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# Reconsidering International Tax Neutrality

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## I. Introduction

Since the Kennedy Administration, U.S. international tax policy and the debate over what that policy should be have been dominated by two principles: capital export neutrality (CEN) and capital import neutrality (CIN).[1] The central idea in the literature is that an income tax cannot simultaneously satisfy both CEN and CIN unless tax rates on capital are harmonized across countries.[2] Over the intervening forty-five or so years, the U.S. government's commitment to one or the other goal has swung back and forth.[3] One reason for those shifts in policy is the widespread view that both goals cannot be achieved simultaneously.[4]

In an insightful and interesting new article, Fadi Shaheen challenges that view.[5] Shaheen does not argue that the traditional proof of the impossibility claim, discussed further below, is wrong. Instead, tracing CEN and CIN back to their original normative conceptions as described by Peggy Musgrave in her 1963 and 1969 books that introduced those concepts, Shaheen argues

[1] For the history of U.S. international tax policy, see Reuven Avi-Yonah, *All of a Piece Throughout: The Four Ages of U.S. International Taxation*, 25 VA. TAX REV. 313 (2005).
[2] See, e.g., Michael J. Graetz, *The David R. Tillinghast Lecture Taxing International Income: Inadequate Principles, Outdated Concepts and Unsatisfactory Policies*, 54 TAX L. REV. 261, 271-72 (2001).
[3] Avi-Yonah, *supra* note [1].
[4] Avi-Yonah, *supra* note [1].

that CEN and CIN have been misconstrued.[6] Using CEN and CIN as they were understood by Musgrave,[7] Shaheen develops an argument for why a territorial tax system can simultaneously satisfy both neutrality benchmarks without the need for governments to harmonize tax rates.[8] Shaheen, further, argues that a worldwide tax system will satisfy neither benchmark.[9]

There is much to admire in Shaheen's article, which illuminates a great deal of the contemporary discussion of international tax policy, provides insightful economic analysis, and advances the dialogue among economists, lawyers and policymakers. I, however, disagree with Shaheen's ultimate conclusions, which I believe get it exactly backwards. Interpreting CEN and CIN largely as Shaheen does, which I believe is also the way those concepts are generally understood by lawyers and policy analysts, albeit not by professional economists, it is a worldwide income tax that can simultaneously satisfy both CEN and CIN. In contrast, a territorial tax system can achieve CIN, but it cannot achieve CEN unless tax rates are harmonized.

In this essay, I also show that the traditional proof that an income tax cannot simultaneously achieve both CEN and CIN is valid if CIN is interpreted not as it was understood by Musgrave and is used today by lawyers and policy analysts, but instead as it came to be used by economists beginning in the 1980's. There are, thus, two alternative and different

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[5] Fadi Shaheen, *International Tax Neutrality: Reconsiderations*, 27 VA. TAX REV. 203 (2007).
[6] PEGGY BREWER RICHMAN, THE TAXATION OF FOREIGN INVESTMENT INCOME: AN ECONOMIC ANALYSIS (1963); PEGGY B. MUSGRAVE, UNITED STATES TAXATION OF FOREIGN INVESTMENT INCOME (1969). Before she married the noted public finance economist Richard Musgrave and took his name, Peggy Musgrave was Peggy Richman.
[7] *Shaheen, supra* note [5], at 207-13.
[8] *Id.* at 219-25.

interpretations of CIN and the failure of commentators to be clear about which interpretation they have in mind when they use the term CIN has been the source of much confusion. I hope this essay will help to dispel some of that confusion. At the very least, writing this essay has helped me to understand more clearly the important international tax policy issues and academic debates of the day.

## II. The Two Principal International Tax Neutrality Propositions

Both CEN and CIN are neutrality propositions. That is to say, they are statements about when tax considerations will affect individual decisions and thus change the market equilibrium. Such changes are undesirable because they reduce global welfare.[10] The normative goal behind CEN is often expressed as tax considerations should not influence whether investors resident in one jurisdiction invest their capital at home or abroad. If the tax system satisfies CEN, business, not tax, considerations will determine where investors invest. This is often said to be efficiency enhancing because it will produce a more efficient global allocation of capital.

The normative goal behind CIN is often expressed as tax considerations should not influence whether a particular investment is made by domestic investors or foreign investors. If the tax system satisfies CIN, business, not tax considerations will determine who makes which investments. It is sometimes said to be efficiency enhancing for a tax system to satisfy CIN

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[9] *Id*. at 225-33.

[10] Most scholars advocate or assume that the international tax system should seek to maximize global welfare. For a dissenting view, see Graetz, *supra* note [2], at 277-82.

because it will reduce inefficiencies in the structure of cross-border holdings.[11]

## III. The Widely Accepted Proof of the Inconsistency of CEN and CIN

For many years, one of the principal ideas in the literature on international tax policy is that it is impossible for a tax system to satisfy both CEN and CIN simultaneously without harmonizing tax rates on capital. The often-repeated proof of that claim, which is usually and most easily expressed through an example, is straightforward.[12] Assume that the United States imposes a 40 percent income tax and that the European Union imposes a 30 percent income tax. For the United States to satisfy CEN, US investors must pay the same 40 percent tax on income earned in the European Union that they pay on income earned in the United States. That requires the United States to tax its residents on their worldwide income and provide a foreign tax credit for the full amount of tax paid to the European Union. Such a tax system is called a worldwide tax system. It is also sometimes called a residence-based tax system or a credit system. Under such a tax system, US-based investors investing in the European Union will pay tax to the European Union on their income at a rate of 30 percent. They will also be taxed at a 40 percent rate in the United States on that income and receive a credit for the 30 percent tax paid to the European Union. They will, thus, have to pay 10 percent of their EU earnings to the US Treasury in taxes, which leaves them with a total tax payment equal to 40 percent of their income. Hence, for US taxpayers, CEN is satisfied if the United States has a worldwide tax system.

[11] The alternative interpretation of CIN that has dominated much of the discussion among economists is discussed

The analysis is similar with one difference for EU-based investors investing in the United States. The US tax authorities will collect 40 percent of the EU investors' US earnings in taxes. Because the US tax liability on that amount exceeds the EU tax liability by 10 percent, the EU does not collect additional tax. That, however, is not the end of the story. In order to satisfy CEN, the European Union must provide a tax rebate to its investors of 10 percent of their US income. For only if the EU tax authorities provide this rebate, will EU-based investors pay tax on their income earned in the United States at the same rate as on their income earned in the European Union (30 percent). Such a provision is often referred to as an unlimited foreign tax credit because the credit is not limited to the residence country's tax on that income. Such a payment brings a high foreign tax rate down to the lower domestic tax rate, thereby achieving CEN for EU taxpayers.[13]

The standard argument continues by turning to CIN. In terms of the example, CIN in any market requires that US investors pay tax at the same rate as EU investors in that market. EU investors in the European Union pay tax at 30 percent. Nondiscrimination ensures that all investors in the European Union, whether EU residents or US residents, pay 30 percent tax to the European Union. Hence, if the United States does not tax the EU income of US-based investors,

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below.

[12] For an example, see Graetz, *supra* note [2], at 272 n.36.

[13] Note that if the foreign tax credit is limited to the tax paid abroad, then the EU investor receives a foreign tax credit of only 30 percent of foreign income. That leaves the EU investor with no additional tax liability to the EU treasury. However, because the investor has already paid tax equal to 40 percent of that income to the US treasury, the investor's total tax liability is 40 percent, not 30 percent. The last 10 percent tax paid to the US treasury generates no usable foreign tax credit. It, thus, follows that if the foreign tax credit is limited, then CEN will not be

then both groups of investors will pay tax at the same rate. Similarly, for EU-based investors investing in the United States, they pay tax to the US government at a rate of 40 percent, the same tax rate as is paid by US investors investing in their home market. If the European Union neither taxes nor provides a rebate to its investors investing abroad, EU-based investors will pay the same tax in the United States as their US competitors. Such a tax system, where the home country does not tax its residents on the income they earn abroad, is called a territorial tax system. It is also sometimes called a source-based tax system because income is taxed only at its source or an exemption tax system because foreign source income is exempt from tax. Such a tax system will satisfy CIN.

