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Waiting for Perseus: A Sur-reply to Professors Graetz and Warren

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Introduction

In an article published last year, entitled *What is Tax Discrimination?*, we offered two main arguments.[1] First, we argued that tax discrimination, prohibited by European Union law, is not (as other scholars have argued) an incoherent concept, but can be best interpreted and understood as requiring what we call "competitive neutrality." Competitive neutrality, which is akin to the colloquial notion of ensuring a level playing field, prevents states from using their tax laws so as to put non-residents at a tax-induced competitive advantage relative to residents in the competition to secure jobs and make investments. In our view, not only is the Court's competitive neutrality interpretation of tax discrimination not incoherent, but it is a reasonable interpretation of the applicable law. Second, we argued contrary to common perceptions about what tax nondiscrimination requires, if the Court interprets the EU tax nondiscrimination principle to prohibit violations of competitive neutrality, then the nondiscrimination principle does not require identical taxation of residents and non-residents by any member state. This is important because national policymakers and commentators have criticized the Court for imposing what they see as an impossible standard of identical taxation of residents and nonresidents. Instead, we showed that competitive neutrality requires only what we called "uniform" taxation. Specifically, states must apply the same source taxes to residents and non-residents working within their jurisdiction, and states must apply the same residence taxes to their residents' domestic and foreign-sourced income. The cumulative effect of source and

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[1] Ruth Mason & Michael S. Knoll, What Is Tax Discrimination? 121 Yale L.J. 1014 (2012).

residence taxes may result in residents and nonresidents paying tax at different rates, but, as we showed in our article, those differences will not violate competitive neutrality. Competitive neutrality, thus, is not the same as tax harmonization or equal taxation because, when states tax on both a residence and source basis, residents of different states will face different total tax rates when they compete in a given market, but their competition will not be distorted by taxation. Accordingly, we argued that the ECJ should strike down non-uniform tax laws as discriminatory, and it should uphold uniform laws as non-discriminatory. We argued that such guidance is straightforward and allows courts to promote a level playing field using commonsense rules of thumbs and without the need to engage in sophisticated economic analysis or examine reams of data.

In their response, Michael Graetz and Alvin Warren, took issue directly with the two main theses of our article and much else we wrote there. [2] We are grateful for the deep engagement by Professors Graetz and Warren with our article. A reader of those two articles might think there is nothing involving tax discrimination with which we and they agree. That is not true. Let us begin by highlighting twelve important areas where we agree with Graetz and Warren.

First, we agree with Graetz and Warren that the ECJ tax discrimination cases are important.[3] They are important in part because of the amounts of money involved.[4] Those cases are also important because they arise from two powerful forces that are in opposition to one another.[5] On the one side are the long-established, closely guarded interests of each member state in designing, enforcing, and operating their own tax systems. On the other side are the interests of the European Union and all of its member states in ensuring that individual member states do not take actions that compromise the single market. As Graetz and Warren appropriately put it, "[t]here is considerable tension inherent in this structure."[6] Second, we agree that the EU treaties

[2] Michael J. Graetz & Alvin C. Warren, Jr., Income Tax Discrimination: Still Stuck in the Labyrinth of Impossibility, 121 Yale L.J. 1118 (2012).

[3] See Graetz & Warren (2012), 121 Yale L.J. at 1121-22.

[4] Michael J. Graetz & Alvin C. Warren, Jr., Dividend Taxation in Europe: When the ECJ Makes Tax Policy, Common Market L. Rev. 1577, _ (2007).

[5] See Michael J. Graetz & Alvin C. Warren, Jr., Income Tax Discrimination and the Political and Economic Integration of Europe, 115 Yale L.J. 1186, 1186 (2006) ("an irresistible force is now confronting an immovable object"). See also Suzanne Kingston, The Boundaries of Sovereignty: The ECJ's Controversial Role Applying Internal Market Law to Direct Tax Measures, 9 Cambridge Y.B. Eur. Legal Stud. 287 (2006-07)

[6] Graetz & Warren (2012), 121 Yale L.J. at 1121.

were intended, among other goals, to create a single market that was relatively free of internal barriers and where member states would not be able to favor their own residents over out-of-state residents or to favor domestic over interstate economic activity and trade.[7] As Graetz and Warren write, '[m]ore recent analyses suggest a growing awareness that the rights and obligations [contained in the EU treaties] constitute a general prohibition of discrimination against commerce among the member states.' In the language of a recent advocate general's opinion, national laws 'must not result in less favourable treatment being accorded to transnational situations than to purely national situations.'"[8] Quoting the same opinion by Advocate General Miguel Maduro, Graetz and Warren write that "the different criteria established by the ECJ for the application of the Treaty freedoms, such as market access and nondiscrimination based on nationality, 'all spring from the same source of inspiration which [is] . . . to prevent Member States from creating or maintaining in force measures promoting internal trade to the detriment of intra-community trade.'"[9]

Third, we agree that the EU treaties promote the single market through both negative and positive integration.[10] Negative integration refers to limitations enforced by courts on member state actions that interfere with the operation of the single market. In contrast, positive integration, which is brought about through legislative action, is the enactment of rules, laws, or directives that apply uniformly throughout the single market. Commentators often refer to positive integration as harmonization. The European Commission, Council, and Parliament together can issue income tax directives that apply uniformly throughout the European Union, but such tax directives are rare because they require unanimous agreement by the member states.[11] Positive integration is more common in the European Union in areas outside of taxation where unanimity is not required. Fourth, we agree that the norm against tax discrimination is not a stand-alone, explicitly articulated concept, but is instead derived from the fundamental freedoms of the Treaty on the Functioning of the European Union (TFEU):[12] the free movement

[7] Graetz & Warren (2006), 115 Yale L.J. at 1120-21.
[8] Graetz & Warren (2012), 121 Yale L.J. at 1199 (footnotes omitted).
[9] Graetz & Warren (2012), 121 Yale L.J. at 1199 (citing C-446/03, Marks & Spencer plc v. Haley, ¶ 37 (Apr. 7, 2005) (opinion of advocate general Maduro).
[10] See Graetz & Warren (2006), 115 Yale L.J. at 1120.
[11] See Graetz & Warren (2006), 115 Yale L.J. at 1120.
[12] Consolidated Version of the Treaty on the Functioning of the European Union, Mar. 30, 2010 [hereinafter TFEU].

of goods, capital, workers, services and the right of business establishment.[13] Thus, the fundamental freedoms, expressed as individual rights, also operate as limitations on the policies of the member states,[14] and so constitute a form of negative integration.

Fifth, we also agree with Graetz and Warren that the prohibition against tax discrimination is the principal legal construct that the ECJ has used to strike down tax laws that interfere with the single market.[15] However, we recognize, as do Graetz and Warren, that the ECJ also has used other constructs—for example, the notion of "restrictions"——to strike down laws that interfere with the single market, including some tax laws.[16] Sixth, we agree that any interpretation of discrimination in the tax context should be capable of being extended more broadly to non-tax cases covered by the fundamental freedoms, or at least it should be capable of co-existing with a reasonable interpretation of those non-tax cases.[17] Seventh, we agree that the capital and labor tax discrimination cases should be treated similarly.[18] That is to say, we agree that any theory of tax discrimination should apply to both labor and capital, and it should not apply to only one sphere but not the other.[19]

Eighth, we agree that the ECJ tax discrimination cases are confusing and that the ECJ has not clearly and consistently articulated its guiding principle for deciding them. There are numerous reasons for this failure. Professors Rita de la Feria and Clemens Fuest emphasize the "archetypal" confusion between method and objective.[20] In their view, the ECJ treats preventing

[13] Graetz & Warren (2006), 115 Yale L.J. at 1194 (describing nondiscrimination as "a concept developed principally through the ECJ's interpretation of the four freedoms").

[14] See Graetz & Warren (2006), 115 Yale L.J. at 1120 (describing the ECJ's charge to ensure that tax laws do not interfere "unduly" with the fundamental freedoms).

[15] Graetz & Warren (2006), 115 Yale L.J. at 1121.

[16] A full discussion of how our approach would apply to restrictions is also beyond the scope of this sur-reply.

[17] Graetz & Warren (2006), 121 Yale L. J. at 1152.

[18] As we explained in our earlier Article, the reason we focused on the labor cases was to reach a broader audience that would not likely be as interested in or might find it difficult to follow the technical tax issues raised in the ECJ's corporate tax cases. Mason & Knoll (2012), 121 Yale L.J. at 1038 ("although our arguments have implications for capital taxation, we do not consider those implications here").

[19] That is to say, we accept what Graetz and Warren describe as the strong form of our claim. Graetz & Warren (2012), 121 Yale L.J. at 1128-29. Although we accept the strong form of the claim, we recognize that a thorough discussion of how our approach would apply to capital, especially to investments made through corporations, is beyond the scope of this sur-reply. The extension of our approach to capital is a matter we intend to take up in the future.

[20] Rita de la Feria & Clemens Fuest, *Closer to an Internal Market? The Economic Effects of EU Tax Jurisprudence*, Oxford University Centre for Business Taxation working paper 18 (July 2011).

tax discrimination as an end in itself rather than as a means to an end, promoting free movement. In our article, we mentioned the practice of issuing court opinions, rather than individual judges' opinions, which tends to strip out the reasoning upon which the holding is based. Whatever the reason, we agree with Graetz and Warren that the opinions of the ECJ are often written in an opaque and bureaucratic manner that can obscure the rationale for their holdings.[21] Such a lack of clarity has attracted the condemnation of commentators. As we wrote in our article, commentators have described the ECJ's tax discrimination jurisprudence as "baffling," "theoretical and arcane," and "incoherent."[22] Our article begins with those criticisms and seeks to provide an avenue to allay them by identifying the efficiency principle, if any, behind the ECJ's interpretation of tax discrimination, by explaining that principle in economic terms, and by describing how to consistently apply that principle.

Ninth, we agree with the conclusion of Graetz and Warren, which they set forth most extensively in their 2006 *Yale Law Journal* article, that the ECJ's tax jurisprudence cannot be readily reconciled with either capital import neutrality (CIN) or capital export neutrality (CEN). Tenth, we agree that there is no single principle that any of the four of us has articulated that will explain either the reasoning or the result of 100 percent of the ECJ tax discrimination cases. Eleventh, we agree with Graetz and Warren that the ECJ has been more aggressive in striking down member state laws that advantage residents over foreigners than in striking down laws that advantage foreigners over residents.[23] That is to say, the ECJ has rarely found instances of "reverse discrimination" to violate the prohibition on tax discrimination.[24] Twelfth, we agree with Graetz and Warren that there are similarities between the tax discrimination jurisprudence and constitutional structure of both the European Union and the United States.[25] In our writings, we and they have compared and contrasted the treatment of particular tax issues under the tax nondiscrimination principles operating in each jurisdiction.[26] Nonetheless, because Graetz and

[21] Graetz & Warren (2007), 44 Com. Mkt. L. Rev. at 1602-11 (criticizing ECJ opinions for not explaining its decisions).

[22] Mason & Knoll (2012), 121 Yale L.J. at 1017 (quoting commentators).

[23] Graetz & Warren (2012), 121 Yale L.J. at 1156-58.

[24] Graetz & Warren (2012), 121 Yale L.J. at 1156.

[25] Graetz & Warren (2006), 115 Yale L.J. at 1236-1244 (comparing U.S. and EU tax discrimination cases, but emphasizing the differences between U.S. and EU legal structures that make drawing inferences from one context to the other risky).

[26] Graetz & Warren (2006), 115 Yale L.J. at 1236-1244; Mason & Knoll (2012), 121 Yale L. J. at 1106-1115.

Warren confine themselves largely to the European Union in their response, we will try to do the same here. These are significant areas of agreement, but perhaps more interesting are the places where we disagree.

Much of the disagreement between us and Graetz and Warren appears to stem from a difference in perspective. Graetz and Warren primarily take a national tax policy perspective. They conclude that the ECJ's decisions "did not (and could not) satisfy commonly accepted tax policy norms, such as fairness, administrability, economic efficiency, production of desired level of revenues, avoidance of double taxation, fiscal policy responses to economic circumstances, inter-nation equity and so on."[27] They criticize the ECJ's tax nondiscrimination jurisprudence because it compromises each member state's ability to enact good tax policy, that is, Graetz and Warren examine the ECJ tax discrimination decisions from the perspective of how those decisions encroach on member states' tax sovereignty. But nowhere do they offer a clear interpretation of the fundamental freedoms or a precise statement of the meaning of tax discrimination. Nor do they offer a clear indication how the ECJ should enforce the fundamental freedoms.[28]

We, in contrast, take as our starting point the notion that the tax nondiscrimination principle prevents states from enacting tax laws that interfere with the operation of the single market—including cases where notions of national tax policy might counsel otherwise.[29] By examining the language and structure of the foundational treaties, contemporaneous sources that explain the goals and benefits of the treaties, and the ECJ tax discrimination cases, we then attempt to describe in more detail what aspects of the single market the tax nondiscrimination principle is intended to advance.[30] Based on our reading of those sources, we conclude that the value promoted by the fundamental freedoms is what we call "competitive neutrality"—the idea that states should not use their tax and regulatory systems to discourage competition from out-of-state interests. We translate that value into the language of modern public finance.

[27] Graetz & Warren (2012), 121 Yale L.J. at 1118.

[28] Graetz and Warren do provide the ECJ with a menu of options, which we consider later. *See infra* notes ___–___ and accompanying text.

[29] For example, there could be circumstances under which a particular state would gain from enacting a protectionist tax, and a tax policy perspective that advocates maximizing national welfare therefore would counsel in favor of the tax. Nevertheless, the tax nondiscrimination principle, as we understand it, would forbid such a tax.

[30] Mason & Knoll (2012), 121 Yale L.J. at 1026-1033, 1085-1097.

Specifically, we argue that the fundamental freedoms, as they have been interpreted by the ECJ through its application of the tax nondiscrimination principle, should be understood as promoting what public finance economists call capital ownership neutrality (CON) in cases involving capital movement and business establishment and as the labor analog of CON in cases involving the movement of workers and provision of services. Together, we refer to these underlying values as competitive neutrality, or sometimes as a "level playing field." We argue that if the ECJ agrees, as its cases seem to indicate, that the tax nondiscrimination principle promotes competitiveness, then the Court should say so explicitly.

That the tax nondiscrimination principle would pursue a level playing field between economic actors from different EU member states is an intuitively attractive idea, but achieving a level tax playing field often requires thinking in non-intuitive ways. For example, as we explain in our article, whether competition between two actors is tax-neutral cannot be determined from a simple comparison of their absolute tax rates. Because the formal requirements of competitive neutrality are not obvious, we describe at length what a competitive neutrality interpretation of tax nondiscrimination means for how states and courts should apply the tax nondiscrimination principle to real cases.[31] We argue (under standard, idealized economic assumptions) that competitive neutrality requires what we describe as "uniform" source and residence taxation and universal adoption of one of two methods of cross-border taxation. We also show that some long-standing and widely accepted tax policies interfere with the single market. We go on to consider various institutional constraints and limitations the ECJ faces that prevent it from fully achieving the competitiveness goals underlying the fundamental freedoms. In light of those constraints, we offer specific recommendations for how the ECJ can balance the goals of the single market with the Court's own limited powers and with other competing values.[32]

[31] In further work, we intend to look more deeply into what is required in order to achieve CON. As part of that exercise, we intend to expand our analysis to cover related questions, such as, how should a determination be made whether residents and nonresidents are sufficiently similar for the purpose of making the relevant comparison for a discrimination determination.

[32] Additionally, and for good measure, in case the ECJ does not agree with our reading of its tax discrimination decisions, we offer formal analysis of how the ECJ should decide tax cases if the nondiscrimination principle instead requires locational neutrality or savings/leisure neutrality. Mason & Knoll (2012), 121 Yale L.J. at 1043-51, 72-74.

I. Interpreting the Tax Nondiscrimination Principle to Require Competitive Neutrality

While we cannot hope to answer all the objections Graetz and Warren raise in their fifty page response to our article, we will try here to respond to what we view as their most serious criticisms. Those criticisms can be divided into two broad categories that track the two parts of our original article. First, Graetz and Warren take issue with our interpretation of tax nondiscrimination as concerned with competitiveness. Second, Graetz and Warren raise questions about how our proposal would apply in both theory and practice. We take these two groups of criticisms in turn.

A. Methodological Criticism: The Role of Welfare Economics

In our article, we argued that the ECJ has been enforcing the TFEU's prohibition on tax discrimination in a manner that promotes competiveness. Graetz and Warren, however, claim to be "mystified" by our theory of constitutional interpretation.[33] According to them, we first choose economic efficiency as the paramount norm for evaluating tax discrimination. We then choose one efficiency concept, competitive neutrality, over other alternative efficiency concepts without theoretical or empirical support. And then, after subsequently conceding that the ECJ lacks institutional authority to fully implement competitive neutrality on its own (because it needs assistance from the legislature), we then urge the ECJ to raise competitive neutrality to "constitutional status."[34]

In our view, the above description seriously misconstrues both the structure and the substance of our argument.[35] It essentially reverses our argument. We begin with the language and structure of the treaties.[36] The treaties establish the goal of the creation of an internal market, "an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured in accordance with the provisions of the Treaties."[37] The EU treaties advance the vision of an internal market in at least two ways. First, they provide a legislative process whereby member states can harmonize their laws (although this process is

[33] Graetz & Warren (2012), 121 Yale L.J. at 1153.
[34] Graetz & Warren (2012), 121 Yale L.J. at 1153.
[35] Graetz and Warren offer a summary of what they believe our argument to be in eight propositions. Graetz & Warren (2012), 121 Yale L.J. at 1127-28. In our view, that summary seriously misstates our arguments.
[36] Part III of our original article makes the case for a competitive neutrality interpretation of nondiscrimination.
[37] TFEU, Art. 26, para. 2.

stricter in tax than in some other areas). Second, they expressly restrain the actions of the member states, including through the fundamental freedoms. In the direct tax area, the fundamental freedoms are enforced principally, although not exclusively, as a prohibition on what the ECJ has labeled "discrimination."

Because the internal market and the fundamental freedoms are legal concepts with economic content,[38] we analyze them in efficiency terms. We did not choose an efficiency perspective at random. As we explain in our article, our focus on efficiency follows the approach of the ECJ, which couches its tax discrimination decisions exclusively in efficiency terms, rather than in terms of other values, such as promoting political unity or solidarity.[39] Having used the structure and language of the EU treaties and the ECJ's own tax discrimination jurisprudence to identify efficiency as the most important value promoted by the prohibition of tax discrimination, to determine what particular kind of efficiency the nondiscrimination principle pursues, we turned to capital neutrality benchmarks that have served as the basis for efficiency analysis of international tax since the 1960s, namely locational neutrality (also called capital export neutrality or CEN)[40] and saving/leisure neutrality (also called capital import neutrality or CIN).[41] So would many commentators. For example, Graetz and Warren considered these two capital neutrality benchmarks as possible candidates for interpreting nondiscrimination in their 2006 article.[42] We also considered CON or competitive neutrality, another leading capital neutrality benchmark, and one that Graetz and Warren did not consider in their 2006 article. Based on our reading of the TFEU and the tax discrimination cases, we then concluded that the tax nondiscrimination principle "accords better"[43] with competitive neutrality than it does with the

[38] Frans Vanistendael, General Report on the Fundamental Freedoms and National Sovereignty in the European Union, chapter V in EU Freedoms and Taxation (F. Vanistendael, ed. 2006), at 171.

[39] Mason & Knoll (2012), 121 Yale L.J. at 1034-6.

[40] The term we use to cover CEN and its labor analog.

[41] Savings/leisure neutrality is the term we use to cover CIN and its labor analog. In contrast, competition between in-state and out-of-state commercial interests falls under competitive neutrality.

[42] See Graetz & Warren (2006), 115 Yale L.J. at 1195-98 (describing how states can use their income tax laws to discriminate against foreign products, producers and production and relating discrimination against foreign producers to CON and discrimination against foreign production to CEN).

[43] *See, e.g.*, Mason & Knoll (2012), 212 Yale L.J. at 1022. *See also id*. at 1042 ("competitive neutrality turns out to be a *better fit* than locational neutrality or leisure neutrality for the nondiscrimination principle, given the text of the TFEU, the goals of the EU, and the ECJ's tax nondiscrimination doctrine") (emphasis added); id. at 1097 ("we argue that the ECJ's interpretation of the principle of tax nondiscrimination *hews more closely* to competitive neutrality than to locational neutrality (and that it does not coincide at all with leisure neutrality).") (emphasis added).

other two traditional capital neutrality benchmarks, namely locational neutrality and saving/leisure neutrality. Thus, we did not chose competitive neutrality because we concluded, without the benefit of theoretical or empirical support, that competitive neutrality would better promote overall economic welfare.[44] Rather, we chose competitive neutrality because it is a superior interpretation of the language of the treaties than the other two norms and because it accords better with the ECJ's actual decisions in tax cases than do the other two benchmarks. Thus, whereas Graetz and Warren characterize competitive neutrality as our "assumed constitutional norm,"[45] we would characterize it as an "observed constitutional norm."

Graetz and Warren's reversal of the structure of our argument plays out again and again throughout their reply. They repeatedly criticize us for failing to justify on normative grounds our claim that the doctrine of tax nondiscrimination should be interpreted and applied so as to advance competitiveness.[46] For example, Graetz and Warren fault us for not showing that the interpretation of tax nondiscrimination that we endorse—competitive neutrality—would "reduce tax-induced distortions more than competing efficiency norms."[47] They correctly argue that "a policy decision based on an economic efficiency standard should be grounded on evidence as to the magnitude of the various distortions."[48] We agree, and we acknowledge this in our article.[49] Again, because our goal was to determine whether any of the efficiency norms fit the extant tax discrimination jurisprudence, we did not see it as our goal to show that the norm that was the best fit was also the *best possible* norm.[50]

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[44] Graetz & Warren repeatedly describe us as "choosing" competitive neutrality. But our argument is that the language of the TFEU and the tax decisions of the ECJ reflect a choice to interpret tax nondiscrimination to promote competitive neutrality. Thus, any choice that was made in favor of competitive neutrality was not made by us, but rather by the founders of the EU and the members of the ECJ.

[45] Graetz & Warren (2012), 121 Yale L.J. at 1153.

[46] Graetz & Warren (2012), 121 Yale L.J. at 1141, 1153.

[47] Mason & Knoll (2012), 121 Yale L.J. at 1118.

