests to keep wealth within a country’s own borders—the theory of international vertical equity can begin to lay the groundwork to establish a more robust and equitable system for international taxation.

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INTRODUCTION

This Essay addresses the question: What does equity mean in the international tax context? Of course, a vast amount has been written on the role of equity in the international tax literature, primarily on the theory of so-called “Inter-Nation Equity” which has dominated the debate.¹ Yet the consensus for the most part in that literature has been that equity plays a much less significant impact on international tax policy than efficiency. To this end, this Essay will consider two motivating questions: (1) why has equity not played a stronger role in the development of international tax policy as compared to domestic tax policy, and (2) is there a new form of equity analysis that can address this problem to allow for a more robust role for equity in international tax policy?

This Essay will propose a new metric of “International Vertical Equity” (IVE) as a new international tax equity instrument distinct from the predominant current theory of inter-nation equity. Rather than attempt to measure a country’s “fair share” of tax revenue (as most current metrics do), IVE serves as a measure of each country’s relative fiscal capacity to fund itself as a sovereign. Unlike inter-nation equity, which analyzes the equitable nature of a preexisting division of tax base, IVE provides a measure of something closer to a measure of marginal utility commonly used for individuals in the international context. In short, IVE provides the first metric to extrapolate the well-known theory of Vertical Equity in the domestic tax policy context into the international tax policy context. In this way, IVE can provide a new metric to help overcome some of the conceptual and practical roadblocks to equity, serving a robust function under the existing international tax regime.

I. THE ROLE OF EQUITY IN DOMESTIC TAX POLICY

Tax policy is typically described as comprised of three components, (1) equity, (2) efficiency, and (3) simplicity, with the goal of tax policy being to balance these three at times competing goals into a single coherent tax system. Most often, simplicity is the first to be sacrificed, leaving most tax policy debates to be described in terms of a “tradeoff” between equity and efficiency.² The simplest example is the perennial debate over the proper highest marginal rate of tax on the highest income earners.

1. See *infra* Section II.A for a discussion of IVE.

2. See, e.g., Paul R. McDaniel & James R. Repetti, *Horizontal and Vertical Equity: The Musgrave/Kaplow Exchange*, 1 FLA. TAX REV. 607, 609 (1993) (discussing the system of “tradeoffs” in an international tax analysis). See generally James R. Repetti, *The Appropriate Roles for Equity and Efficiency in a Progressive Individual Income Tax*, 23 FLA. TAX REV. 522 (2020) (arguing that increased focus on economic efficiency in designing tax policy has come at the expense of equity and led to a decreased individual income tax rate progressivity, which in turn has exacerbated inequality).

Most theories of equity would support imposing higher tax rates on higher incomes and lower tax rates on lower incomes. By contrast, while slightly more complex, efficiency supports setting the highest tax rate somewhere in the middle of the income distribution with very low rates at the lowest and highest end of the income distribution.³ The existing U.S. federal income tax in fact blends both policies—with progressive rates on individuals earning wages and salary and reduced rates on income from capital gains and stock options.⁴

Equity itself is traditionally further subdivided into “horizontal” equity and “vertical” equity. In general, horizontal equity refers to the concept that similarly situated taxpayers should be taxed similarly to avoid arbitrariness in tax liability, while vertical equity refers to the concept that appropriate distinctions should be made between differently situated taxpayers, i.e., progressivity.⁵ Traditional vertical equity provides that taxpayers should be ranked by some measure, typically annual income, and then allocate tax liability higher to those with higher income and lower to those with lower income.

More recently, vertical equity has come under attack as a useful tool of tax policy. As one example, a debate has emerged as to whether horizontal and vertical equity have substantively different meaning at all.⁶ Critics of vertical equity argue that the act of combining similarly situated taxpayers into groups in effect also separates groups of differently situated taxpayers.⁷ For example, if all taxpayers with income under \$20,000 per year are treated as similarly situated then, at the same time, the other taxpayers with income above \$20,000 must not be considered similarly situated. If horizontal equity demands the “under \$20,000” group pays the same tax rate, then horizontal equity also demands that everyone in the “above \$20,000” group pays a different rate. Assuming this is true, vertical equity could be thought of as effectively collapsing into horizontal equity.

Taken together, the goal of tax policy in the classic sense is to raise a fixed amount of revenue in a manner that best balances these competing

3. See, e.g., Joel Slemrod, *Optimal Taxation and Optimal Tax Systems*, 4 J. ECON. PERSPECTIVES 157, 164 (1990) (discussing low tax rates at each end of income distribution).

4. See generally *id.*; Johannes Becker & Clemens Fuest, *Optimal Tax Policy When Firms Are Internationally Mobile*, 18 INT’L TAX & PUB. FIN. 580 (2005).

5. David Elkins, *Horizontal Equity as a Principle of Tax Theory*, 24 YALE L. & POL’Y REV. 43, 43 (2006) (“The principle of horizontal equity demands that similarly situated individuals face similar tax burdens.”).

6. See McDaniel & Repetti, *supra* note 2, at 607 (“The starting point was a statement by Musgrave in 1959 that the requirements of horizontal and vertical equity are but different sides of the same coin.”).

7. See McDaniel & Repetti, *supra* note 2, at 608 (“[I]f we cannot explain why we discriminate among unequals, then we cannot explain why we fail to discriminate among equals.”).

demands of equity and efficiency. Numerous examples can be found throughout the literature, ranging from earned income tax credit,⁸ marriage penalty,⁹ capital gains rates,¹⁰ home mortgage interest deductions,¹¹ and tax-exempt status.¹² Crucially, what is often forgotten when discussing such tax policy issues is that the traditional equity/efficiency analysis is necessarily being done with respect to individual policies *within* the context of an income tax. Put differently, most equity/efficiency tradeoff analysis implicitly is undertaken in service to the goals of the income tax and not to the choice of whether to adopt an income tax in the first place.

So if it is not equity/efficiency, what are the fundamental goals of determining the income tax as choice of tax base? While there is no single universal comprehensive theory, the one common thread throughout the literature is that (perhaps counterintuitively) no taxing jurisdiction would adopt a progressive income tax if efficiency were the sole equitable criterion.¹³

This can be best demonstrated through a simple thought experiment: What would a tax regime premised solely on efficiency look like? In general, from an efficiency standpoint, the most efficient tax base is the one that creates the fewest distortions to behavior by taxing the hardest to change (or least elastic) tax base.¹⁴ The most efficient tax base, therefore, would be some form of a head tax, or a tax of a fixed amount on each person alive at a given time (such as a tax of \$10,000 per person per year alive on December 31). The reason the head tax is the most efficient is because there is only one way to avoid paying a tax that must be paid for being alive—and it is assumed that dying is a pretty extreme way to avoid paying taxes.¹⁵

8. See I.R.C. § 32 (offering a tax credit for working people with low to moderate income).

9. See I.R.C. § 1(a)–(h); see generally Maryalene LaPonsie, *What to Know About the Marriage Tax Penalty*, U.S. NEWS: MONEY (Feb. 20, 2020), <https://money.usnews.com/money/personal-finance/articles/what-to-know-about-the-marriage-tax-penalty> [<https://perma.cc/W545-B2KX>] (explaining how dual-income couples who get married may end up paying more tax than if they had remained single).

10. See I.R.C. § 1(h) (providing reduced tax rates for gains from certain capital assets held for longer than a year).

11. See I.R.C. § 163(h) (2016) amended by Tax Cuts and Jobs Act of 2017, Pub. L. No. 115-97, § 11043(a), 131 Stat. 2054, 2086 (providing a deduction for homeowners for the interest they pay on any loan used to build, purchase, or make improvements upon their residence).

12. See, e.g., I.R.C. § 501(c)(3)–(4) (exempting charitable, religious, educational organizations and certain social welfare organizations).

13. See, e.g., Louis Kaplow, *Taxation*, in 1 HANDBOOK OF LAW AND ECONOMICS 647, 652 (A. Mitchell Polinsky & Steven Shavell, eds., 2007).

14. See, e.g., Daniel N. Shaviro, *The Economics of Tax Law*, in 3 THE OXFORD HANDBOOK OF LAW AND ECONOMICS 106 (Francesco Parisi ed., 2014); see also David A. Weisbach, *Line Drawing, Doctrine, and Efficiency in the Tax Law*, 84 CORNELL L. REV. 1627 (1999).

15. See Shaviro *supra* note 14, at 107.

On its face, the single largest and most obvious problem with a head tax is that it doesn't distinguish between taxpayers based on wealth or income or any other attribute other than being alive¹⁶—millionaires are taxed the same as minimum wage earners, practicing lawyers are taxed the same as law students, even a parent is taxed the same as her infant child. For example, under a head tax of \$10,000 per person, a married couple with two children, with one spouse being a market wage earner with a salary of roughly \$25,000 per year and the other providing full-time childcare with an imputed value of about \$50,000 per year, would owe \$40,000 in taxes, while a single billionaire earning \$10 million in the same year would owe \$10,000.