The inconsistency of the two goals – CEN and CIN – immediately follows. CEN requires that US-based investors pay the same 40 percent tax in the European Union as they pay when they invest in the United States, which requires a worldwide tax system with an unlimited foreign tax credit. CIN, however, requires that US-based investors pay the same 30 percent tax in the European Union that EU-based residents pay there, which requires a territorial tax system.[14] Thus, CEN and CIN cannot both be satisfied simultaneously unless the European Union and the United States both have tax income at the same rate.[15]

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satisfied for the EU investor. In this circumstance, the US investor is sometimes said to still satisfy CEN, but the EU investor is said not to do so.

[14] The analysis is similar from the EU perspective. CEN requires EU investors pay tax at 30 percent when they invest in the United States, but CIN requires EU investors pay tax at 40 percent when they invest in the United States.

[15] As others have pointed out, a cash flow consumption tax will satisfy both CEN and CIN simultaneously without the need to harmonize statutory tax rates. E.g. David Bradford, *The X Tax in the World Economy* (CESifo Working Paper Series No. 1264, Princeton Law & Public Affairs Paper No. 03-9, 2004), *available at* http://ssrn.com/abstract=447780. That is because the consumption tax has the effect of exempting the ordinary return to capital from tax. Thus, if two countries adopt cash flow consumption taxes at different statutory rates, then

If the European Union and the United States tax income tax at the same rate, say 40 percent, then the tax system will simultaneously satisfy both CEN and CIN.[16] From the US perspective, the US investor will pay tax at 40 percent whether the investment takes place in the European Union or the United States. Thus, CEN is satisfied. The EU investor will also pay tax at 40 percent when the investment is made in the United States. Thus, CIN is also satisfied from the US perspective.[17]

The above demonstration is quite standard and it can be found in one form or another in many articles and books, with many more citing to the result.[18] It is, however, wrong or at the very least misleading. To understand my criticism of the claim that CEN and CIN cannot simultaneously be satisfied without harmonizing tax rates we need to look more closely at the concepts of CEN and CIN, which for 45 years have dominated the debate about international tax policy.

## IV. Giving Normative Content to CEN and CIN

The economic analysis of international tax policy takes as its starting point the idea that

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they have both set their tax rates on capital to zero. In effect, a consumption tax only taxes the income from labor, which is the only income to which the statutory rate is applied.

[16] Note that in such circumstances it does not matter whether the tax system is territorial or worldwide because in neither case does an investor in a foreign country pay any tax to the residence jurisdiction.

[17] The analysis is identical from the EU investor's perspective. The investor's total tax payment is equal to 40 percent of income whether the EU investor invests at home or abroad. Also, a US investor who invests in the European Union will pay tax at 40 percent, the same as an investor from the European Union.

[18] One of the clearest and best known examples comes from Graetz, *supra* note [2], at 272 n.36.

the maximization of global welfare is an appropriate goal of tax policy and taxation by distorting economic decisions reduces that welfare. In a world where labor and land are (or at least were) viewed as immobile, but capital is viewed as highly mobile, international tax policy is concerned with the impact alternative tax policies can have on various capital market decisions. By interfering with those decisions, tax policy imposes a welfare cost on society. The various tax neutrality propositions represent tax systems that do not distort specific capital decisions.

Sometimes, tax neutrality is measured against a baseline of the ideal non-tax world. Under certain restrictive assumptions, a world without taxes is efficient in the sense that it maximizes aggregate welfare. Under those same assumptions, the imposition of a tax that changes behavior reduces welfare. In those circumstances, the distortion caused by the tax can be measured against the baseline of the untaxed world. However, in a market in which there are already distortions (i.e., other taxes), the welfare consequences of imposing a new tax, removing an old tax, or revising an existing tax cannot be measured against the non-tax baseline. In order to determine whether any tax policy change produces a distortion we look for margins where public and private benefits are not equal.

In such a world, a tax policy change increases a distortion when it increases the difference between public and private benefits.[19] It reduces that same distortion when it reduces that difference. To assess the total welfare consequences of any given change all of the distortions across all dimensions must be summed. That is a daunting task. It is also one which

[19] The welfare consequences of a distortion increase as the square of the magnitude of the distortion.

in theory can go in either direction. Thus, imposing a tax can reduce or increase welfare and eliminating a tax can increase or reduce welfare. Although either result is possible in theory, in practice nearby effects are likely to dominate distant effects. Accordingly, the practice is to look at the public and private benefits at nearby margins. Viewed from such a perspective, a tax is inefficient with respect to any particular decision when the ratios of private and social benefits across that margin are not equal. If there are such margins, then a hypothetical central planner can increase welfare by making changes across that margin. In that case, the tax system is said to be inefficient with respect to those dimensions. Conversely, the dimensions on which welfare cannot be improved by the hypothetical planner by shifting resources are said to be efficient.[20] The welfare benchmarks of international tax policy focus on the various decisions that capital owners make.

### A. The Normative Meaning of CEN

The welfare benchmark of CEN focuses on the location of capital. Viewed against the non-tax baseline, a world in which CEN is satisfied is one in which the allocation of capital across jurisdictions is the same as it is in the untaxed world. Expressed in terms of shifting assets to increase welfare, a tax system satisfies CEN if it is not possible to increase aggregate welfare by changing the location of assets. That is to say, if the market would produce an equilibrium such that the allocation of assets across jurisdictions is the same that a planner trying to maximize global welfare would produce, then the tax system satisfies CEN. The contribution

[20] See HARVEY S. ROSEN & TED GAYER, PUBLIC FINANCE 331-48 (5th ed. 2008).

that any asset makes to global welfare is a function of the before-tax rate of return generated by the asset. Thus, if the before-tax rate of return on the marginal asset in each jurisdiction is equal, then global welfare cannot be increased by shifting assets across borders. In such circumstances, the tax system is said to satisfy CEN.

As Musgrave pointed out many years ago, a worldwide tax system with an unlimited foreign tax credit will satisfy CEN.[21] A worldwide tax system with an unlimited credit ensures that all investors pay tax at their home country tax rate on all income regardless of where it arises. Because investors are concerned with their after-tax return, market forces will tend to push after-tax returns into equality. Thus, in an environment with a worldwide tax system, because all investors pay tax at the same rate on all income regardless of source, competition tends to push before-tax rates of return across countries into equality. In such circumstances, welfare cannot be improved by changing the location of capital. Thus, a worldwide tax system satisfies CEN.

That can be seen by returning to the example and adding more structure. Recall that in the example, the US tax rate is 40 percent and the EU tax rate is 30 percent. Assume further that readily available investments in the United States yield a before-tax rate of return of 10 percent annually (the "benchmark asset"). That implies that US investors earn 6 percent after tax on their domestic investments. Because capital is assumed to be freely mobile, the before-tax rate of return in the European Union must also be 10 percent annually. That can be seen as follows.

A US investor in the European Union earns 10 percent before tax and pays tax at 30 percent to the European Union. That leaves the US investor with an after-tax return of 7 percent. With a worldwide tax system, the US investor reports the entire 10 percent after-tax return to the US government and is assessed a tentative tax liability of 40 percent on that return. The US investor receives a foreign tax credit for the 30 percent tax paid to the European Union. That leaves the investor with an additional 10 percent tax obligation on the before-tax income.[22] Thus, the US investor has no incentive to shift capital between the European Union and the United States because the after-tax rate of return is both jurisdictions is 6 percent.

Assuming that the European Union provides an unlimited foreign tax credit, the analysis is similar except that the after-tax rate of return for investors from the European Union is 7 percent, not 6 percent. Note that if the before-tax rate of return in the European Union is not 10 percent, then the market would not be in equilibrium, capital would shift from the jurisdiction with a lower before-tax rate of return to the jurisdiction with a higher rate of return, until the before-tax rate of return was the same across jurisdictions. Because a worldwide tax system leads to an equilibrium where the before-tax rate of return is equal everywhere, it follows that a worldwide tax system results in CEN.[23]

Suppose that one or more countries diverge from the consensus and decline to tax their

[21] In effect, international convention assigns the primary right to tax to the source country and gives the residence country a secondary right.
[22] For simplicity and ease of exposition all assets are assumed to be riskless. Risk is discussed briefly in note [49], infra.

residents on foreign source income. Does the tax system still satisfy CEN? That depends upon what happens to the return to capital in different jurisdictions. If the countries that still use worldwide taxation are large enough that they continue to determine the before-tax rate of return everywhere and so set that rate equal around the world, then CEN is still satisfied. Alternatively, if those countries are no longer so large that the before-tax rate of return differs across countries, then CEN is lost.

