

# TAX AND THE BOUNDARIES OF THE FIRM

Jordan M. Barry & Victor Fleischer\*

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\* Jordan M. Barry and Victor Fleischer are both Professors of Law at the University of San Diego. Victor Fleischer is currently serving as Chief Tax Counsel to the Senate Finance Committee. The analysis and conclusions set forth are those of the authors and do not indicate concurrence by any members of the Senate or of its staff. The authors wish to thank Alan Auerbach, Bobby Bartlett, Thomas Brennan, Dhammika Dharmapala, Mihir Desai, Erik Gerding, Richard Harvey, Oliver Hart, James R. Hines, Jr., Louis Kaplow, Michael Knoll, Rebecca Kysar, Frank Partnoy, Chris Sanchirico, Ted Seto, Dan Shaviro, Joel Slemrod, and participants in workshops at Columbia, Duke, the University of Pennsylvania, NYU, the University of San Diego, the American Law and Economics Association, the National Tax Association, the Mid-Career Tax Association, the Law and Society Association, and the International Society for New Institutional Economics for comments and suggestions on earlier versions of this paper.

## I. INTRODUCTION

How does the income tax shape the boundaries of the firm? This Article goes back to foundational ground—Coase’s inquiry into the nature of the firm—to gain some traction on this elementary question.

In some industries, the entire process of production is integrated into a single firm.<sup>1</sup> In others, firms rely on numerous suppliers for essential production components—and these suppliers may themselves rely on other suppliers.<sup>2</sup> Many more industries fall somewhere in between these two extremes, relying partly on external suppliers and partly on internal production.<sup>3</sup>

Economists have long sought to discern what causes companies to concentrate production internally or acquire inputs from other firms. This question is often referred to as the “make or buy” decision, as firms can either make an input themselves or buy it from an external supplier. Most famously, in *The Nature of the Firm*, Nobel Prize Winner Ronald Coase posited that the key to the “make or buy” question depended on the relative advantages of making a product inside the firm compared to the costs of purchasing inputs outside the firm.<sup>4</sup>

The chief advantage of purchasing inputs from outside the firm is that doing so enables a producer to take advantage of the invisible hand of the marketplace. Competition among potential suppliers can help the entrepreneur acquire inputs at the lowest cost. Moreover, easily visible market prices make it easier for the entrepreneur to allocate economic resources in an efficient way.

The chief disadvantage of purchasing inputs from outside the firm is that doing so introduces the costs we now call “transaction costs.” These include the cost of finding suitable suppliers,<sup>5</sup> the cost of acquiring and processing information,<sup>6</sup> the costs of negotiating and enforcing contracts, the costs of hold-up and moral hazard, and other strategic behavior.<sup>7</sup> The boundaries of the firm are set where the benefits of the

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<sup>1</sup> [Example]

<sup>2</sup> [Example]

<sup>3</sup> [Example]

<sup>4</sup> Coase, *The Nature of the Firm* (1937).

<sup>5</sup> (search costs) [cite]

<sup>6</sup> (information costs) [cite]

<sup>7</sup> See Barry et al., *Voluntary Transactions Costs*.

market are outweighed by transaction costs; in those circumstances the entrepreneur will choose to make the production input in question rather than buy it in the marketplace.

A vast literature in transaction cost economics has expanded on this Coasean approach to understanding why firms exist and how they are organized. Scholars have examined how various factors affect the make or buy decision and alter the boundaries of firms.<sup>8</sup> However, no one has examined how the income tax, a ubiquitous feature of modern economies,<sup>9</sup> affects the boundaries of the firm.