In an economic model the head tax is an “ideal” tax because it optimizes efficiency while raising necessary revenue.¹⁷ In the real world, however, taxing jurisdictions have uniformly rejected head taxes precisely due to equity considerations. If anything, progressive income taxes have dominated tax policy. Modern progressive income tax regimes are premised on the so-called Ability to Pay theory, which provides that a taxpayer's tax liability should be set as a percentage of that taxpayer's income based on how much that taxpayer can afford to contribute, such that the percentage increases for those with higher incomes. Ability to Pay is based on a theory known as “declining marginal utility of money” which provides that utility from income is highest at low-income levels and declines as incomes increase. In other words, the first dollar earned by a person used for necessities like food and shelter is more valuable to that person in terms of “utility” than the one millionth dollar, which might be spent on luxuries or saved for the future. In turn, Ability to Pay theory provides that marginal rates should increase as incomes increase; for example, a taxpayer earning \$10,000 a month might pay 25% in taxes while one making \$2,000 a month might only pay 5% in taxes.

As can be seen from this overview of tax policy, the building blocks of an income tax are not necessarily weighted equally—efficiency would support something like a head tax or endowments tax while equity would support something like a progressive income tax or wealth tax. In the real world, every major developed country has adopted some form of progressive income tax (at least in combination with other taxes).¹⁸ While it

16. *See id.* (“Substantial reliance on constant per capita levies is unacceptable precisely because of distributive concerns.”).

17. *See* Slemrod, *supra* note 3, at 159.

18. *See generally* EDWIN R.A. SELIGMAN, PROGRESSIVE TAXATION IN THEORY AND PRACTICE 1 (2d ed.1909) (noting progressive income tax systems across continental Europe, Japan, America, Australia, Canada, and elsewhere).

doesn't necessarily explain why, this fact is consistent with the conclusion that equity won out over efficiency as the guiding normative principle for choice of tax system and tax base.

II. THE ROLE OF EQUITY IN INTERNATIONAL TAX POLICY

Given the dominance of equity over efficiency in the development of the modern income tax, at least in the choice of tax base context, it might surprise many that in the international tax context efficiency has tended to dominate tax policy debates.¹⁹ Even more surprisingly, perhaps, this appears to have become the case without much investigation. Rather, for the most part the literature appears to assume that efficiency is the superior policy-making metric. While recent scholarship has begun to question this conclusion, either by advocating for a stronger role of equity or newer more robust theories of equity,²⁰ for the most part they have not challenged the dominant role efficiency has played in the first place.²¹

From its beginnings in the early twentieth century, international tax policy was analyzed in terms of the well-known theories of "capital export neutrality" (CEN) and "capital import neutrality" (CIN). The basic premise underlying these "neutrality" theories is that the tax law should minimize distortions to the cross-border business decisions of taxpayers. For example, CEN provides that if a taxpayer operating solely in the United States pays 30% U.S. income tax, then that taxpayer should also pay 30% in U.S. income tax if operating in both the United States and in other countries. Since the total tax liability is the same, the tax should not distort business choice whether to operate in the United States or in other countries. This is sometimes referred to as "worldwide" taxation, in that tax must be imposed on both domestic and foreign income to achieve this goal. By contrast, CIN provides that a U.S. business operating in a foreign country should pay the same local rate of tax as other companies doing business there. This is also referred to as "territorial" taxation because it

19. See Kim Brooks, *Inter-Nation Equity: The Development of an Important but Underappreciated International Tax Policy Objective*, in *TAX REFORM IN THE 21ST CENTURY: A VOLUME IN MEMORY OF RICHARD MUSGRAVE* 471, 492 (John G. Head & Richard Krever eds., 2009) [hereinafter Brooks, *Inter-Nation Equity*] ("[W]hy has inter-nation equity been undervalued or under-utilized in [international] tax policy . . .?").

20. See Nancy H. Kaufman, *Fairness and the Taxation of International Income*, 29 *LAW & POL'Y INT'L BUS.* 145, 145 (1998) (describing individuals who have proposed a more equity-driven international tax framework).

21. See J. Clifton Fleming, Jr. et al., *Fairness in International Taxation: The Ability-to-Pay Case for Taxing Worldwide Income*, 5 *FLA. TAX REV.* 299, 302-03 (2001) (examining the role that fairness concerns, embedded in the ability-to-pay-concept, play in justifying the U.S. policy of taxing U.S. residents on their worldwide incomes).

is implemented by exempting the foreign income of business from domestic tax. The law is “neutral” in that domestic companies are not put at a competitive disadvantage with local businesses in the foreign market.

Ability to Pay theory, as discussed above, provides that tax rates should increase progressively as income rises due to the declining marginal utility of money. Ability to Pay looks to ability to consume, meaning that as income goes up, taxpayers can afford to pay more tax and still have enough income to meet their consumption needs (or, put differently, their lost consumption results in lower loss of utility than other taxpayers). Since all that matters is ability consume, it follows that the source of income (whether domestic or foreign) is irrelevant. After all, money is money whether it’s earned in the United States or China and whether it’s paid in U.S. dollars or yuan. Since taxpayers can use any of it to consume goods and services, it all should be taken into account under Ability to Pay.

For most of U.S. history there was not much conflict, at least deep conflict, between the policies supported by CEN and those under Ability to Pay in actual tax policy. From 1919 through 2017, the United States international tax system was based primarily on some form of worldwide system. Over the past couple of decades, however, a movement developed to support shifting from a worldwide system to a territorial system, the policy supported by CIN. Economists and legal scholars vigorously debated whether CEN, CIN, or some other neutrality metric should serve as the basis for international tax policy in the modern economy.²² While the literature was sharply divided, a growing but far from unanimous consensus began to emerge that as the worldwide economy grew increasingly global, CIN became the more appropriate base.

By comparison, however, Ability to Pay does not suffer from such uncertainty. Ability to Pay theory supports a worldwide income tax. There simply is no way under a robust and clearly defined theory of Ability to Pay to conclude that two U.S. taxpayers earning the same total income should pay two different amounts of tax solely because they operate in different countries. This is not a secret: it was vociferously argued in the literature throughout the debate.²³

Even with efficiency conflicted about the proper tax base and equity strongly supporting worldwide tax, the United States joined most of the rest of the countries of the world in 2017 by repealing its worldwide tax

22. See, e.g., Michael J. Graetz & Michael M. O’Hear, *The “Original Intent” of U.S. International Taxation*, 46 DUKE L.J. 1021 (1997); Reuven S. Avi-Yonah, *Globalization, Tax Competition, and the Fiscal Crisis of the Welfare State*, 113 HARV. L. REV. 1573 (2000).

23. See, e.g., Adam H. Rosenzweig, *Why Are There Tax Havens?*, 52 WM. & MARY L. REV. 923, 996 (2010) (advocating for the harmonization of international tax laws to reduce the incentive for poorer countries to become tax havens).

regime and replacing it with a territorial tax system for multinational businesses based in the United States.²⁴ From a political standpoint, the argument that worldwide taxation put U.S. business at a significant disadvantage to its competitors based in Europe or China in the global marketplace seemed to win the day. Under this argument, U.S. businesses would be forced to lose market share, lay off workers, or even go out of business due to this competitive disadvantage.

By contrast, Ability to Pay did not seem to influence the political debate to any significant extent, notwithstanding that it serves as the primary normative basis for the U.S. income tax system as a whole.²⁵ To draw an analogy, imagine a political candidate proposes completely repealing income tax on millionaires as a way to stimulate economic growth. The common response, and one often raised in political debates, would be that the proposal is an unfair giveaway to the rich at the expense of the middle class and working poor.²⁶ Even if unspoken, it seems that Ability to Pay principles underlie such critiques, at least as a political matter. To be clear, this is not to say that tax cuts could not or should not be adopted depending on the circumstances, but rather that Ability to Pay theory has proven a persistent and powerful counterweight to such proposals ever since the adoption of the modern income tax.

Why the huge disparity in the role equity plays in domestic tax policy versus international tax policy? As an initial matter, the concept of equity in the domestic context appeals more directly to familiar and intuitive notions of political and moral conceptions of fairness than in the international context. For example, it may not be hard to understand why a head tax in the United States that imposes the same tax liability on a single parent working for minimum wage as it does on wealthy individuals such as Mark Zuckerberg (the founder and CEO of Facebook)²⁷ might be considered unfair on its face, but it can be more difficult to understand intuitively whether a worldwide tax regime with foreign tax credits might be more or less fair than a territorial tax regime with a global intangibles minimum tax.

24. See generally, Tax Cuts and Jobs Act of 2017, Pub. L. No. 115-97, 131 Stat. 2054; J. Clifton Fleming Jr., Robert J. Peroni & Stephen E. Shay, *Expanded Worldwide Versus Territorial Taxation After the TCJA*, 161 TAX NOTES 1173 (2018).

25. See Fleming, Jr. et al., *supra* note 21, at 345.

26. See, e.g., Dave Gilson, *How Trump Turned Tax Day into a Giveaway for the 1 Percent*, MOTHER JONES (Mar./Apr. 2018), <https://www.motherjones.com/politics/2018/04/how-trump-turned-tax-day-into-a-giveaway-for-the-1-percent/> [<https://perma.cc/V7KJ-NFK2>].