It follows that if all countries adopt territorial taxation, then the tax system will not achieve CEN. That is easy to illustrate with the example. If the European Union and the United States both adopt territorial taxation with tax rates of 30 percent and 40 percent, and if the before-tax rate of return in the United States is 10 percent, then the before-tax rate of return in the European Union will be 8.57 percent. At those rates, investors everywhere earn 6 percent after tax, and thus have no incentive to shift capital. However, shifting capital from the European Union to the United States will increase worldwide welfare. For example, taking $1 of capital from the European Union will cost $1.0857 in one year. Investing that $1 in the United States will produced $1.10 in the United States in one year. The difference – $0.0143 – is the surplus. The existence of a surplus means that CEN is not achieved. Thus, a territorial tax system violates CEN.

Over the years, Musgrave's conclusions that a worldwide tax system satisfies CEN and that a territorial tax system violates CEN have been broadly accepted by the economics, legal

[23] It has long been recognized that in order for a worldwide tax system to achieve CEN without harmonizing tax

and policy communities. The story is more complicated with the other welfare benchmark, CIN.

### B. The Two Different Normative Meanings of CIN

Musgrave discusses CIN in connection with business competition and expansion opportunities.[24] As described by Musgrave, the idea embodied in CIN is that if all investors in a jurisdiction are taxed at the same rate, regardless of their residence, then taxation should not affect competition in that jurisdiction. Musgrave's notion of CIN might seem abstract and opaque, and that opacity has influenced the development of international tax policy.

#### 1. Savings Neutrality

In an influential and important article published in 1980, Thomas Horst formalizes and models some of the basic ideas developed in Musgrave's early writings.[25] In that short article, Horst demonstrates that a worldwide tax system will not distort the allocation of income across locations.[26] Horst then demonstrates that territorial taxation will not distort the consumption-savings decisions across jurisdictions.[27] Horst refers to the latter situation as one in which CIN obtains.[28]

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rates the foreign tax credit must be unlimited. What other conditions must be met for a tax system to achieve CEN is a question that warrants further research.

[24] Musgrave, *supra* note [6], at 109-21.

[25] Thomas Horst, *A Note on Optimal Taxation of International Investment Income*, 94 QUARTERLY J. OF ECON. 793 (1980).

[26] *Id.* at 796.

[27] *Id.*

[28] *Id.*

I refer to a tax system that does not distort the choice between consumption and savings across individuals as achieving saving neutrality. As is well recognized, taxation distorts the consumption – savings choice by increasing the price of saving relative to the price of current consumption. The price of current consumption is loss of the after-tax return on that capital. For each taxpayer, that cost is the taxpayer's after-tax return. Accordingly, if taxpayers earn different after-tax rates of return, then a social planner can increase aggregate welfare (measured by willingness to pay) by shifting saving and consumption across different investors. If, however, every investor earns the same after-tax return, then the social planner cannot improve welfare by shifting savings. This interpretation of CIN caught on and took over in the economics literature. And it is what many economists have in mind when they say that a territorial tax system satisfies CIN. However, it is not what Musgrave meant, and more to the point, it is not what many modern day lawyers and policy analysts have in mind when they talk about CIN.

Nonetheless, global adoption of a territorial tax system satisfies such a conception of CIN. In a world where every country has a territorial tax system, investors pay tax only in the source country. Thus, competition among investors for the highest after-tax rate of return will push after-tax rates of return across jurisdictions into equality. In terms of the example, if the before-tax rate of return in the United States is 10 percent, then the after-tax rate of return in the United States is 6 percent. With a territorial tax system, 6 percent is the after-tax rate of return in the United States for both EU and US investors. Competition to achieve the highest after-tax cash flow ensures that the after-tax rate of return in the European Union is also 6 percent, which

implies a before-tax rate of return of 8.57 percent in the European Union. Because the after-tax rate of return is 6 percent everywhere for every investor, every investor faces the same trade-off between saving and current consumption. Thus, a central planner cannot increase aggregate welfare by reallocating consumption and savings among individuals.[29] It, therefore, follows that global adoption of a territorial tax system satisfies CIN when CIN is understood to mean savings neutrality – neutrality with respect to the consumption – savings trade-off.

In contrast, a worldwide tax system does not satisfy CIN when CIN is understood to mean savings neutrality. That can be readily seen using the example. With a worldwide tax system, the before-tax rate of return is everywhere equal to 10 percent. US investors earn 6 percent after tax on their investments, whereas EU investors earn 7 percent. Thus, at the margin, US investors value $1 of current consumption as much as $1.06 in consumption one year later, whereas EU investors value $1 of current consumption as much as $1.07 in consumption one year later. That the tax system violates CIN can be seen by making the following adjustments. Reduce investment by EU investors by $1. That investment produces $1.10 in one year – $0.03 of which is paid to the EU tax authority. At the margin, EU investors are indifferent between saving $1 and consuming $1.07 in one year. Thus, they are indifferent to the change. The EU treasury, however, loses $0.03 assuming the investment is made in the European Union.

[29] Both US and EU investors earn 6 percent after tax on their investments. Thus, at the margin, both US and EU investors value $1 of current consumption as much as $1.06 in consumption one year later. Reduce investment by EU investors by $1. At the margin, the EU investor is indifferent between saving and consuming $1. The EU treasury, however, loses $0.0257 assuming the investment is made in the European Union. Increase investment by US investors by $1. Assume that investment also takes place in the European Union. Thus, the EU treasury recovers the $0.0257 it originally lost and so it is unaffected by the shift. If the US investor receives $1.06 it as well off with the investment as with current consumption. That leaves no surplus, which implies that the tax system satisfies CIN. Thus, a territorial tax system does not violate CIN when CIN is understood as savings neutrality.

Increase investment by US investors by $1. Assume that investment also takes place in the European Union. Thus, the EU treasury recovers the $0.03 it originally lost and so it is unaffected by the shift. If the US investor receives $1.06 it as well off with the investment as with current consumption. Because the investment yields $1.10 before tax and the EU tax collector must receive $0.03 to break even, that leaves an additional $0.01. That $0.01 is surplus, and it implies that the tax system does not satisfy CIN. Thus, a worldwide tax system violates CIN when CIN is understood as savings neutrality.

### 2. Competitiveness or Ownership Neutrality

The second meaning of CIN is as competitiveness or ownership neutrality.[30] Ownership considerations were first introduced into the economic literature on foreign direct investment in the late 1950's. That work, which is now recognized as the foundation of the modern literature on international trade, did not receive much attention at the time. Accordingly, for many years, economists ignored the importance of ownership in influencing foreign direct investment.[31]

It was not until the 1980's that economists again started to think seriously about how ownership considerations impact foreign direct investment.[32] Even so, the rigorous economic analysis of ownership remained outside the realm of international tax policy for another 20

[30] For discussions of the links between ownership and competitiveness, see Michael Knoll, *Taxes and Competitiveness* (University of Pennsylvania, Institute for Law and Economics, Research Paper No. 06-28, 2006), *available at* http://ssrn.com/abstract=953074; Michael Knoll, *Business Taxes and International Competitiveness*, (University of Pennsylvania, Institute for Law and Economics Research Paper No. 06-28, 2008), *available at* http://ssrn.com/abstract=1138374.

[31] See EDWARD M. GRAHAM & PAUL R. KRUGMAN, FOREIGN DIRECT INVESTMENT IN THE UNITED STATES 177-78 (2d ed. 1991).