Of course, tax scholarship has considered some related questions, such as how tax affects the financing of firms. The academic literature, especially in law reviews, has focused primarily on how tax distorts the ways that companies fund themselves. An extensive literature considers how tax affects the decision to finance marginal investments with debt, equity, or retained earnings—that is, the right hand side of the balance sheet.<sup>10</sup>

Reading this literature, one gets the sense that the left hand side of the balance sheet—what a firm does, where, and with whom—should be taken as a given, as if it were somehow determined in a world without taxes.<sup>11</sup> The literature has not explored how the income tax distorts “real” (non-financial) management decisions, such as how to organize a firm, whether to “make” or “buy” key aspects of production, where to locate assets and production functions within the firm, and how and where to reinvest profits.<sup>12</sup>

We fill this gap in the literature by returning to a Coasean perspective, which refocuses the inquiry on these important questions. We start with the conceptual insight that tax distorts the boundaries of the firm by distinguishing between market and nonmarket transactions. The U.S. income tax, like all other modern income taxes, relies on market

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<sup>8</sup> [String cite]

<sup>9</sup> [cite]

<sup>10</sup> The right hand side of the balance sheet consists of liabilities and equity, also referred to as the capital structure of the firm. For example, there is a “new view” and “old view” on how the income tax affects companies’ dividend policies. [Cites]

<sup>11</sup> The left hand side of the balance sheet consists of the assets of the firm. One exception is a recent paper finding that the U.S. corporate income tax distorts the allocation of capital investment. See Li Liu, *Do Taxes Distort Corporations’ Investment Policy? Evidence from Industry-Level Data* (unpublished paper, Oct. 2011) (noting that “[m]easuring the inter-asset distortion effect of the corporate income tax has received little attention despite the well-documented differences in the taxation of different capital assets.”)

<sup>12</sup> [There has been attention to various specific carve-outs and tax expenditures, such as R&D credit, immediate expensing of investments, etc. String cite]

transactions outside the boundaries of the firm to measure income. Intrafirm transactions create opportunities to shift income within the firm in advantageous ways—for example, to move income to lower-tax jurisdictions, or to defer the recognition of income to the future. Thus, an income tax encourages firms to engage in more intrafirm transactions than they would in a world without taxes.

Consider, for example, a hypothetical U.S.-headquartered firm that sells clothing worldwide. Assume the firm has a choice between either (1) building a new clothing factory in Cambodia or (2) contracting with a logistics firm that would source the clothes, to required specifications, from a Cambodian company. By expanding its boundaries into Cambodia, the U.S.-headquartered company may be able to shift profits to Cambodia, a low tax jurisdiction.<sup>13</sup> Simply contracting with a foreign manufacturer or sourcing firm at the market rate, by contrast, would not offer the same opportunity.<sup>14</sup> Thus, in this instance, the U.S. income tax favors “make” over “buy,” expanding the boundary of the firm at the margin.

The tax treatment of losses provides another example of how distinguishing between intra- and inter-firm transactions can distort the boundary of the firm. Taxpayers reporting net annual losses generally are not entitled to collect payments from the government. Instead, they must wait until they have taxable income to monetize their tax losses.<sup>15</sup> There are also rules that prevent a company that has suffered losses from easily transferring those losses to a separately owned business that could (presumably) put them to use.<sup>16</sup> However, losses that a firm incurs within one line of business can be used immediately to offset income from another. Taken together, these rules advantage larger, combined enterprises, expanding the boundary of the firm at the margin.

There are also many rules in the tax code that give advantages to small businesses of various types.<sup>17</sup> These provisions are a heterogeneous group: Some provisions bestow benefits to the companies directly,<sup>18</sup>

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<sup>13</sup> Cambodia has a corporate tax, but offers exemptions for many foreign direct investment projects.

<sup>14</sup> Even where high transaction costs prevent moving production functions inside the firm, tax encourages firms to engage in more relational contracting on the margin, rather than simply buying inputs on the open market. These kinds of long-term contractual relationships allow for relational tax planning.

<sup>15</sup> Section 172

<sup>16</sup> Section 382

<sup>17</sup> [Cite to Mirit Eyal-Cohen; others]

<sup>18</sup> *See, e.g.*, 26 U.S.C. § 474 (allowing simplified dollar-value inventory pricing for small companies using LIFO).

while others provide benefits to investors in small businesses.<sup>19</sup> Some are driven by a policy choice to encourage and reward small businesses, while others are driven by administrative or compliance concerns. Their definitions of small business vary significantly.<sup>20</sup> But despite their differences, all of these provisions encourage breaking enterprises into smaller pieces, shrinking the boundary of the firm at the margin.<sup>21</sup>

There are many other ways in which the tax code's (understandable) differential treatment of intra- and inter-firm transactions can affect the boundary of the firm, and we give additional examples later in this Article.<sup>22</sup> Some of these provisions expand the boundary of the firm; others contract it. But a key observation is that the expansions and contractions do not generally offset each other, and thus each distortion is problematic; two wrongs are unlikely to make a right in this instance.