27. Mark Zuckerberg, FORBES, <https://www.forbes.com/profile/mark-zuckerberg/> [<https://perma.cc/D3CV-G6Y5>] (last visited Jan. 7, 2021) (tracking CEO of Facebook Mark Zuckerberg's real time net worth—currently nearly \$100 billion—as well as other biographical information).

By contrast, traditional neutrality theories such as CEN and CIN have begun to come into question in the international tax literature from many different sides. Interestingly, CEN and CIN first came into question from an efficiency standpoint. For example, recently a competing theory of “capital ownership neutrality” (CON) was introduced, which, as its name indicates, focuses on the ownership of capital as opposed to CEN and CIN which focus on incentives to import or export capital.²⁸ Even further, a recent strand of the literature has started to question the concept of neutrality in the field of international taxation altogether.²⁹ This line of literature contends that, rather than serving as purely objective baselines, the outcomes of neutrality theory depend almost entirely on *which* margin is being analyzed. The problem is that efficiency theory does not necessarily provide a reason to favor one particular margin over another. In other words, neutrality theory can tell us *how* to maximize on a margin, but it provides little guidance on *which* margin to use. Yet that is precisely what it had been used for throughout most of the development of international tax policy.³⁰

Despite this emerging consensus that efficiency cannot serve as the lodestar for international tax policy, somewhat surprisingly other tax policy metrics have not readily stepped up to take its place.³¹ It is difficult to understand precisely why this is the case. It may be due, in part, to a misunderstanding of equity in the international context; it may be in part due to the lack of a single clear equity criterion in the international context; perhaps it is due to the lack of easily and readily available metrics to measure equitable disparities.³² Regardless which one may turn out to be true, what matters more is that all of them are more in the nature of symptoms than causes; symptoms of a subtle but pervasive structural bias in favor of efficiency over equity in international tax policy.

An example can help flesh this out. Recall the example above where one political candidate proposes a zero tax rate on millionaires. The familiar and immediate response, rooted in Ability to Pay, was an inherent

28. See Mihir A. Desai & James R. Hines Jr., *Evaluating International Tax Reform*, 56 NAT'L TAX J. 487, 496 (2003) (stating that tax systems satisfy capital ownership neutrality if they do not distort ownership patterns).

29. See generally Michael S. Knoll, *Reconsidering International Tax Neutrality*, 64 TAX L. REV. 99 (2011).

30. It is partially for this reason that some have begun to reject using the so-called alphabet soup of CEN, CIN, CON, finding them to be more confusing than helpful in setting international tax policy. DANIEL N. SHAVIRO, *FIXING U.S. INTERNATIONAL TAXATION* 14 (2014).

31. Nancy H. Kaufman, *Equity Considerations in International Taxation*, 26 BROOK. J. INT'L L. 1465, 1465 (2000) [hereinafter Kaufman, *Equity Considerations*] (claiming that issues of fairness, which are inherently about values, play second fiddle to some other considerations).

32. See Brooks, *Inter-Nation Equity*, *supra* note 19, at 492 (explaining that the concept of equity has been considered too vague to provide sufficient guidance on particular international tax issues).

unfairness in such a proposal. Now assume that the proposal is to reduce the tax rate on income earned from sales of goods and services by U.S. taxpayers in China to zero. The potential responses become more complicated. One might be that the proposal is unfair to U.S. taxpayers who do not operate in China, but another might be that the proposal helps U.S. businesses compete or expand in the Chinese market, or another could be to prevent Chinese companies from taking over certain industries like social networking or biotechnology.

As this example shows, claims of equity in the international context raise more complex and potentially conflicting positions. Without a more precise way to identify and quantify equitable tradeoffs, any claim to equity in the international context can appear purely subjective or self-serving and thus be subject to misplaced attacks which in the domestic tax policy context would seem unacceptable on their face.

Perhaps the starkest example of this can be seen in the context of proposals to transfer tax revenue from wealthier to poorer or developing countries as a means to increase development. For example, one of the original tools advocated to help developing countries was a provision called “tax sparing” in tax treaties. In short, tax sparing would permit developing countries to use low tax rates as a way to attract capital investment without developed countries undoing it through higher taxes.³³ Tax sparing was adopted in many bilateral tax treaties but was strongly opposed by the United States, mostly on an efficiency basis.³⁴ Even worse, the data started to show over time that tax sparing did not in fact help developing countries as much as had been hoped and expected. Eventually, tax sparing fell out of favor as a tool for equity in international tax policy.³⁵

Over the years, other tools were proposed to replace tax sparing, but none gained much support.³⁶ Instead, a new criticism slowly began to develop that not only were these proposals ineffective but that they were

33. See William B. Barker, *An International Tax System for Emerging Economies, Tax Sparing, and Development: It Is All About Source*, 29 U. PA. J. INT'L L. 349, 361 (2008) (“[T]he object is to permit developing economies to reduce their income taxes under an incentive scheme for foreign taxpayers without having the residence country collect the spared tax.”).

34. See, e.g., Kim Brooks, *Tax Sparing: A Needed Incentive for Foreign Investment in Low-Income Countries or an Unnecessary Revenue Sacrifice?*, 34 QUEEN'S L.J. 505, 518–19 (2009) [hereinafter Brooks, *Tax Sparing*] (offering the arguments that led to the failed 1957 U.S.–Pakistan tax sparing treaty as an example of American resistance to tax sparing).

35. See James R. Hines Jr., “Tax Sparing” and Direct Investment in Developing Countries, in INTERNATIONAL TAXATION AND MULTINATIONAL ACTIVITY 39, 70 (2000) (describing issues with “tax sparing” that have caused its value to decline in relation to equity in international tax policy).

36. See Brooks, *Tax Sparing*, *supra* note 34, at 558 (explaining that high income countries should look for ways to prevent tax competition among low-income countries instead of agreeing to tax sparing).

also bad policy in that they reward and thus incentivize developing countries to use their tax systems to undermine (or steal) U.S. and international tax base away from where it properly belonged. As an example, one commentator stated that “[Supporters] argue that tax havens cannot be beat except by being bought off under the current tax system. One wonders how buying off all the possible tax havens would be possible when each has insatiable demands.”³⁷

These arguments appear to mirror many arguments made in the domestic context, such as the debate over the earned income tax credit (EITC). In general, opponents argue that giving money through the tax system to the working poor in the United States does nothing but incentivize people to remain poor enough so as not to lose that benefit. In effect, efficiency theory would say that the EITC, while better than other programs, is undesirable because it effectively locks people into a level of poverty indefinitely.³⁸

While these arguments share a basic premise, it is important to note the stark difference in tone and impact between the domestic and international context. With few distinctions, the efficiency analysis proves winning in the tax sparing debate but unpersuasive in the EITC context. Why do similar equity arguments prove so persuasive in one context and not the other?

To demonstrate this more starkly, reimagine the above quote modified to apply in the domestic context, as follows: “[Supporters] argue that [poor and starving people] cannot be beat except by being bought off under the current tax system. One wonders how buying off all the [poor and starving people] would be possible when each has insatiable demands.” The incentive-based argument effectively remains the same, but the equity analysis seems to feel different and much less appealing. In the domestic context, not only has the EITC survived such critiques, but it has thrived, becoming one of the largest anti-poverty programs in the entire federal government.³⁹ Why the stark difference?

Of course, the two situations are not identical, and in no way is this example meant to equate developing countries with domestic families living in poverty or to attribute such a position to the quote’s author. Rather, the point of the thought experiment is to demonstrate just how starkly

37. Calvin H. Johnson, *Taxing GE and Other Masters of the Universe*, 132 TAX NOTES 175, 180 (2011).

38. See Daniel Shaviro, *The Minimum Wage, the Earned Income Tax Credit, and Optimal Subsidy Policy*, 64 U. CHI. L. REV. 405, 462–63 (1997) (explaining that EITC is undesirable from an efficiency perspective as such a program will disincentivize gaining high-income employment).

39. See Dennis J. Ventry Jr., *Welfare by Any Other Name: Tax Transfers and the EITC*, 56 AM. U. L. REV. 1261, 1263 (2007).

different the application of equity in the domestic context can sound compared to the international context. While rarely discussed, this disparity seems deeply entrenched in the literature. If there is even a chance that this disparity does not reflect an affirmative policy choice but rather something like path dependence or upon reflection proves anachronistic, there would be less reason to remain committed to it. The remainder of this section will discuss the development of equity theory in the international tax context.

A. *Inter-Nation Equity*

The first, and by far the most dominant, theory of equity in international tax is the theory of inter-nation equity. The concept of international equity begins by looking to the baseline concept of “national gain” and then determining whether departures from this baseline are fair or unfair. To quote the original 1972 essay:

Let X, a resident of A, invest in B. Income earned thereon constitutes a national ‘gain’ to country A. If country B taxes the income earned by X, the gain accruing to country A as a nation is reduced. This is the issue of inter-nation equity. The fact that the gain accrues to B’s treasury is not the crucial point. B may pass this gain on to its tax-payers by tax reduction, but it still retains the national gain. Similarly, A has suffered a national loss due to B’s tax. This national loss results, whether A gives a credit to X for taxes paid to B, thereby suffering a treasury loss, or whether the income is taxed again and X is left to bear the burden.⁴⁰

As a second step, inter-nation equity then allows for departures from the baseline distribution of tax base attributable to national gain to account for factors such as disparities in labor and capital, natural resources, and other attributes of different countries. Crucially, however, international equity places the burden for departures from national gain on proponents of these departures. In essence, inter-nation equity creates a presumption in favor of national gain and against redistribution of tax base. Over time, this presumption has proven particularly difficult to overcome.