[48] Graetz & Warren (2012), 121 Yale L.J. at 1139.

[49] Mason & Knoll (2012), 121 Yale L.J. at 1098. *See also* id. at 1086 where we state in the text that "we do not advocate competitive neutrality from first principles," by which we explain in note 195 that "we do not argue that a competitive neutrality interpretation of nondiscrimination would do a better job of promoting economic welfare or any specific notion of the good, justice, or fairness than other possible interpretations").

[50] As we said in our original article, our claim that the tax discrimination principle is intended to promote competitive neutrality is not an argument that the European Union does not care about locational neutrality or that the EU treaties do not promote locational neutrality in other ways. The provisions in the foundational treaties that set out procedures for achieving positive harmonization are a clear example of the value the European Union places on locational neutrality.

Graetz and Warren's critique of our article amounts to a lament that we did not take up the question, "What ought to be the interpretation of tax discrimination from an economic welfare perspective?" But our goal was to answer a more limited set of questions, namely, "what is the extant legal definition of tax discrimination, and what are the economic implications of that definition?"[51] Thus, we are trying to describe in a more rigorous, economics-oriented fashion the interpretation that we believe best captures the existing language of the treaties and its interpretation by the ECJ. Ideally, the answers to Graetz and Warren's question and the answers to our questions would be related. But it's not obvious that they are identical. Their criticism, thus, confuses our interpretive project with their policy project.

Although we view the welfare consequences of alternative ways of structuring nondiscrimination law as secondary to our descriptive project, Graetz and Warren see it as central to their normative project. For example, Graetz and Warren express surprise that we do not focus on rate differentials among the member states.[52] Rate differentials (Ireland taxes everyone, resident or nonresident, at 15% while Germany taxes everyone at 40%) may burden (or restrict) cross-border commerce. In that sense, of course rate differentials impact work and investment within the European Union. But the ECJ has clearly held that the nondiscrimination principle does not restrain variation in national tax rates, as long as each member state applies its rates even-handedly to all comers.[53] Thus, even if Graetz and Warren are correct when they assert that rate differentials may be the most distortive features of member state tax systems,[54] uniformly applicable rate differentials nonetheless are not relevant to the legal question addressed by our article.[55] Again, Graetz and Warren want to take on a big issue, namely, how

[51] In the same vein, we do not ask whether it might be possible to draft or construct a different and more efficient framework for the single market with a different division of rights and responsibilities among the member states than that which is already contained in the EU treaties.

[52] Graetz & Warren (2012), 121 Yale L.J. at 1148.

[53] *See, e.g.*, Gilly paras. 46-53.

[54] Graetz & Warren (2012), 121 Yale L.J. at 1149.

[55] *Compare* Case C-336/96, Gilly v. Directeur des Services Fiscaux du Bas-Rhin, 1998 E.C.R. I-2793, ¶¶ 34, 48 (holding that a cross-border tax disadvantage caused by the resident state's foreign tax credit limitation did not violate EU law because the disadvantage was caused by neutrally-applied, but divergent, "scales of direct taxation" and to require the resident state to "reduce its tax in respect of the remaining income . . . would . . . encroach on its sovereignty in matters of direct taxation")*with Royal Bank of Scot.*, 1997 E.C.R. I-2651, ¶ 34 (holding that Greece discriminated when it taxed domestic banks at 35%, but branches of foreign banks at 40%).

Although rate differentials are an important source of locational distortions, they are left out of a variety of multistate agreements designed to promote cross-border commerce. For example, the GATT and GATS allow national VAT rates to vary, but they forbid certain import duties and export subsidies. The requirements under those do we reduce economic distortions in Europe? Rate differentials would clearly be important for this question. But we have a narrower goal. We are asking only "what is tax discrimination?"

Our approach, which was to argue that a competitive neutrality interpretation of the tax nondiscrimination principle seems to best fit the text and doctrine, may, as Graetz and Warren claim, put us in a "second- or third-best world." We do not disagree, and we acknowledge so in our article.[56] We, however, fail to see the connection between this observation and our argument.[57] Moreover, although Graetz and Warren say that they disagree with our interpretation, they do not dispute our conclusion that competitive neutrality is the best fit for the text and doctrine by offering an alternative interpretation that they claim better fits the text and doctrine.[58] There may be some not-yet-identified norm that corresponds better with the language and the structure of the treaties and the doctrine than does competitive neutrality. But we have not been able to identify it, and Graetz and Warren suggest no alternative.

Despite not claiming (and not regarding it as essential for our doctrinal argument to claim) that competitive neutrality is the best possible interpretation of tax nondiscrimination, we do claim in our article that interpreting the tax nondiscrimination principle to require competitive neutrality is welfare-enhancing as compared to a situation in which the ECJ did not police tax

treaties are for "national treatment" and "most favored nation treatment," which can also be characterized as nondiscrimination obligations. Thus, allowing each state to choose its tax rate is not necessarily incompatible with the idea of prohibiting protectionism (and other forms of discrimination).

[56] Mason & Knoll (2012), 121 Yale L.J. at 1099, n. 235.

[57] As Ian Roxan put it, the Treaty "provisions on freedom of movement are concerned to ensure that freedom of movement is unrestricted. They do not themselves require that the resulting movement be economically efficient." Ian Roxan, 63 Mod. L. Rev. 831, 845 (2000).

[58] Graetz and Warren object that there are examples of cases that do not seem to pursue competitive neutrality. We do not disagree. As we note in our article, if the application of tax nondiscrimination rules reflect "competitive neutrality goals, they do not reflect *rigorous* application of our formal conception of competitive neutrality." Mason & Knoll (2012), 121 Yale L.J. at 1116 (emphasis added). We speculate that this lack of rigor may be attributable to the complexities and subtleties of competitive neutrality, and so we attempt to provide simple rules of thumb that would assist courts in applying the concept in the future.

Graetz and Warren also argue that if the tax nondiscrimination principle required competitive neutrality, then the ECJ should also strike down cases of so-called "reverse discrimination," that is, cases in which the member state treats outsiders *better* than insiders. We agree that a strict competitive neutrality interpretation of nondiscrimination would compel this conclusion. While reverse discrimination is an important piece of the puzzle, we did not have space in our article (or in this response) to address it. We note here, however, that the ECJ handles cases of reverse discrimination under the more specific language in Article 107 TFEU which prohibits reverse discrimination under the rubric "state aids." *See* Article 107 TFEU, providing, in relevant part, "Save as otherwise provided in the Treaties, any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market."

discrimination *at all*. That is because tax-induced distortions of competition—especially protectionists taxes—reduce welfare, so eliminating them should enhance welfare. As we state in the article,

> There is no consensus among economists . . . that competitive neutrality is more important than locational neutrality from a welfare perspective. . . . However, economists generally agree that violations of competitive neutrality reduce welfare. Economists also widely recognize that states, unless they are constrained, will enact trade barriers that tilt the playing field in favor of domestic interests with attendant negative welfare consequences. In other words, absent legal or other restraints, states will tend to violate competitive neutrality, which will reduce welfare."[59]

Graetz and Warren would appear to agree. As they wrote in their 2006 article:

> "[Limiting] the ability of the ECJ to strike down member states' income tax provisions… would permit considerable mischief by the member states. As our review of the ECJ cases has shown, some member state tax provisions are potentially quite protectionist, and some have been adopted to serve precisely that purpose. The dilemma for the nations of Europe is to find a way to retain their autonomy over tax matters without undermining the internal market and, as a practical matter, severely restricting the four freedoms."[60]

Moreover, we believe that identifying competitive neutrality as the principle underlying the ECJ's tax discrimination decisions and putting that principle into economic terms provides guidance for courts seeking to enforce the fundamental freedoms by framing the central issue in tax discrimination cases. If, as we argued in the article, the judges of the ECJ are trying to apply a competitive neutrality interpretation of nondiscrimination by intuition, then express identification of that value should enable the Court to (1) clarify whether competitive neutrality is indeed its guiding principle and (2) reach more consistent results. If the ECJ agrees that the nondiscrimination principle pursues competitive neutrality, then in resolving tax discrimination cases it need not limit itself to drawing analogies from precedent. Rather it can attempt to directly ascertain whether or not the challenged tax policy interferes with competitive neutrality.

[59] Mason & Knoll (2012), 121 Yale L.J. at 1098.
[60] Graetz & Warren (2012), 121 Yale L.J. at 1233.

In addition, identifying the principle behind tax discrimination and putting that principle into economic terms also allows commentators and other court observers to evaluate whether the ECJ or a national court has correctly applied the norm in particular tax discrimination cases.

B. Substantive Criticism

Graetz and Warren's principal criticism is that we have not provided sufficient normative grounding for that claim that the prohibition of tax discrimination in the TFEU is best interpreted as promoting competitive neutrality. For the reasons described above, their welfare-economics-based criticism is not germane to our interpretive argument. In their reply, Graetz and Warren also raise several narrower, substantive challenges to our interpretation. Specifically, Graetz and Warren argue that: (1) our interpretation of tax discrimination is too narrow from a normative perspective;[61] (2) the capital neutrality benchmarks that are the bases for the labor neutrality benchmarks that we discuss in the article (especially CON) do not translate from capital to labor;[62] (3) our focus on cross-border workers is misplaced[63] and our argument in favor of a competitive neutrality interpretation of the law is based on an unrealistic assumption—that residence is fixed;[64] (4) we ignore the law on impermissible "restrictions" that is inconsistent with our interpretation;[65] and (5) a competitive neutrality interpretation of tax discrimination is not supported by the outcomes of the cases, the language of the cases, or the EU treaties from which the principle of tax nondiscrimination is derived.[66] We respond to each of these arguments in turn.

1. "Narrow" Focus on Efficiency

Graetz and Warren fault our conclusion that efficiency is "the most important norm for deciding tax discrimination cases" because, in their view, "this is much too restrictive a focus for constitutional courts."[67] Yet, many constitutions contain provisions that promote efficiency, and

[61] Graetz & Warren (2012), 121 Yale L.J. at 1129-30.
[62] Graetz & Warren (2012), 121 Yale L.J. at 1130-35.
[63] Graetz & Warren (2012), 121 Yale L.J. at 1134-35.
[64] Graetz & Warren (2012), 121 Yale L.J. at 1135-39.
[65] Graetz & Warren (2012), 121 Yale L.J. at 1124-27.
[66] Graetz & Warren (2012), 121 Yale L.J. at 1155-61.
[67] Graetz & Warren (2012), 121 Yale L.J. at 1129.

the EU treaties are no exception.[68] For example, the EU treaties prohibit the member states from imposing customs duties and quantitative restrictions on imports and exports.[69] Free trade in goods, a concept endorsed by the EU treaties, is surely an efficiency concept. In addition, the history of the European Union reflects a strong desire to improve economic efficiency,[70] although that is not the only motivation for the Union's creation, maintenance, and growth.

But most importantly, economic efficiency is the *only* factor the ECJ cites in making its tax discrimination determinations. As we noted in our article, "[b]ecause our goal . . . is to try to get a clearer understanding of what the tax nondiscrimination principle requires, it seems prudent to discuss what the ECJ itself has identified as tax nondiscrimination's most important underlying value."[71] Although it might reflect a lack of imagination, we are at a loss for how to formalize the ECJ's conception of tax discrimination without considering the only value that the ECJ has identified as relevant to the project.[72] Nor do Graetz and Warren cite any cases that support the notion that economic efficiency is not the lodestar for tax discrimination cases. Although they note that the ECJ "recently [has] given more weight to member state defenses grounded in fiscal and administrative concerns,"[73] that observation is misplaced. As we note in our article, the procedure followed by the ECJ is to first determine whether a member state has engaged in tax discrimination, and only then to determine whether the discrimination can be justified (for example, by the need to prevent fiscal evasion).[74] Thus, the discrimination and justification determinations are legally and analytically distinct. That the ECJ finds tax discrimination to be

[68] Think, for example, of the patent and copyright clause of the U.S. Constitution. U.S. Const. Art I, sec. 8, cl. 8 (giving Congress the power "[t]o promote the Progress of Science and the useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries"). The wording of this clause recites the standard efficiency justification for such grants, to encourage creation of new products by rewarding effort.

[69] TFEU Arts. 28.1, 34 and 35 (also banning other charges having equivalent effect).

[70] Comite Intergouvernemental Cree Par La Conference De Messine, Rapport Des Chefs De De1egation Aux Ministres Des Affaires Etrangres, Doc. MAE 120 f/56 (1956) [hereinafter the Spaak Report].

[71] Mason & Knoll (2012), 121 Yale L.J. at 1036.

[72] We do not find an approach that begins with a definition, such as defining tax discrimination as equal taxation, to be helpful. Because the norm of tax nondiscrimination is derived from the free movement principles, not the other way around, such an approach does not provide a conceptual underpinning for the free movement principles.

[73] Graetz & Warren (2012), 121 Yale L.J. at 1129 (citing commentators, but not cases). Cases that they do not cite, but seem to be referring to, in which the ECJ took member states' revenue concerns into consideration, did so in the justification stage of the ruling, not the discrimination stage. Even the language they quote from Professor Joachim Englisch reflects this when he says that "the ECJ has been particularly inclined to uphold *discriminatory* tax provisions based on the rule of reason…"). Id. at 1129, n. 45 (emphasis added).

[74] Mason & Knoll (2012), 121 Yale L.J. at 1036.

justified in light of other, non-efficiency, values does not imply that the discrimination determination itself is not informed by solely or primarily by efficiency.

Moreover, any claim that a criterion other than efficiency carries *greater* weight in tax discrimination determinations simply cannot be supported by the decisions of the ECJ.[75] Thus, in adopting economic efficiency as "the most important norm" for tax discrimination, we take our cue directly from the Court. If we were starting from scratch and were charged with designing a single market and were asked, "Ought there to be a tax nondiscrimination principle, and if so, what should it mean?" we might give more weight to non-efficiency goals. Indeed, after showing in our article that the Court's tax discrimination interpretations accord better with competitive neutrality than with the other efficiency norms of locational neutrality or leisure neutrality, we showed how a competitive neutrality interpretation of tax nondiscrimination would promote other values, such as representation reinforcement, political unity, legal certainty, and so on.[76] So we agree with Graetz and Warren about the importance of those values. But, as our goal was to figure out what the EU treaties require, we focused on efficiency because, among other reasons, that's what the ECJ does.

Perhaps Graetz and Warren's statement that economic efficiency is too narrow a focus for constitutional courts is meant to convey the idea that the fundamental freedoms are not only about efficiency, but also advance other non-economic, social issues. We do not disagree. Consequently, we have no objection in theory to courts articulating other values in parallel with competitiveness, whether related to efficiency or not and whether derived from the same or different treaty sources.[77] But exploring the economic efficiency values that motivate the

[75] Graetz and Warren state, "[n]or do we agree with Mason and Knoll that the ECJ has declared economic efficiency to be the most important underlying value in resolving these tax cases." Graetz & Warren (2012), 121 Yale L.J. at 1129. But they cite no cases in support of any alternative proposition.

[76] Mason & Knoll (2012), 121 Yale L.J. at 1097-1106.

[77] For example the Supreme Court interprets the Article IV Privileges and Immunities Clause to protect both political as well as economic rights, such as the right to make a living. Our approach does not have anything to say about the protection of noneconomic rights, but it certainly does not in any way suggest that the ECJ would be wrong to derive political rights from the fundamental freedoms. Nor would we say that the Supreme Court is wrong in interpreting the Privileges and Immunities Clause to protect non-economic rights of citizenship in addition to economic rights.

fundamental freedoms is not a wrongheaded project, even if the fundamental freedoms also pursue other values.[78]

2. Translating Capital Neutrality Benchmarks into Labor Benchmarks

Graetz and Warren argue that the familiar capital neutrality benchmarks (especially CON) cannot be adapted to analyze labor, and therefore it makes no sense to analyze tax discrimination against cross-border workers in terms of such concepts.

As best we can discern, the phrase "capital ownership neutrality" (CON), was first used by Michael Devereux in 1990 in an unpublished paper.[79] It first appeared in print in a 1994 article by Robert Green, which incidentally was about tax discrimination, albeit in the context of bilateral tax treaties.[80] The concept of ownership neutrality started to receive substantial attention when it was advocated by Mihir Desai and James Hines in a series of articles published beginning in 2003.[81] In those articles, Desai and Hines presented a normative argument that the failure of tax policymakers to advance CON has substantial negative welfare consequences. They advocated refocusing the direction of international tax policy in order to achieve or come closer to CON. The welfare argument that Desai and Hines make, especially claims about the relative size of any welfare distortions, is complicated, and it has been vigorously debated.[82]

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[78] Another possible interpretation of their claim is that the reasons or justifications behind a provision, even one that is closely associated with economic efficiency, might extend beyond economic efficiency. Graetz has argued elsewhere that the justification for many policies and principles, including economic principles, such as capital export neutrality, might not be economic efficiency, but fairness. Michael J. Graetz, *Taxing International Income: Inadequate Principles, Outdated Concepts, and Unsatisfactory Policies*, 54 TAX L. REV. 261, PAGE (2001). If Graetz and Warren are arguing that there are reasons other than efficiency for adopting the fundamental freedoms, we do not disagree.

[79] Michael P. Devereux, Capital Export Neutrality, Capital Import Neutrality, Capital Ownership Neutrality and All That (June 11, 1990) (unpublished manuscript) (on file with the authors).

[80] See Robert A. Green, The Troubled Rule of Nondiscrimination in Taxing Foreign Direct Investment, 26 L. & POL'Y INT'L BUS. 113, 138 (1994) ("[o]wnership neutrality prevails if the international tax system is neutral with respect to the identity of the firm that owns and controls capital in a given country"). Professor Green's employment of this notion in the tax treaty nondiscrimination context shows that it is intuitive to conceive of legal prohibitions on tax discrimination as seeking to prevent violations of competitive neutrality.

[81] *See, e.g.*, Mihir A. Desai & James R. Hines Jr., Evaluating International Tax Reform, 56 NAT'L TAX J. 487, 494 (2003); 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); Mihir A. Desai, *New Foundations for Taxing Multinational Corporations*, TAXES, Mar. 2004; James R. Hines Jr., *Reconsidering the Taxation of Foreign Income*, 62 TAX L. REV. 269 (2009).

[82] *See, e.g.*, Mitchell A. Kane, *Ownership Neutrality, Ownership Distortions, and International Tax Welfare Benchmarks*, 26 VA. TAX REV. 53 (2006) (arguing that we lack empirical evidence that current methods of double tax relief cause ownership distortions that are distinct from locational distortions); Mitchell A Kane, *Considering*

Their formal economic argument includes a number of assumptions, such as the assumption that capital is instantly mobile whereas labor is fixed, or at least that capital is much more mobile than is labor. If the assumption of the relative immobility of labor as compared to capital is important for the argument that there can be significant welfare gains from pursuing one or more capital neutrality benchmarks, it might be difficult to make claims about the relative importance of pursuing labor neutrality benchmarks. At the very least, as Graetz and Warren point out, if one is going to make such normative claims, the argument needs to be constructed. Accordingly, Graetz and Warren criticize us for employing the labor analog of CON and using it without having laid the appropriate groundwork.[83]

Such an argument again confuses the scope of our doctrinal project with the normative project that they would have preferred we undertake. We are not making a welfare economics argument. We are not claiming that, if one were designing a tax system from the ground up, achieving competitive neutrality for jobs would enhance welfare more than some other system. Rather, our project is interpretive. Our reading of the cases and text led us to conclude that the tax nondiscrimination principle requires a level playing field between out-of-state and in-state providers of labor, capital, services, and business establishment.[84] We use the language of economics, namely CON and what we outline as the labor analog to CON, to give formal content to the requirement of a level playing field. The controversial welfare arguments that Desai, Hines, and others have made in the capital context advocating CON may not have the same force in the labor context. But that doesn't mean that the ECJ's interpretation of tax nondiscrimination is not animated by the desire to root out protectionism and promote competitiveness in *both* capital and labor. Our argument is not that we (or the ECJ) conducted a careful study of welfare economics and concluded that a competitive neutrality interpretation of tax discrimination would

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"Reconsidering the Taxation of Foreign Income", 62 TAX L. REV. 301 (2009) (comparing the methods of achieving CON and arguing that global adoption of worldwide taxation would be better than global exemption); Stephen E. Shay, *Commentary Ownership Neutrality and Practical Complications*, 62 TAX L. REV. 317 (2009) (arguing that due to the flexibility of forms of ownership of assets, the link between taxation and ownership neutrality may be weaker than suggested by advocates of CON); Harry Grubert & Rosanne Altshuler, *Corporate Taxes in the World Economy: Reforming the Taxation of Cross-Border Income*, *in* FUNDAMENTAL TAX REFORM: ISSUES, CHOICES AND IMPLICATIONS 319 (John W. Diamond & George R. Zodrow eds., 2008) (arguing that the welfare effects of each of the neutrality benchmarks is presently indeterminate whereas theoretical discussions of such welfare effects rely on very simple models).

[83] Graetz & Warren (2012), 121 Yale L.J. at 1132-5.

[84] Mason & Knoll (2012), 121 Yale L. J. at 1085-1106.

be best for Europe. Rather, our argument is that, in interpreting the text of the treaties in light of the goals of the EU, the ECJ regards competiveness as the principal value pursued by the concept of tax nondiscrimination in all the areas covered by the fundamental freedoms. Because we used the labor tax cases to illustrate our arguments, we expressed the value of "competitiveness" in terms of what we described as a labor analog to CON. We used the CON concept because it is familiar to our readers. We readily agree that we do not perform the groundwork to establish competitive neutrality as a crucial *normative* goal for cross-border tax policy. That was not our goal, and it was not necessary for our project. All we needed to do for our project was to translate the economic idea of a level playing field into the labor context.[85] The notion that taxes can distort competition between workers is an intuitive and straightforward concept to incorporate in the labor context.[86]

3. Focus on Cross-border Workers and Assumption of Fixed Residence

Graetz and Warren also take issue with our focus on cross-border workers and our simplifying assumption that a worker's residence is fixed. Since our responses to those criticisms are related, we consider them together. First, Graetz and Warren claim that by narrowing our focus to the tax treatment of what we label "cross-border workers"—people who commute across state borders for work or who earn labor income from more than one member state in a single tax year—we neglect a more important issue, namely, workers who permanently change their residence for tax reasons.[87]

The legal problem we chose to analyze—namely, "what is tax discrimination?"—dictated our decision to focus (only) on cross-border workers. As we explained in our article, the legal prohibition on tax discrimination generally does not apply to workers who permanently change their state of residence in response to taxes.[88] The reason for that is straight-forward. If a taxpayer permanently moves to another state where she earns all her income, the new state will tax her as a resident with purely domestic income. This is a case of domestic law applied to an

[85] That is not to say that there are not subtleties in the application, which are often overlooked.
[86] Indeed, the fact that CIN has long been and still is widely interpreted as focusing on competitiveness is evidence of the intuitive appeal of competitiveness. See Michael S. Knoll, Reconsidering International Tax Neutrality, 64 Tax. L. Rev. 99, 110-18 (2011).
[87] Graetz & Warren (2012), 121 Yale L.J. at 1134-35.
[88] Mason & Knoll (2012), 121 Yale L. J. at 1038-39.