An income tax can also cause other real economic distortions by according different treatment to different parts of the same economic firm. One clear example is the treatment of multinational corporate entities with a U.S. parent corporation: The United States taxes corporations on their worldwide profits, and the U.S. statutory corporate tax rate is higher than most other countries.<sup>23</sup> However, profits earned by foreign subsidiaries generally are not subject to U.S. tax until they are brought back to the United States as dividends paid to the parent corporation.<sup>24</sup> Thus, the income tax encourages U.S.-based multinationals to reinvest profits, and to shift growth, assets, and business activity, abroad rather than domestically.<sup>25</sup>

In other instances, however, firms adopt legal structures that enable them to obtain the same favorable tax treatment without significantly changing their business activities. This technique, known as

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<sup>19</sup> See, e.g., 26 U.S.C. § 1045 (allowing taxpayers to defer gains from certain sales of the stock of small businesses if they reinvest in other small businesses); 26 U.S.C. § 1202 (partially excluding from income gain from certain sales of the stock of small businesses), 26 U.S.C. § 1244 (converting capital losses to ordinary losses when they arise from the sale of stock in a small business).

<sup>20</sup> See, e.g., 26 U.S.C. § 474 (defining "small" as having less than \$5,000,000 annual gross receipts over the previous three years); 26 U.S.C. §§ 1045, 1202 (defining "small" as having less than \$50,000,000 in assets); 26 U.S.C. § 1244 (defining "small" as a corporation that has raised \$1,000,000 in equity capital or less).

<sup>21</sup> A provision does not need to be explicitly limited to small businesses to advantage small businesses, thereby shrinking the boundary of the firm at the margin. For example, consider a corporate income tax that was highly progressive with steeply climbing rates. We discuss other provisions that have this effect later.

<sup>22</sup> [Infra cite]

<sup>23</sup>

<sup>24</sup>

<sup>25</sup> See *infra* at text accompanying notes xx.

regulatory arbitrage,<sup>26</sup> enables economic activity to continue more or less as it would in a world without taxes. The primary effect of tax under these conditions is not a real distortion of economic activity, but rather an increase in transaction costs both within and outside the firm. Under these conditions, the primary effect of tax is to make firms more complex, less transparent, and more costly to do business with.<sup>27</sup> Some of these tax-planning techniques have recently been in the public eye, with Congressional inquiries into Apple, Microsoft, and Hewlett-Packard and with press coverage of Google, Starbucks, and other high profile companies. Politicians express outrage at the byzantine structures concocted to avoid tax, yet fail to fully understand the ways that the tax code encourages this complexity.

This regulatory arbitrage response has also manifested itself in the form of firms organizing as passthrough entities, such as partnerships, LLCs, REITs and MLPs, in order to avoid the corporate income tax. Changing organizational form to avoid taxes can drive up transaction costs, increase complexity, increase agency costs, and result in suboptimal corporate governance.<sup>28</sup> Thus, even these nonreal responses can have significant impacts on real economic activity.

Accordingly, our analysis yields both a theoretical contribution and some new insights into current policy debates. The theoretical contribution is that the income tax can introduce an additional economic distortion—and therefore inefficiency—by pushing firms to make different decisions about what they produce internally and what they purchase externally than they would absent taxes. This source of inefficiency adds a new theory-based argument for eschewing or minimizing a corporate income tax, as well as other tax instruments that have similar distortionary effects.<sup>29</sup>

This analysis also suggests some more actionable recommendations for a slew of ongoing major policy debates. First, consider the statutory corporate income tax rate. There is a surprising amount of bipartisan support for lowering this rate.<sup>30</sup> The inefficiency effect that we identify in this Article provides a new reason to support such a rate cut: the degree to which the corporate income tax distorts the

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<sup>26</sup> [Cite to Reg Arb articles by Fleischer and Barry]

<sup>27</sup> See Victor Fleischer, *Regulatory Arbitrage*, Tex L. Rev.; Leigh Osofsky, Frictions.