As explained in more detail below, while inter-nation equity was intended to incorporate equitable principles into international tax policy, it did not start from equitable first principles, whether theories of sovereignty, egalitarianism, democratic legitimacy, or others. Rather, it was developed from the same initial model as the international tax efficiency

40. Richard A. Musgrave & Peggy B. Musgrave, *Inter-Nation Equity*, in *MODERN FISCAL ISSUES: ESSAYS IN HONOR OF CARL S. SHOUP* 63, 67 (Richard M. Bird & John G. Head eds., 1972).

analysis.⁴¹ To isolate the issue of efficiency in international tax that model was designed using two countries and one item of income, with one being the country of source and the other the country of residence.⁴² This makes sense for an efficiency model because there is no issue of international tax unless at least two countries are competing over taxing an item of income. From this perspective, it is irrelevant which country is labeled source and which is labeled residence, or whether they are different in terms of wealth or standard of living, since all that matters is that two countries exist in the model.

By contrast, the point of inter-nation equity is precisely to take into account differences between countries, which it does by assigning different measures of wealth or development between the countries of source and residence. Yet, building an equity analysis with the same conceptual framework and model as efficiency unintentionally but effectively incorporated a pro-efficiency bias into the analysis. To draw an analogy, it is much like home-court advantage in sports. Since equity is playing against efficiency on efficiency's "turf" and using efficiency's "equipment," it starts at an inherent disadvantage. Or using a different analogy, it is as if equity opted to cede the opening move in perpetuity to efficiency in a global game of chess.⁴³ By doing so, in the long run the advantage effectively dominates the outcome over almost any other factor.

Contrast this to vertical equity in the domestic income tax context, which typically starts its analysis by looking at individuals as taxpayers where the only tool to differentiate among taxpayers is income.⁴⁴ Unfortunately income is a very poor proxy for many if not most underlying traits one might want to take into account in an equity analysis. Being rich doesn't make one good; being poor doesn't make one bad. Unskilled taxpayers born to wealthy parents may earn high incomes while highly skilled lawyers may choose to work for low-paying public interest jobs. Even for the same taxpayer, one year the taxpayer may appear rich due to a large bonus and the next year may appear poor due to retirement. Since income is the only proxy available, however, some standard by which to compare taxpayers based on income is necessary. This is where declining marginal utility comes in. This theory provides that higher income taxpayers can disproportionately afford to pay higher taxes than lower income taxpayers. Using declining marginal utility as the metric,

41. See Peggy B. Musgrave, *Combining Fiscal Sovereignty and Coordination*, in THE NEW PUBLIC FINANCE 167, 189 (Inge Kaul & Pedro Conceição eds., 2006).

42. See Brooks, *Inter-Nation Equity*, *supra* note 19, at 486.

43. BRUCE PANDOLFINI, CHESSTHINKING: THE VISUAL DICTIONARY OF CHESSTHINKING, RULES, STRATEGIES AND CONCEPTS 108 (1995) (defining first move advantage).

44. See McDaniel & Repetti, *supra* note 2, at 613.

vertical equity can provide a policy outcome of progressive rates as incomes increase. By defining equity on its own terms in this manner, equity can stand on equal footing with efficiency in domestic tax policy.

B. Interindividual Equity

Inter-nation equity defined in this manner can be contrasted to interindividual equity. In short, inter-nation equity uses the nation as the relevant unit in international tax while interindividual equity looks to individual people as the relevant unit. Interindividual equity disregards countries on the premise that ultimately equity cares about the well-being of people and thus must ultimately focus on individuals. For this reason, much like in the domestic context, the foundational theory of interindividual fairness is Ability to Pay. Recall that from a normative theory standpoint, Ability to Pay incorporates the concept of vertical equity such that the tax law should take into account relative differences in income in assessing overall tax liability. Some advocates of interindividual equity have argued that the same criterion should apply in the international context.⁴⁵ The basis of their argument is relatively straightforward: since Ability to Pay underlies the domestic international tax system there is no reason it should stop applying at a country's borders. For this reason, interindividual equity typically supports worldwide taxation of income.

Ability to Pay is not the only interindividual form of equity in the international tax context, however. More recent scholars have argued that issues of global distributive justice are more relevant in the international tax context as opposed to the domestic context.⁴⁶ From this perspective, the normative goal of an international tax regime should be less focused on taxpayers' relative ability to pay and more on redistributing wealth and income from the wealthiest taxpayers to the poorest potential taxpayers. In this respect, the distributive justice analysis of interindividual equity would support not only worldwide taxation with progressive rates but also explicit redistribution of tax revenue from wealthier to poorer countries in the international tax context.⁴⁷

A more recent variation on this line of literature has focused less on comparative wealth or income of individuals and more on fair taxation as a human right.⁴⁸ In short, this theory treats taxation as an obligation of a

45. See Kaufman, *Equity Considerations*, *supra* note 31, at 1467.

46. See Tsilly Dagan, *International Tax and Global Justice*, 18 THEORETICAL INQUIRIES L. 1, 6–7 (2017) (arguing that principles of distributive justice should be applied universally: to all human beings across the globe).

47. Ilan Benshalom, *Rethinking International Distributive Justice: Fairness as Insurance*, 31 B.U. INT'L L.J. 267, 272–73 (2013).

48. Allison Christians, *Fair Taxation as a Basic Human Right*, 9 INT'L REV. CONSTITUTIONALISM 211, 212 (2009).

state to its people in the same manner as the rights to life or liberty, among others. From this perspective, a country imposing a system of taxation in which the wealthiest pay no tax and the poorest bear a high tax burden would violate human rights in the same manner as if that country denied poorer people the right to vote. By tying taxation to human rights, the equity analysis by definition takes priority over all else, including efficiency. Further, the right would be inalienable and cross all borders, governments, and economic systems.⁴⁹

C. Sovereignty, Trade, and Other Theories

A recent strand in the literature has rejected a strict dichotomy of international and interindividual equity and has looked to other normative baselines to serve as the basis of equitable theory in international tax. For example, one strand of literature has argued that the proper focus of tax policy should not be on division of tax base per se but rather on the impact that the tax laws of one country have on the tax revenue of another country.⁵⁰ From this perspective, equitable considerations do not involve individuals but rather sovereigns. As sovereigns, countries have both the right to use taxes to raise revenue but also the duty not to interfere with the national tax regimes of each other.⁵¹ While similar in that it looks to the state as the relevant unit, it is not technically considered part of international equity because rather than looking to national gain, this line of literature looks first to sovereign obligations states owe each other in the international regime.⁵²

From this perspective, for example, increasingly aggressive “anti-abuse” efforts by large wealthy countries such as the United States that reach into the activities of other countries could be considered to violate this norm.⁵³ In particular, efforts by the United States to coerce other countries into sharing information about bank deposits or other capital transfers in and out of their countries as a means to collect taxes against U.S. taxpayers would be seen as a violation of this norm by intruding on the sovereignty of the other countries.⁵⁴

49. Anthony C. Infanti, *International Equity and Human Development*, in TAX LAW AND DEVELOPMENT 209, 235–36 (Miranda Stewart & Yariv Brauner eds., 2013).

50. See, e.g., Allison Christians, *Sovereignty, Taxation and Social Contract*, 18 MINN. J. INT'L L. 99, 147 (2009).

51. See *id.* at 140 (explaining that equitable considerations involve sovereigns).

52. Diane Ring, *Democracy, Sovereignty and Tax Competition: The Role of Tax Sovereignty in Shaping Tax Cooperation*, 9 FLA. TAX REV. 555, 572 (2009).

53. Peter Dietsch, *Rethinking Sovereignty in International Fiscal Policy*, 37 REV. INT'L STUDIES 2107, 2107–09 (2011).

54. *Id.* at 2107.