"insider" with no cross-border activities. To illustrate, if, rather than commuting to Luxembourg, a Belgian resident permanently moves to Luxembourg and earns all her income in Luxembourg, Luxembourg will tax her like any other Luxembourger. This is an artifact of the tax law; states generally use tax residence, rather than nationality, to determine how they will exercise tax jurisdiction. The Luxembourgish tax law therefore sees only residents and nonresidents; it generally would not see old residents and new residents (or Luxembourg nationals and everybody else). EU tax discrimination law says nothing about how Luxembourg should tax its own residents' exclusively *domestic*-source income. The legal concept of tax discrimination simply does not apply to such "purely internal" situations.[89] That's not especially surprising. We usually think of discrimination as adverse treatment of outsiders. It would be surprising indeed if discrimination in the EU tax context were interpreted to cover a member state's treatment of its *own resident's purely domestic* income.

To extend our example, should the new Luxembourg resident now decide to remain in Luxembourg, but earn labor income from Germany so that there was a cross border element, EU tax discrimination law would apply to her, and she would now fall into our category of "cross-border workers." Our "cross-border worker" is just someone who has labor income from a state other than (or in addition to) her residence state.[90] By focusing explicitly on the kinds of situations covered by the legal prohibition of tax discrimination, we do not mean to suggest that residence distortions are unimportant as a policy or efficiency matter. We considered only the set of taxpayers protected by the EU prohibition on tax discrimination because we were interested in the meaning of that particular legal concept. Were we instead interested in the normative project of eliminating the largest tax-induced economic distortions to work in Europe, we might have taken a wider focus.[91]

[89] According to Judge Koen Lenaerts, Vice President of the ECJ and Professor at the Catholic University of Leuven, "[s]ince the 'pervasiveness' of EU law only applies to cross-border situations, purely internal situations are not affected." Koen Lenaerts, *Federalism and the Rule of Law: Perspectives from the European Court of Justice*, 33 FORDHAM INT'L L.J. 1338, 1341 (2010). *See also* Case C-112/91, Werner v. Finanzamt Aachen-Innenstadt, 1993 E.C.R. I-429, ¶¶ 16-17 (rejecting a taxpayer's claim of tax discrimination because the facts presented a "purely national" situation to which fundamental freedoms did not apply).

[90] Residence, of course, is a legal status. Accordingly, one way to reduce residence distortions would be to change the test used to determine residence.

[91] We note that Graetz and Warren give no evidence of the importance or magnitude of workers changing their state of residence. The only evidence they give in support of their claim that cross-border workers issues are unimportant is to recognize that 25 percent of the tax discrimination cases, which equates to about 2 percent of all

Relatedly, Graetz and Warren claim that our argument for a competitive neutrality interpretation of tax discrimination is based on the "unrealistic" assumption that a taxpayer's residence is fixed.[92] Graetz and Warren argue that this assumption is too restrictive if one is trying to undertake a complete welfare analysis of the tax consequences of various rules or interpretations.[93] We do not disagree. We acknowledge that tax residence rules, such as the dominant one in the European Union, whereby one becomes a resident of a new state after living there for 6 months,[94] will create distortions. Those distortions will interact with other distortions complicating any welfare calculations.[95] That is true, but irrelevant. Again, that argument confuses our interpretive project with their welfare economics project.[96] Our interpretation does not depend upon any such assumption. Our simplifying assumption that workers cannot move is used to illustrate how our approach works; it is not used to justify or support our argument for a competitive neutrality interpretation of tax discrimination.[97]

Graetz and Warren also criticize us for ending up with a theory of sharply limited applicability.[98] They claim that our "entire analysis [is based on] the unrealistic assumption that EU citizens will not take a job in another country if they have to live in the other country for more than six months."[99] In addition, they claim our analysis is inapplicable to capital investments where the assumption that residence is fixed "is patently implausible."[100] We disagree with those claims.

ECJ cases, involve labor income. Graetz & Warren (2012), 121 Yale L.J. at 1137. We fail to see how this is probative, especially since there are even fewer cases involving workers who change their state of tax residence.

92 Graetz & Warren (2012), 121 Yale L.J. at 1135-39.

93 Graetz & Warren (2012), 121 Yale L.J. at 1137-38.

94 Graetz & Warren (2012), 121 Yale L.J. at 1135.

95 There are numerous complex issues, such as the source of income, the question of what is a tax, the determination of what expenditures or services should be treated as offsets to taxation, that interact with any tax system and can complicated the administration of tax policy and the determination of what is the welfare maximizing policy.

96 In several places, Graetz and Warren discuss how various tax rules can interact with one another and cause jobs (or the demand for labor) to shift across locations.

97 Our response to Graetz and Warren's claim that an assumption of fixed residence undercuts our policy prescriptions are taken up later. See note _ - _ infra and accompanying text.

98 Graetz & Warren (2012), 121 Yale L.J. at 1139.

99 Graetz & Warren (2012), 121 Yale L.J. at 1135.

100 Graetz & Warren (2012), 121 Yale L.J. at 1136.

Start with their claim that we assume EU nationals will not take a job in another country if they have to live there for more than six months.[101] What we actually say is that when an individual has to change residence in order to take a new job, the doctrine of tax discrimination is inapplicable because the taxpayer resides in the same state where he earns his income.[102] EU commentators refer to this as a "purely internal" situation, whereas the concept of tax nondiscrimination only applies to cross-border activity.[103] Thus, our decision to follow the lead of the ECJ by excluding such movement from our analysis of tax discrimination was appropriate. Moreover, although the ECJ has not applied the tax discrimination concept to the kinds of cases that concern Graetz and Warren but that are not covered by our analysis (i.e., those in which an EU national changes her residence and then earns purely domestic income in her new residence state), the TFEU may nonetheless offer protection in those cases.[104]

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[101] Graetz & Warren (2012), 121 Yale L.J. at 1135 ("Mason and Knoll therefore base their entire analysis on an assumption that EU citizens will not take a job in another country if they have to live in the other country for more than six months").

[102] Mason & Knoll (2012), 121 YALE L. J. at 1038-9.

[103] See references *infra* note ___.

[104] Change-of-residence cases generally involve the extra-territorial assertion by the former residence state of exit, inheritance, or pension taxes. Thus, they too involve a cross-border element, as they must to trigger the application of the fundamental freedoms. But these cases have been decided under the rubric "restriction," rather than "discrimination." *See*, e.g., Case C-9/02, De Lasteyrie du Saillant v. Ministère de l'Économie, des Finances et de l'Industrie, 2004 E.C.R. I-2409, ¶ 45 (finding that the French exit tax "restricted" the freedom of establishment). Restrictions were not the focus of our article. *See infra* Part I.B.4.

Although no such case has yet arisen in the ECJ, we can imagine tax discrimination (rather than restriction) cases involving discrimination against *new* residents. When such cases have arisen in the United States, the Supreme Court has analyzed them under the nondiscrimination principles embodied in the Privileges and Immunities or Equal Protection Clauses. *See, e.g.,* Nordlinger v. Hahn, 505 U.S. 1, 12 (1992) (holding that California's Proposition 13A, which based property taxes on 1975–76 assessments did not violate the Equal Protection Clause in spite of the law's less favorable treatment of new residents because the rule was rationally related to the state's goal to encourage "neighborhood preservation, continuity, and stability"). Thus, while we do not completely rule out the possibility that change-of-residence cases will be incorporated into the ECJ's tax discrimination doctrine, it seems to us prudent for now to focus on the kinds of cases that have actually arisen before the Court. Moreover, if cases involving discrimination against new residents were to arise, they would fit comfortably within our conceptual framework because the challenged laws in such cases would tilt the playing field against external interests.

But, in our view, the change-of residence tax cases with a cross-border element (e.g., pension, exit, or inheritance taxes) and hypotheticals in which member states discriminate against new residents do not represent what's really at stake for Graetz and Warren. They seem to want to know whether the TFEU aims to reduce tax residence distortions, regardless of whether the taxpayer who changes residence continues to be involved in cross-border economic activities. We do not know enough to answer this question. While the ECJ has not interpreted the tax nondiscrimination principle to advance that particular notion residence neutrality, other parts of the TFEU may advance that goal. Note, however, that at least some cases, including tax cases, suggest that rather than promoting residence neutrality, the TFEU aims to promote what is essentially the opposite of residence neutrality, namely, competition for residents. This can be seen in the corporate charter competition cases such as *Centros* and *Inspire Art*, in which the ECJ held that an EU national did not abuse its rights under the TFEU when it established a corporate presence in a state with a favorable regulatory regime for the purpose of being governed by that regime when it entered the market of a second member state. The ability to take advantage of a home state regulatory

More broadly, Graetz and Warren assert that our analysis of tax discrimination is inapplicable to capital because investors can change their residence. We agree with their observation that investors can change their residence. We fail, however, to see how that observation undercuts our interpretation of tax discrimination or renders that interpretation inapplicable to investors (or corporations). Although investors might be readily able to move, at any point in time, they must reside somewhere. Their investments are also located somewhere, perhaps in many different states. Such cross-border investors could potentially be the target of tax discrimination. Host states, for example, might seek to discourage investments (especially controlling investments) from abroad. Also, residence states might try to discourage their residents from investing abroad. The EU as a whole, as well as particular investors, therefore both stand to benefit from the prevention of such tax discrimination. We, thus, fail to see how the ability of investors (and service providers) to change residence somehow makes tax discrimination (which only applies to cross-border investments and provisions of services) unimportant.[105]

4. The Relationship between Discrimination and Restriction

Much of the rest of Graetz and Warren's criticism stems from their conflation of the analytically distinct EU law concepts of "discrimination" and "restriction." Our original article dealt only with the former, but much of Graetz and Warren's criticism seems to lament that we did not address the latter.[106] For example, Graetz and Warren give an example of a charity that faces new requirements when it seeks to expand its operations into a neighboring EU member

regime when doing business abroad would promote competitive neutrality, but it would distort where corporations choose to reside. *See* Case C-212/97, Centros, 1999 E.C.R. I-1459 (upholding right under the freedom of establishment of Danish nationals to incorporate a company in the United Kingdom that did no business in the United Kingdom, but rather was incorporated there for the express purpose of being governed by favorable U.K. law when transacting business through a secondary establishment in Denmark), Case C-167/01, Kamer van Koophandel en Fabrieken voor Amsterdam v. Inspire Art Ltd., 2003 E.C.R. I-10155, ¶121 (holding, on facts similar to those in *Centros*, that to subject branches to the domestic corporate law of the host member state would impede their right of establishment).

The promotion of regulatory competition also can be seen in the compensatory tax cases, such as *Eurowings*, in which the ECJ held that a member states was not justified in assessing an additional tax on nonresidents to make up for the fact that they were taxed more lightly at home. Case C-294/97, Eurowings Luftverkehrs AG v. Finanzamt Dortmund-Unna, 1999 E.C.R. I-7447. Permitting compensatory taxation would tend to promote both locational and residence neutrality, but it would violate competitive neutrality. Finally, as discussed in the next Part, in our view, the mutual recognition principle promotes competitive neutrality over locational neutrality. *See infra* Part I.B.4.

[105] Graetz and Warren also assert that our assumption of fixed residence undercuts our policy recommendations. That is an issue we discuss below.

[106] See Graetz & Warren (2012), 121 Yale L.J. at 1126-29.

state.[107] In Graetz and Warren's example, the new host state applies its requirements on the same basis to all charities operating in its territory—regardless of whether those charities are established domestically or abroad. Because the multi-state charity must satisfy the requirements of both its home and host states, while domestic charities need satisfy the requirements of only one state, the charity operating across borders faces additional burdens. For example, if both the home and host states of the charity required the charity to the keep financial records according to national accounting rules, the charity would face duplicative burdens.

Similarly, Graetz and Warren refer to another restriction case, *Cassis de Dijon*.[108] In *Cassis*, Germany tried to exclude an imported liquor because it did not meet the minimum alcohol content for liquor under German regulations. But the liquor, which was manufactured in France, complied with French liquor regulations. The German law was not facially discriminatory; Germany did not have one set of standards for liquor manufactured abroad and another set for liquor manufactured in Germany. Rather, German standards simply were different from French standards. The ECJ held that, notwithstanding the universal applicability of the regulation, Germany imposed an "obstacle"[109] on cross-border trade because goods would have trouble satisfying the standards of both Germany and the state of manufacture. As Graetz and Warren note, the ECJ's solution in *Cassis* was to select an origin state rule for goods. This origin state rule came to be known as the "mutual recognition" principle, and under it goods manufactured in one member state are presumptively free to circulate throughout the European Union, as long as they satisfy the regulatory scheme of their state of manufacture.[110] So Germany must accept the French liquor manufactured to French standards.

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[107] Graetz & Warren (2012), 121 Yale L.J. at 1126-27.

[108] Graetz & Warren (2012), 121 Yale L.J. at 1126. *See also* Case 120/78, Rewe-Zentrale AG v. Bundesmonopolverwaltung für Branntwien (Cassis de Dijon) 1979 E.C.R. 649. Notice also that, unlike the other cases and examples cited by Graetz and Warren and us, *Cassis* was a case involving the free movement of goods. Direct tax discrimination analysis does not generally implicate the freedom of movement of good because goods are the subject of *indirect* taxes (like VAT), rather than *direct* taxes (like income taxes). Competitive neutrality in the area of goods would involve producers from different states competing on a level playing field to sell goods in a given market.

[109] Case 120/78, Rewe-Zentrale AG v. Bundesmonopolverwaltung für Branntwien (Cassis de Dijon) 1979 E.C.R. 649, ¶¶ 14-15 (holding that excluding the French liquor "constitute[d] an obstacle to trade" that qualified as a measure "having an effect equivalent to quantitative restrictions on imports" and was therefore prohibited under Article 30 EEC.

[110] *See* Communication from the Commission "Mutual recognition in the context of the follow-up of the action plan for the single market" [COM(1999) 299 final - Not published in the Official Journal].

Citing mutual recognition, Graetz and Warren would like the ECJ to choose a particular state's tax law to govern cross-border situations. Specifically, they suggest that the only sensible way for the ECJ to enforce the prohibition on tax discrimination would be to pick one of the following options: (1) to apply the source country's tax system (destination state rule), (2) to apply the residence country's tax system (origin state rule akin to mutual recognition) or (3) to harmonize the source and residence country's tax systems.[111] However, although Graetz and Warren's approach would cure restrictions that arise from the application of duplicative or conflicting regulatory regimes like that seen in *Cassis* (for example, it would eliminate double juridical taxation), it would not necessarily cure discrimination. For example, it would do nothing to preclude source or residence rules of the following format: "purely domestic activities are taxed at 15%, but cross-border activities are taxed at 30%." None of the three proposals above by Graetz and Warren would address this problem, even though we would assert that preventing this sort of protectionist tax law lies at the heart of the nondiscrimination project.

Relatedly, the ECJ has expressly held that the nondiscrimination principle does not require the member states to relieve double juridical taxation.[112] So the fact that Graetz and Warren's approach solves double juridical taxation (admittedly a major problem that tends to inhibit integration in a common market) doesn't mean that their approach addresses discrimination. Double taxation, like multiple regulatory burdens, *at least in the view of the ECJ so far* does not present a problem of discrimination. We would characterize double taxation, like multiple regulatory burdens, as creating restrictions.[113] That is, double taxation inhibits cross-border commerce even though each taxing state's regime may apply in an even-handed way (i.e., uniformly) to both residents and nonresidents working in the jurisdiction (or to residents' foreign- and domestic-source income). While commentators have criticized the ECJ for failing to adequately distinguish "discriminations" from "restrictions" in the tax area, the two concepts can be distinguished analytically, and mutual recognition for taxation will not necessarily cure cases of tax discrimination. Thus, neither the multi-state charity in Graetz and Warren's

[111] Graetz & Warren (2012), 121 Yale L.J. at 1126-27.

[112] *See, e.g.,* Case C-128/08, Damseaux v. Belgium, 2009 E.C.R. I-6823, ¶ 25; Case C-513/04, Kerckhaert & Morres v. Belgium, 2006 E.C.R. 1-10967, paras. 20-24.

[113] *See* Georg Kofler & Ruth Mason, *Double Taxation: A European "Switch in Time?"* 14 COLUM. J. EUR. L. 63 (2007) (comparing the ECJ's double regulatory burdens cases to double taxation).

hypothetical nor the liquor manufacturer in *Cassis* faced "discrimination."[114] We would add that probably the best U.S. analog to the restriction/discrimination dichotomy can be found in the dormant Commerce Clause, which forbids both "discrimination" and non-discriminatory (or "facially-neutral") "undue burdens."[115]

We did not consider tax restrictions because our project focused exclusively on discrimination. Restrictions are a complicated subject that has produced its own jurisprudence, literature, and debate. Restrictions are well beyond what we covered in our original article, and there is not enough space to do them justice in this sur-reply.[116] One reason that we focused in our article on discrimination rather than restrictions is that, so far, the ECJ has decided the vast majority of its direct tax cases under the discrimination rubric, reserving its restriction analysis for non-tax regulations.[117] That said, we offer a few brief comments here in response to Graetz and Warren's critique.

One reason for the ECJ's differential treatment of taxes and non-tax regulations could be that taxes (even when imposed by different states using different currencies) are all in money and so are additive.[118] If a tax of €10 is imposed by France on a French resident engaged in a specific activity conducted in Germany, and a tax of €5 is imposed by Germany on that same individual for the same activity, the total tax paid by that individual on that activity is €15. In contrast, regulations are often not additive.[119] That can be illustrated using *Cassis*. In *Cassis*, the German regulations required a minimum alcohol content for the liquor to be sold in Germany. Because French law was different, the product in question had a lower alcohol content than the German minimum. Thus, to sell in Germany, the French producer would have had to change its formula

[114] In both cases, the destination member state's requirement applied even-handedly to all comers, whether foreign or domestic. The problem in both those cases was that multi-state actors faced duplicative or conflicting regulations applicable in multiple states.

[115] Graetz & Warren (2012), 121 Yale L.J. at 1148.

[116] As is widely acknowledged, the ECJ will strike down both tax and non-tax laws that discriminate. It will also strike down non-tax laws (e.g., regulations) if they constitute an "impermissible restriction on cross-border economic activity." So far, however, direct tax cases primarily have been resolved on discrimination, not restriction, grounds. . We do plan to look more closely at restrictions in the future and to consider how well a competitiveness paradigm would work with restrictions and how to operationalize that standard.

[117] The ECJ has decided change-of-residence cases under the restriction concept. *See supra* notes ___–___ and accompanying text.

[118] Roxan (2000), 63 Mod. L. Rev. at _.

[119] Roxan (2000), 63 Mod. L. Rev. at _.

for the German market. That might have been very expensive for a variety of reasons or even impractical. To make the point more starkly, France (or another country) might have had a regulation that did not allow the sale of alcohol above a certain level, which level was below the German minimum. In such a case, it would not be possible to sell the same product in both countries. Such regulations, although not discriminatory, would segment and undercut the single market and undermine the notion that goods produced in other states should compete on the same terms with domestic goods.

The same logic that the ECJ applied to goods in *Cassis* also applies with capital investments and labor services. Allowing both origin and destination state regulations to apply might interfere with the single market. To eliminate restrictions (for example, to cure conflicting regulatory burdens), a choice has to be made about *which* member state's law will apply.[120] Where regulations are not additive, only one of the origin state's or the destination state's law can apply. In contrast, because taxes are additive, there is an option with taxes that is not available with regulations – to permit both source and residence taxation simultaneously so long as source and residence taxes are what we call uniform, that is, they apply the same way to all comers. Because taxes are always additive whereas regulations are not, there is an additional option (beyond the options Graetz and Warren consider sensible[121]) for designing a competitively neutral tax system that is not available with regulations.[122] That option is to require uniform source and residence taxation.

Another reason may help explain why the mutual recognition principle, which has successfully reduced conflicts and duplication among Member State regulatory regimes, has not

[120] There is no general way to apply both origin and destination regulations without imposing very different burdens on parties from different states depending upon their origin and destination states.

[121] Graetz & Warren (2012), 121 Yale L.J. at 1126-27 (describing three ways out of the labyrinth of impossibility: impose origin state requirements, impose destination state requirements, and harmonization)

[122] It's important to note that the basis for the mutual recognition principle is that disparate regulatory regimes in different states aim to accomplish similar policy ends. For example, even though French and German health and consumer protection law governing the manufacture of liquors may differ, a product manufactured to French standards will equally protect German buyers of the product (at least up to the level of French safety standards). Thus, the presumption under mutual recognition that goods manufactured in one member state are free to circulate in other member state is rebuttable. *See* Regulation 764/2008, The "Mutual Recognition Regulation," O.J. [2008] L218/21 (Jul. 9 2008) (providing procedure whereby a destination state can provide notice to a manufacture justifying exclusion of its product despite the mutual recognition principle, on various, but limited grounds, such as the need for consumer protection). *Id.* at ¶ 23. The notion that either state's regulation can serve both states' policy goals does not work with taxation. Clearly, assigning to France the exclusive right to collect taxes on a cross-border transaction does nothing to satisfy German revenue needs.

been pushed into the tax area. One basis for the mutual recognition principle is that disparate regulatory regimes in different states aim to accomplish similar policy ends. For example, even though French and German health and consumer protection law governing the manufacture of liquors may differ, a product manufactured to French standards will equally protect German buyers of the product (at least up to the level of French safety standards). Thus, the presumption under mutual recognition that goods manufactured in one member state are free to circulate in other member state is rebuttable.[123] The notion that *either* state's regulation can serve *both* states' policy goals simply does not work with taxation. For example, assigning to France the exclusive right to collect taxes on a cross-border transaction does nothing to satisfy German revenue needs.