<sup>28</sup> Mitchell Kane. But see Larry Ribstein.

<sup>29</sup> To be clear, there are many other arguments for and against a corporate income tax, and the issue we raise need not be dispositive, or even the most important. It should be considered, however. [Cites talking about arguments in favor of and against a corporate income tax]

<sup>30</sup> [Cite to Jordan Barry, Chapman L Rev article] [Of course, this may not hold as the Democratic Party appears to be shifting left.]

boundary of the firm varies with the magnitude of the tax imposed. Reducing the corporate income tax rate will thus reduce the distortive effect we identify.

In the international tax context, one of the biggest active policy debates is whether we should maintain our current international tax system. Our analysis underscores how current law's deferred taxation of foreign subsidiaries' offshore earnings creates real distortions in the location of reinvested earnings. It also helps explain the increasing complexity in multinational corporate organizations, a complexity that is primarily tax-driven. In addition, our analysis bears on current proposals to replace our current system. One camp is pushing for a territorial system, which would exempt the offshore earnings of foreign subsidiaries from U.S. tax altogether. From a Coasean boundaries-of-the-firm perspective, this is a step in precisely the wrong direction. Such a system would reward "making" over "buying" in all the same circumstances as current law, but to a significantly larger degree. Instead, our analysis bolsters proposals to partially or fully eliminate deferral through worldwide consolidation.<sup>31</sup>

The remainder of this Article is organized as follows. Following this Introduction, Part II revisits the literature on Coase and the boundaries of the firm, setting the stage for a discussion of how transaction cost economics can inform tax policy. Part III explores some of the ways in which the income tax distorts the boundary of the firm. In doing so, it provides numerous examples of provisions that can grow or shrink firms at the margin or alter the relative size of their components. It also discusses how firms can respond to income tax law incentives without significantly changing their economic behavior by engaging in regulatory arbitrage. Part IV emphasizes these points through a case study of U.S.-based multinational corporations, discussing both the real distortion of reinvesting profits abroad and the "nonreal" response of moving existing profits abroad for legal purposes. Part V discusses the implications of our analysis for a number of tax policy questions and Part VI concludes.

## II. THEORY OF THE FIRM LITERATURE

To understand how tax affects the boundaries of firms, one must understand the theory of the firm. There is a voluminous literature on this topic, but a seminal work in the field is Ronald Coase's *The Nature of the Firm*, in which Coase posited that transaction costs define the boundaries

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<sup>31</sup> Again, from a theory perspective, a consumption tax would minimize distortions of the boundaries of the firm; in particular, the best instrument would be a destination-based VAT. In the short term, however, worldwide consolidation at a lower rate seems somewhat more plausible.

of the firm.<sup>32</sup> We begin with a discussion of Coase's theory before turning to how subsequent work within the fields of economics, finance, law, and tax have expanded upon that theory.

#### A. The Coasean Framework

In the Coasean framework, an entrepreneur or manager decides whether to make or to buy the inputs she will need to produce goods or services. If the entrepreneur chooses to buy the inputs, it will engage in market transactions with other firms that produce them. This enables the entrepreneur to rely on the price mechanism of the market—sometimes called the invisible hand—to help the entrepreneur decide how best to allocate her resources efficiently.

At the same time, contractual dealings with unrelated parties raise a number of challenges that the entrepreneur must contend with. Suppliers may have better information than the entrepreneur, and may seek to use this to their advantage. Suppliers may engage in various types of opportunistic behavior, or defraud the entrepreneur. The entrepreneur must design its supply contracts with these issues in mind. Even so, negotiating and enforcing contracts is costly, and contracts are likely to prove an incomplete solution to these problems.

Alternatively, the entrepreneur could decide to make the inputs she needs, shifting production from outside suppliers into the firm itself. In doing so, the entrepreneur substitutes a hierarchy of managers and employees in place of market transactions with unrelated parties. This can reduce the transaction costs described above—essentially, the entrepreneur does not need to worry that she will seek to take advantage of herself.