Under traditional inter-nation equity analysis, small countries that use their tax laws to attract capital investment or tax base away from other countries were often labeled as “tax havens” or “bad actors” for trying to shift national gain inappropriately. For this reason, these countries were deemed appropriate targets for punishment both by individual countries and international organizations such as the Organisation for Economic Co-operation and Development (OECD).⁵⁵ By contrast, the sovereignty literature often takes the opposite point of view, treating the actions of these larger wealthier countries as intrusions into the fiscal sovereignty of the smaller countries.⁵⁶

Similarly, another line of literature has argued that countries that disproportionately benefit from the international economic system owe an obligation to transfer revenue to the countries that do not benefit as much from the tax system.⁵⁷ In other words, if a country such as the United States derives over half of the worldwide gains from trade due to the World Trade Organization, then it has an affirmative obligation to transfer some of that gain to poorer countries in the form of tax base. In effect, this line of literature challenges the normative position that national gain is a neutral starting point for a tax equity analysis and thus should not serve as the starting point for an equity analysis.⁵⁸

III. INTERNATIONAL VERTICAL EQUITY

As the above discussion demonstrates, all existing theories of international tax equity (even competing ones) built on the theoretical foundation of inter-nation equity incorporate the same underlying premises about the baseline distribution of worldwide tax base as inter-nation equity does, which are the same as those underlying the capital neutrality model. In turn, to the extent those premises incorporate a bias in favor of any one policy over another, those models would all be expected to reflect that bias to some extent. If true, the superiority of efficiency over equity in international tax could simply reflect this common bias rather than actual policy superiority. In such a case, what would be needed is a new model of equity explicitly not built on those same foundations. This part will propose one such new model—International Vertical Equity (IVE)—

55. Andrew P. Morriss & Lotta Moberg, *Cartelizing Taxes: Understanding the OECD's Campaign Against "Harmful Tax Competition"*, 4 COLUM. J. TAX L. 1, 33 (2012).

56. Laurens van Apeldoorn, *BEPS, Tax Sovereignty and Global Justice*, 21 CRITICAL REV. INT'L SOC. & POL. PHIL. 478, 491–92 (2016).

57. Ilan Benshalom, *The New Poor at Our Gates: Global Justice Implications for International Trade and Tax Law*, 85 N.Y.U. L. REV. 1, 62–63 (2010).

58. Ilan Benshalom, *How to Redistribute? A Critical Examination of Mechanisms to Promote Global Wealth Redistribution*, 64 U. TORONTO L.J. 317, 336 (2014).

and a new analytic metric—the IVE Score—that can be used to simply and clearly apply IVE to the real world.

A. Baselines, Bias, and International Tax

As discussed above, since most theories of international tax share a conceptual baseline of “source” and “residence” they all would be distorted to the extent those concepts implicitly carried some bias. This can be difficult to see, however, especially with few alternatives to act as a comparison. As the first and dominant theory of international tax equity, however, inter-nation equity provides the best possible example to try to unearth of this phenomenon.

Inter-nation equity analysis relies on the concept of “national gain,” which in turn is built on the same initial allocation of resources and income between countries of source and residence as the capital efficiency model. From this perspective, it should not be surprising that inter-nation equity ends up supporting similar allocations of tax base as the capital neutrality model. This makes sense; after all, if one starts with the premise that income or gain “properly” belongs to a country as an initial matter it would be difficult for any countervailing policy to depart from that allocation. By framing inter-nation equity in terms of national gain, it is almost predetermined to support that allocation, which in turn means that any other equity considerations are doomed to fail as a normative goal in the international tax context.⁵⁹

This problem becomes even more apparent when transitioning from the concept of national gain in theory to national gain in the real world. Most traditional economic models of international tax assume two countries, a country of residence and a country of source, so as to isolate the issue of cross-border taxation. It follows that national gain in the same model would also be defined in terms of an assumed country of residence and country of source. In the real world, multinational business transactions are more complex. Many countries define “source” and “residence” quite differently for their own tax purposes.⁶⁰ Thus, rather than serve as a neutral baseline, in the real world source and residence are inherently legal concepts enacted for the purpose of implementing and enforcing an international tax system.⁶¹

The literature generally concedes that economics theory alone cannot provide a definition of country of “source” or country of “residence” precisely because these concepts have no independent normative economic

59. Brooks, *Inter-Nation Equity*, *supra* note 19, at 474.

60. Wei Cui, *Minimalism About Residence and Source*, 38 MICH. J. INT'L L. 245, 246 (2017).

61. *Id.* at 247.

meaning.⁶² For example, if one were to buy a soda pop at a convenience store in the United States and offers to pay with a real dollar bill, the store doesn't ask first where the dollar came from. A dollar is a dollar; there is no economic difference between a dollar earned in New York, or a dollar earned in California, or a dollar earned in Chicago, or a dollar earned in London, or a dollar earned in Shanghai. Unlike gross domestic product (GDP),⁶³ income is not a measure of wealth or activity. Rather, income is a measure of *increases* in wealth.⁶⁴ By contrast, source and residence are concepts linked to economic activity, determined primarily by looking to underlying factors such as location of sales, location of production, location of payor, location of research and development, or other factors.⁶⁵ Which countries are defined as the source or residence therefore depends on which factors are chosen.

For example, assume Apple sells an iPhone for a total profit of \$300. Apple is headquartered in the United States, and the design and marketing of the phone were done in the United States. The patents are owned by an Irish subsidiary. The trademarks are owned by a Dutch subsidiary. The phone was built in China and was sold in France. Assume Apple earns \$300 on the sale of the phone. Where is the source of the income? France, the country of sale? China, the country where it was built? The United States, the headquarters and country of design? Any of these can be justified by at least part of the economic activity generating the profit. Correspondingly it proves difficult to convince competing countries to adopt any factor that is to their own detriment. From this perspective it should not be surprising that countries such as India and China prefer population-related factors while countries such as the United States prefer consumption-based factors.

With the primacy of source and residence declining, theories of neutrality and efficiency built on source and residence have also come under challenge. In its place, for the most part, the broader political and policy debate in recent years has shifted to defining a country's fair share of

62. Fadi Shaheen, *International Tax Neutrality: Revisited*, 64 TAX L. REV. 131, 132 (2010).

63. See *infra* Section III.C.

64. See, e.g., Stephen E. Shay et al., *The David R. Tillinghast Lecture "What's Source Got to Do with It?" Source Rules and U.S. International Taxation*, 56 TAX L. REV. 81, 137 (2002) ("The idealized Schanz-Haig-Simons definition of income as equaling consumption, plus, or minus, the change in the taxpayer's wealth between the beginning and the end of a year."). More specifically, so-called Haig-Simons income is a measure of consumption plus savings over any given period of time. See also Boris I. Bittker, *Comprehensive Income Taxation: A Response*, 81 HARV. L. REV. 1032, 1036 (1968).

65. Fred B. Brown, *An Equity-Based, Multilateral Approach for Sourcing Income Among Nations*, 11 FLA. TAX REV. 565, 570–75 (2011).

taxes or taxing where value is added.⁶⁶ Either way, what is considered fair is often defined in relative terms to some baseline, typically with little to no further investigation into whether that baseline itself meets any independent normative metrics. Put differently, to show that tax liability or revenue is different from an existing baseline does nothing to establish it is good or bad, only that it is different.

From an inductive reasoning standpoint this approach makes sense. If specific examples of problems with the existing international tax regime can be identified, then doing so and providing solutions to the problem not only makes sense but is extremely valuable to the development of the tax law. But this approach does nothing to help confront the issue from a deductive reasoning standpoint. In other words, without some sense of what normative baseline the international tax regime should strive for, it is difficult to develop a set of rules to do so. The first step is to understand what is normatively troubling in the first place before specific solutions can be developed.

So what precisely is bad about the Apple example from a first principles standpoint? One of the leading critics has phrased it that

income derived by a multinational group from business activities in a country other than the domicile (however defined) of the group's ultimate parent company, but which is subject to tax only in a jurisdiction that is not the location of the customers or the factors of production through which the income was derived, and is not the domicile of the group's parent company.⁶⁷

Of note, the definition begins with an assumption that the country of domicile of the parent corporation is the proper country to tax the income of that group, and then considers income not in that jurisdiction or certain other jurisdictions as abusive or troubling.⁶⁸

Implicit in this assumption, however, must be some underlying normative premise that if tax had been imposed by the country of domicile that would be acceptable or at least less troubling. Yet since this underlying premise rarely is explicitly stated and even more rarely explicitly defended, it can be difficult to identify. Instead, it can become so accepted as a premise as to “go without saying” even if it might be influencing the ultimate outcome. In essence, taxation by the country of “residence” (and

66. See, e.g., Allison Christians & Laurens van Apeldoorn, *Taxing Income Where Value Is Created*, 22 FLA. TAX REV. 1, 3 (2018); Adam H. Rosenzweig, *Defining a Country's "Fair Share" of Taxes*, 42 FLA. ST. U. L. REV. 373, 374–75 (2015) [hereinafter Rosenzweig, “Fair Share” of Taxes].

67. Edward D. Kleinbard, *Stateless Income*, 11 FLA. TAX REV. 699, 701–02 (2011).

68. Presumably what underlies these concerns is a sense that the normative underpinnings of their preferred income tax regime are being undermined in some manner but precisely how is less clear. See Rosenzweig, “Fair Share” of Taxes, *supra* note 66, at 387.

to a lesser extent the country of “source”) could be thought of as becoming so accepted as the unstated “neutral” baseline that even mentioning it can be seen as unusual or inappropriate. This is not meant as a criticism of any individual author or individual theory; rather this is a systemic claim that requires a systemic reappraisal. As the critical tax literature has demonstrated across several areas, it is precisely when bias becomes so embedded as to be invisible when it becomes *most* important to unearth it and revisit those premises.⁶⁹

It could be argued that much of the frustration with the lack of success for equity in the international tax context arises from the fact that it relies on source and residence which themselves are biased in favor of efficiency because they come from an efficiency-driven model of international tax. If true, it may simply not be possible to separate the instrumentally useful concepts of source and residence from the normative concepts of source and residence which build into themselves implicit assumptions about distributional baselines that favor wealthier, developed countries. In turn, any equity analysis that does use source and residence as baselines would also incorporate this bias, even if unintentionally.