Interestingly, the approach the ECJ adopted in *Cassis*, mutual recognition of origin state regulation, does not aim to promote locational neutrality, which seems to be Graetz and Warren's preferred welfare norm.[124] On the contrary, mutual recognition overtly encourages regulatory competition that will influence the location of production. Although it does not promote locational neutrality, mutual recognition of origin state regulation does promote competitive neutrality, especially if the ECJ is more worried about states restricting imports than advantaging exports.[125] Thus Graetz and Warren's citation to *Cassis* seems especially out-of-place because it shows that the ECJ's interpretation of the free movement of goods does not have much to do with their preferred norm of locational neutrality, while at the same time it shows that the ECJ's interpretation of the free movement of goods readily implicates our preferred interpretation of the fundamental freedoms as rooting out protectionism and promoting competitive neutrality.[126]

Furthermore, a quick look at the ECJ's other jurisprudence on restrictions suggests that the ECJ has been choosing between the origin and the destination state in a manner that promotes

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[123] See Regulation 764/2008, The "Mutual Recognition Regulation," O.J. [2008] L218/21 (Jul. 9 2008) (providing procedure whereby a destination state can provide notice to a manufacture justifying exclusion of its product despite the mutual recognition principle, on various, but limited grounds, such as the need for consumer protection). Id. at ¶ 23.

[124] Rather, regulatory harmonization would be required to achieve locational neutrality in a wide range of circumstances. In our view, this is a big problem for any interpretation of the fundamental freedoms that emphasizes locational neutrality.

[125] [Cite Commission communication on page 725 of Dinnage and Laffineur.]

[126] Other lines of cases also seem to support competitive neutrality over locational neutrality, including the corporate charter competition cases and the compensatory tax cases. *See* discussion in *supra* note 104.

competition between domestic and foreign suppliers rather than one that promotes locational neutrality.[127] Thus, for example, the ECJ generally has decided that *destination*-state regulation will control labor and services. Accordingly, health, safety, and work rules are generally determined by the destination state, not the origin state.[128] As a result of this rule, domestic and foreign suppliers incur the same continuing and regularly incurred costs.[129] Such a rule, thus, promotes competitive neutrality, but not locational neutrality. However, in other areas, including the sale of goods, professional qualifications, driver's licenses, and the regulation of finance and broadcasting, the origin state's regulation governs.[130] These costs tend to be one-time or upfront costs and so the alternative rule of destination-state regulation would lead suppliers to incur duplicative costs. Thus, this rule also promotes competitive neutrality, but not locational neutrality.[131] Although we readily acknowledge that a detailed discussion of regulations is beyond the scope of this sur-reply, our quick look does not suggest that the ECJ's treatment of regulations is inconsistent with our interpretation of tax discrimination. Rather, the ECJ seems to be trying to promote competitive neutrality, but not locational neutrality.

5. Sources of Interpretation

Graetz and Warren also claim that our sources do not support our interpretation of tax discrimination as informed by competitive neutrality.[132] We built our argument for a competitive neutrality interpretation of tax discrimination and the fundamental freedoms on a range of sources. We began with the Spaak Report, one of the few reports that was generally available when the Treaty of Rome was adopted in 1956. That report made clear that one of the motivations behind the establishment of the European Union was to allow for the development of EU-based multinationals that could operate on a large scale without becoming monopolies. That

[127] *See also* discussion in supra note ___ discussing the ECJ's rulings in *Daily Mail* and *Eurowings*, which dealt respectively with corporate charter competition cases and compensatory taxes. In both these cases, the ECJ's decisions vindicate regulatory competition over residence or locational neutrality,

[128] Alexander Saydé, One Law, Two Competitions: An Enquiry into the Contradictions of Free Movement Law, 13 Cambridge Y.B. Eur. Legal Stud. 386 (2011).

[129] Saydé (2011), at 386

[130] Saydé (2011), at 387.

[131] Locational neutrality would require harmonization.

[132] Graetz & Warren (2012), 121 Yale L.J. at 1155-61. Much of their argument against a competitive neutrality interpretation of nondiscrimination is premised on the observation that the ECJ does not strike down instances of reverse discrimination. Graetz & Warren (2012), 121 Yale L.J. at 1156-58. As noted above, we acknowledge the ECJ's acceptance of reverse discrimination and the inconsistency of this acceptance with a competitive neutrality interpretation of tax discrimination.

motivation has nothing to do with locational neutrality, but everything to do with competitive neutrality. Thus, the Spaak report supports the notion that competitive neutrality was a value promoted by the formation of the European Union.

We also argued that the structure and language of the EU treaties supports our interpretation. The treaties provide for a political process to advance harmonization, and harmonization produces locational neutrality. Thus, we do not argue that the EU treaties provide no mechanism for advancing locational neutrality. Rather, our argument is the fundamental freedoms, and in particular the tax nondiscrimination principle, advance competitive neutrality where member state law remains unharmonized.

The language of the treaties supports our interpretation. For example, the TFEU explicitly imposes obligations on both source and residence states under the fundamental freedoms. The imposition of nondiscrimination obligations on both source and residence states is consistent with competitive neutrality, but it is inconsistent with both locational neutrality and leisure/savings neutrality. Moreover, the right of business establishment appears to be unrelated to either locational neutrality or savings/leisure neutrality, but it is important for achieving competitive neutrality.

We also argued that the ECJ cases fit more closely (albeit not perfectly) with competitive neutrality than with either locational neutrality or leisure/saving neutrality. The ECJ's opinions regularly refer to state actions that "discourage" or "deter" cross-border activity. For the reasons we argue in the article, that language fits more closely with competitive neutrality than with locational or savings/leisure neutrality. Moreover, the ECJ has struck down numerous source state tax provisions (while allowing others to stand). Such a policy makes no sense if the ECJ's goal is to promote locational neutrality.[133] Similarly, the ECJ has struck down numerous

[133] If the tax discrimination doctrine were being used to promote locational neutrality and if the member states adopted worldwide taxation (with unlimited foreign tax credits), then source taxation would not interfere with achieving locational neutrality. Alternatively, if all states employed residence taxation, then any source taxation would interfere with locational neutrality.

residence state tax provisions (while allowing others to stand). Such a policy makes no sense if the ECJ's goal is to promote savings/leisure neutrality.[134]

In addition, other aspects of the nondiscrimination jurisprudence support a competitive neutrality interpretation. For example, we argue that the EU doctrine of "direct effect" allows affected parties to sue their own and other member states for tax discrimination. The doctrine of direct effect fits comfortably with a competitive neutrality interpretation of nondiscrimination because a tax that violates competitive neutrality harms identifiable taxpayers, whereas when taxes compromise locational neutrality, they reduce returns for everyone, rather than for specific, identifiable taxpayers.

Although Graetz and Warren take issue with some elements of our interpretation, they do not challenge other elements. For example, at least in their response, they do not challenge our interpretation of the Spaak report. But Graetz and Warren do disagree with our claim that the right of establishment would be superfluous if the tax nondiscrimination principle were interpreted to promote locational neutrality.[135] Yet the notion that free movement of portfolio investment (which is covered by the freedom of capital movement) is sufficient to achieve an efficient distribution of global capital (i.e., to achieve locational neutrality) is the basis for the standard argument that CON should not be considered an important neutrality benchmark. If foreign direct investment by multinationals was needed to achieve locational neutrality, then the argument for CON at the level of the firm would be closely tied with the argument for CEN. CON would be a prerequisite for CEN. The argument that CON is not important is thus based on a view that CEN can be achieved without CON. Of course, what this requires is that portfolio capital be highly mobile, which it is widely acknowledged to be.

As for the cases, Graetz and Warren claim that we endorse competitive neutrality by relying on the *language* of cases, but we reject locational neutrality and leisure/saving neutrality as inconsistent with the *outcomes* of the cases. They claim that a more even-handed analysis would not favor competitive neutrality, although they do not offer any examples in support of this

[134] Savings/leisure neutrality, the term we use for CIN and its labor analog, requires source state taxation only.
[135] Graetz & Warren (2012), 121 Yale L. J. at 1158-59.

claim. In our view, *neither* the language nor the outcomes of the cases supports a locational or savings/leisure neutrality interpretation of the fundamental freedoms or tax discrimination. First, we are not aware of any language in the cases that shows support for leisure/saving neutrality. There is some language that supports locational neutrality in conjunction with competitive neutrality (this makes sense, since the two neutrality benchmarks can be achieved simultaneously and are at times confused for one another[136]). But there is also much language that explicitly rejects locational neutrality, whereas we are not aware of language explicitly rejecting competitive neutrality.

Finally, Graetz and Warren dispute our claim that the doctrine of direct effect provides support for a competitive neutrality interpretation of tax nondiscrimination. They argue that locational neutrality violations also produce winners and losers, and they offer a brief example of two firms based in one country. One firm is purely domestic and the other is a multinational. Graetz and Warren note that an increase in the source tax rate faced by the multinational abroad will harm the multinational firm, but not the purely domestic firm.[137] In order to evaluate their argument, consider the following example. Assume there are two firms from Slovakia. One firm is purely domestic, whereas the other is a multinational with operations in both Slovakia and the Czech Republic. Assume initially that Slovakia and the Czech Republic have the same tax system, which includes a flat 25% tax rate on corporations and only source-based corporate taxation. The resulting tax system is locationally neutral because it is harmonized. Assume the Czech Republic subsequently raises its corporate tax rate from 25% to 30%. That will harm the Slovakian multinational relative to the purely domestic Slovakian firm. In that event, there is both injury to a firm and a violation of locational neutrality. That seems to be what Graetz and Warren have in mind when they say the doctrine of direct effect can be applied to locational neutrality as well as competitive neutrality. But now assume that Slovakia subsequently raises its tax rate to 30% (in order to equal to the Czech rate). That tax increase will harm Czech multinationals with operations in Slovakia relative to purely domestic Czech firms, but it does not compromise locational neutrality. Instead, it restores it. If taxpayer injury is being used to identify violations of locational neutrality, this is a false positive. Assume after raising its

[136] See note – infra.
[137] Graetz & Warren (2012), 121 Yale L. J. at 1156, n. 139.

corporate tax rate to 30%, the Czech Republic subsequently decides to reduce that rate back to 25% (while Slovakia maintains its 30% corporate tax rate). The resulting tax rate decrease compromises locational neutrality. Yet, there is no injury to any firm. This is a false negative. As the above example illustrates, injury to individual taxpayers is poorly associated with violations of locational neutrality.

We make this point more sharply by imagining once again that Slovakia and the Czech Republic both start out taxing corporations on a purely source basis at 25%, As noted, this harmonized tax system is locationally neutral. Now suppose that the Czech Republic again decides to raise its rate to 30%. As long as the Czech Republic imposes the tax uniformly, so that it applies the same way to domestic and foreign corporations, it will create only a locational, and not a competitive distortion. Is that tax discrimination because, on Graetz and Warren's reading it may injure the Slovakian multinational? If a firm were to argue that the even-handed application by a member state of tax rates that were higher than another state's rates were discriminatory, the firm would lose, and it should lose. Taken at face value, if the ECJ were to hold that a member state discriminated simply by raising its tax rates in an even-handed way for all economic actors within its territory as Graetz and Warren suggest,[138] the Court would lock in tax policy indefinitely, or at least it would preclude tax increases.[139]

6. Concluding Observations

Interpreting treaties and cases is not an exact science; rarely do all of the factors point in only one direction. At the end of the day, one is often left making a decision among a range of plausible alternatives. An interesting question to ask in this case is: If the tax nondiscrimination principle does not require competitive neutrality, what does it require? In this vein, we would note that there is a substantial amount of academic commentary that has tended to interpret the tax nondiscrimination principle as promoting competitiveness or something akin to it. Among the prominent commentators who have taken such a position is Wolfgang Schön, who argues

[138] Graetz & Warren, 121 Yale L.J. at 1156 n. 139.

[139] This brings us back to Graetz and Warren's criticism that we should have analyzed differential tax rates because such differences may cause the largest tax-induced distortions in Europe. But, even if rate differentials cause the largest tax-induced distortions to intra-EU commerce, the ECJ has expressly stated that rate differentials are not discriminatory, as long as they apply even-handedly to all comers. This may be regrettable in Graetz and Warren's view, but since our goal was to gain insight into the Court's definition of tax discrimination, our interpretive theory would have been wrong had we not taken the ECJ's views on rate differentials into account.

that "[t]he fundamental freedoms of the EC treaty . . . primarily serve to guarantee access to each national market to economic subjects from other [m]ember [s]tates."[140] Professor Schön further argues that "[t]he fundamental freedoms in their current shape as prohibitions of discrimination and restrictions correspond to these requirements: on the one hand, the prohibition of discrimination forces the country of investment or activity to establish capital import neutrality within its domestic tax system. At the same time, the (former) country of residence of a taxpayer must not unreasonably hinder the export of monetary, real or human capital."[141] As Graetz and Warren point out, this is similar to the practical implication of our interpretation of tax discrimination as promoting competitive neutrality. Specifically, member states must limit themselves to enacting uniform source and uniform residence rules.

Ian Roxan also interprets tax discrimination along lines similar to ours. Professor Roxan describes the fundamental freedoms as concerned not with the "incentives to move," but with the "cost of movement." In Roxan's view, there is an incentive to move when nationals of both the origin and destination state have an economic incentive to move (or stay) that operates in the same direction. Thus, a higher tax rate in Estonia than Latvia encourages both Estonians and Latvians to work in Latvia rather than in Estonia. In contrast, a cost to move operates on one party and in one direction. A tax imposed only on Latvians who work in Estonia will discourage Latvians from working in Estonia, but it will have no direct effect on Estonians. Although Roxan does not use the language of CEN to describe "incentives to move" or the language of CON to describe "cost of movement," the notions appear to be similar.

Even Graetz and Warren in their earlier work interpreted the fundamental freedoms and tax discrimination along the lines of competitive neutrality. For example, in a 2000 article upon which Graetz and Warren heavily relied in their 2006 article, Warren writing alone stated that that international tax law conceptualizes tax laws that favor domestic producers over foreign producers as a matter of discrimination.[142] In contrast, according to Warren, international tax law conceptualizes tax policies that favor domestic production over foreign production not as a

[140] Wolfgang Schön, Tax Competition in Europe – the legal perspective, EC Tax Rev. 90, 97 (2002).
[141] Schön (2002), EC Tax Rev. at 98 (footnotes omitted).
[142] Alvin C. Warren, Jr., Income Tax Discrimination Against International Commerce, 54 Tax L. Rev. 131, 150 (2000).

matter of discrimination, but rather as a matter of double taxation.[143] Moreover in that 2000 article, Warren went on to conclude that "[t]he competitiveness norm would seem more consistent with the current scope of prohibited discrimination than is the efficiency norm."[144] Warren equated the efficiency norm with locational neutrality or CEN.[145] Although he was primarily discussing trade and tax treaty nondiscrimination, Warren's discussion shows that tax discrimination has long concerned promoting competition between in-state and cross-border actors. Thus, it is perhaps no surprise that the judges of the ECJ would come to similar conclusions.

Drawing on Warren's 2000 article, in their 2006 article Graetz and Warren describe tax discrimination as concerned with discrimination against foreign producers as opposed to foreign production.[146] To us that seems very close to selecting CON over CEN as the motivating concept behind tax discrimination.[147] If that is not clear enough, they are more clear elsewhere in that article. For example, Graetz and Warren discuss the dangers of stripping the ECJ of power to review tax policies, which they say would likely lead to a rapid expansion of protectionist tax legislation. They then offer a possible "middle ground between the limited nondiscrimination requirements of international tax and trade treaties and the unduly inhibiting version of nondiscrimination fashioned by the ECJ."[148] "One alternative," according to Graetz and Warren, "might be a slowing of ECJ intervention with more attention to the effect on the member states' fisc and *a greater emphasis on protectionism* as a potential middle ground. The court's inquiry might, for example, be directed to whether the *intent* of the provision was *protectionist*."[149] Because competitively neutral provisions are designed to eliminate protectionism, we read the above statement by Graetz and Warren as accepting competitive neutrality as a reasonable interpretation of the EU concept of tax nondiscrimination, even if they

[143] Warren (2000), 54 Tax L. Rev. at 153.
[144] Warren (2000), 54 Tax L. Rev. at 164.
[145] Warren (2000), 54 Tax L. Rev. at 159-61.
[146] Graetz & Warren (2006), 115 Yale L.J. at 1196 (discussing bilateral tax treaty nondiscrimination, as opposed to trade treaty nondiscrimination).
[147] One might be tempted to try to draw a distinction between discriminatory taxes that impose a higher burden on cross-border commerce than on domestic commerce and discriminatory taxes that discourage cross-border economic activity. It is, however, clear from the ECJ's regular usage of such words as "deter" and "interfere" that it does not view the fundamental freedoms and tax discrimination as concerned only with the economic impact on affected taxpayers, but also with the impact on their behavior. See Roxan (2000), 63 Mod. L. Rev. at _.
[148] Graetz & Warren (2006), 115 Yale L.J. at 1233.
[149] Graetz & Warren (2006), 115 Yale L.J. at 1234 (emphasis added; footnote omitted)

do not directly advocate such an interpretation. Of course, we recognize that one can change one's interpretation over time, but Graetz and Warren do not acknowledge such a change or defend a different interpretation. And although they might have come to a different interpretation since 2006, we believe they would be hard-pressed to deny that a competitive neutrality interpretation is at least a reasonable and intuitive interpretation of tax nondiscrimination.

Although each of the commentators mentioned above writes about promoting competition through application of tax nondiscrimination, none explicitly links the interpretation of the tax nondiscrimination principle to the public finance concept of CON (or its labor analog). However, in the context of bilateral tax treaties, Professor Robert Green, who first used the term CON in a published article, explicitly coined and used that phrase to describe the goals of the nondiscrimination provisions of bilateral tax treaties. Thus, in describing the fundamental freedoms and tax discrimination as informed by considerations of competiveness, we are not far removed from the views of other scholars. Both tax policy experts and members of the ECJ have understood the prohibition of tax discrimination to promote competition between in-state and out-of-state interests—a value we argue can be understood formally as CON and its labor analog. In contrast, there is little support for the idea that the prohibition of tax discrimination promotes locational neutrality, that is, that it seeks to make neutral decisions about where taxpayers work or invest.[150]

As we stated in the Article, it is our hope that if members of the ECJ agree that competitive neutrality is indeed the principle underlying their tax discrimination decisions, they will expressly endorse it and announce it as such. That should lead to clearer, more predictable

[150] We are aware of only one prominent commentator who has endorsed the view that tax discrimination is concerned with locational neutrality. Daniel Shaviro argued that the dormant commerce clause of the U.S. Constitution should be interpreted to promote what he calls locational neutrality, which has the characteristic that it "minimizes the real social costs of production and ensures that low-cost producers will out-compete high-cost but otherwise equivalent producers." Daniel Shaviro, *An Economic and Political Look at Federalism in Taxation*, 90 MICH. L. REV. 895, 900 (1992). Thus, Professor Shaviro's notion of locational neutrality is broad enough that it encompasses competitiveness concerns as well as the allocation of assets, which is the standard interpretation of locational neutrality.

decisions. If the members of the ECJ instead regard some other norm as the principle underlying tax discrimination, we urge them to expressly identify that norm.[151]

II. Applying the Competitive Neutrality Interpretation of Tax Discrimination

In our original article, after arguing that the best interpretation of the tax nondiscrimination principle is that it seeks to promote competitiveness, we described how courts could apply that interpretation. We began the latter argument by showing what the ECJ would have to do in order to rigorously enforce competitive neutrality in tax cases. We showed that strict adherence to competitive neutrality requires what we called uniform source and uniform residence taxation. We also showed that because competitive neutrality is closely related to the concept of comparative advantage and so depends upon relative tax burdens across activities and actors, competitive neutrality will not obtain if states use different methods for taxing cross-border income. Accordingly, in order for taxation not to influence whether a national form one state or another state owns an investment or takes a job, all states must agree on one of two acceptable methods of double tax relief. We showed that competitive neutrality requires universal adoption of either an unlimited foreign tax credit or the ideal deduction method, one instantiation of which is exemption of foreign source income. That is not a result that is immediately obvious, but it follows from our analysis.

We acknowledged that the ECJ does not have the power or the authority to impose these stringent requirements (which would be even more stringent if the nondiscrimination principle were interpreted to advance CEN or CIN[152]) on the member states.[153] That is because the ECJ cannot compel states to choose one or the other method of double tax relief.[154] Accordingly, drawing inspiration from the experience of the U.S. Supreme Court with a similar tax issue, we suggested that the ECJ adopt what might be described as a variant of the U.S. "internal consistency test." Under this approach, the ECJ should uphold an alleged discriminatory tax as

[151] Mason & Knoll (2012), 121 Yale L.J. at 1116.

[152] If the nondiscrimination principle required CEN, all the member states would have to enact either residence-only taxation or worldwide taxation with unlimited credits for source taxes. If the nondiscrimination principle required CIN, no member state could tax on a residence basis (unless residence taxes were perfectly harmonized), and each member state's source taxes would have to be uniform. See Mason & Knoll (2012), 121 Yale L.J. at 1072.

[153] Mason & Knoll (2012), 121 Yale L.J. at 1074-5.

[154] Graetz and Warren argue that the ECJ has no basis to choose one method over the other. Graetz & Warren (2012), 121 Yale L.J. at 1147. We agree. Mason & Knoll (2012), 121 Yale L.J. at 1074.

long as the law was written in and enforced on a uniform source or residence basis. A challenged source tax rule is uniform if it applies the same way to workers earning income in the jurisdiction, no matter their state of residence. A challenged residence rule is uniform if it applies the same way to residents of the jurisdiction, no matter where they earn their income.

Thus, we made both a theoretical argument that uniform taxation combined with universal adoption of either ideal deduction or worldwide taxation with unlimited foreign tax credits would under ideal conditions achieve competitive neutrality and a policy argument that in the absence of authority to impose a universal method of double tax relief (worldwide tax with unlimited credits or ideal deduction), the ECJ should enforce the nondiscrimination principle by striking down non-uniform tax laws.

In our article, we claimed that under the usual economic assumptions (such as frictionless markets, no externalities, quick convergence to equilibrium, etc.) universal adoption of worldwide taxation with unlimited foreign tax credits or ideal deduction will achieve competitive neutrality. Graetz and Warren are careful not to say that they disagree with that claim.[155] They do, however, state that they could not follow our argument well enough to ascertain its validity,[156] and they expressed doubts that we have adequately demonstrated what we set out to show.[157] Accordingly, because our goal is to persuade and because different readers will prefer different levels of detail in order to find an argument persuasive, we have provided a more general derivation[158] along the lines suggested by Graetz and Warren,[159] and we have expanded the example of Françoise and Günther to cover more thoroughly parts of the argument we covered quickly in our article. These are attached as appendixes 1 and 2.