On the other hand, directing production within the firm also carries its own costs. (Somewhat confusingly, these costs are often called “intrafirm transaction costs.”) Employees shirk their duties. Managers make self-interested decisions. Even if managers are direct production with the entrepreneur's interest in mind, they will be relying on their knowledge of events with the firm, instead of market prices, when they decide how to allocate resources. Deprived of market pricing information, managers may simply make bad decisions, allocating rewards or resources within the firm in an inefficient way.

Coase posited that the boundaries of the firm are set at the point at which overall transaction costs are minimized. The boundaries of the firm depend on the specificity of assets used in production and institutional constraints on opportunistic behavior. Production takes place within a

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<sup>32</sup> Coase (1937).



firm when the costs of transacting in the marketplace are higher than the costs of producing the same goods or services within the firm. When these Coasean transaction costs are low, the entrepreneur buys inputs from the market. When transaction costs are high, the firm produces goods and services within the firm. The boundary of the firm is where the two sets of costs—the costs of transacting in the marketplace and the costs of directing production inside the firm—are equal.

It is worthwhile to ground this theorizing with a simple illustrative example. Consider a power plant that generates electricity by burning coal. For simplicity, assume that coal is the only input in the plant's production process.

One could imagine several ways in which this production process would be organized. One possibility is that the plant could purchase its coal from one or more external and unrelated coal mines—that is, it could buy its coal on the open market. Another would be for the plant itself to own and operate a coal mine, and to use the coal it mines in its generating process—that is, it could make its own coal.

Consider the scenario in which the power plant buys coal from unrelated mines. There are several reasons why this arrangement might make sense. For example, the knowledge and training involved in mining coal differ from those required to operate a power plant, and managers experienced in one field might not be well-equipped to oversee the other. If the power plant purchases its coal on the open market, it will not have to concern itself with the operation of the coal mine. All it needs to do is agree to contract terms with a coal supplier. This may be an attractive option if the plant can count on strong competition among sellers of coal, which is most likely when there are many available suppliers selling interchangeable coal. In these circumstances, the plant can rely on market prices to help it allocate resources efficiently.

There are also scenarios in which it might make sense for the power plant to own and operate its own coal mine. For example, suppose that coal mined from different locations has different properties, and that it is worthwhile to modify the power plant so that it is more efficient at burning a particular type of coal.<sup>33</sup> The power plant could simply identify a particular coal mine that it plans to purchase from, and then modify its plant accordingly. However, these modifications would make it difficult for the plant to shift to burning coal from another source. Knowing that the plant is relying on it, and therefore vulnerable, the coal mine can take

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<sup>33</sup> [This is true. One can also construct many other examples of this type. For example, the plant may need to build a railroad line to a coal mine to bring in coal. The railroad represents an asset-specific investment that cannot be easily recouped, nor can the plant easily switch suppliers.]

advantage of the situation by charging a supra-competitive price for its coal.

There are contractual responses to this sort of problem. One option is for the power plant to negotiate a long-term contract with the coal mine before it makes any modifications to its plant. This locks in a price and protects the plant from price-gouging for years to come. However, negotiating such contracts can be challenging, as they need to take into account all manner of unexpected events.<sup>34</sup>

Alternatively, if the power plant owns its own coal mine, it does not need to worry about opportunistic behavior by the coal mine, as it will control the coal mine. The downside of this approach is that the power plant will now be in the coal mining business as well as the power-generating business. The power plant may lack the expertise to operate a coal mine efficiently. Moreover, it may be difficult for the power plant to determine what its costs are from mining coal, and thus how well its coal-mining business is doing overall. Without a clear price for the coal it burns, it may also be more difficult to tell how well the power-generating business is doing.

## B. Subsequent Economic Literature

In the decades following *The Nature of the Firm*, many economic scholars have expanded on Coase's framework. This literature is substantial, and a complete review is beyond the scope of this Article. We instead limit our discussion to a brief mention of a few major strands, in order to give the reader a sense of how much attention and consideration economists have devoted to the theory of the firm.

One line of work emphasizes the importance of team production.<sup>35</sup> In this view, firms exist because team production increases output, but makes it difficult to match (or "meter") rewards to productivity. Incentivizing close monitoring is therefore critical, and it is often efficient to give the residual earnings of the firm to the monitor herself. The boundaries of the firm are set at the point at which the marginal benefits of team production equal the marginal costs of monitoring behavior inside the firm.