[32] For a brief discussion of these developments, see *id.* at 178-179.

years. That changed only about five years ago. In a series of articles published in 2003 and 2004, Mihir Desai and James Hines brought ownership into the professional economists' literature on international taxation.[33] Desai and Hines coined the phrase capital ownership neutrality (CON) to describe a tax system that is neutral with respect to the ownership of assets, and they have argued that a non-neutral tax regime will impose large welfare costs. Their work has been highly influential, although some commentators question whether the welfare costs of a regime that is not neutral with respect to ownership are significant.[34]

Yet, the idea of competitiveness or ownership neutrality is older. It seems clear upon a reading of Musgrave that when she used the term CIN she had competitiveness in mind and nothing at all like savings neutrality. Thus, in Taxation of Foreign Investment, first published in 1963, Peggy Musgrave introduces the phrase "capital import neutrality" in the following sentence: "A form of capital-import neutrality under which all investors who invest in one particular country are subject to the same tax treatment, namely, that of the country of the source of investment income, would allow all foreign investors in that country equal opportunity for expansion."[35] Although Musgrave rejects CIN as the appropriate welfare benchmark because it does not promote neutrality with respect to the location of investment,[36] the passage is clearly

[33] Mihir A. Desai & James R. Hines, Jr., *Evaluating International Tax Reform*, 41 NAT'L TAX J. 487 (2003); Mihir A. Desai, *New Foundations for Taxing Multinational Corporations*, TAXES, Mar. 2004, at 39; Mihir A. Desai & James R. Hines Jr., *Old Rules and New Realities: Corporate Tax Policy in a Global Setting*, 57 NAT'L TAX J. 937 (2004).
[34] Mitchell A. Kane, *Ownership Neutrality, Ownership Distortions, and International Benchmarks*, 26 VA. TAX REV. 53 (2006); Harry Grubert, *Comment on Desai and Hines, "Old Rules and New Realities: Corporate Tax Policy in A Global Setting*," 58 NAT'L TAX J. 263 (2005).
[35] Musgrave, *supra* note [6], at 8.
[36] *Id*. In light of the thinking of her contemporaries in the economics profession, it is not surprising that Musgrave rejected the idea that tax policy should be guided by concerns with ownership. That is why she rejected CIN in favor of CEN as the appropriate welfare benchmark.

not about savings, but instead has more to do with competitiveness.[37]

Similarly, in United States Taxation of Foreign Investment, published in 1969, Musgrave writes that business people argue that "the relevant concept of neutrality is equal treatment of U.S. investors abroad and their foreign competitors (capital-import neutrality)." And in a section entitled "*Capital-import neutrality*", [38] Musgrave writes: "[b]usinessmen frequently maintain that neutrality should apply between U.S. foreign investors and their competitors abroad. This view of neutrality, which may be termed 'capital-import neutrality' suggests taxation by source or exemption of foreign investment income by the United States." [39] Once again, Musgrave is skeptical of the efficiency and fairness benefits of CIN, but even so there is no ambiguity as to connotation. CIN is about competitiveness, not savings.

It is certainly fair to say that Musgrave does not describe the nature of the competition that occurs between businesses. Nowhere does she explain how businesses compete with one another to expand production. However, modern corporate finance does explain how firms compete. They compete with one another for assets by raising money from outside investors, which they use to acquire assets. Thus, the competition between businesses takes the form of competition to own (and otherwise control) assets.

[37] The connection between expansion and ownership is not clear. The idea might be that a lower tax rate means more after tax dollars to invest and hence greater expansion. Alternatively, the idea might be that a lower tax rate means that the investor will earn more after tax on future investment, which will encourage greater expansion. The latter is closer to the idea of ownership. Such confusion has occurred in other areas. For a discussion of that confusion in the context of tax-exempt and taxable investors, see Michael S. Knoll, *The UBIT: Leveling an Uneven Playing Field or Tilting a Level One?*, 76 FORDHAM L. REV. 857 (2007).
[38] Musgrave, *supra* note 6, at 119.
[39] *Id.*

Ownership neutrality, then, is a second meaning of CIN and it seems to be the primary meaning intended by Musgrave. It is also a more natural meaning for the term capital import neutrality (CIN) than the alternative meaning of not distorting the consumption – savings choice across investors. The words "capital import neutrality" do not suggest anything about savings. Instead, the phrase suggests investment from abroad into a host country in competition with local investors and the neutrality is often expressed as occurring between a home investor and a foreign investor. In many instances, the investors are assumed to be firms, not individuals, which strains the interpretation of CIN as dealing with the individual investors' trade-off between consumption and savings. Also, both CEN and CIN are often described as dealing with foreign direct investment, not portfolio investment. In a world where firms make direct investments and individuals make portfolio investments, it makes little sense for CIN to be about both direct investment and the consumption – savings tradeoff. Instead, ownership neutrality – or something close to it – appears to be what many writers about tax policy who are not professionally trained economists have in mind when they use the term CIN.[40]

Although this is getting into speculation, I suspect that many of the authors who use CIN as a form of ownership neutrality think of it as having immediate welfare consequences. Differential tax rates translate into a competitive advantage, which in turn translates into an excess burden. It is also easy to understand how many readers without formal economic training came to think that absolute differences in tax rates across taxpayers determines competitiveness

or ownership. It was a short step from that conclusion to the conclusion that differences in tax rates across investors have adverse welfare consequences by distorting who makes certain investments.

Furthermore, many of the writers who reproduce or refer to the proof on the impossibility of a tax system simultaneously satisfying both CEN and CIN seem to have in mind the notion of CIN as ownership neutrality, not CIN as saving neutrality.[41] I would guess that an even larger number of readers of those works think of CIN as closer to ownership neutrality than to saving neutrality when they read the proof and think about its significance.

The use of CIN to refer to a level playing field between foreign and domestic investors is in wide use. And this idea is closely connected with the concept of ownership. As Hugh Ault and David Bradford wrote in 1990, "'capital-import neutrality' refers to the nationality of ownership of firms."[42]

It is certainly fair and accurate to describe much of the writing that advocates for CIN as ownership neutrality as thinly reasoned, especially the connection between CIN and economic efficiency. It is, however, incorrect to describe that work as treating CIN as saving neutrality or as anything other than as some aspect of competitiveness.

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[40] The language of the traditional proof of the impossibility of achieving both CEN and CIN simultaneously without harmonizing tax rates reinforces this interpretation.
[41] See Graetz, *supra* note [2].

The simplest explanation for the lack of rigor in discussions of the connection between CIN as ownership neutrality and economic efficiency is that professional economists, until about five years ago, generally thought the ownership of capital was unrelated to considerations of economic efficiency. In several places, Musgrave notes that the welfare considerations of the residence and nationality of the investor are of secondary importance to considerations of the location of investment.[43] And more recently, Ault and Bradford wrote "[t]he nationality of owners is not generally associated with economically significant consequences (apart, perhaps, from portfolio diversification)."[44] Thus, it is easy to see why some commentators, especially professional economists, might see Desai and Hines as introducing ownership considerations into the international tax policy discussion. However, the risk from reading Desai and Hines in that fashion is that it can cause the reader to misunderstand and misinterpret a large literature on international taxation by writers who are not professional economists.

When viewed from the perspective of noneconomists working in the field of international tax policy, Desai and Hines do not so much introduce ownership considerations into the discussion of international tax policy as they provide a rigorous economic foundation for doing so. Desai and Hines have also been outspoken advocates for adopting an ownership neutral tax regime on the grounds that there can be large and negative welfare consequences from adopting tax systems that distort ownership patterns. Thus, Desai and Hines argue at length that the ownership of capital substantially affects the productivity of that capital and hence global

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[42] Hugh J. Ault & David F. Bradford, *Taxing International Income: An Analysis of the U.S. System and Its Economic Premises*, *in* TAXATION IN THE GLOBAL ECONOMY 11, 39 (Assaf Razin & Joel Slemrod eds., 1990).
[43] E.g., Musgrave, *supra* note 6, at 9, 27.
[44] Ault & Bradford, *supra* note [42], at 39.

welfare.[45] Desai and Hines also look at what sorts of tax systems will or will not distort the ownership of capital.[46] They conclude that global adoption of either territorial or worldwide taxation will not distort ownership patterns even if tax rates vary across countries.[47]

In order to understand the circumstances under which ownership neutrality occurs, the example needs more structure. Recall that the before-tax rate of return for investments in the United States is 10 percent a year. Assume that there is an investment available (the "candidate investment") through which a $1000 investment will yield $1100 in one year when that investment is liquidated. If the candidate investment in made by a US investor in the United States, the US investor will report $100 income to the US treasury, pay $40 tax, and be left with an after-tax cash flow of $1060. The candidate investment is, thus, worth $1000 to a US investor.[48] That is because at that price the investment generates an after-tax return of 6 percent,

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[45] Desai & Hines, *Evaluating International Tax Reform*, *supra* note [33], at 494.