Although Graetz and Warren disagree with our interpretation of tax discrimination as concerned with promoting competitiveness, they are willing to assume such an interpretation for

[155] Graetz & Warren (2012), 121 Yale L.J. at 1146.
[156] Graetz & Warren (2012), 121 Yale L.J. at 1145-46.
[157] Graetz & Warren (2012), 121 Yale L.J. at 1145-46 .
[158] Of course, no proof or derivation is fully general.
[159] Graetz & Warren (2012), 121 Yale. L. J. at 1143-44

the purpose of evaluating our enforcement claims.[160] However, even assuming such an interpretation of tax discrimination and assuming that uniform source and residence taxation are both required for competitive neutrality, Graetz and Warren raise several direct criticisms of our enforcement claims. In this section, we have tried to organize those criticisms according to whether they are most directly a criticism of our theoretical argument (which Graetz and Warren label "full competitive neutrality") or our policy argument (which Graetz and Warren label "partial competitive neutrality"). With respect to our theoretical claim, Graetz and Warren argue that: (1) the ideal deduction method cannot accommodate graduated tax rates;[161] (2) the ideal deduction method, even if it works with graduated tax rates, will not work with tax base differences that reflect personal circumstances;[162] and (3) the ideal deduction method is based on the implausible assumption that residence is fixed.[163]

With respect to our policy recommendation, Graetz and Warren argue that (1) our approach to tax discrimination is unrealistic because it relies on the acceptance of one or more tax systems that do not resemble any current, real world tax systems;[164] (2) tax discrimination cannot be discerned by looking at what just one state does, but requires consideration of the impact of taxation by both the source and residence states.[165] Finally (3), Graetz and Warren offer three examples for us to consider, which they assert are typical of the kinds of cases any comprehensive theory of tax discrimination must be able to handle, but for which our proposals give no guidance.[166]

[160] Graetz & Warren (2012), 121 Yale. L. J. at _. Graetz and Warren, however, argue that the strictness of the conditions required for competitive neutrality is an argument against a competitive neutrality interpretation of tax discrimination. In contrast, we view the treaties as promoting competitive neutrality and believe that no one at the time of their enactment had rigorously thought through what competitive neutrality required.

[161] Graetz & Warren (2012), 121 Yale. L. J. at 1149-51.

[162] Graetz & Warren (2012), 121 Yale. L. J. at 1149.

[163] Graetz & Warren (2012), 121 Yale. L. J. at 1148. Presumably, the same criticism applies to residence-based taxation only or worldwide taxation with unlimited foreign tax credits.

[164] Graetz & Warren (2012), 121 Yale. L. J. at 1152.

[165] Graetz & Warren (2012), 121 Yale. L. J. at 1164.

[166] Graetz & Warren (2012), 121 Yale. L. J. at 1124-26.

A. Criticism of the Theoretical Claim: "Full" Competitive Neutrality

1. Ideal Deduction and Graduated Tax Rates

Graetz and Warren assert that the ideal deduction method does not work with progressive tax rates.[167] Graetz and Warren support their claim through an example involving a taxpayer (call her Ida) who earns €10,000 at home (say Italy) where the source tax rate is 10% and €10,000 abroad (say Austria) where the source tax rate is 5%. Ida also faces a progressive Italian residence tax structure with a 15% tax rate on the first €10,000 and 30% thereafter. As Graetz and Warren describe, under ideal deduction, Ida will pay €1,000 in Italian source taxes and €500 in Austrian source taxes. Under ideal deduction, Ida's total residence taxable income is €18,500—€20,000 less the €1,500 in Italian and Austrian source taxes—and so her residence tax will be €4050. Graetz and Warren then ask, "how much of the residence tax is attributable to the foreign income? Is it half . . . or 95/185? Without an answer to these questions, the taxpayer cannot make the (necessary) calculations."[168] Graetz and Warren then continue by assuming that the residence tax rate is zero and ask the same questions.

In order to evaluate their assertion that our approach does not work with graduated tax rates, their example needs to be extended. Our claim is that the ideal deduction method will not distort competitive neutrality even in the presence of a progressive residence rate structure. Their numerical example does not provide for a decision that could be affected by a violation of competitive neutrality. Without a decision to make, there is not enough structure to apply our method or test their assertion. To introduce such a decision, assume that there is an option to add a third job either in Italy or Austria (we will call this third job Job 3I or Job 3A, depending on whether it is located in Italy or Austria). In addition, assume there is another taxpayer, call him Andreas, who we will assume, continuing with Graetz and Warren's example, resides in Austria, which does not impose a residence level tax. Andreas has the same first two jobs as Ida (one each in Italy and Austria paying €10,000), and he is considering adding a third job, either Job 3I or Job 3A. A second taxpayer is necessary because our claim is that the ideal deduction method will not distort the competition between or among taxpayers, so testing our claim requires more

[167] Graetz & Warren (2012), 121 Yale L.J. at 1149-51.
[168] Graetz & Warren (2012), 121 Yale L.J. at 1150.

than one taxpayer.[169] Assuming that both taxpayers would earn €10,000 in either incremental job (Job 3I or Job 3A),[170] then, *in the absence of taxation*, neither one would have a comparative advantage over the other for either job.[171]

This can be seen as follows. If Ida took Job 3I, she would earn an additional €10,000 in Italy, whereas if she took Job 3A, she would earn an additional €10,000 in Austria. Thus, the ratio of Ida's earnings on Job 3I to her earnings on Job 3A is 1. Similarly, Andreas, because he also earns €10,000 in either position, also has a ratio of 1. Because these ratios are the same, neither taxpayer has a comparative advantage in seeking either position.

Now introduce taxation. Consider Andreas who resides in Austria, which has no residence taxation. Given a 10% source tax rate in Italy, he will earn, if he takes Job 3I, €10,000, pay €1,000 in tax, and be left with €9,000. Alternatively, if he takes Job 3A, he will receive €10,000 pay €500 in Austrian source tax, and be left with €9,500. Thus, the ratio of his incremental after-tax earnings from taking Job 3I to his incremental after-tax earnings from taking Job 3A is .947. Now consider Ida, who resides in Italy and is subject to progressive residence taxation. If she takes the third job in Italy, she earns an additional €10,000, pays an additional €3,350 in tax, and is left with an €6,650.[172] Alternatively, if she takes the third job in Austria, she still earns an additional €10,000; she pays an additional €3,700 in tax and is left with an additional €6,300.[173] Thus, the ratio of her incremental after-tax earnings from taking her third job in Italy to her incremental after-tax earnings from taking her third job in Austria is .947. Because the ratios are the same for Andreas and Ida, the tax system has not compromised competitive neutrality. Note

[169] It is widely accepted that taxation will reduce the incentive to work. The debate is over the magnitude of the effect and the importance of the income effect. The substitution effect of a higher income tax rate is to reduce work. In the language of international taxation, this would be a violation of the labor analogue of CIN.

[170] The assumption that both jobs pay €10,000, but that local source taxes are different, is somewhat problematic. It suggests that there is some difference between the jobs that is not specified.

[171] The example assumes that a taxpayer does not change his or her state of residence by taking one or the other job.

[172] Ida's incremental cash flow is calculated as follows. Her €10,000 in earnings in Austria incurs Austrian source tax liability of €500. She reports €9,500 income to Italy, her state of residence. At her 30% marginal tax rate, she pays €2,850 more in residence tax. Thus, her total tax obligation on the incremental €10,000 is €3,350, which leaves her with an incremental €6,650 after all taxes.

[173] Ida's incremental cash flow is calculated as follows. Her €10,000 in earnings in Italy incurs Italian source tax liability of €1,000. She reports €9,000 income to Italy, her state of residence. At her 30% marginal tax rate, she pays another €2,700 in Italian residence tax. Thus, her total tax obligation is €3,300, which leaves her with an incremental €6,700 after all taxes.

that the progressive tax system has not compromised competitive neutrality, even though the tax rates differ across the taxpayers. Competitive neutrality is not compromised, in spite of the different tax rates, because each taxpayer is subject to the same schedule regardless of which job he or she takes.[174] Thus, not only does our approach accommodate progressive taxation, but it allows each state flexibility in determining its own schedule of progressive tax rates (i.e., it does not require rate harmonization). This outcome is more respectful of member state tax sovereignty and national tax interests than are, for example, Graetz and Warren's suggestions for various methods of tax harmonization.[175]

2. Ideal Deduction and the Tax Base

Graetz and Warren also claim that the ideal deduction method is not compatible with tax base differences that reflect differences in personal circumstances.[176] They do not provide an argument or an example to support their assertion. Accordingly, we constructed the following example to illustrate how such differences can be incorporated into ideal deduction without compromising competitive neutrality.

Consider similar jobs in Bulgaria and Romania. The jobs in both states can be filled by residents of either state. Consider a job that pays €100 a week in Romania, which has a 20% source tax. A worker who takes such a job will receive €80 after paying the Romanian source tax. Assume that Bulgaria, which has a 50% source tax, has a provision in its tax law that allows a taxpayer with Bulgarian-source income a deduction against that income for certain personal circumstances. The deduction is offered on a uniform *source* basis—that is, it is available to both Bulgarian and non-Bulgarian residents who work in Bulgaria. Assume further that for a certain category of workers, those deductions total €20. For now, assume that neither country assesses residence-based taxes. Assuming a competitive market for workers between Bulgaria

[174] The logic is the same for the more complex example to which Graetz and Warren make a brief reference. That example, an opera singer who is taxed in her country of residence at graduated rates and who has offers to perform in 20 countries, but who can accept only 10 of those offers. See Graetz & Warren (2012), 121 Yale L.J. at 1151.

[175] *See supra* notes ___–___ and accompanying text (discussing Graetz and Warren's argument that one coherent way forward for the ECJ in tax discrimination cases would be to choose among the following three options: (1) always apply only the source state's tax law (destination rule) (2) always apply only the residence state's tax law (origin rule) or (3) harmonize the tax laws of all the member states).

[176] Graetz & Warren (2012), 121 Yale L.J. at 1149.

and Romania (and that prices in Bulgaria are determined by prices in Romania), the Bulgarian job will pay €140 a week in equilibrium. A worker who takes a job in Bulgaria earns €140, takes a €20 deduction, and so reports taxable income of €120. At a 50% Bulgarian source tax rate, the worker pays €60 in tax, and so is left with €80. In this simple example, both Bulgarian and Romanian residents earn €80 after source taxation, regardless of where they work. Consequently, workers are indifferent as to whether to work in Bulgaria or Romania and there is no competitive distortion from the tax system, despite the differences in deductions available in Romania and Bulgaria. [177]

In contrast, if the Bulgarian tax system does not offer the deduction *uniformly* to both Bulgarians and Romanians working in Bulgaria, then the tax system will not be neutral with respect to the decision of which job to take. If Romanians are denied the deduction, then assuming the Bulgarian job pays €140, Romanians will take home only €70 when they work in Bulgaria.[178] They will then prefer to work in Romania (where their take home pay is €80) rather than Bulgaria (where their take home pay is €70). Thus, the nonuniform tax system will have had the effect of distorting the matching of workers with jobs.[179] Thus *nonuniformly* applied differences in tax bases will distort competition, and should, under our analysis, be struck down as discriminatory by the ECJ.

This example can be extended from an exemption system to the ideal deduction method by introducing the possibility of residence taxation in addition to source taxation. Assume Bulgaria has a uniform 10% residence tax that is assessed on the after-source-tax income of

[177] That there is no competitive distortion from the Bulgarian and Romanian source taxes can be shown as follows: The relative productivity of Romanians working in Romania (€140) relative to Bulgaria (€100) as compared with Bulgarians working in Romania (€140) relative to Bulgaria (€100) is equal to 1. That is because ((€140/€100)/(€140/€100)) is equal to 1. Similarly, the relative after-tax wage of Romanians working in Romania (€80) relative to Bulgaria (€80) as compared with Bulgarians working in Romania (€80) relative to Bulgaria (€80) is also equal to 1. Because the tax system has not altered the ratio of after-tax wages across states such that it differs from the ratio of before-tax productivity, there is no distortion.

[178] Bulgarians will earn €140 and pay €70 tax on that amount. They will, thus, take home €70.

[179] That the non-uniform Bulgarian tax base distorts the competition between Bulgarians and Romanians for jobs can be shown as follows: The relative after-tax wage of Romanians working in Romania (€80) relative to Bulgaria (€70) as compared with Bulgarians working in Romania (€80) relative to Bulgaria (€80) is equal to 1.14. In contrast, the relative productivity of Romanians working in Romania (€140) relative to Bulgaria (€100) as compared with Bulgarians working in Romania (€140) relative to Bulgaria (€100) is still equal to 1. Thus, because the non-uniform Bulgarian tax base has not altered the ratio of after-tax wages across states (1.14) such that it differs from the ratio of before-tax productivity across states (1), there is a distortion. The distortion will encourage the Romanians to work at home rather than Bulgaria.

Bulgarian residents regardless of where they earn their income. Because Bulgarian residents earn €80 after paying Bulgarian or Romanian source tax, they will pay €8 in Bulgarian residence tax and be left with €72 after both source and residence taxes. Assume Romania imposes a 30% residence tax on the after-source-tax income of Romanian residents regardless of where that income is earned. Assume in addition that Romania provides a €30 deduction to offset some specified personal circumstance. Assuming that the Romanian personal deduction is available on a uniform *residence* basis, which is to say that Romanian residents receive the deduction on the same terms, no matter whether the source of their income is Romania or Bulgaria, then Romanians will report €50 in residence income (the €80 after-source-tax amount less the €30 deduction) to Romania, pay €15 tax, and be left with €65 after all taxes regardless of where they work. Because Bulgarians and Romanians are still indifferent as to where they work, the tax system has not distorted the competition between Bulgarians and Romanians for jobs.[180] Notice that our approach accommodates source- or residence-based tax base differences. As long as states apply their tax bases uniformly—on a uniform source basis to all taxpayers working in the jurisdiction no matter their state of tax residence and on a uniform residence basis to all residents no matter the source of their income—tax bases can differ across states.

This last point is worth emphasizing. The tax systems just described, including the tax base adjustments, do not distort the competition among nationals from different states for jobs because the tax rates and bases are uniformly applied, despite the wide variety of entitlements available to taxpayers in the different scenarios presented here. In our example, a Romanian resident who works at home receives one €30 deduction that is worth €15 after-all-taxes, whereas a Romanian resident who works in Bulgaria receives two deductions (one from Romania and one from Bulgaria) totaling €50 that are together worth €19 after-all-taxes. However, a Bulgarian who works in Romania does not receive any deductions, whereas a Bulgarian who works in Bulgaria receives one €20 deduction that is worth €4 after-all-taxes. Nonetheless, in spite of the differing numbers of deductions (0, 1, or 2), their total amounts (0, €15, €20, or €50), and their after-tax values (0, €4, €15, or €19), there is no violation of

[180] More formally, the uniform Bulgarian and Romanian residence taxes (including the uniform deduction) have not compromised competitive neutrality. There is no distortion because the relative after-tax wage of Romanians working in Romania (€65) relative to Bulgaria (€65) as compared with Bulgarians working in Romania (€72) relative to Bulgaria (€72) is equal to 1, which is also the ratio of their relative productivities.

competitive neutrality. There is no violation because each state confers the deductions on either a uniform source or a uniform residence basis. Moreover, attempts to equalize the number, total amount, or value of the deductions (without harmonizing rates and bases) will compromise competitive neutrality. Thus, the deductions a taxpayer receives (i.e., the tax base) can differ depending upon where a worker resides and works without introducing competitive distortions, as long as the deductions (i.e., any tax base differences) apply on either a uniform source or uniform residence basis. This is an important advantage of competitive neutrality—it can be implemented without the need to harmonize tax bases, which allows member state to retain significant autonomy to pursue policies through their tax codes.

3. Ideal Deduction and the Assumption of Fixed Residence

Graetz and Warren argue that our results are severely limited by our assumption of fixed residence. According to Graetz and Warren, the fixed residence assumption implies that the ideal deduction method will not work to ensure competitive neutrality either when the worker has to move in order to change jobs or when the relevant taxpayer is an investor (or a corporation).[181] In effect, they claim that the usual tax residence rule (a taxpayer becomes a resident of any state in which he resides for 6 or more months) will create a distortion that will interact with other distortions such that ideal deduction will not produce a competitively neutral equilibrium. We believe Graetz and Warren overstate their case markedly.

As we stated in our article, the residence rule can create a distortion only when the competition involves jobs that cross the residence threshold, i.e., non-commuting jobs lasting longer than six months.[182]

As Graetz and Warren recognize, if one is competing for a series of short jobs, such as the example Graetz and Warren provide of an opera singer who will give 20 performances over the

[181] Graetz & Warren (2012), 121 Yale L.J. at _.

[182] Graetz & Warren (2012), 121 Yale L.J.1071, n.170. For commuters who meet the six month threshold in more than one state (for example, because they cross national borders daily), residence-tie-breaker rules in bilateral tax treaties will generally select the state where the taxpayer has his permanent home as the residence state, whereas the work state will be the source state. Such commuters thus constitute cross-border workers and fall comfortably within our analysis. *See* OECD Model Tax Treaty, art. 4. Thus, the class of workers that concern Graetz and Warren are only those who have to move to the work state for six months or more in order to be able to perform the job.

year, then because each performance is a short-term job, the decision to accept or not a particular engagement will not affect the singer's tax residence.[183] Thus, the same residence tax system will apply regardless of the job choices and so the residence rule does not distort job selection. Hence, it does not interfere with competitive neutrality.

Next, consider positions that practically require the taxpayer take up residence in the state where the work is performed in order to accept the position. Almost any long-term job requiring the service to be performed regularly on site and which is located far from a border would fall into this category. There are many such examples, including doctors, executives, and clerks. Graetz and Warren claim that such jobs are outside the scope of our project. They are correct in the sense that if one changes his or her residence in order to take such a job there is no issue of tax discrimination regardless of how the new state taxes because the taxpayer *both* resides and works in the same state, and the prohibition of tax discrimination applies only in cross-border cases, not in "purely internal" cases. True enough, but note that, contrary to Graetz and Warren's claim, there also would not be a competitiveness problem if the new state of residence imposes ideal deduction with uniform source and residence taxes as we suggest. In such cases, there is taxation by only one state, although such a tax might be in two jurisdictional postures (source and residence). Thus, ideal deduction and uniform taxation promotes competitiveness between nationals from different states (including those who change their state of residence subsequent to moving for a job).

As we described in our article, the only circumstances in which the residence rule can create distortions is when employment crosses the residence threshold.[184] If, for example, a job can last 4 months (in which case residence remains as before the job) or 8 months (in which case residence shifts to the new location), then there can be a distortion that can affect the competition for work. That is certainly possible, but it would not seem to be common.[185]

[183] Graetz & Warren (2012), 121 Yale L.J. at 1151. Their objection with the opera example is to graduated tax rates. We showed how to incorporate graduated tax rates in *supra* Part II.A.1 .

[184] Mason & Knoll (2012), 121 Yale L.J. at 1071, n. 170.

[185] Moreover, even in such instances, there arguably still might be no violation of competitive neutrality. That is because even in such cases, there is symmetry between nationals and non-nationals inasmuch as both have the same incentive to avoid working in a state long enough to be a resident if that state taxes its residents unfavorably. Thus, because the current residence rule is symmetric between residents and non-residents, both have the same

Graetz and Warren also assert that our analysis is inapplicable to capital whether owned by an individual or a corporation. Again, they do not specify their argument. What they seem to be asserting is that our claim that ideal deduction (and worldwide taxation with unlimited foreign tax credits) will achieve competitive neutrality only holds under the assumption that residence is fixed. But investors (and corporations) can readily change their residence. Therefore, Graetz & Warren seem to imply that ideal deduction (or worldwide taxation with unlimited credits) will not produce competitive neutrality for capital investments because investors (and corporations) are free to move away from their capital. Although we agree that many investors can readily change their place of residence, we disagree with the conclusion that such freedom somehow implies that ideal deduction (or worldwide taxation) will not achieve competitive neutrality. In contrast with work, which forces most people either to live near where they work or to change jobs, investors generally do not need to live near their investments. For such investors, the residence choice can be largely divorced from the investment choice. Thus, wherever such investors reside, they are likely to hold investments elsewhere. Accordingly, to protect such investors from protectionist legislation, the uniformity requirements with ideal deduction are needed.[186]

B. Criticism of the Policy Claim: "Partial" Competitive Neutrality

1. Ideal Deduction is Unrealistic

We now shift to Graetz and Warren's criticisms of our policy recommendation that courts, in the absence of the ability to enforce all of the requirements of "full competitive neutrality," should require uniform source and residence taxation. Graetz and Warren argue that even if we are correct that ideal deduction will preserve competitive neutrality when there are differences in tax bases and progressivity, the tax systems we discuss and describe are so far removed from real world tax systems as to be impractical.[187] We have several responses here.

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incentive to avoid residence in the high-tax state. Hence, arguably even in this circumstance, there is no violation of competitive neutrality.

[186] See supra note _ - _ and accompanying text

[187] Graetz & Warren (2012), 121 Yale L.J. at 1152.

First, as Graetz and Warren recognize, it is common to analyze international tax policy using ideal types such as exemption and worldwide taxation with unlimited foreign tax credits.[188] Graetz and Warren themselves employ this technique in their own work, and our analysis in terms of ideal deduction is similar. It is useful to understand the ideal forms that must be employed to achieve specific tax neutrality benchmarks even when any real world system is likely to fall short of that goal.[189]

Second, the ideal deduction method is in fact closer to actual practice than Graetz and Warren acknowledge. Exemption is a form of ideal deduction. Under an exemption system that also satisfies the requirements of ideal deduction, the first stage of taxation would consist of uniform source taxes at whatever rate each source country selects autonomously, and the second stage would be uniform residence taxation where every country sets the residence tax rate to zero. Most of the member states already employ exemption tax systems (although none implements exemption perfectly, which they would all have to do to achieve full competitive neutrality).