Approached from this perspective, the challenge is to define one’s normative theory of fairness in the international tax regime without relying on concepts of source and residence. The difficulty is that, absent the mooring of source and residence, any theory that happens to be coextensive with one’s strategic self-interests would not add any independent normative content. In other words, any proposed normative framework that also perfectly matches one’s strategic self-interest would immediately be suspect as being insincere and self-serving. As a result, it should not be surprising that such theories also prove less than persuasive in generating consensus as might have been initially hoped.

From this perspective, the legal terms of source and residence, while important if not crucial from an instrumental standpoint, not only do not help but could affirmatively hurt theories of tax equity in which they are incorporated. Returning to inter-nation equity, this would mean that it should not use source and residence to define national gain, yet that is precisely what the literature has done over the past decades. By doing so, inter-nation equity, as the dominant normative framework in the international tax literature, has proven less of a counterbalance to efficiency but ultimately a means to reinforce it. To be clear, this is not to say inter-

69. See generally CRITICAL TAX THEORY: AN INTRODUCTION (Anthony C. Infanti & Bridget J. Crawford eds., 2009). More radically, if conceptions of source and residence lack independent normative content, existing theories of equity in international tax could be thought to go as far as not only reflecting but also constructing the bias that favors distribution of international tax base toward wealthier, developed countries and away from poorer, developing countries. Cf. LIAM MURPHY & THOMAS NAGEL, THE MYTH OF OWNERSHIP: TAXES AND JUSTICE 13–15 (2002).

nation equity cannot have independent normative content, but rather that theories of inter-nation equity built on source and residence depend entirely on definitions of source and residence that themselves could implicitly favor one outcome over another.

B. Vertical Equity and International Tax

To begin to create a new definition of equity for international tax, at a minimum that theory must begin with the premise that the fact that a particular item of tax base is allocated to a particular country under source and residence rules is irrelevant to whether that country should be entitled to tax that item of income. Rather, source and residence rules would be treated only as instrumental legal rules used to implement and divide international tax base among countries and not as an exogenous neutral baseline. Assuming this to be true, some other metric would be needed to guide the equitable division of tax base.

To determine what this underlying metric should be in the international context, it helps to look to the more familiar and well-established concept of vertical equity. As discussed above, vertical equity provides that the tax law should make appropriate distinctions among taxpayers who are not similarly situated. For the most part, vertical equity analysis in an income tax uses income to distinguish among taxpayers. While this is a simplifying assumption, it provides the clearest and most tractable way to implement vertical equity analysis. From this perspective, as taxpayers move up the income scale, they are considered better able to pay taxes and thus should pay higher rates of tax. In the domestic context this results in an income tax with progressive rate tables such as those used in the United States.⁷⁰

In the international context, however, implementing vertical equity proves more complex. First, the relevant tax unit needs to be defined. While the unit can be the individual, as in the domestic context, in the international context the relevant unit could also be the country. Second, the choice of unit impacts the measure of income. In the United States, individuals must convert income earned in various different currencies into a single functional currency, typically the U.S. dollar, for tax purposes.⁷¹ For example, a taxpayer using dollars as their functional currency but who is paid in a currency such as euros must convert those euros into dollar equivalents to report the income, which means the identical salary in euros could be reported as different amounts of income due solely to the happenstance of the euro/dollar exchange rate fluctuation

70. I.R.C. § 1(a)–(h).

71. I.R.C. § 985; 26 C.F.R. § 1.985-2 (2016); *see also* Adam Chodorow, *Bitcoin and the Definition of Foreign Currency*, 19 FLA. TAX REV. 365, 369–70 (2016).

over time.⁷² As a starting point, the simplest way to extend a vertical equity analysis into the international context would be to start with the fewest changes, i.e., treat individuals worldwide as the taxable unit and to use U.S. dollars as the functional currency under some simplified (even fixed) exchange rate.

Regardless which unit is chosen, the largest hurdle of expanding vertical equity internationally is the lack of data. For example, worldwide individual income data is not collected. There is no world tax authority to do so, and there still is no fully developed mechanism for countries to share tax data automatically.⁷³ While this presents a challenge, it need not prove insurmountable. Even in the domestic context, using income itself is a proxy for utility and ability to pay. Thus, the issue is not whether income data is available but rather whether any proxy roughly as good as income in the domestic context would be readily available.

To that end, the World Bank and OECD do publish data on country-level income statistics including not only gross domestic product (GDP) but also net national income (NNI), as well as GDP per capita and NNI per capita. Neither metric perfectly matches individual income as a proxy for vertical equity. In particular, per capita metrics are necessarily mean averages and tell us nothing about distribution of income among individuals. As a starting point, however, these metrics can provide a comparative metric as between individuals resident in different countries.

As an example, using the most recent World Bank data, the average income per capita per year in the United States is \$47,249; in France \$36,748; in Italy \$29,817; in Costa Rica \$9,040; and in India \$1,803.⁷⁴ Treating this identically to income for individuals, vertical equity applied literally would demand that the average U.S. taxpayer pay a significantly higher marginal tax rate than the average Indian taxpayer to reflect the significant disparity in income. In effect, the most simplistic version of vertical equity applied in the international context could effectively demand net transfers of revenue from U.S. taxpayers to Indian taxpayers.

Of course, this analysis leaves out many important factors, such as the significant disparities in cost of living across the globe; while these issues are not unique to international tax, they can prove even more daunting to

72. See, e.g., Rodney W. Burton & E. Brownwell Johnston, Jr., *The Tax Impact of Changing to the Euro Under U.S. Tax Law*, 24 INT'L TAX J. 1 (1998).

73. See generally *About Automatic Exchange*, OECD: AUTOMATIC EXCHANGE PORTAL, <https://www.oecd.org/tax/automatic-exchange/about-automatic-exchange/> [https://perma.cc/RT3E-QGKA] (last visited Jan. 9, 2021) (chronicling international efforts to establish the automatic exchange of income information).

74. *Adjusted Net National Income per Capita*, WORLD BANK, <https://data.worldbank.org/indicator/NY.ADJ.NNTY.PC.CD> [https://perma.cc/QVE4-SEB8] (last visited Jan. 11, 2021).

overcome when applying vertical equity in the international context.⁷⁵ For example, as of 2018, the cost of living in Hawaii, the highest cost of living U.S. state, was roughly 30% higher than Mississippi, the lowest cost of living U.S. state, which means the median household would need to earn \$15,000 more in Hawaii to afford the same cost of living as the median household in Mississippi.⁷⁶ By contrast, while an average U.S. taxpayer earns roughly *thirty times* more income than an average Indian taxpayer (in nominal functional currency), that income consumes significantly more in India than it could in the United States.

Fortunately, the World Bank has calculated an additional metric that attempts to take this disparity into account by converting the unit of measure from a single functional currency into a hypothetical unit called Purchasing Power Parity (PPP). PPP is calculated by measuring income not in nominal currency but in relation to how much it can consume in its relevant market.⁷⁷ Using PPP instead of dollars, the disparity between the U.S. taxpayer and the Indian taxpayer drops from thirty times to nine times. While this makes the two taxpayers two-thirds less disparate, vertical equity would still require the U.S. taxpayer to pay a significantly higher rate than the Indian taxpayer.

Intuitively, this result makes sense. The United States has the largest economy in the world, at least based on total GDP,⁷⁸ and (excluding certain small population countries such as Monaco and Macao) has one of the ten highest GDP per capita.⁷⁹ By almost any measure, even taxpayers at the poverty level in the United States have higher average income than most individuals around the world.⁸⁰

75. See, e.g., Louis Kaplow, *Fiscal Federalism and the Deductibility of State and Local Taxes Under the Federal Income Tax*, 82 VA. L. REV. 413, 439 (1996).

76. See *Cost of Living*, FED. RES. BANK ST. LOUIS: ECON. RES., <https://research.stlouisfed.org/publications/cost-of-living/calculator> [<https://perma.cc/DMY8-XYVW>] (last visited Jan. 21, 2021).

77. *GNI, PPP (Constant 2017 International \$)*, WORLD BANK, <https://data.worldbank.org/indicator/NY.GNP.MKTP.PP.KD> [<https://perma.cc/3UCT-MHHF>] (last visited Jan. 11, 2021).

78. *GDP (Current US\$)*, WORLD BANK, https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?most_recent_value_desc=true [<https://perma.cc/8JKA-UWQ7>] (last visited Jan. 13, 2021) (sort the “All Countries and Economies” chart by “Most Recent Value (Millions)” to see the country with the highest GDP).

79. *GDP Per Capita (Current US\$)*, WORLD BANK, https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?most_recent_value_desc=true [<https://perma.cc/HL9A-E6ZK>] (last visited Jan. 13, 2021) (sort the “All Countries and Economies” chart by “Most Recent Value (Millions)”).