[46] E.g., Desai & Hines, *Evaluating International Tax Reform*, *supra* note [33]. Some of my recent scholarship contributes to this literature. E.g., Michael S. Knoll, *supra* note 30.

[47] Desai & Hines, *Evaluating International Tax Reform*, *supra* note [33], at 495.

[48] In order to calculate the value of the candidate investment to a potential investor, the following notation is helpful. Denote the pretax cash flow from the candidate investment by C, the before-tax return on alternative investments by R, the total tax rate imposed on an investor from country i on alternative investments by $t_i$, the total tax imposed on an investor from country i on the candidate investment by $t_j$, and the price paid by an investor from country i for the candidate investment by $V_i$. An investor from country i will have $C(1- t_j) +Vt_j$ after paying taxes on the candidate investment. That same investor must receive at least $V_i(1+R(1- t_i))$ or will forego the candidate investment for other investments. Equating those two expressions and rearranging terms, yields the maximum bid price for the candidate investment by an investor from country i: $V_i = C(1- t_j) /[1- t_j+ R(1-t_i)]$.

Furthermore, if the candidate investment is taxed the same as other investments, $t_i = t_j$ , then the above equation for the maximum bid price an investor in country i will pay for the candidate investment simplifies to $V_i = C/(1+R)$. Substituting $1100 for C and 10 percent for R into that equation yields $1000. That an investor from the United States is willing to pay up to $1000 to acquire the candidate investment can be seen as follows. In one year, that investor will receive $1100. Of that amount, $100 is income. The US investor pays $40 tax on that income and so is left with $1060. Thus, the US investor earns an after-tax return of 6 percent, which confirms that such investor is willing to pay up to $1000 for the candidate investment.

the same rate as other readily available investments.[49]

Assume that the United States and the European Union both adopt worldwide tax systems. The before-tax rate of return in the European Union, then, will be 10 percent as well. However, on their alternative investments EU investors will earn 7 percent after tax, not the 6 percent after tax as do US investors. The reason why EU investors earn more after tax than do US investors is they are taxed at 30 percent instead of 40 percent.

If an EU investor acquires the candidate investment in the United States, then that investor will report $100 of US source income to the US government. The US government will assess the taxpayer a tax liability of $40 on that amount. That will allow the EU investor to repatriate $1060. The EU investor will also report $100 income to EU tax authorities and be assessed a tentative tax liability of $30.[50] That investor will also receive a foreign tax credit of $40 for the $40 paid to the US treasury on that same income. Because the EU tax liability on that income is only $30, the EU investor is entitled to a rebate from the EU treasury of $10. That will leave the EU investor with a net total tax liability of $30 and hence with a cash flow of

[49] As described throughout this Essay, the value that an investor places on an asset is a function of how high the investor is taxed on that asset relative to other assets. That raises the question what other assets are relevant. In a world of riskless assets, all assets are perfect substitutes for one another. However, in a world of risky assets portfolio selection is more complicated and so the question what assets are the right alternatives is a difficult one. Mihir Desai and Dhammika Dharmapala argue that the right way to think about that question is to use the after-tax capital asset pricing model (CAPM). Mihir Desai & Dhammika Dharmapala, Investor Taxation in Open Economies, (January 2009) (unpublished working paper). According to that model, relative tax rates across assets and individuals determines the relative intensity of investments. In such a world, investors do not specialize in their investments by holding only the most tax advantaged and avoiding all other investments. Instead, investors tend to hold a higher share of their portfolio in tax advantaged investments and a smaller share in tax-disadvantaged investments, where tax-advantaged and tax-disadvantaged is measured by how the investor is taxed on that asset relative to other assets as compared with all other investors.

[50] For simplicity and ease of exposition all amounts are expressed in US dollars.

$1070 after tax. The EU investor will, thus, value the candidate investment at $1000, the same as a US investor.[51] Because the EU and US investor both value the candidate investment at $1000, CIN is satisfied with respect to the US market.[52]

Note that if the EU foreign tax credit is limited to the tax paid abroad, then the EU investor receives a credit of only $30. That leaves the EU investor with no additional tax liability to the EU treasury. However, because the investor paid $40 tax to the US treasury and repatriated $1060, the investor's total tax liability is $40 and after-tax cash flow is only $1060. The additional $10 tax paid to the US treasury generates no usable foreign tax credit, which accounts for the $10 difference in taxes paid and after-tax cash flows in the two versions of the example. If the foreign tax credit is limited, then CIN will not be satisfied for the EU investor. The EU investor will value the candidate investor at only $985.07.[53] The EU investor values the candidate investment less than an equally efficient US investor who has the same cash flow and pays the same tax. That is because the EU investor pays more tax and has a smaller after-tax cash flow if the investment is made in the United States than if the economically equivalent investment is made in the European Union. In this circumstance, CIN is said not to be satisfied in the US market.

[51] The value of the candidate investment to an EU investor is calculated using the simpler equation in footnote [] for the value of the candidate investment when the tax rate on the candidate investment ($t_j$) and the benchmark asset ($t_j$) are the same. In that case, the tax rates drop out of the equation.

[52] The example in the text assumes that differences in tax rates across countries do not reflect differences in services (value) provided to capital investors. If some of those tax differences are reflected in services, then a worldwide tax system will not achieve ownership neutrality.

[53] The value of the candidate investment to an EU investor is calculated using the general equation in footnote [] for the value of the candidate investment and setting $t_i$ equal to 40 percent and $t_j$ equal to 30 percent.

Assume the candidate investment is sourced in the European Union. That investment produces $1100 when it is liquidated in one year. If the EU investor makes the investment, that investor reports $100 income to the EU tax authorities, pays $30 tax and is left with an after-tax cash flow of $1070. The EU investor will, thus, value the candidate investment at $1000.[54] If the investment is made by a US investor, the US investor will report $100 income to the European Union and pay $30 tax to the EU tax authorities. That investor will also report $100 to US tax authorities. On that income, the US investor will be assessed a tentative tax liability of $40. The US investor will also receive a foreign tax credit of $30, and so that investor will owe an additional $10 tax to the US treasury. Thus, in total, the US investor pays $40 in tax, which reflects the US tax rate. After paying all taxes, the US investor will be left with $1060, which represents a 6 percent after-tax rate of return on the investment. Thus, the candidate investment is worth $1000 to the US investor if it is located in the European Union, the same value as it has to EU investors.[55] Thus, the worldwide tax system also satisfies CIN with respect to the European Union.

Consider now the possibility that the United States and the European Union both adopt territorial tax systems. Assuming that the before-tax rate of return in the United States remains at 10 percent, US investors will still earn 6 percent after tax in the United States. EU investors, however, will also earn 6 percent after tax in the United States. Equilibrium, thus, requires that EU investors also earn 6 percent after tax in the European Union. Given the 30 percent tax rate

[54] Again, the value of the candidate investment to an EU investor is calculated using the simpler equation in footnote [48], which is not a function of tax rates.
[55] Once again, when the tax rate on the candidate investment and on benchmark investments are the same, the value of the candidate investment is not a function of tax rates.

in the European Union, a 6 percent after tax rate of return implies a before-tax rate of return of 8.57 percent in the European Union.

Assume that the candidate investment is located in the United States where it generates a before-tax rate of return of 10 percent. Whether it is acquired by an EU or US investor, the holder will receive $1100, pay $40 in taxes, and be left with $1060. Such an investment is worth $1000 because it generates an after-tax rate of return of 6 percent, the same as the benchmark asset despite the presence of different rates.

Assume that the candidate investment is located in the European Union. If we assume that competition takes the form of reducing the cash flow from the candidate investment, not increasing its cost, then the cash flow from the candidate investment will fall to $1085.71.[56] At a 30 percent tax rate, the EU collects $25.71 tax, which leaves the investor with an after-tax cash flow of $1060. That represents an after-tax rate of return of 6 percent. With such a return, the candidate investment is worth $1000 to both EU and US investors. Thus, CIN is satisfied in the European Union as well.