Moreover, there are real world examples of two-stage taxation in which the second stage tax rate is not set to zero. For example, many aspects of the social welfare and support system that are administered through the tax laws have these qualities. Such provisions are often granted on a uniform residence basis, despite the taxation of earned income taxed on a source basis.[190] However, the clearest example of the ideal deduction method is the classical corporate income tax. With such a tax, the corporation is taxed on its income and the investor is taxed on the same income. The investor is typically taxed on dividends, which are clearly and explicitly an after-tax cash flow, and capital gains, which are implicitly so. Thus the classical double tax system is one in which the source country taxes the profits to the corporation, and the residence country taxes the after-tax profits (i.e., the corporate profits after deduction of source state corporate taxes) to the shareholder. This is similar to how the ideal deduction method works—the source

[188] Graetz and Warren recognize this. Graetz & Warren (2012), 121 Yale L.J. at 1151.

[189] Proponents of eliminating deferral of taxation of foreign corporate income often defend that policy on the ground that such a change would move the tax system closer to CEN. However, few, if any, of those proponents would endorse all the steps, including unlimited foreign tax credits, necessary to achieve CEN.

[190] In addition, in many, although not all instances, the benefits are a function directly or indirectly of after-tax income. Where the residence state provides benefits on a uniform residence basis, this can be thought of as a second stage of taxation in which the tax rate is negative.

state taxes the worker's earned income, and then the residence state taxes the same income after allowing a deduction for source taxes.

Moreover, states often impose a withholding tax on dividends paid to foreign shareholders. Because such a tax is not imposed on dividends paid to domestic shareholders, the dividend withholding tax represents a differential (i.e., non-uniform) treatment of foreign and domestic shareholders. The effect of that differential treatment is to discourage foreign shareholders relative to domestic shareholders from investing in domestic companies. As Graetz and Warren recognize, bilateral treaties tend to reduce withholding tax rates.[191] By doing so, they are moving the tax system's treatment of investments in corporations closer to ideal deduction.[192]

2. One-State or Multistate Approach

In our article, we argued that one advantage of adopting the requirement of uniformity as the key enforcement guideline for tax discrimination is that it would make tax discrimination cases reasonably straightforward to resolve because, among other reasons, the courts would only have to look at the law of one state to determine whether that state discriminated.[193] If a law is uniform either on a source or residence basis, the law is not discriminatory; otherwise it is discriminatory. Graetz and Warren see our one-state approach, not as an advantage, but as a failing. In their words, "[o]ur own view is that any serious attempt to identify the tax advantages or disadvantages for cross-border income should take account of the tax consequences in both countries."[194] Graetz and Warren provide no reasons, arguments or examples to support that assertion. That makes it difficult to respond. What they might have in mind is given by the following example.

[191] Graetz & Warren (2006), 115 Yale L.J. at 1209.

[192] An interesting question raised by the tax treatment of corporations is how to integrate the corporate and individual income tax systems without compromising competitive neutrality and whether and how the ECJ's extant jurisprudence on this topic furthers competitive neutrality. That important question is beyond the scope of this sur-reply, but it merits attention.

[193] The court would still have to consider whether any discrimination was justified before declaring a policy unlawful. The ECJ has held that a defendant member state could cure its discrimination by securing in a bilateral tax treaty with another state a promise from the other state to rectify the discrimination (for example, by providing a tax credit that would undo the discrimination). However, if the second state does not actually cure the discrimination, despite its obligation in the bilateral tax treaty, the ECJ has said that the obligation to cure would revert to the defendant state. *See, e.g.*, Case C-170/05, Denkavit Internationaal BV, 2006 E.C.R. I-11949; Case C-379/05, Amurta, 2007 E.C.R. I-9569.. *See also* W. Hellerstein, et al., Constitutional Restraints on Corporate Tax Integration, 62 Tax L. Rev. 1, 30-32 (2008) at 30-32.

[194] Graetz & Warren (2012), 121 Yale L.J. at 1164.

Assume Finland taxes (non-corporate) investments in Finland by domestic residents at 40% and that Finland also taxes inbound (non-corporate) investments at a higher rate, say 50%.[195] This scheme violates the uniformity rule because it applies different source tax rules to residents and nonresidents. Therefore, we would say that the Finnish tax system discriminates against nonresidents.

Assume, however, that Sweden, which taxes both Swedes and non-Swedes at 30% on their (non-corporate) investments in Sweden, also provides a 10% subsidy to Swedes who make (non-corporate) investments in Finland. The Swedish subsidy exactly offsets the incremental burden of the non-uniform Finnish tax on Swedes investing in Finland. In such circumstances, the tax systems of Sweden and Finland taken together achieve CON. Moreover, if our uniformity rule is adopted by the ECJ, and the result is that Finland reduces the tax rate on inbound investors from 50% to 40%, the resulting tax system will not be competitively neutral as long as Sweden continues to subsidize its residents' investments in Finland. Swedes will have a tax-induced advantage when acquiring (non-corporate) assets in Finland. In contrast, a more exhaustive approach that looked at both source and residence states would recognize that the Swedish subsidy offsets the higher Finnish tax and would lead to the correct result.

We offer two observations in response. First, the Swedish subsidy is a non-uniform residence subsidy, and as such, it will create competitive distortions when it interacts with the uniform (i.e., competitively neutral) source tax rules of member states other than Finland. Thus, upholding Finland's non-uniform source tax because Sweden has a non-uniform residence tax that just happens to perfectly offset the competitive distortion introduced by Finland against Swedes does little to advance competitive neutrality overall. In any case where the residence state, unlike Sweden, does not enact a compensatory subsidy to overcome its residents' adverse treatment in Finland, the non-uniform Finnish source tax will violate competitive neutrality. Thus, a two-state (or multistate) approach raises the possibility that the same Finnish residence

[195] If Finland provided its resident taxpayers with a 10% subsidy on their foreign investments, then the Finnish tax system would be uniform on both a source and residence basis, so to make things simple, we further assume further that Finland does not tax residents on their income from foreign investments.

rule could be held to be nondiscriminatory when applied to Swedes, but discriminatory when applied to residents of other EU member states.[196]

It, thus, follows that the complexity of the ECJ's requisite analysis multiplies as the number of member states increases. That can be seen by extending the example. Consider a third country, Estonia, which taxes both Estonians and non-Estonians at 20% on non-corporate investments in Estonia and which does not generally tax Estonians on their income from foreign investments. Such a tax scheme is competitively neutral because it is uniform (and therefore we would say it is nondiscriminatory). But in order for the (non-uniform) Finnish tax system to maintain competitive neutrality when applied to inbound investment Estonians, Estonia must provide its residents with a 10% subsidy when they invest in Finland, but not when they invest in Sweden.

Consider now a fourth country, Latvia, which similar to Finland taxes nonresidents at a higher rate than residents on their (non-corporate) investments in Latvia. Assume Latvia taxes Latvians at 20%, but it taxes non-Latvians at 35%. Assuming Latvia does not generally tax its residents on their foreign source (non-corporate) investment income, Latvia still must provide a 10% subsidy for Latvians investing in Finland in order for the Finnish tax system not to compromise competitive neutrality. In addition, Finland must provide its residents with a 15% subsidy when investing in Latvia to maintain competitive neutrality. Moreover, Sweden and Estonia, which already must provide their residents who invest in Finland a 10% subsidy to prevent Finland from violating competitive neutrality, must also provide their residents with a 15% subsidy when investing in Latvia to prevent Latvia from violating competitive neutrality.

As the number of member states expands, the complexity increases. With 28 member states, the analysis would be very complex and cumbersome.[197] And for what purpose? How likely is it that any single state's discriminatory tax policy would be perfectly offset by the policies of all

[196] Likewise, if the ECJ began to strike down cases of "reverse discrimination," the Swedish nonuniform residence subsidy might be held to be nondiscriminatory when applied to investments in Finland, but discriminatory when applied to investments elsewhere in Europe.

[197] To determine whether one state's policies discriminate against residents of the other member states, requires looking at how that state treats its residents and the residents of the other 27 member states. If one is looking to draw conclusions about a specific tax policy in general, then the same exercise has to be done for each of the 28 member states. That leads to 784 [=28 x 28] possible nodes.

the 27 other member states? Presumably, very unlikely. (Talking about holy grails!) And at what cost? The data requirements would be extensive; the litigation costs would likely be very large; and the judicial system will provide less useful guidance. And it is even possible that the TFEU's prohibition on state aids would be interpreted to limit the states' use of such compensatory subsidies.[198]

The doctrine of the U.S. Supreme Court is instructive in this area. The Court has refused to analyze the impact of other states' tax laws when considering whether a defendant state engaged in tax discrimination in violation of the dormant Commerce Clause, even though other states' rules may interact with the tax rules of the defendant state. According to the Supreme Court, the constitutionality of the accused state's tax law should not "depend on the shifting complexities of the tax codes of 49 other States." [199] Because we agree with this line of thinking, we would argue that the ECJ has taken the wrong path on those occasions when it has taken a two-state approach. Rather, each state's tax law must stand or fall on its own merits.

Our second observation is that in order to compensate its residents for the non-uniform source tax imposed by Finland (Finland taxes domestic investors at 40%, but foreigners at 50%), Sweden provides a 10% subsidy on its residents' investment that is outbound to Finland. This means that Sweden expends its public resources to maintain a level tax playing field for its residents who invest in Finland. Sweden forgoes 10%, and Finland receives an extra 10%. This creates a revenue shift that rewards Finland for its discrimination.

3. Three Examples

Graetz and Warren give three examples and argue that a competitive neutrality approach to nondiscrimination would not clarify how to resolve them. Earlier we discussed the first example,

[198] At the same time, one should keep in mind how easy it is to be confused about whether a tax or subsidy is needed to offset another state's policies. As we described both in the prior section and in our Article, it is readily intuitive, but wrong that tax benefits should be available to everyone "once, somewhere" and that a cross-border tax system that conveys different levels of benefits to similar people who reside and earn income in different states is not necessarily in violation of competitive neutrality. As long as those policies are applied on a uniform source and residence basis, they will not violate competitive neutrality.

[199] ARMCO Inc. v. Hardesty, 467 U.S. 638, 644 (1984).

which involved a charity that was subject to a restrictive regulation in another member state. We will not revisit that example here, except to note that our goal was to provide guidance in discrimination cases, not necessarily in restriction cases.

The second example offered by Graetz and Warren involves corporate tax integration. They ask whether a country that grants tax credits to resident individuals for corporate taxes paid on local source income (e.g., imputation credits) should be required to extend those credits to cover corporate taxes paid to foreign governments on foreign source income.[200] That is a very important question. As mentioned above and in our article, we have tried to avoid discussing corporate tax examples in our original article and this sur-reply, even though our approach has applications in that area, because of the extensive background and detail that would be required to address those issues. At the risk of not adequately preparing interested readers not familiar with the complexities of corporate taxation (both domestic and international), we will respond briefly to the challenge.

We start by recognizing that it is possible to talk about competitive neutrality in the corporate tax context (i.e., CON) at two levels: the level of the corporation making investments and the level of investors in the firm. The combination of a uniform and flat source tax on corporations and a uniform (although not necessarily flat) residence tax on investors will achieve competitive neutrality at both levels. Accordingly, granting such credits on a uniform source *or* residence basis will preserve competitive neutrality. Thus, if the country grants the imputation credit on a residence basis, it would have to extend it to all residents, including those who have foreign-source corporate dividends. In contrast, if the country grants the imputation credit on a source basis (i.e., against all dividends issued by resident corporations), the credit would have to apply to all dividends sourced within the territory, whether the shares were owned by resident or foreign shareholders.[201] However, granting the credit on a non-uniform source or a non-uniform residence basis (i.e., imputation credits only for resident shareholders of resident companies) would disrupt competitive neutrality on at least one level and possibly at both levels.[202]

[200] Graetz & Warren (2012), 121 Yale L.J. at 1165.

[201] If the imputation credit is granted on a source basis, then for the shares held by foreign investors the source state would provide a refund either to the corporation or to the foreign shareholders.

[202] These results are demonstrated through an example in Appendix III.

The third example offered by Graetz and Warren is that of a same sex couple who marries in one state where such marriages are recognized but who, in order to take jobs, subsequently moves (long enough to establish tax residency) to a second state that does not recognize such marriages. Graetz and Warren ask whether the second state should be required to recognize their marriage. According to Graetz and Warren, if the second state fails to recognize the marriage, the couple will be dissuaded from moving to the second state in order to take jobs for which they, by hypothesis, have a comparative advantage.[203] The conclusion that they will be persuaded from moving, however, does not follow. Assuming that the relevant jobs in the second state require residence there as a practical matter, then everyone competing for those jobs has to be a resident of that state (i.e., we're in a purely internal situation). In such circumstances, everyone who competes for those jobs will be subject to the local rules, including the rule failing to recognize same-sex marriages.[204] Thus, the rule applies to everyone considering taking the job (i.e., it is uniform), and therefore will not violate competitive neutrality.

If Graetz and Warren mean that differences in marriage law across different member states will affect residence decisions; they are correct. But there is no evidence that the nondiscrimination principle of the TFEU aims to make residence decisions neutral, indeed, there is much evidence of the opposite. The intent in the EU appears to be, at least in part, to set up regulatory competition among the member states, and although this may have originally primarily encompassed competition for economic regulation, member states also compete for residents though social regulation. There is much evidence in cases that one of the overarching goals of the TFEU is to create regulatory competition, at least in those areas (including direct tax) not harmonized at the EU level.[205]

[203] Graetz & Warren (2012), 121 Yale L.J. at 1165.

[204] Of course, the same sex couple might be competing with others, some who are married and others who are not, for the same jobs. As commentators have long recognized the taxation of married couples as a unit as opposed to taxing all individuals on their own terms distorts job choice within a single jurisdiction. Not surprisingly, our approach cannot cure ownership distortions that would exist in a single jurisdiction or with a harmonized tax system. However, recognizing that the free movement rights and the nondiscrimination principle are concerned with competitive neutrality would help to frame the issue.

[205] See discussion in *supra* note 104 and Part I.B.4.

III. Conclusion

In their 2006 article, Graetz and Warren argued that the ECJ's tax discrimination jurisprudence accorded with neither CEN nor CIN.[206] We agree with that conclusion.[207] Graetz and Warren further argued (relying on the well-known proof of the impossibility of simultaneously achieving both CEN and CIN without harmonizing taxes) that because CEN would impose nondiscrimination obligations only on residence states, and CIN would impose obligations only on source states, the simultaneous imposition of nondiscrimination obligations on both source and residence states was incoherent and erected, in their terms, a "labyrinth of impossibility."[208]

It is with this latter conclusion that we disagreed. In our view, imposition by the ECJ of nondiscrimination obligations at both source and residence does not necessarily show that the Court was trying to do the impossible by trying to enforce *both* CEN and CIN, a goal that is impossible to achieve in the absence of tax rate harmonization. Instead, our argument is that imposition of nondiscrimination obligations at both source and residence is consistent with competitive neutrality—an efficiency norm that Graetz and Warren did not consider in 2006. One virtue of reconciling the imposition of nondiscrimination obligations at both source and residence with a coherent efficiency goal is that, as we say in the article, it accords with the intuition that "states may impermissibly discriminate in either capacity: when taxing in a source capacity, they may discriminate between resident and nonresident workers; when taxing in a residence capacity, they may discriminate between residents' foreign and domestic income."[209]
We also argued that a competitive neutrality interpretation of nondiscrimination fits the ECJ jurisprudence better than does either CEN or CIN. And we argued that a competitive neutrality interpretation of the tax nondiscrimination principle can be supported by the language of the treaty, history, and the policy goals of political and economic union (although we did not attempt the kind of through-going normative analysis that would enable us to conclude that competitive neutrality is the best possible interpretation of the tax nondiscrimination principle from an

[206] Graetz & Warren (2012), 121 Yale L.J. at 1212-23.
[207] Mason & Knoll (2012), 121 Yale L.J. at 1051-1053.
[208] Graetz & Warren (2012), 121 Yale L.J. at 1243.
[209] Mason & Knoll (2012), 121 Yale L.J. at 1106.

efficiency perspective).[210] We regard as a separate question whether one *ought* to interpret the nondiscrimination principle as promoting competitive neutrality if one were choosing an efficiency norm for the European Union from scratch and were not constrained by the existing EU treaties and the ECJ's interpretations of those treaties. Indeed, as Graetz and Warren point out, in our article we concede that many economists would regard locational distortions as more welfare-reducing than competitive distortions.[211]

Our project, then, stands in contrast with that of Graetz and Warren's. They examined the substantive outcomes in tax cases and criticized the ECJ's infringement on EU member states' tax sovereignty. Tax policy, in Graetz and Warren's view, ought to be made by the member states, not the ECJ. At times, therefore, Graetz and Warren seem to advocate that the ECJ should abandon its nondiscrimination jurisprudence. For example, they state that our own analysis "confirm[s their] view that constitutional courts should not be making tax policy based on abstract and contradictory principles of nondiscrimination."[212] But while we acknowledge that nondiscrimination principles are notoriously slippery, it is not clear what alternative the ECJ has to deciding such cases. The TFEU clearly provides that member states may not discriminate against EU nationals when they exercise their fundamental freedoms. Likewise, the TFEU provides a clear procedure for national courts to refer to the ECJ questions of EU law for preliminary ruling.[213] The ECJ cannot simply reject such ruling requests, and to do so would simply result in even more haphazard results, as there would be no supranational court that could reconcile the conflicting interpretations of the TFEU by national courts. Thus, notwithstanding that nondiscrimination cases are difficult to handle—and that, as a policy matter Graetz and

[210] *See, e.g.*, Mason & Knoll (2012), 121 Yale L.J. at 1086 ("Support for a competitive neutrality interpretation of tax discrimination derives from the goals of the EU common market, the language and structure of the EU treaties. and the ECJ's case Law. . . . [W]e do not primarily advocate competitive neutrality from first principles.").

[211] As Graetz and Warren concede, the empirical evidence to make the choice between the various neutrality benchmarks does not exist. Graetz & Warren (2012), 121 Yale L.J. at 1140-1. Presumably this means that, in their view, no valid efficiency choice can be made among the options. If so, this criticism would apply equally to their own menu of choices, namely, (1) apply the source state's rules (CIN), (2) apply the residence state's rules (CEN), or (3) harmonization (CEN plus CIN). The ECJ cannot simply stop deciding tax discrimination cases; it has a mandate to aid in the enforcement of EU nationals' rights and the interpretation of EU law. Thus, it must either make a choice among efficiency principles, or it must interpret the prohibition on tax discrimination without any reference to economic efficiency.

[212] Graetz & Warren (2012), 121 Yale L.J. at 1152.

[213] *See* TFEU, art. 267 (preliminary rulings).

Warren have a preference for tax policy issues to be decided by legislatures, not courts—the ECJ *must* resolve them.

An alternative that might satisfy Graetz and Warren might be for the member states to strip the ECJ of its jurisdiction to hear tax cases. Although this move was considered in the negotiations over the EU Constitution, the member states rejected it.[214] The member states apparently regard the ECJ's jurisprudence in this area to be worth both any confusion it presently generates and any infringement of their tax sovereignty. This is not a difficult conclusion to understand, when we consider the importance of the fundamental freedoms to the operation of a single market and the kinds of national tax schemes that the ECJ has struck down. Among other domestic business tax provisions, the ECJ has struck down (1) a law that taxed foreign banks at a higher rate than domestic banks,[215] (2) a law that allowed trade tax deductions for rental payments made to domestic (but not foreign) companies,[216] and (3) a law that allowed payment of interest on tax refunds to resident, but not nonresident, taxpayers.[217] Similarly, the Court struck down a tax provision that allowed deduction of professional training expenses if the training took place domestically, but created a rebuttable presumption that professional training expenses for courses taking place abroad were nondeductible because they involved a significant tourism element.[218] The Court also has invalidated individual tax provisions that allowed residents, but not nonresidents who earned all or almost all their income in the defendant state, to (1) deduct pension contributions,[219] (2) enjoy the benefits of marital joint filing,[220] and (3) deduct other personal and family expenses.[221] Similarly, the Court has held that states may not establish significantly more onerous tax administrative procedures for nonresidents than residents, [222] nor

[214] See Frans Vanistendael, *The ECJ at the Crossroads: Balancing Tax Sovereignty Against the Imperatives of the Single Market*, 46 Eur. Tax'n 413, 413 (2006).
[215] Case C-311/97, Royal Bank of Scotland plc v. Greece, 1997 E.C.R. I-2651.
[216] Case C-294/97, Eurowings Luftverkehrs AG v. Finanzamt Dortmund-Unna, 1999 E.C.R. I-7447.
[217] Case C-330/91, Queen v. Inland Revenue Comm'rs, *ex parte* Commerzbank AG, 1993 E.C.R. I-4017.
[218] Case C-55/98, Skatteministeriet v. Vestergaard, 1999 E.C.R. I-7641.
[219] Case C-80/94, Wielockx v. Inspecteur der Directe Balastingen, 1995 E.C.R. I-2493.
[220] Case C-87/99, Zurstrassen v. Administration des Contributions Directes, 2000 E.C.R. I-3337 (Luxembourg required spouses to live together in the same household to qualify for joint filing, but this requirement did not apply to Luxembourg-resident couples).
[221] Case C-279/93, Finanzamt Köln-Altstadt v. Schumacker, 1995 E.C.R. I-225.
[222] *See, e.g.,* Case C-175/88, Biehl v. Administration des Contributions de Luxembourg, 1990 E.C.R.I-1779 (holding that Belgium discriminated against nonresidents workers by requiring them to secure refunds for overpaid taxes via a discretionary, case-by-case administrative procedure, whereas residents automatically received refunds of tax overpayments).

may states allow residents, but not nonresidents, to deduct fees for tax advice.[223] Without an enforcement of the legal prohibition on tax discrimination, such protectionist provisions would remain in place indefinitely, hampering cross-border commerce. Indeed, the absence of any enforcement would invite the member states to enact more protectionist tax policies. Additionally, because EU-wide tax legislation requires the unanimous agreement of the member states, it is extremely difficult for the member states to eliminate tax discrimination via legislation.[224] Thus, the imperfect instrument of the tax nondiscrimination principle, and its enforcement by the ECJ, remain the most important method for removing tax barriers to cross-border commerce in the European Union.