80. In the United States, the 2020 federal poverty guideline was set at \$12,760 for a single individual. Annual Update of the HHS Poverty Guidelines, 85 Fed. Reg. 3,060 (Jan. 17, 2020). Of the 204 countries the World Bank collects data on, 134 have average per capita incomes of less than the U.S. federal poverty guideline. *Adjusted Net National Income Per Capita (Current US\$)*,

In terms of an equity analysis, this result may strike many as inappropriate or unfair, at least as an intuitive manner. There has never been much support in the United States for a policy of significant transfers of tax revenue to taxpayers in India or Bangladesh or Haiti. Part of the intuition underlying this resistance is based on the fact that part of the reason for disparities in income around the world has to do with differences in development, infrastructure, and especially government. For example, it would be expected that a country governed by a corrupt government which spends little on improving general welfare of its residents would have much lower GDP and GDP per capita. Conversely, part of the reason for high U.S. incomes could be due to a generally stable and effective government, including stable currency, legal systems, and physical infrastructure. From this perspective, it might seem absurd for vertical equity to demand transferring revenue from the United States to such a government when the money would be expected to be lost to corruption. Ultimately, the combination of primarily country-level data and the difficulty of separating individual equity from country-level effects on national income makes the country more appealing as the tax unit for any vertical equity analysis.

The primary difficulty in using the country as the unit is finding a comparable base to measure utility that could be used as a proxy in the same manner as income for individuals. Any base tied directly to GDP, NNI, GDP per capita, or related concepts ultimately suffers the same issues as discussed above for individuals. In addition, and unique to the country level, is whether and to what extent country-level metrics should measure something different than merely an aggregate of the individuals residing in that country. The key question, therefore, is: What ultimately makes a country different from an individual? Ultimately, it is the fact that the country as sovereign and only the sovereign, has the power to impose taxes. From this perspective, using the sovereign as the relevant unit means considering not only the total output or income generated within that country but also looking to both actual tax revenue, potential tax revenue, and public spending funded by tax revenue.

International vertical equity takes these differences into account in the following ways. First, IVE defines the unit as the sovereign taxing jurisdictions. Second, it doesn't look solely to measures of income but instead creates a matrix of measurements unique to the sovereign by looking at a jurisdiction's tax revenue, public spending, and national income. It does so by calculating and assigning a novel "IVE Score" which, generally speaking, is intended to represent a country's public spending as a

percentage of its total national income. Putting aside issues surrounding sovereign debt as an initial matter, the IVE Score reflects the relative amount a country had to tax itself to pay its bills. The higher the score, the less national income remains available for the private consumption or investment. Perhaps more importantly, the higher the IVE Score the less tax base is available to be taxed, for example in the face of an emergency such as COVID-19.

Thinking of this in terms of vertical equity for individuals, the IVE Score could be thought of as a type of marginal tax rate for countries. Under vertical equity for individuals, the higher the marginal rate the less is assumed to remain available for personal consumption or investment. By applying a theory of declining marginal utility of money, vertical equity concludes that taxpayers with higher income are harmed less by paying taxes than taxpayers with lower incomes in terms of overall utility.). Similarly, vertical equity in the international context could be thought to conclude that wealthier countries are harmed less by adopting new taxes so as to raise additional revenue than poorer countries, at least in terms of overall utility. Translated into IVE Scores, this would mean countries with lower IVE Scores would be relatively better able to afford to impose new taxes so as to raise additional revenue than countries with higher IVE Scores. At the extreme end of the spectrum, a country with an IVE Score of 1 would have fully taxed its own economy—there simply would be nothing left to tax if an emergency arose.

In essence, the IVE Score could be thought of as the inverse of income used as a proxy to assess relative declining marginal utility. For individuals, lower incomes are assumed to match higher marginal utility of money and higher incomes are assumed to have lower marginal utility of money. While reasonable people can debate where to draw the line between high and low incomes, the connection to marginal utility has remained mostly without question. For countries, in much the same way, higher IVE Scores would be assumed to match with higher marginal utility while lower IVE Scores would be assumed to have lower marginal utility. In other words, countries with low IVE Scores can more easily afford to raise additional tax revenue with less pain than countries with high IVE Scores.

C. Translating IVE Scores into IVE Policy

In theory, IVE Scores provide a meaningful metric that can be used as an effective proxy for utility at the country level and thus translating traditional vertical equity into “international” vertical equity. Unlike vertical equity, however, where the policy of progressive rates seems a natural and comfortable fit, policies that further IVE in the international context

can prove more difficult both to conceive and implement. A direct translation of vertical equity into IVE would require wealthier countries paying more in taxes than less wealthy countries. Translating this into IVE Scores would mean that wealthier countries should have higher IVE Scores than poorer countries. Yet, as discussed in more detail below, the opposite is true.

There are macroeconomic concepts which attempt to measure something similar to the annual income of a country that, while not identical to the concept of income for an individual, seem to attempt to capture some similar concepts on a macro level. As discussed above, the most familiar of these is gross domestic product or GDP. GDP is intended to be a measure of the gross output of a national economy from domestic sources so as to measure the ultimate total economic value produced in a given period. GDP is often used to compare countries in terms of relative wealth by looking to their total economic output per year, and GDP per capita is often used to compare countries on a relative basis in terms of wealth generated per person per year in a given country.

As discussed above, given the parallels between GDP for a country and income for an individual and the fact that GDP is already used as a measure of relative wealth and income among countries *qua* countries, it follows that it may be useful as well in a tax analysis. From a tax standpoint, however, GDP or similar economic concepts are not sufficient in and of themselves. The reason is because GDP is not exogenous to tax policy; countries affect their GDP both by the taxes they impose and the public spending those taxes finance, such as roads, bridges, electricity, national defense, and others, as well as through fiscal policy including tax law.⁸¹ Thus, unlike in domestic vertical equity, international tax requires taking into account this additional factor.

For example, the Cayman Islands has an extremely high per capita GDP, but it is almost entirely due to the fact that it has zero income tax and thus is used as a location for many international investment funds such as hedge funds.⁸² Thus, while on paper the Cayman Islands would appear to be wealthy in terms of GDP per capita, it more closely resembles a poorer country in terms of tax revenue, public goods, or public services.

81. Norman Gemmill et al., *The Growth Effects of Tax Rates in the OECD*, 47 CANADIAN J. ECON. 1217, 1217 (2014).

82. See, e.g., Michel Brocard & Francois-Serge Lhabitant, *A Primer on the Tax Framework of Offshore and Onshore Hedge Funds*, EDHEC BUS. SCH. 1, 19–24 (2016) (discussing the advantages of locating a hedge fund in the Cayman Islands, including its zero taxation regime, that has led to over 25% of the world's hedge funds being located there).

Unfortunately, at this level of specificity, it becomes difficult if not impossible to discern any useful generally applicable policy rules sufficient to establish a neutral baseline for equitable analysis outside of a straight case-by-case basis. To overcome this, a simplifying assumption becomes necessary. In this case, the key simplifying assumption will be to look to not only GDP of a country but also NNI. As discussed above, NNI measures a country's income generated by productive capacity and to exclude highly mobile and manipulable forms of income such as financial services.⁸³ In essence, NNI provides insight into the productive capacity of a country's economy which at least in theory should be less influenced in the short run by that country's own tax policy. To this end, two IVE Scores would be calculated: one representing the country's total income tax revenue for a given year over its GDP that year and one over its NNI for that year. Of course, neither statistic completely excludes the effect of tax laws on its own economy, but at least for countries with low rankings in both IVE Scores, using GDP and NNI helps alleviate concerns that results reflect more internal domestic politics rather than a comparative metric of ability to pay.

Both GDP and NNI statistics are in place and calculated and published annually by the OECD and the World Bank for reasons unrelated to international tax policy, not only providing a more neutral baseline than source and residence but also alleviating the administrative concern over which country should calculate the scores and why other countries should trust those scores.

Once both IVE Scores are calculated, a picture of relative ability to pay (meaning at the country level, capacity to raise additional tax revenue) quickly emerges, at least among countries at the extreme ends of the spectrum. For example, much attention is paid to the U.S. budget deficit and the total U.S. public debt, in the popular press at least, if for no other reason than its size.⁸⁴ Many recent proposals to address the deficit have come in the form of increasing taxes on multinational corporations or other international taxpayers.⁸⁵ This makes sense if the normative framework of the international tax regime was built on inter-nation equity,

83. See *Net National Income*, OECD, <https://data.oecd.org/natincome/net-national-income.htm> [<https://perma.cc/44MZ-TU9U>] (last visited Jan. 7, 2021) ("Net national income (NNI) is defined as gross national income minus the depreciation of fixed capital assets (dwellings, buildings, machinery, transport equipment and physical infrastructure) through wear and tear and obsolescence.").

84. See, e.g., *Trump's Most Enduring Legacy Could Be the Historic Rise in the National Debt*, WASH. POST (Jan. 14, 2021), <https://www.washingtonpost.com/business/2021/01/14/trump-legacy-national-debt-increase/> [<https://perma.cc/6KQD-PFB4>].