As the above examples show, CIN can occur with either a territorial or worldwide tax system. That is in contrast with the usual view that a territorial tax system will achieve CIN, but

[56] It might be more intuitive to assume that competition would increase the price rather than reduce the cash flow from the investment. Economically, the two effects are equivalent in that they reduce the before-tax rate of return. However, assuming that the cash flow declines makes clear what the effect is on the rate of return.

a worldwide tax system will not.[57] Looked at from the perspective of an investment in the United States, CIN is the idea that EU-based investors investing in the United States should enjoy neither a tax advantage nor a tax disadvantage relative to their US-based competitors. The standard explanation of CIN assumes whether there is a tax advantage depends on the relative tax rates applicable to US- and EU-based investors investing in the United States. That, however, is incorrect when CIN is interpreted as ownership neutrality. As the example plainly shows, such neutrality does not depend on the relative tax rates paid by US and EU investors in the same jurisdiction. Instead, each party's competitive position in the United States depends on the tax rate it pays in the United States relative to the rate it pays in the European Union.[58]

Returning to the example, if US investors pay 40 percent tax everywhere they invest and if EU investors pay 30 tax percent everywhere they invest, then both groups of investors will be indifferent as to the location of their investments as long as the before-tax return is equal across regions. It is true that EU-based investors earn more after-tax when they invest in the US than do US investors. However, in order for the EU-based investors to undertake the project, they must meet a higher after-tax hurdle rate because EU-based investors earn a higher after-tax rate of return at home as well. These two effects offset one another. In other words, the competitive

[57] The literature recognizes that both territorial and worldwide taxation can achieve CON. See Shaheen, *supra* note [5], at 209.

[58] It follows that a country's investors can enjoy a tax-induced competitive advantage in a region even if they are taxed more heavily than their competitors. They will have an advantage as long as they are taxed lower in the region than they are in other regions. For example, if US firms pay tax at 40 percent on their US investments and 35 percent on their EU investments, they will enjoy a competitive advantage in the European Union over EU investors who pay tax at 30 percent everywhere. To make the example more concrete, assume that the before-tax return to capital everywhere is 10 percent. EU-based investors will earn 8 percent in both the European Union and the United States; US-based investors will earn 6 percent in the United States and 7 percent in the European Union. Assuming the marginal investment for US-based investors was in the United States, they would be willing to make

positions of investors in any market does not depend upon their relative tax rates in that market, but rather on differences in their tax rates in that market compared with their tax rates in other markets.[59] The latter is less intuitive than the former and so it has confused many readers.

What this means is that CIN has been misapplied. CIN does not require that US- and EU-based investors pay tax at the same rate in any single jurisdiction. Instead, it requires that investors from a given jurisdiction earn the same after-tax return in different jurisdictions. As demonstrated further below, that requirement does not violate CEN, which requires that for each investor the before-tax rate of return is equal everywhere. However, before discussing the possibility of a tax system satisfying both CEN and CIN simultaneously without harmonizing tax rates on capital, the next section summarizes the above discussion of the different types of distortions that are important for understanding international tax policy.

### C. The Three Types of Distortions

The discussion above describes three, not two, types of investment distortions implied by CEN and CIN. Those distortions include the location where capital is invested, the ownership of capital, and the savings-consumption decision. The first distortion – where capital is located – is the only distortion associated with CEN. In addition, the standard for neutrality – that the before-tax rate of return is equal everywhere – closely matches up with the widely perceived view that each investor pays tax at the same rate on income earned at home and abroad. The

investments in the European Union that had a before-tax return of 9 percent because their after-tax return of 6.3 percent exceeds their 6 percent hurdle rate.

confusion comes from CIN.

CIN has two meanings. One of those meanings comes from the economics literature. According to that definition, CIN occurs when there is no distortion across individuals in the saving – investment decision. That, in turn, implies that every investor earns the same after-tax return at the margin. Because for marginal investments, all investors will earn the same before-tax rate of return in any location, the savings neutrality interpretation of CIN requires all investors in a jurisdiction pay tax at the same tax rate. That is to say, saving neutrality does not require that the tax rate be the same in every jurisdiction. It does, however, imply that everyone who earns income in a jurisdiction pay tax at the same tax rate. Thus, such an interpretation of CIN is consistent with territorial taxation, but not with worldwide taxation.

Under the second definition of CIN, a tax system satisfies CIN if investors from all jurisdictions compete on par for investments in each jurisdiction. This is the definition of CIN implied in Musgrave's writings. It is also the definition many policymakers and lawyers have in mind when they talk about CIN. Moreover, many people think that such neutrality requires that investors from different jurisdictions pay tax at the same rate in each jurisdiction. As described above, equality of tax rates across investors in each jurisdiction is a sufficient, but is not a necessary condition for ownership neutrality. The standard for ownership neutrality is not equality in absolute tax rates, but rather equality in relative tax rates. If relative tax rates paid by different investors across jurisdictions are equal, then ownership neutrality is achieved. There is

[59] In other words, competitive position depends upon second differences, not first differences.

no difference in relative tax rates across jurisdictions if taxpayers pay the same tax rate in all jurisdictions even if different taxpayers pay taxes at different rates. That is to say, ownership neutrality requires that for each investor, the after-tax return is equal everywhere. It is not necessary that investors from different countries earn the same after-tax return or pay tax at the same rate as one another. Accordingly, ownership neutrality can be satisfied using either territorial or worldwide taxation (without harmonizing tax rates) as long as all jurisdictions use the same type of tax system.

Table 1 summarizes these results. That table describes the three types of distortions, the capital neutrality concept associated with each distortion, the neutrality standard for each distortion, and whether territorial, worldwide or both types of tax systems (if universally adopted) would meet that standard.

Table 1
Tax Neutrality Conditions

| Distortion | Neutrality Proposition | Standard for Neutrality | Systems that Satisfy |
|---|---|---|---|
| Location | CEN | For each investor, the before-tax rate of return is equal everywhere. | Worldwide |
| Savings | CIN (economists interpretation) | All investors have the same after-tax rate of return. | Territorial |
| Ownership | CIN (traditional interpretation)<br>CON | For each investor, the after-tax rate of return is equal everywhere. | Universal Worldwide or Universal Territorial |

## D. A Note on Terminology

In light of the confusion that has been caused by CEN and CIN, especially the two

different meanings of CIN, I believe we need to be more careful about terminology. We can do that in at least three different ways. The first possibility would be for commentators to drop the terms CEN and CIN. If the literature were to take this route, we would not stop using the concepts or the analyses that have been developed over the years, but we would avoid the labels. In their place, we could write and speak directly and specifically about the relevant distortion. Thus, instead of talking about CEN, commentators could talk about distortions in the location of investments (locational distortions). And instead of talking about CIN, commentators could talk about ownership and saving distortions. The last is the key – commentators need to be clear whether they mean a distortion in ownership or a distortion in saving.

Second, if it is too late to banish talk of CEN and CIN, then users of those terms need to be clear about whether they are talking about distortions in ownership or in the savings-consumption choice. Thus, we can speak of CIN in the sense of savings neutrality or CIN in the sense of ownership neutrality.[60] It might take a while for such terminology to catch on, but once it did everyone would understand what the speaker or writer had in mind or would ask the speaker if the sense is not specified.

A third possibility is to associate locational neutrality with CEN, savings neutrality with CIN and ownership neutrality with CON. This would match up well with most trained economists' understanding of these concepts. It also would allow the discussion of CON to proceed with little interruption or change in vocabulary. My concern, however, is that such a

solution would not dispel the confusion of many lawyers and policymakers. The plainest meaning and most obvious connotation of CIN is too closely connected with ownership neutrality to be confident that such a simple change in vocabulary would remedy the confusion where it is most prevalent.[61]

## V. What Tax System Simultaneously Satisfies CEN and CIN?

This Part is divided into five sections. In the first section, I show that a worldwide tax system can simultaneously satisfy both CEN and CIN as ownership neutrality without harmonizing tax rates, whereas a territorial tax system cannot. In the second section, I show that a territorial tax system can simultaneously satisfy both conceptions of CIN without harmonizing tax rates, whereas a worldwide tax system cannot. In the third section, I argue that the traditional proof on the impossibility of simultaneously achieving CEN and CIN still holds if CIN is understood as saving neutrality. In that section, I also describe why a tax system cannot simultaneously satisfy both CEN and CIN as savings neutrality without harmonizing tax rates. In the fourth section, I describe and comment upon Shaheen's argument that a territorial tax system can simultaneously satisfy both CEN and CIN as ownership neutrality without harmonizing tax rates, whereas a worldwide system cannot satisfy either condition. The fifth section summarizes the above results.