The other alternative suggestion made by Graetz and Warren would constrain member states far more than would our proposal to make explicit the notion that the nondiscrimination principle in the TFEU requires competitive neutrality. Graetz and Warren argue that, to be consistent, the ECJ must take the same approach in the direct tax area that it has taken in the area of regulation of goods. Namely, the Court should choose among three options: (1) it could apply *only* the source country's tax rules (destination state rule), or (2) it could apply *only* the residence state's tax rules (origin state rule equivalent to the mutual recognition principle seen in *Cassis*), or (3) the EU legislature could harmonize the source and residence state rules. Since the ECJ has no authority to accomplish (3), its choice presumably lies between (1) and (2). But the TFEU provides no guidelines for the choice between (1) and (2), and making that choice arguably falls outside the institutional competence of the ECJ. Moreover, forcing the ECJ to make such a dramatic choice strikes us as an odd recommendation coming from Graetz and Warren, who claim to be concerned that the ECJ has delved too far into national tax policy matters that are better left to the legislatures of the individual states. In contrast, under a competitive neutrality interpretation of nondiscrimination, both the source and residence states can continue to apply their autonomously drafted national tax laws, provided that those laws apply uniformly to domestic and cross-border situations.

[223] *See, e.g.,*C-346/04, Robert Hans Conijn v. Finanzamt Hamburg-Nord, 2006 E.C.R. I (Germany could not deny nonresidents a deduction for tax advising expenses related to preparing their German taxes when it allowed resident Germans to deduct those expenses).

[224] TFEU, art. 115 (unanimity).

According to Professors Graetz and Warren, we are "stuck in a labyrinth of impossibility" searching for the "holy grail of tax discrimination."[225] However, we are not working in the realm of mythology where the gods have all the answers, or theoretical physics, where the right answer causes all of the pieces to fall in line perfectly. Instead, we are dealing with flesh and blood judges and legislators—the men and women who drafted the foundational documents, who wrote the tax laws, and who must decide the cases and issue their opinions. To require 100 percent explanatory power for any theory or interpretation is unrealistic and to impose such a requirement is to ensure that the only possibility is to continue to muddle through with little hope for more coherence or better results.

APPENDICES

APPENDIX I – DERIVATION

APPENDIX II – FRANÇOISE AND GÜNTHER REVISITED

APPENDIX III – IMPUTATION CREDITS

[225] Graetz & Warren (2012), 121 Yale L.J. at 1127.

Appendix I

Derivation

In this Appendix, we seek to provide a simple example that explains our basic results for when taxation will and will not distort competitive neutrality. This appendix, thus, responds to the request by Graetz and Warren to provide more support for our claims that various tax systems either will or will not promote competitive neutrality. Because our claims about competitive neutrality apply to both labor and capital, in this Appendix we use capital. With only slight variation, the example could be turned into a labor example.

Consider an economy with only two countries, Portugal and Italy, denoted P and I. Assume Italy is much larger than Portugal and that Italy sets market prices in the economy. Investors can readily invest all the capital they want in a riskless benchmark asset without affecting its rate of return. The benchmark asset, located in Italy, pays a before-tax annual rate of return of b. A party from Italy and a party from Portugal are both considering investing in a riskless alternative asset, C, which is assumed to be located in Portugal. There is only one unit of asset C available. Both parties have more than enough cash available to purchase the entire amount of the alternative asset. Any funds not invested in the alternative asset will be invested in the benchmark asset. The alternative asset, which is fully divisible, will pay C once a year in perpetuity. If all of the alternative asset is owned by the Portuguese investor he will receive C_P and if it is all owned by the Italian investor, she will receive C_I. Denote the value of the alternative asset by V. Thus, the value of the alternative asset to the Portuguese investor, V_P, is given by the following expression:

$$V_P = \frac{C_P}{b}. \qquad (1)$$

Similarly, the value of the alternative asset to the Italian investor, V_I, is given by the following expression:

$$V_I = \frac{C_I}{b}. \qquad (2)$$

Obviously, if the parties place different values on the asset, it will be fully acquired by the party who values it the most. Thus, the Portuguese investor will acquire the asset if and only if he values the asset more than the Italian investor. Gathering terms, the above statement implies that:

$$V_P \underset{<}{\overset{\geq}{=}} V_I \; as \; C_P \underset{<}{\overset{\geq}{=}} C_I \, or \; as \; \frac{C_P}{C_I} \underset{<}{\overset{\geq}{=}} 1. \qquad (3)$$

It is clear from equation (3) that the alternative asset will be acquired by the party who can produce more value with the asset. Thus, in the absence of taxation competitive neutrality will obtain.[1]

The next step is to introduce taxes. Denote the total tax rate by T with a subscript to denote residence and a superscript to denote source. Thus, T_I^I denotes the total tax rate of an Italian resident on an investment in Italy (the benchmark asset). Similarly, T_I^P denotes the total tax rate of a Italian resident on an investment in Portugal (the alternative asset). Likewise, T_P^I denotes the total tax rate of a Portuguese resident on an investment in Italy. Finally, T_P^P denotes the total tax rate of a Portuguese resident on an investment in Portugal. It follows that the Portuguese resident will earn an after-tax annual return of $(1- T_P^I)b$ if he invests in the benchmark asset, whereas the Italian resident will earn $(1- T_I^I)b$ if she invests in the benchmark asset. Similarly, the after-tax return the Portuguese resident will earn if he invests in the alternative asset is $(1-T_P^P)C_P$, whereas the Italian investor will earn an after-tax return of $(1- T_I^P)C_I$ if she invests in that same asset. Because both investors are assumed to invest any available funds not invested in the alternative asset in the benchmark asset, the value of the alternative asset to the Portuguese investor, V_P, is given by the following expression:

$$V_P = \frac{(1-T_P^P)C_P}{(1-T_P^I)b} \qquad (4)$$

Similarly, the value of the alternative asset to the Italian investor, V_I, is given by the following expression:

$$V_I = \frac{(1-T_I^P)C_I}{(1-T_I^I)b}. \qquad (5)$$

[1] This is what Graetz and Warren refer to as proposition 2. See Graetz & Warren (2012), 121 Yale L.J. at 1143.

As before, the alternative asset will be acquired by the party that places the higher value on that asset. That, in turn, implies the following: [2]

$$V_P \gtrless V_I \; as \; \frac{(1-T_P^P)C_P}{(1-T_P^I)b} \gtrless \frac{(1-T_I^P)C_I}{(1-T_I^I)b}, \tag{6a}$$

which in turn implies:

$$V_P \gtrless V_I \; as \; \frac{\frac{(1-T_P^P)}{(1-T_P^I)}}{\frac{(1-T_I^P)}{(1-T_I^I)}} \times \frac{C_P}{C_I} \gtrless 1. \tag{6b}$$

It follows from equations (6a) and (6b) that what we call "retention ratios," that is, the ratio of the share of an investor's before-tax earnings he would retain after taxes if he invested in the alternative asset ($1\text{-}T^P$) relative to the share of before tax earnings he would receive if he invested in the benchmark asset ($1\text{-}T^I$), can affect who owns what investments. Specifically, in the case where the alternative asset produces the same amount in both investors' hands, equations (6a) and (6b) can be rewritten as:[3]

$$V_P \gtrless V_I \; as \; \frac{(1-T_P^P)}{(1-T_P^I)} \gtrless \frac{(1-T_I^P)}{(1-T_I^I)} \tag{7a}$$

or

$$V_P \gtrless V_I \; as \; \frac{\frac{(1-T_P^P)}{(1-T_P^I)}}{\frac{(1-T_I^P)}{(1-T_I^I)}} \gtrless 1. \tag{7b}$$

If the fraction in equation (7b) is close to 1, then small changes in tax rates will have a dramatic impact on the ownership of assets. A small change in taxes that causes the fraction in equation (7b) to shift from less than 1 to more than 1 will shift ownership of the alternative asset from the Italian investor to the Portuguese investor. Equation (6a) demonstrates how such changes could have negative welfare consequences by causing society to lose the benefit of the more productive owner. It is such distortions that are the logic behind CON as a normative welfare benchmark.

[2] This establishes what Graetz and Warren refer to as proposition 1. See Graetz & Warren (2012), 121 Yale L.J. at 1143.

[3] This establishes what Graetz and Warren refer to as proposition 3. See Graetz & Warren (2012), 121 Yale L.J. at 1143.

Take a look at equations (3) and (6b). The difference between equations (3) and (6b) is that equation (6b) also contains the fraction that is made up of the 4 retention rates. Note further that in order to ensure that taxes will not affect ownership, the fraction made up from the various retention rates must equal 1. If that fraction is not identically 1, then it is possible for taxation to affect the ownership of assets.

The above tax rates, denoted by T, are total tax rates. They represent the total tax rate paid on income by an investor from Italy or Portugal investing in either the alternative or benchmark asset. Those rates are going to be a function of the rates in the two countries and a function of the tax system. Thus, in order to examine how tax various tax policies will affect ownership, some additional notation is needed. Denote the tax rate assessed by a single country by t. If the tax is assessed by the country of residence that country is denoted by a subscript. Thus, a residence tax assessed by Portugal is denoted by t_P whereas a residence tax denoted by Italy is written $t_{I.}$ A uniform residence tax is one where the same tax is assessed on domestic residents with domestic income as on domestic residents with foreign income. When necessary, a second subscript is used to denote the source of the income. Thus, the residence tax rate assessed by Italy on the domestic income of a Italian resident is written $t_{I,I}$ whereas the residence tax rate assessed by Italy on the foreign income of a Italian resident is written $t_{I,P}$. Hence, with uniform residence taxation, $t_I = t_{I,I} = t_{I,P}$. If the tax is assessed by the source country, then that country is denoted by a superscript. Hence, the source tax assessed by Portugal is t^P and the source tax assessed by Italy is t^I. By analogy to residence taxation, a second superscript is used where needed to designate the residence of the investor. Thus, the source tax imposed by Portugal on income earned in Portugal by Portuguese residents is given by $t^{P,P}$ whereas the source tax imposed by Portugal on income earned in Portugal by Italian residents is given by $t^{P,I}$.

The total tax rates, T, can be expressed as functions of the source and residence tax rates, t. For example, if both Italy and Portugal embrace territorial taxation, then $T_P^P = t^{P,P}$ and $T_I^P = t^{P,I}$. If Portugal has uniform source taxation, $t^P = t^{P,P} = t^{P,I}$, then $T_P^P = T_I^P = t^P$. Similarly, if Italy has uniform source taxation, then $T_P^I = T_I^I = t^I$.

Using the above notation, it is possible to express various tax policies. For example, territorial taxation (with uniform source tax rates in each jurisdiction) implies in Portugal that $T_P^P = T_I^P = t^P$ and in Italy that $T_P^I = T_I^I = t^I$. Substituting the territorial tax rates in Portugal and Italy into equation (7b), that equation becomes:

$$V_P \gtreqless V_I \; as \; \frac{\frac{(1-t^P)}{(1-t^I)}}{\frac{(1-t^P)}{(1-t^I)}} \gtreqless 1. \tag{8}$$

It is, thus, clear from equation (8) that the fraction on the right side of that equation after "as" is identically 1. It, thus, follows that uniform source taxation does not compromise CON.

Similarly, residence taxation (with uniform rates regardless of where one earns income) or worldwide taxation with unlimited foreign tax credits implies for Portuguese residents that $T_P^P = T_P^I = t_P$ and for Italian residents that $T_I^P = T_I^I = t_I$. Substituting the territorial tax rates in Portugal and Italy into equation (7b), that equation becomes:

$$V_P \gtreqless I \; as \; \frac{\frac{(1-t_P)}{(1-t_P)}}{\frac{(1-t_I)}{(1-t_I)}} \gtreqless 1. \tag{9}$$

It is, thus, clear from equation (9) that the fraction on the right side of that equation after "as" is identically 1. It, thus, follows that uniform residence taxation or worldwide taxation with unlimited foreign tax credits does not compromise CON.

Finally, the total tax rates with ideal deduction can also be written as a function of the source and residence tax rates. Assuming uniform source and residence taxation,[4] then the total rates are as follows:

$$T_P^P = (1 - t_P)(1 - t^p) \tag{10a}$$

$$T_P^I = (1 - t_P)(1 - t^I) \tag{10b}$$

$$T_I^P = (1 - t_I)(1 - t^p) \tag{10c}$$

$$T_I^I = (1 - t_I)(1 - t^I) \tag{10d}$$

[4] Uniform residence taxation implies that $t_I = t_{I,I} = t_{I,P}$ and that $t_P = t_{P,I} = t_{P,P}$, but it does not require that $t_I = t_P$. Similarly, uniform source taxation implies that $t^I = t^{I,I} = t^{I,P}$ and that $t^P = t^{P,I} = t^{P,P}$, but it does not require that $t^I = t^P$.

Substituting the total tax rates in equations (10a) – (10d) into equation (7b), that equation becomes:

$$V_P \underset{<}{\overset{>}{=}} V_I \ as \ \frac{\frac{(1-t_P)}{(1-t_P)}}{\frac{(1-t_I)}{(1-t_I)}} \frac{\frac{(1-t^P)}{(1-t^I)}}{\frac{(1-t^P)}{(1-t^I)}} \underset{<}{\overset{>}{=}} 1. \tag{11}$$

In equation (8), the two fractions on the right side of that equation after "as" multiply one another. The first fraction is from equation (9), which is identically 1, and the second fraction is from equation (8), which is also identically 1. It, thus, follows that the fraction on the right side of equation (11) is identically 1. From that result it follows that ideal deduction does not compromise CON.[5]

Equation (11) was constructed assuming that both Portugal and Italy employ uniform source and residence taxation. Dropping that assumption, equation (11) can be rewritten as:

$$V_P \underset{<}{\overset{>}{=}} V_I \ as \ \frac{\frac{(1-t_{P,P})}{(1-t_{P,I})}}{\frac{(1-t_{I,P})}{(1-t_{I,I})}} \frac{\frac{(1-t^{P,P})}{(1-t^{I,P})}}{\frac{(1-t^{P,I})}{(1-t^{I,I})}} \underset{<}{\overset{>}{=}} 1. \tag{12}$$

Although equation (12) is somewhat messy, it can be used along with equation (11) in order to understand how nonuniform taxation will compromise CON. Focus on the top half of the left fraction, which describes how Portugal taxes its residents. If Portugal taxes its residents uniformly that fraction, $(1-t_{P,P})/(1-t_{P,I})$ is identically 1. If it does not, then that fraction is not identically 1. Such nonuniform taxation will compromise CON unless one of the other tax systems is nonuniform and that nonuniformity exactly offsets the nonuniformity in Portugal's residence tax system. The argument is the same for the bottom half of the fraction on the left, which describes Italy's residence tax system.

Moving from residence to source taxation, the right fraction describes the states' source tax systems. Recall that with uniform source taxation, the fraction on the top, $(1-t^P)/(1-t^I)$, equaled the fraction on the bottom, which was identical to it, and so the right fraction was identically 1. If, however, one state, deviates from uniform source taxation, then the numerator of the right

[5] Apparently, the claim that various tax systems do not violate CON is not part of what Graetz and Warren describe as the major propositions in our argument. See Graetz & Warren (2012), 121 Yale L.J. at 1143-44.

fraction will not equal the denominator of that fraction. Unless, therefore, there is another nonuniformity in the tax system that exactly offsets the first nonuniformity, CON will be lost.[6]

[6] This establishes in more detail than above what Graetz and Warren refer to as proposition 3. See Graetz & Warren (2012), 121 Yale L.J. at 1143. This also establishes what Graetz and Warren describe as the conclusion. See Graetz & Warren (2012), 121 Yale L.J. at 1144.

Appendix II

Françoise and Günther Revisited

In our original article, we provided an arithmetic example designed to illustrate that both worldwide taxation with unlimited foreign tax credits and ideal deduction preserve competitive neutrality.[1] In addition, we used that example to illustrate how nonuniform taxation will distort competitive neutrality.[2] In their reply, Graetz and Warren observed that although we explicitly state that our results assume certain market conditions, our example does not clearly incorporate those conditions.[3] Specifically, they note that our assumption that German producers are looking to produce a fixed output, not hire a fixed number of workers, is not directly incorporated into our example.[4] Accordingly, this appendix reworks the example of Günther and Françoise from our original article to explicitly incorporate that assumption. In addition, we have taken this opportunity to revise the example slightly by changing some of the tax rates in the last example. We make that change for two reasons. First, we make the change to allow for the possibility that tax rates will differ across all four quadrants. Second, we make the change to show that even when tax rates are the same for competitors in a single market, it is still possible for taxation to distort competition.

Consider two countries France and Germany. Residents of both countries compete for jobs in both countries. Initially, consider one resident from each country. Françoise resides in France and Günther resides in Germany, and they both compete for a job in each jurisdiction.[5] Assume further that Françoise and Günther are equally productive when they work in France, but that Françoise is substantially more productive than Günther when working in Germany. Putting some numbers to these assumptions, let us say that Françoise and Günther each would produce €100 of output in France, that Günther would produce €100 in Germany, but that Françoise would produce €150 in Germany. Table 1 illustrates this.

[1] Mason & Knoll (2012), 121 Yale L.J. at 1060-68.
[2] Mason & Knoll (2012), 121 Yale L.J. at 1068-72.
[3] Graetz & Warren (2012), 121 Yale L.J. at 1144-46.
[4] Graetz & Warren (2012), 121 Yale L.J. at 1144-46.
[5] The jobs are assumed not to require residence changes. Thus, Françoise will continue to reside in France regardless of the job she takes, and Günther will continue to reside in Germany regardless of the job he takes.

TABLE 1. COMPETITIVE NEUTRALITY IN A NO-TAX WORLD

	JOB IN FRANCE		JOB IN GERMANY	
	Françoise	*Günther*	*Françoise*	*Günther*
Gross Income and Take-Home Pay	€100	€100	€150	€100

Under these circumstances, and assuming that there is only one job in each state, productive efficiency requires Françoise to work in Germany and Günther to work in France. Françoise should work in France because the ratio (1½) of her productivity in Germany (€150) to her productivity in France (€100) exceeds the ratio (1) of Günther's productivity in Germany (€100) to his productivity in France (€100). Conversely, Günther should work in France because the ratio (1) of his productivity in France (€100) to his productivity in Germany (€100) exceeds the ratio (2/3) of Françoise's productivity in France (€100) as compared to her productivity in Germany (€150).

That the market will efficiently match workers to jobs can be seen by assuming that Françoise and Günther compete for jobs by offering to take less than the full value that they produce. When considering how much to bid for a job in Germany, both Françoise and Günther will consider their alternative job opportunities in France. Since Günther earns €100 if he takes a job in France, which is the full value of his output there, he will not be willing to accept less than €100 in Germany, which is the full value of his output in Germany. In contrast, because Françoise is more productive in Germany than in France, she can lower the wage she demands in Germany (relative to her productivity) and still come out ahead compared to working in France, where the maximum she can earn is €100 (the full value of her output in France). Specifically, Françoise will be willing to work for as little as €100 in Germany, even though she produces €150 there.

In order to describe the nature of the equilibrium more clearly, assume that there are many Françoises and many Günthers and that employers are not restricted to hiring a fixed number of employees, but rather are trying to produce a given output at least cost. Those assumptions imply that employers will select employees with the greatest relative difference between their wage and their output. To make this assumption concrete, assume that there are 100 identical Françoises and 100 identical Günthers each with productivity levels as given in Table 1. In addition, assume that the demand for workers in France at a wage equal to their productivity level (€100) is unlimited. In contrast, the demand in Germany for workers is limited. Producers are willing to pay workers for €9000 of output. Once that level of production is met, the demand for workers disappears. The above assumptions imply that workers will earn their marginal product if they work in France, but they have to compete for work in Germany.

Under these assumptions, each Françoise is willing to accept as little as 2/3 of her total output in Germany as payment for her services for working there. That is to say, each Françoise is willing to accept as little as €100 to work in Germany because that is what she can earn in France. That leaves German employers with a €50 surplus from hiring each Francoise. If German employers hire only Françoises (no Günthers are hired in Germany), then 60 Françoises will be hired in Germany and their German employers will receive a total surplus of €3000. Accordingly, 40 Françoises will work in France, where they will earn €100, just as their German counterparts.

As with each Françoise, each Günther will require €100 to work in Germany because that is what he can earn in France.[6] However, because each Günther produces exactly €100 of output working in Germany, there is no surplus to the employer from hiring a Günther. As a result, in the absence of taxation, equilibrium in the market for employees has all Günthers working in France earning €100, 40 Françoises working in France earning €100, and 60 Françoises working in Germany earning €100. French employers earn no economic rents; they break even; German employers earn an economic rent of €50 for each Francoise they hire.

The above equilibrium is a baseline without taxation. We will use that baseline to show that when all states have the same international tax system, uniform taxes will not distort the matching of workers and jobs, whereas nonuniform taxes will. We start by introducing worldwide residence taxes with unlimited credits for foreign taxes. Assume that both France and

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[6] Thus, if all German employers hired Günthers, they could hire 90 Günthers. That would leave 10 Günthers to work in France.

Germany implement worldwide taxation with unlimited foreign tax credits. Assume further that France taxes at 20% both its residents on their worldwide income and nonresidents (Germans) on their income earned in France whereas Germany taxes at 50% both its residents and nonresidents (French) on their German income. The following chart compares how much each worker would take home after taxes if each earned his or her productivity-determined wage in each state:

TABLE 2. COMPETITIVE NEUTRALITY UNDER WORLDWIDE TAXATION

		JOB IN FRANCE Uniform 20% worldwide taxation		JOB IN GERMANY Uniform 50% worldwide taxation	
		Françoise	*Günther*	*Françoise*	*Günther*
a	Gross Income	100	100	150	100
b	Source Tax	(20)	(20)	(75)	(50)
c	Net Residence Tax/Refund[7]	0	(30)	45	0
e	Take Home Pay	80	50	120	50
	Total Tax Rate	20%	50%	20%	50%

As residents of different states that have different tax rates, Françoise and Günther take home different amounts after payment of all taxes. However, because the ratio of their after-tax wages *relative to each other* is unchanged from the world without taxes, taxation has not distorted the competition between Françoise and Günther for jobs. Even after taxes, Françoise still earns 50% more when she works in Germany (€120) than when she works in France (€80), whereas Günther still earns the same amount (€50) no matter where he works. Although Françoise is taxed at a total tax rate of 20% whereas Günther is taxed at a total tax rate of 50%, the difference in tax liability does not translate into a change in the ratio of Françoise's earnings in Germany relative to her earnings in France; nor does it translate into a change in the ratio of Günther's earnings in Germany relative to his earnings in France. (Hence, taxation does not result in a change in the ratio of these two ratios.) Thus, in order to have a job in Germany rather than in France, Françoise still would be willing to accept a (before-tax) salary equal to only two-thirds of what she produces in Germany. In contrast, Günther still would require payment for all he produces in Germany (or France). Thus, implementation of worldwide taxation with unlimited foreign tax credits maintains competitive neutrality even in the presence of national tax rate

[7] Taxes paid and cash outflows are negative numbers and are in parentheses; refunds and cash inflows are positive numbers and are not in parentheses. All of our examples assume that the residence state provides unlimited credits for source taxes.

diversity. Accordingly, the equilibrium is still characterized by all 100 Günthers working in France earning €100, 40 Françoises working in France earning €100, and 60 Françoises working in Germany earning €100. French employers also earn no economic rents; they break even; German employers earn an economic rent of €50 for each Francoise they hire.