85. See, e.g., David L. Carden, *To Pay for the Pandemic, Dry Out the Tax Havens*, FOREIGN POL'Y (July 16, 2020, 12:19 PM), <https://foreignpolicy.com/2020/07/16/tax-havens-apple-costs->

where all of the income of a corporation resident in the United States is properly considered national gain of the United States. But consider the question under an IVE analysis: while the U.S. budget deficit is the largest in the world, its tax revenue as a share of its GDP is a tiny fraction compared to most midsize and small developing countries. What this tells us is that the United States has greater capacity to increase revenue solely by taxing its domestic income base, if necessary. In fact, this implicitly is the reason the United States remains able to borrow effectively at the risk-free rate notwithstanding the size of its national debt. By contrast, countries such as the Netherlands or Luxembourg, which are typically not thought of as poor or developing in terms of GDP per capita or standard of living, have an IVE Score significantly higher than the United States, at times almost double,⁸⁶ meaning there is significantly less capacity either to tax or borrow.

This disparity in fiscal capacity can be seen in recent events surrounding COVID-19.⁸⁷ By all accounts, the virus caused a global pandemic requiring worldwide response by every country in terms of testing, medical care, and research. The virus impacted every country in the world without regard to national borders. Yet preliminary reports seem to indicate that poorer countries are suffering disproportionately from the pandemic.⁸⁸ Putting aside different health care networks in different countries, the reason seems to be attributable to fiscal capacity. For example, while the U.S. economy staggeringly dropped over four percent in the first quarter of 2020,⁸⁹ Congress was able to easily pass billions of dollars

pandemic/ [https://perma.cc/J2YC-9H6B]; Tabby Kinder & Emma Agyemang, *'It's a Matter of Fairness': Squeezing More Tax from Multinationals*, FIN. TIMES (July 7, 2020), <https://www.ft.com/content/40cffe27-4126-43f7-9c0e-a7a24b44b9bc> [https://perma.cc/RKD5-95KF]; Dominic Rushe, *Big Tech and Corporate Tax Cuts: The Targets of Joe Biden's Urgent Economic Plans*, GUARDIAN (Nov. 7, 2020), <https://www.theguardian.com/us-news/2020/nov/07/joe-biden-most-urgent-economic-plans-key-elements> [https://perma.cc/QTT6-T43R].

86. See *infra* Appendix.

87. See, e.g., *The Global Economic Outlook During the COVID-10 Pandemic: A Changed World*, WORLD BANK (June 8, 2020), <https://www.worldbank.org/en/news/feature/2020/06/08/the-global-economic-outlook-during-the-covid-19-pandemic-a-changed-world>.

88. See, e.g., Joseph Stiglitz, *Conquering the Great Divide*, INT'L MONETARY FUND: FIN. & DEV. 17, (Sept. 2020), <https://www.imf.org/external/pubs/ft/fandd/2020/09/COVID19-and-global-inequality-joseph-stiglitz.htm> [https://perma.cc/TL93-UR7N]; Nicolas Bottan et al., *The Unequal Impact of the Coronavirus Pandemic: Evidence from Seventeen Developing Countries*, 15 PLOS ONE 1 (2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7540865/pdf/pone.0239797.pdf> [https://perma.cc/3HZJ-93JN].

89. See Ben Casselman, *Worst Economy in a Decade. What's Next? 'Worst in Our Lifetime.'*, N.Y. TIMES (Apr. 29, 2020), <https://www.nytimes.com/2020/04/29/business/economy/us-gdp.html> [https://perma.cc/KH22-ENCK] ("U.S. gross domestic product, the broadest measure of goods and services output, fell at a 4.8 percent annual rate in the first quarter of the year, the Commerce Department said Wednesday. That is the first decline since 2014, and the worst quarterly contraction since 2008, when the country was in a deep recession.")

in stimulus and unemployment benefits⁹⁰ and the Centers for Disease Control and Prevention (CDC) and National Institutes of Health (NIH) aggressively funded research into a vaccine.⁹¹ Even in the face of massive economic losses, the United States proved to have more than enough fiscal capacity to respond.

Yet few other countries have that luxury. Countries such as Peru and Guatemala were significantly less able to respond effectively because of the massive drop in their individual GDP and in worldwide demand for goods and services.⁹² These fiscal constraints make responses like continued quarantine, universal testing, and the use of masks and hand sanitizer difficult if not impossible, leading to a vicious cycle.⁹³ Even worse, they lead to even greater reliance on the shadow or underground economy, which not only is unlikely to pay taxes, but also is unlikely to follow health regulations, which can lead to even greater spread of the virus.

If instead, however, the United States were to aggressively attempt to tax some of the income from another country with a higher IVE Score, it would put increasing pressure on that country to meet its own minimum government expenses or even threaten that country's fiscal sovereignty altogether. Thus, under an IVE standpoint, the comparison for raising the extra dollar of revenue is between the United States utilizing its own taxing capacity and the United States using the tax capacity of this other country. Since the United States can afford to pay significantly more of its national income in taxes than most other countries, vertical equity analysis would suggest that the United States should tax itself and not the other country. Taken to an extreme, IVE analysis could suggest transferring tax revenue from the United States to those countries with the highest IVE Scores.

90. See generally Coronavirus Aid, Relief, and Economic Security (CARES) Act, Pub. L. 116–136, 134 Stat. 281 (Mar. 27, 2020) (to be codified at 15 U.S.C. ch. 116).

91. See *Fact Sheet: Explaining Operation Warp Speed*, U.S. DEPT. OF HEALTH & HUMAN SERV., <https://www.hhs.gov/about/news/2020/06/16/fact-sheet-explaining-operation-warp-speed.html> [<https://perma.cc/TE4V-MPMQ>] (last visited Jan. 13, 2021) (“Operation Warp Speed (OWS) aims to deliver 300 million doses of a safe, effective vaccine for COVID-19 by January 2021, as part of a broader strategy to accelerate the development, manufacturing, and distribution of COVID-19 vaccines, therapeutics, and diagnostics (collectively known as countermeasures).”).

92. See generally *Policy Responses to COVID-19*, INT’L MONETARY FUND, <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19> [<https://perma.cc/ES97-R2NQ>] (last visited Jan. 9, 2021).

93. See, e.g., Elyas Alwazir, *World’s Most Vulnerable Countries Lack the Capacity to Respond to a Global Pandemic*, UNITED NATIONS (Oct. 27, 2020), <https://www.un.org/ohrlls/news/world%E2%80%99s-most-vulnerable-countries-lack-capacity-respond-global-pandemic-credit-mfdelyas-alwazir> [<https://perma.cc/9X7L-LUW7>]; Andrew Walker, *Developing World Economies Hit Hard by Coronavirus*, BBC NEWS (Apr. 23, 2020), <https://www.bbc.com/news/business-52352395> [<https://perma.cc/TMD3-Z4D2>].

IVE does not necessarily mandate such extreme measures as revenue transfers in designing an overall income tax regime, just as vertical equity does not end up resulting in 100% tax rates for the wealthiest taxpayers and 0% for everyone else, but a robust conception of vertical equity in the domestic context does typically result in progressive tax rates. There is little reason to think the same would not apply in the international context. IVE could prove especially compelling when determining how best to finance so-called “global public goods” (such as global climate change or pandemic vaccination) in which all countries benefit.⁹⁴ With IVE Scores providing a metric to do so, it could well prove increasingly difficult to oppose doing so in the future.

CONCLUSION

Efficiency considerations have dominated international tax policy throughout its history. As a result, it should not be surprising that the international tax regime for the most part has focused on issues of protecting the tax base and accompanying revenue of wealthier countries in the name of defending national gain. This has been true whether the issue has been so-called income-stripping or tax havens or tax arbitrage or reverse hybrids or dual residence companies or inversions or Double Irish or whatever. At some point, if a policy regime consistently and exclusively reaches the same conclusion no matter what the specific legal issue at hand, one must question the premise of that regime. For equity to begin to influence real policy choices in the international tax regime, as it has in the domestic context, a new and more robust conception of equity and its role in tax policy is needed. This Essay does just that, introducing International Vertical Equity as that method.

94. See P.B. Anand, *Financing the Provision of Global Public Goods*, 27 *WORLD ECON.* 215, 216–17 (2004).

APPENDIX⁹⁵

<i>Country</i>	<i>GDP</i>	<i>NNI</i>	<i>Revenue</i>	<i>IVE (G)</i>	<i>IVE (N)</i>
United States	20,494,100	16,756,058	1,944,008	9.48	11.60
Japan	5,414,680	4,326,767	297,387	5.49	6.87
Netherlands	970,604	782,280	96,780	9.97	12.37
Austria	491,095	387,627	47,983	9.77	12.38
Luxembourg	67,520	37,401	8,069	11.95	21.57
Iceland	20,263	14,157	2,521	12.44	17.81

95. All data from *National Accounts Statistics*, OECD, <https://stats.oecd.org/Index.aspx?DataSetCode=NAAG> [<https://perma.cc/98DU-KN6Y>] (last visited Jan. 13, 2021). For 2017 or most recent other year available. All numbers in thousands.