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[60] For those who like capitalized acronyms, CIN as savings neutrality could be written as CIN/SN and CIN as ownership neutrality as CIN/ON. I leave it to others to determine how these acronyms are pronounced.

[61] Using CON for ownership neutrality and referring to CIN as "CIN in the sense of savings neutrality" for a period of time is likely to dispel some of the existing confusion.

A. The Argument that a Worldwide Tax System Simultaneously Satisfies CEN and CIN

In this section, I show that a worldwide tax system can simultaneously satisfy both CEN and CIN as ownership neutrality without harmonizing tax rates, whereas a territorial system cannot. That result can be shown in an intuitive manner by returning to the numerical example.[62] When every country uses a worldwide tax system with an unlimited foreign tax credit, the before-tax rate of return is equal everywhere. In terms of the example, then, the before-tax rate of return is 10 percent in every jurisdiction. That implies that CEN is satisfied.

Under those circumstances, CIN in the sense of ownership neutrality is also satisfied. The candidate investment is worth $1000 to both EU and US investors whether it is offered in the European Union or the United States. At a price of $1000, the candidate investment yields $1100 in one year. That is a before-tax rate of return of 10 percent, the same as the benchmark asset.[63] Thus, CIN as ownership neutrality is satisfied.

Conversely, with a territorial tax system, CEN and CIN as ownership neutrality are not satisfied simultaneously with different tax rates across countries. Returning to the example, where the U.S. tax rate is 40 percent and the EU tax rate is 30 percent, and the after-tax rate of return is 6 percent everywhere, the before-tax return in the United States is 10 percent, but it is only 8.57 percent in the European Union. It immediately follows from the difference in the before-tax rates of return that CEN is not satisfied because global welfare can be improved

[62] That conclusion also follows directly from Table 1 and the discussion above.

increased by shifting assets from the European Union to the United States. CIN as ownership neutrality, however, is still satisfied. First, if the candidate investment is in the United States, it will generate $1100 in one year and so it is worth $1000 to both EU and US investors. Second, if the candidate investment is in the European Union, it will generate $1087.51 in one year and so it will be worth $1000 to both EU and US investors.

B. The Argument that a Territorial Tax System Simultaneously Satisfies Both Interpretations of CIN

Although a territorial tax system will not satisfy CEN, it will satisfy CIN as savings neutrality. Thus, a territorial tax system will satisfy both meanings of CIN. That a territorial tax system satisfies CIN as savings neutrality is easy to see. With a territorial tax system, the after-tax rate of return is equal everywhere and is the same for all investors. Thus, in terms of the example, the after-tax rate of return is 6 percent for both EU and US investors. Because the after-tax rate of return is the same for both EU and US investors, shifting saving and consumption among investors will not increase welfare. Thus, a territorial tax system satisfies both meanings of CIN.

In contrast, a worldwide tax system does not satisfy CIN as savings neutrality because the after-tax rate of return differs for residents of different jurisdictions. Thus, in the numerical example, EU investors earn 7 percent after tax, whereas US investors earn 6 percent after tax. It,

[63] Of course, EU and US investors earn different after-tax rates of return.

therefore, follows, that a worldwide tax system simultaneously satisfies both CEN and CIN as ownership neutrality, but it fails to satisfy CIN as savings neutrality. And a territorial tax system simultaneously satisfies both CIN as savings neutrality and CIN as ownership neutrality, but it fails to satisfy CEN.

### C. Why No Tax System Can Achieve Both Locational and Savings Neutrality Without Harmonizing Tax Rates

In section V.A, I showed that a worldwide tax system can simultaneously satisfy both CEN and CIN as ownership neutrality. In Section V.B, I showed that a territorial tax system can simultaneously satisfy both CIN as savings neutrality and CIN as ownership neutrality. Nowhere, however, have I claimed that a tax system can satisfy both CEN and CIN as savings neutrality without harmonizing tax rates. Indeed, when CIN as interpreted as saving neutrality the long-standing claim that it is impossible for a tax system to satisfy simultaneously both CEN and CIN simultaneously without harmonizing tax rates is valid.

The reason no tax system can achieve both locational and savings neutrality without harmonizing tax rates is straightforward. Locational neutrality requires that the before-tax rate of return is equal everywhere. Savings neutrality requires that all investors earn the same after-tax rate of return. Because each investor's after-tax rate of return is the product of the market-determined before-tax rate of return and one minus the investor's tax rate, it follows that saving neutrality and locational neutrality can be achieved simultaneously only if every investor pays

tax at the same rate. Thus, it should not come as a surprise that global harmonization of tax rates is required to achieve both CEN (locational neutrality) and CIN (savings neutrality).

D. Response to Shaheen's Argument that a Territorial Tax System Simultaneously Satisfies CEN and CIN

I am not the first to argue that a single tax system can simultaneously satisfy both CEN and some conception of CIN without harmonizing tax rates. Shaheen argues that territorial taxation can simultaneously satisfy CEN and CIN as ownership neutrality, but worldwide taxation cannot simultaneously satisfy either neutrality benchmark. That claim conflicts with the result described above in two ways. First, Shaheen claims that worldwide taxation fails to achieve CEN. Second, Shaheen claims that territorial taxation can achieve CEN. In this section, I offer my response to Shaheen's claims that a worldwide tax system cannot achieve CEN, but a territorial tax system can.

Shaheen, I believe, reached the wrong result with respect to worldwide taxation because he used the wrong baseline for an efficient tax system. In arguing that a worldwide tax system cannot satisfy CEN, Shaheen used the baseline of the nontax world. Thus, Shaheen concluded that a worldwide tax system cannot satisfy CEN because the tax will reduce savings and hence must also affect where property is located.[64] However, it does not follow from the conclusion that a tax reduces savings and hence capital that there is also a locational distortion. What it

[64] Shaheen, *supra* note [5]

means for there to be a locational distortion is that the marginal productivity of capital is equal across jurisdictions. In such circumstances, a central planner cannot increase welfare by reallocating capital across jurisdictions. Thus, as described above, worldwide taxation is locationally neutral because the before-tax return to capital is equal everywhere.[65]

Shaheen also argues that territorial taxation simultaneously satisfies both CEN and CIN because the location of capital will be the same as in the nontax world. To reach that conclusion (especially the conclusion that a territorial tax system satisfies CEN), Shaheen explicitly assumes that the economic incidence of any tax imposed on capital falls fully on labor.[66] That assumption is not standard in the literature. It is also inconsistent with most empirical research. Moreover, if true, it implies that both territorial and worldwide taxation would satisfy CEN. If a tax statutorily imposed on capital does not fall on capital, then differential tax rates on capital will not affect the allocation of capital across jurisdictions. That assumption, which is equivalent to assuming a completely inelastic supply of labor, is highly questionable.[67]

E. Summary

The two principal international tax systems can each achieve two of the three neutrality

[65] See discussion *supra*.
[66] Shaheen, *supra* note [5]
[67] In light of the substantial uncertainty and disagreement on who bears the burden of the corporate income tax, there is simply no consensus that the burden falls entirely on labor. Recent articles reviewing what is known about the economic incidence of the corporate tax include Jane G. Gravelle & Thomas L. Hungerford, *Corporate Tax Reform: Should We Really Believe the Research?*, 121 TAX NOTES 419 (2008); Alan J. Auerbach, *Who Bears the Corporate Tax? A Review of What We Know* (NBER, Working Paper No. W11686, 2005), available at

goals without harmonizing tax rates. This is set forth below in Table 2.

Table 2
Tax Neutrality with Different Tax Systems

| Tax System | Location Neutrality | Ownership Neutrality | Savings Neutrality |
|---|---|---|---|
| Worldwide | √ | √ | |
| Territorial | | √ | √ |

As is clear from Table 2, global adoption of a worldwide tax system can simultaneously satisfy both locational and ownership neutrality. And global adoption of a territorial tax system can simultaneously satisfy both ownership and savings neutrality. It is, however, impossible for a tax system to satisfy both locational and savings neutrality without harmonizing tax rates.

## VI. Directions for Future Research

The approach developed in this essay can also help to focus academic research. Various doctrines, concepts and tax systems can be analyzed in terms of whether they advance or hinder attainment of one or more neutrality principles. For example, in this essay, I examine whether territorial and worldwide taxation achieves locational neutrality, savings neutrality and ownership neutrality. I conclude that global adoption of worldwide taxation can achieve locational neutrality and ownership neutrality, but not savings neutrality, whereas global adoption of territorial taxation achieves savings neutrality and ownership neutrality, but not locational neutrality.