The second way to achieve competitive neutrality is for all states to enact what we call "ideal deduction" or the "ideal deduction method" of double tax relief, one instantiation of which is exemption. Under this method, taxes on cross-border income would consist of two stages. The first stage consists of uniform source taxes. That is, each state applies its source tax regime on the same basis to both nonresidents *and residents* who work in its territory. In the second stage, states tax the worldwide income of their residents, but first stage taxes (i.e., source taxes, including domestic source taxes) are deductible from income taxable at residence. Thus, under the ideal deduction method, states tax their own residents on two jurisdictional predicates: source and residence. Under ideal deduction, states need not adopt the same tax rates as each other; that is, they need not harmonize their tax rates. However, each state must apply its own taxes uniformly.

In our original article, we assumed each state assessed its source taxes at the same rate at its residence taxes.[8] That assumption was not necessary for our results. It also had the effect of equating total tax rates of French residents working in Germany and German residents working in France.[9] Because that assumption is not necessary for our results, we now introduce different source and residence rates in each jurisdiction. Accordingly, assume that France imposes a 30% source tax and a 20% residence tax. Also assume that Germany imposes a 40% source tax and a 50% residence tax on equivalent terms. Recall that under ideal deduction, each country applies its source tax uniformly to all workers, foreign and domestic, that earn income within their territory.

Because jurisdictions now impose source taxes at different rates, those source taxes will affect the relative before-tax wages across the two countries. Because German source income is

[8] Mason & Knoll (2012), 121 Yale L.J. at 1065-67 (assuming that France imposes source and residence taxes at 20% and Germany imposes source and residence taxes at 50%).
[9] The total tax rate in both circumstances were 60% [=20% + 50% - (20% x 50%)].

taxed at 40%, whereas French-source income is taxed at only 30%, if jobs paid the same in Germany and France, both German and French residents would take home less if they worked in Germany than if they worked in France. Accordingly, in equilibrium, jobs in Germany will pay more than equivalent jobs in France so that, regardless of their residence, workers will earn the same amount after payment of source taxes. For example, in equilibrium, if a French job pays €100, then the equivalent job in Germany will pay €116.67,[10] and the after-source-tax wage in each jurisdiction will be the same, namely €70.

For this example, we maintain our assumption that Françoise and Günther are equally productive when they work in France, and we assume that they would both earn €100 (before tax) for work there. However, since in equilibrium wages are 16.67% higher in Germany than in France in order to compensate for higher German source taxes, both Françoise and Günther will earn more in Germany than in France.[11] Since we continue to assume for this example that Françoise is 50% more productive than Günther when they both work in Germany, Günther will earn €116.67 if he works in Germany and Françoise will earn €175 if she works in Germany. The following chart shows that competitive neutrality is maintained if both states implement ideal deduction, which requires residence states to allow deductions for source state taxes (including their own source taxes),:[12]

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[10] Given the salary in France (€100), the salary in Germany is calculated as follows: €116.67 = €100 x (1-30%) / (1-40%).

[11] The higher German taxes will drive jobs to France. Only those positions in which workers are productive enough to cover the additional German source taxes will remain in Germany.

[12] The simplest version of ideal deduction is an exemption system. If the example in the text were changed so that France and Germany employed exemption, the tax rate in the second stage would be zero, which effectively eliminates the second stage. The taxpayers' take home pay would be as follows:

TABLE A. COMPETITIVE NEUTRALITY UNDER EXEMPTION

		JOB IN FRANCE Uniform 30% source tax, no residence tax		JOB IN GERMANY Uniform 40% source tax, no residence tax	
		Françoise	*Günther*	*Françoise*	*Günther*
a.	Gross Income	100	100	175	116.67
b.	Source Tax	(30)	(30)	(70)	(46.67)
c.	Residence Tax	N/A	N/A	N/A	N/A
e.	Take Home Pay	70	70	105	70

When all the states employ exemption, no worker has a tax-induced advantage or disadvantage compared to any other for work in any particular jurisdiction. Thus, exemption maintains competitive neutrality.

TABLE 3. COMPETITIVE NEUTRALITY UNDER IDEAL DEDUCTION

		JOB IN FRANCE Uniform 30% source and 20% residence taxes		JOB IN GERMANY Uniform 40% source and 50% residence taxes	
		Françoise	*Günther*	*Françoise*	*Günther*
a.	Gross Income	100	100	175	116.67
b.	Source Tax	(30)	(30)	(70)	(46.67)
c.	Residence Income	70	70	105	70
d.	Residence Tax[13]	(14)	(35)	(21)	(35)
e.	Take Home Pay	56	35	84	35
	Total Tax Rate	44%	65%	52%	70%

As in the example with worldwide taxation, Françoise and Günther earn different after-all-tax wages and pay taxes at different total rates. Even so, taxation will not affect the matching of workers with jobs. Assuming that there is still unlimited demand for workers in France and that the demand for workers in Germany is still for a fixed output, say now €7000 to reflect the higher relative cost of production in Germany, all of the Günthers will continue to work in France, and Françoises (now 40) will fulfill the demand for workers in Germany. As in the prior examples, no Günther is willing to accept less than the full value of what he produces in order to take a job in Germany, whereas each Françoise is still willing to take a one-third discount to work in Germany. Thus, as with worldwide taxation, implementation of the ideal deduction method maintains competitive neutrality even in the presence of national tax rate diversity.

It is worth drawing attention to the total tax rates in Table 3. Françoise's total tax rate in France is 44%, whereas Gunther's is 65%. In Germany, Francoise's total tax rate is 52%, whereas Gunther's is 75%. In spite of these different and widely ranging tax rates, taxation has not affected comparative advantage and so it has not altered competitive neutrality. Expressed in terms of retention rates, the tax system has not affected the matching of workers and jobs

[13] Under ideal deduction, workers are subject to tax on their worldwide income at their residence state's rate, but source taxes (including domestic source taxes) are deductible from taxable income.

because it has not changed *relative* retention rates.[14] Françoise's retention rate in Germany (48%) is 6/7ths of her retention rate in France (56%). Similarly, Gunther's retention rate in Germany (30%) is 6/7ths of his retention rate in France (35%). Thus, taxation has not affected the ratio of Françoise's after-tax earnings in France relative to her after-tax earnings in Germany as compared to Günther's after-tax earnings in France relative to his after-tax earnings in Germany.

Although uniform taxation will achieve competitive neutrality when all states adopt the same *method* for taxing cross-border income (i.e., all states enact worldwide taxation or all states enact ideal deduction), universal adoption of the same method without uniform taxation will not achieve competitive neutrality. For example, assume that both France and Germany still implement ideal deduction and that France assesses uniform source and residence taxes. Assume, however, Germany assesses non-uniform source taxes – perhaps to encourage German employers to hire German workers. Specifically, Germany continues to tax the German income of French residents at 40% whereas it taxes the German income of German residents at only 5%.

i. Table 4. Nonuniform Source Taxation Violates Competitive Neutrality Under the Ideal Deduction Method

		JOB IN FRANCE Uniform 30% source and 20% residence taxes		JOB IN GERMANY Uniform 50% residence tax, nonuniform (5%, 40%) source tax	
		Françoise	*Günther*	*Françoise*	*Günther*
a.	Gross Income	100	100	175	116.67
b.	Source Tax	(30)	(30)	(70)	(5.83)
c.	Residence Income	70	70	105	110.83
d.	Residence Tax	(14)	(35)	(21)	(55.42)
e.	Take Home Pay	56	35	84	55.42
	Total Tax Rate	44%	65%	52%	53%

As Table 4 illustrates, although Françoise earns more after all taxes than does Günther regardless of where they work, Günther now has an advantage in the competition to secure a job *in Germany*. As in the prior examples, Françoise is willing to accept as little as 67% (i.e., €56/€84) of her productivity-determined wage in Germany to secure a job in Germany rather than a job in

[14] Retention rates and ratios are described in Appendix I, supra.

France at which she would be less productive. However, because Günther faces a much lower source tax when he works in Germany than when he works in France, Günther is willing to accept as little as 63% (i.e., €35/€55.42) of his productivity-determined wage in Germany in order to secure the job in Germany rather than the job in France that would subject him to high German source taxation. Because employers will hire the worker with the largest relative difference between productivity and wage, employers in Germany now will prefer to hire Günthers, who demand in wages only 63% of what they produce (€73.68) than to hire Françoises, who demand 67% of what they produce (€116.67). Accordingly, if employers in Germany are still looking to produce €7000 of output, they will hire 60 Günthers. They will pay these Günthers €4420.80 in total, which will leave them a profit of €2579.20. That is €246 more than they would earn if they hired 40 Françoises at €116.67 (for a total cost of €4666.80) to produce the same output. The remaining 40 Günthers will be employed in France where they will be joined by all 100 Francoises.

It is easy to show that the resulting allocation of workers to jobs is inefficient. If German employers hired Françoises instead of Günthers, they would need to hire only 40 Françoises to produce what the 60 Günthers produce. That would free 60 Günthers to work in France. However, it would take only 40 of those Günthers working in France to produce what the 40 Françoises produced when they were working in France. The output of the additional 20 Günthers working in France is therefore surplus and hence proof of the inefficient allocation brought about by nonuniform taxation.

Moreover, it should be pointed out that Günther has a tax-induced competitive advantage over Françoise to land a job in Germany in spite of paying tax at a slightly higher total tax rate (53%) than Françoise (52%) when working in Germany. That result can be expressed in terms of retention rates and retention ratios. Günther's retention rate if he works in France is 35% and his retention rate if he works in Germany is 47%.[15] Accordingly, his retention ratio for working in Germany relative to working France is 115.8%,[16] and his retention ratio for working in France

[15] A retention rate is one minus a taxpayer's total tax rate. Accordingly, Günther's retention rate if he works in France is 35% because his total tax rate if he works in France is 65%. Similarly, Günther's retention rate if he works in Germany is 47% because his total tax rate if he works in Germany is 53%.

[16] This is calculated as 115.8% = 47% ÷ 35%.

relative to Germany is 86.3%.[17] Similarly, Françoise's retention rate in France is 56% and her retention rate in Germany is 48%.[18] Accordingly, her retention ratio in Germany relative to France is 85.7% and her retention ratio in France relative to Germany is 116.7%.[19] Thus, Günther has a tax-induced competitive advantage over Françoise in Germany as compared to France because his retention ratio (115.8%) is higher than her retention ratio (85.7%). Conversely, Françoise has a tax-induced comparative advantage over Günther to land a job in France as compared to Germany because Françoise's retention ratio in France as compared to Germany (116.7%) is higher than Günther's retention ratio (86.4%). As the above example illustrates, Germany's nonuniform source tax has reversed Françoise's comparative advantage over Günther in Germany. Françoise derived her original comparative advantage over Günther in Germany from her greater productivity in Germany, However, Germany's lower tax rate on the German income of Germans as compared to the German income of non-Germans more than offset the productivity advantage of non-Germans.

Alternatively, Germany might try to dissuade Germans from working abroad by taxing Germans at a higher rate on their foreign income than their domestic income. Assume that Germany assesses uniform source taxation at 40%, but that Germany assesses non-uniform residence taxation. Specifically, assume Germany taxes the foreign income of German residents at 50%, but that it imposes a residence tax on the German income of German residents of only 20%. The following chart shows the income, taxes, and take-home pay of Françoises and Günthers.

[17] This is calculated as 86.3% = 35 ÷ 47%.

[18] Françoise's retention rate if she works in France is 56% because her total tax rate if she works in France is 44%. Similarly, Françoise's retention rate if she works in Germany is 48% because her total tax rate if she works in Germany is 52%.

[19] Françoise's retention ratio in Germany relative to France is calculated as 85.7% = 48 ÷ 56%, and her retention ratio in France relative to Germany is calculated as 116.7% = 56% ÷ 48%.

ii. Table 5. Nonuniform Residence Taxation Violates Competitive Neutrality Under the Ideal Deduction Method

		JOB IN FRANCE Uniform 30% source and 20% residence taxes		JOB IN GERMANY Uniform 40% source tax, nonuniform (20%, 50%) residence tax	
		Françoise	*Günther*	*Françoise*	*Günther*
a.	Gross Income	100	100	175	116.67
b.	Source Tax	(30)	(30)	(70)	(46.67)
c.	Residence Income	70	70	105	70
d.	Residence Tax	(14)	(35)	(21)	(14)
e.	Take Home Pay	56	35	84	56
	Total Tax Rate	44%	65%	52%	52%

As in the prior example, nonuniform taxation (now nonuniform residence taxation) has provided the Günthers with a tax-induced comparative advantage in the competition to secure a job *in Germany*. As in the prior examples, Françoise is willing to accept as little as 67% (i.e., €56/€84) of her productivity-determined wage in Germany to secure a job in Germany rather than a job in France at which she would be less productive. However, because Günther faces a much lower residence tax when he works in Germany than when he works in France, Günther is willing to accept as little as 63% (i.e., €35/€56) of his productivity-determined wage in Germany in order to secure the job in Germany rather than the job in France that would subject him to high German residence taxation. The equilibrium is the same as above – and is just as inefficient. As this example makes clear, it is not enough to maintain uniform source taxation (and agreement on a method of taxing international income) to achieve competitive neutrality. In addition, residence taxes must also be uniform.

Appendix III

Imputation Credits

In this Appendix, we demonstrate that corporate integration accomplished by granting shareholders imputation credits for taxes paid by their corporations will not compromise competitive neutrality if those imputation credits are granted on a uniform source or uniform residence basis. However, before demonstrating that imputation credits are consistent with competitive neutrality, we first demonstrate that the classical corporate income tax is consistent with competitive neutrality. Both demonstrations are made through a simple example.

Consider Danish investors in a Danish company that earns only Danish-source income. Assume Danish corporations earn an annual before-tax return of 10% and that Danish corporations distribute all their after-tax earnings. Assume further that Denmark imposes a flat 40% corporate tax and a flat 50% personal tax and that Denmark has a classical corporate tax system. Thus, a €1000 investment by a Dane in a Danish company will return €100 after one year. That €100 income will attract €40 corporate tax. The Danish investor will report €60 of personal income and will incur a personal tax liability of €30. That liability will leave the Danish investor with €30. Thus, Danish residents earn 3% annually after-tax on investments in Danish companies, and Danish companies can raise capital from Danish investors at 10%, which is also the hurdle rate for new investment by Danish companies.

Now consider, Poland, which we assume also has a classical corporate income tax system. Assume Poland imposes a flat 25% corporate tax and a flat 30% personal tax. Corporate investments in Poland earn 8% annually before tax, and Polish corporations also fully distribute their after-tax earnings.[1] Thus, a €1000 investment in Poland will generate €80, which will attract €20 tax, leaving the investor with €60. A Pole who invests €1000 in a Polish company will earn €60 a year after paying Polish corporate tax and pay €18 in individual tax. That will leave the Polish investor with €42. Similarly, a Polish investor who invests €1000 in a Danish company will receive a dividend of €60, pay €18 in individual tax, and be left with €42. Thus, a

[1] The lower before-tax return in Poland is a result of a lower source tax rate in Poland than in Denmark. The lower source tax rate in Poland will attract capital to Poland thereby violating locational neutrality.

Polish investor would be indifferent between the two investments. Similarly, a Danish investor would be indifferent between investing in the shares of Polish and Danish companies. Either way, the Dane receives €60 each year after corporate tax, pays €30 of individual tax, and so is left with €30. Thus, the classic corporate income tax (with uniform source and residence taxes) will not compromise competitive neutrality.[2]

Assume now that Denmark grants imputation credits that credit resident investors fully for the taxes paid by Danish corporations on Danish-source income. Assuming that the before-tax return on Danish investments does not change, so that a €1000 investment in such a company will still return €100 after one year, the investment will still incur €40 corporate tax. However, in contrast with the classical corporate income tax, the Danish investor will report €100 income (comprised of €60 cash dividend and €40 corporate tax paid on that dividend) and will incur a tentative tax liability of €50. That liability will be reduced by the €40 credit, resulting in an additional liability of €10, and leaving the Danish investor with €50 after the payment of all taxes. Thus, Danish residents earn 5% after-tax on investments in Danish companies and Danish companies can still raise capital from Danish investors at 10%.

Assume further that the credit is implemented by both Denmark and Poland and that the credit is granted on a uniform residence basis inasmuch as each state fully credits both foreign and domestic corporate taxes that are indirectly paid by its residents. That is to say, Denmark grants Danish residents imputation credits for corporate taxes paid by both Danish and Polish corporations, and Poland grants Polish residents imputation credits for corporate taxes paid by both Danish and Polish corporations. . In such circumstances, shareholders' tax liabilities depend only upon their residence tax rates, not at all on the corporate tax rates. Accordingly, because differences in the corporation state's tax rates will not affect investors' total tax

[2] The above result can be expressed using retention rates and ratios, as described in Appendix I. Danish investors pay a total tax rate of 70% on corporate investments in Denmark and of 62.5% on corporate investments in Poland. Thus, Danish investors' retention rates are 30% for investments in Danish corporations and 37.5% for investments in Polish corporations. Thus, Danish investors have a retention ratio of 80% for investments in Danish as compared to Polish corporations. Polish investors pay a total tax rate of 58% on corporate investments in Denmark and of 47.5% on corporate investments in Poland. Thus, Polish investors' retention rates are 42% for investments in Danish corporations and 52.5% for investments in Polish corporations. Thus, Polish investors have a retention ratio of 80% for investments in Danish as compared to Polish corporations. Therefore, because the retention ratios are the same (80%), the classical corporate income tax with uniform taxes does not distort ownership.

liabilities, taxes will not distort the location of capital. Thus, in the simple example employed here, pre-tax returns will be equal across states. Assume, then, that a €1000 investment in a Danish or Polish corporation produces an annual pre-tax return of €100. After paying all taxes, Danish investors will earn €50 on investments in both Danish and Polish corporations whereas Polish investors will earn €70 on such investments. Although Danes are taxed more heavily than are Poles, taxes will not distort ownership.[3]

Assume now that Denmark and Poland grant imputation credits on a uniform source basis. As applied to Denmark, for example, Denmark will refund to Polish shareholders of Danish corporations the taxes paid by Danish corporations on behalf of Polish shareholders. Under such circumstances, source taxes will not impact investors. Effectively, domestic and foreign investors will pay tax on their equity investments in both domestic and foreign corporations at the investors' individual residence tax rate.[4] Thus, as in the prior example, after paying taxes, Danish investors will earn €50 on investments in both Danish and Polish corporations whereas Polish investors will earn €70 on such investments. And as in the prior example, although Danes are taxed more heavily than are Poles, taxes will not distort location or ownership.

In contrast, if Denmark and Poland were to adopt non-uniform versions of shareholder imputation, then ownership would be distorted. Assume that Denmark and Poland both choose to grant imputation credits to residents only and only for equity investments in domestic corporations. Thus, Denmark will grant imputation credits only to Danish investors in Danish corporations and Poland will grant imputation credits only to Polish investors in Polish companies. Accordingly, Denmark will not grant imputation credits to Danish investors in Polish companies or to Polish investors in Danish companies, nor will Poland grant imputation credits to Polish investors in Danish companies or to Danish investors in Polish companies. To

[3] The above result can also be expressed using retention rates and ratios. The retention rate for Danes is 50% for equity investments in both Denmark and Poland and the retention rate for Poles is 70% for equity investments in both Denmark and Poland. Accordingly, the retention ratios for Danes and Poles are both 1 and so ownership is not distorted by taxes.

[4] The difference between this and the prior example is that in the prior example (credit extended to shareholdings in foreign companies) the corporations' state receives and retains the corporate tax revenue when foreign investors hold shares in domestic corporations. In contrast, in the current example (credit extended to shareholdings by foreign investors in domestic companies) the corporations' state does not retain corporate tax revenue when foreign investors hold shares in domestic corporations.

keep the calculations simple, assume that rates of return are unchanged with all corporations earning 10 percent before taxes. Danish investors would pay a total tax of 50% on investments in Danish corporations and a total tax of 62.5% on investments in Polish corporations. In contrast, Polish investors would pay 40% total tax on investments in Polish corporations and 58% total tax on investments in Danish corporations. Because Danish and Polish investors are both taxed more heavily on investments in foreign corporations, the tax system distorts ownership by encouraging both groups of investors to invest in domestic rather than foreign corporations.[5]

The discussion above looked at only a few limited examples with imputation credits. We intend to examine corporate integration in more detail in future work.

[5] The above result can also be expressed using retention rates and ratios. Danish investors pay a total tax rate of 50% on corporate investments in Denmark and of 62.5% on corporate investments in Poland. Thus, Danish investors' retention rates are 50% for investments in Danish corporations and 37.5% for investments in Polish corporations. Thus, Danish investors have a retention ratio of 133% for investments in Danish as compared to Polish corporations. Polish investors pay a total tax rate of 58% on corporate investments in Denmark and of 40% on corporate investments in Poland. Thus, Polish investors' retention rates are 42% for investments in Danish corporations and 60% for investments in Polish corporations. Thus, Polish investors have a retention ratio of 70% for investments in Danish as compared to Polish corporations. Accordingly, because Danes (133%) have a higher retention ratio than Poles (70%) for equity investments in Danish as compared to Polish corporations, the tax system distorts ownership by encouraging Danes to invest in Danish corporations and discouraging Poles from doing so. The retention ratios are the inverse for investments in Poland as compared with Denmark. Thus, Danish investors have a retention ratio of 75% for equity investments in Poland as compared to Denmark, whereas Polish investors have a retention ratio of 143% for such investments. Accordingly, because Poles (143%) have a higher retention ratio than Danes (75%) for equity investments in Polish as compared to Danish corporations, the tax system distorts ownership by encouraging Poles to invest in Polish corporations and discouraging Danes from doing so. It, therefore, follows that non-uniform imputation credits will distort ownership compromising competitive neutrality.