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http://ssrn.com/abstract=823189; Jane Gravelle & Kent A. Smetters, *Who Bears the Burden of the Corporate Tax in The Open Economy?* (NBER Working Paper No. W8280, 2001), available at http://ssrn.com/abstract=268889.

These same neutrality concepts can also be used to analyze other tax laws. For example, in a recent paper, I assess whether the corporate income tax can simultaneously satisfy both locational neutrality and ownership neutrality. I conclude that absent harmonization of corporate tax rates, it is impossible for a corporate income tax to achieve simultaneously both locational and ownership neutrality.[68] Similar analyzes can be done for different tax systems.

The approach employed in this Essay can also be used to assess whether other tax rules – for example, the source, currency exchange, timing, and anti-discrimination rules – tend to promote or interfere with various neutrality goals. That same approach can also be helpful in interpreting or designing tax rules in a way that promotes neutrality. It also helps to illustrate the trade-offs from alternative rules or systems of rules.

The approach developed in the Essay can also be used to examine investments in specific industries or asset classes by specific categories of investors. The international tax literature usually talks about CEN, CIN and CON in a manner that suggests that the 'C' which refers to capital denotes capital in aggregate or at least foreign direct investment in aggregate. The various capital neutrality concepts are rarely used to talk about investments in specific industries or from specific categories of investors. Although savings neutrality probably makes sense only when talking about aggregate investment, locational neutrality and ownership neutrality are useful concepts for analyzing investments in specific industries and by specific investors. Thus, it is reasonable to ask whether tax rules encourage SWFs or private foreign investors, relative to

[68] Michael S. Knoll, *The Corporate Income Tax and the Competitiveness of U.S .Industries* (University of

one another, to acquire US equities.[69] And it is worth asking whether tax laws encouraged foreign investors to invest in US real estate relative to US investors.[70] And it is important to ask whether current tax laws distort investment by nonprofits.[71] It is also reasonable to inquire as to whether tax considerations encourage or discourage investment in auto production within the United States relative to production overseas. The language of locational neutrality and ownership neutrality facilitate that discussion by integrating that discussion into the larger international tax neutrality literature.

The subtlety of that discussion, however, varies depending on the neutrality concept that is being assessed. As described above, locational neutrality requires that the before-tax rate of return on investments be equal across borders. That, in turn, requires that investors pay tax at the same total rate across jurisdictions. When the total tax rate on investments made in different jurisdictions is not equal, then there is not locational neutrality. The location of investment will be distorted by being shifted away from high-tax jurisdictions and towards low-tax jurisdictions. Although there are some subtleties and some unexpected results occur because of implicit taxes

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Pennsylvania, Institute for Law and Economic Research, Paper No. 09-01, 2009), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1330434.

[69] See, e.g., Victor Fleischer, *A Theory of Taxing Sovereign Wealth*, 84 N.Y.U. L. REV. 5 (forthcoming 2009) (arguing that taxes provide SWFs with an advantage over other foreign investors); Mihir Desai & Dhammika Dharmapala, *Taxing the Bandit Kings*, 118 YALE L.J. POCKET PART (2008), http://yalelawjournal.org/content/view/720/14/ (arguing that SWFs and other foreign investors are roughly on par under current tax law); Michael Knoll, *Taxation and the Competitiveness of Sovereign Wealth Funds*, (University of Pennsylvania, Institute for Law and Economic Research, Paper No. 08-28, 2008), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1291878 (arguing that whether SWFs are advantaged or disadvantaged relative to other private foreign investors depends on a range of factors that vary across countries and describing how to design an international tax system for SWFs and private foreign investors that is ownership neutral).

[70] Richard Kaplan, *Creeping Xenophobia and the Taxation of Foreign-Owned Real Estate*, 71 GEO. L.J. 1091 (1983).

and surrogate taxes, the results are largely intuitive and mostly as expected.

In contrast, ownership neutrality is more complex and so the results are often not intuitive and so are frequently unexpected. There are not one, but two different standards for ownership neutrality, depending upon whether the competition is occurring among investors or entities.[72] And when the competition is between investors, the distortion is not always in favor of the lowest-taxed investor. Instead, the advantage belongs to the investor who has the lowest total tax rate on the investment under consideration (the "candidate investment") relative to that same investor's total tax rate on readily available alternative investments (the "benchmark asset"). As a result, the tax consequences can be complicated to work out and are not always intuitive.[73]

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[71] E.g., Susan-Rose Ackerman, *Unfair Competition and Corporate Income Taxation*, 34 STAN. L. REV. 1017 (1982); Henry B. Hansmann, *Unfair Competition and the Unrelated Business Income Tax*, 75 VA. L. REV. 605 (1989); Knoll, *supra* note 37.

[72] Throughout this essay, and in keeping with the standard practice in the literature, I ignore entities or assume that entities are taxed explicitly or effectively as pass-through entities. (An entity is effectively a pass-through, even if it is not technically one, if the beneficial owner is taxed on the basis of the entity's before-tax income and receives a foreign tax credit for any tax paid by that entity.) Much of the efficiency concerns with ownership are probably with ownership at the level of the firm, not at the level of the investor. Mitchell A. Kane, *Ownership Neutrality, Ownership Distortions, and International Tax Welfare Benchmarks*, 26 VA. TAX REV. 53 (2006). Moreover, many multinational enterprises are taxed as corporations and those corporations are owned by investors who do not receive foreign tax credits for taxes paid by the corporation. In that case, ownership neutrality at the level of the firm requires territorial taxation of the firm and ownership neutrality at the level of the investor requires worldwide taxation of the investor. See Knoll, *Business Taxes and International Competitiveness*, *supra* note [30].

[73] A good illustration of the complexity of the analysis, the difficulty in assessing who is advantaged and disadvantaged, the nonintuitive nature of many of the results, and the surprising nature of the resulting policy prescriptions is the recent series of papers assessing whether tax rules encourage or discourage investment by sovereign wealth funds (SWFs) in the United States. See, e.g., Victor Fleischer, *supra* note 69 (arguing that taxes provide SWFs with an advantage over other foreign investors); Desai & Dharmapala, *supra* note 69 (arguing that SWFs and other foreign investors are roughly on par under current tax law); Knoll, *supra* note [69] (arguing that whether SWFs are advantaged or disadvantaged relative to other private foreign investors depends on a range of

## VII. Conclusion

For decades, the debate over the form that the international tax system should take has been dominated by the welfare benchmarks of CEN and CIN. That debate, however, has been confused because not all participants and readers share the same understanding of CIN. In the literature, there are two very different interpretations of CIN. In the interpretation favored by professional economists, CIN is savings neutrality. However, in the interpretation favored by lawyers, policy analysts, and lay readers CIN is most closely connected with competitiveness or ownership neutrality.

One place where that confusion is manifest is in the often-repeated statement that a tax system cannot simultaneously satisfy both CEN and CIN without harmonizing tax rates. That statement is correct when (and only when) CIN is understood as savings neutrality. It is, however, incorrect when CIN is understood as ownership neutrality. As described above, a worldwide tax system, which does not satisfy CIN as savings neutrality, simultaneously satisfies both CEN and CIN as ownership neutrality. It is, therefore, possible for one tax system to achieve simultaneously both CEN and CIN as ownership neutrality. That, however, requires international coordination. Countries must either harmonize their tax rates (as has long been recognized) or they must all adopt worldwide taxation (in contrast with the accepted wisdom).

Finally, it is my hope that this essay will serve to focus more clearly the long-standing debate on the advantages and disadvantages of alternative international tax regimes and the

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factors that vary across countries and describing how to design an international tax system for SWFs and private

search for an optimal international tax regime. Although the international tax literature is voluminous and the advances in understanding achieved in recent years are numerous and important, much of the current conversation remains confused because of the ambiguity surrounding the notion of CIN. A clearer understanding of the distortions that various tax regimes can cause and their relationship to the well-worn concepts of CEN and CIN – and careful use of terminology – should help everyone interested in international taxation. And that should benefit all of us.

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foreign investors that is ownership neutral).