Agency cost theories of the firm also emphasize the importance of the firm as a centralized monitor.<sup>36</sup> Locating production inside the firm creates a principal-agent problem, as the managers who direct production

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<sup>34</sup> [Cite ALCOA case]

<sup>35</sup> Alchian & Demsetz 1972; string cite

<sup>36</sup> Jensen & Meckling (1976).

are often different from the principals who own the firm. The boundaries of the firm are set when the agency costs—the monitoring costs, bonding costs, and residual loss—become so high that it is cheaper to contract in the market.

Property rights theories of the firm focus on the problem of incomplete contracting. Because parties have imperfect information, and because information is costly to obtain, contracts are necessarily incomplete and cannot contemplate every contingency that might arise. Property rights fill these gaps.<sup>37</sup> Property rights can also facilitate information exchange among potential users of innovation.<sup>38</sup> The boundaries of the firm are set at the point where making the firm the residual owner of more property is equal to the costs associated with holding that property.

The New Institutional Economics literature on theory of the firm is perhaps closest to the spirit of Coase's original paper. This literature highlights the importance of the firm as a governance structure that can address the problem of ex post opportunism.<sup>39</sup> This approach shows that the make or buy decision, often framed as a binary choice, can also be thought of as falling more on a spectrum, with relational contracting filling the gap between these two poles. Relational contracting allows for governance structures that constrain opportunism without imposing hierarchical control. It is also worth noting that relational contracting opens up opportunities for relational tax planning, where firms rely on incentives, relationships, and norms to overcome frictions that would otherwise constrain tax planning.<sup>40</sup>

Finally, some recent works on the theory of the firm have focused on how globalization and technological advancement have rendered the boundary of the firm increasingly fluid. Zingales has argued that the extant theory of the firm literature envisions an asset-intensive and vertically integrated firm with tight hierarchical control over its employees.<sup>41</sup> Human capital, not physical assets, increasingly determine the boundaries and success of the firm. If the firm's critical assets can walk out the door whenever they like, the hierarchical model of internal

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<sup>37</sup> Sanford Grossman & Oliver Hart, *The Costs and Benefits of Ownership: A Theory of Lateral and Vertical Integration*, 94 J. POL. ECON. 691 (1986); Oliver Hart & John Moore, *Property Rights and the Nature of the Firm*, 98 J. POL. ECON. 1119 (1990).

<sup>38</sup> Arrow, *Vertical Integration and Communication* (1975).

<sup>39</sup> Oliver E. Williamson, *THE ECONOMIC INSTITUTIONS OF CAPITALISM: FIRMS, MARKETS, RELATIONAL CONTRACTING* (1985).

<sup>40</sup> Raskolnikov, Fleischer.

<sup>41</sup> Zingales, *In Search of New Foundations*, 55 J. Fin. 1623, 1624 (2000).

control becomes questionable.<sup>42</sup> Zingales argues that firms have increasingly shifted away from direct control over suppliers in favor of loose collaborations as well. Thus, power, control, and rents are distributed throughout the firm, and the boundaries of the firm are in constant flux. Gilson, Sabel & Scott argue that the boundaries of the firm have become more fluid in order to optimize collaborative innovation.<sup>43</sup> They describe the braiding of formal (legally enforceable) and informal (legally unenforceable) contracts among firms as “contracting for innovation.”<sup>44</sup>

While theories of the firm vary in important ways, a consistent theme persists: firm boundaries vary depending on transaction costs within and outside the firm. Firms exist as a response to, and as a way of economizing on, transaction costs. As we will argue in Part [X], tax creates distortions under any of the theories discussed above. Thus, we need not adopt (or defend) any of these particular theories of the firm here.

We also note that, while economists routinely accept that tax distorts decision-making,<sup>45</sup> the effect of tax on the boundaries of the firm has largely been left unexplored. Theory of the firm scholars generally continue to operate in a world in which tax is assumed away. However, this is not true of finance scholarship, to which we now turn.

### C. Finance and Accounting Literature: Tax Matters

Much of the finance and accounting literature is infused, implicitly or explicitly, with insights from the theory of the firm literature.<sup>46</sup> While a comprehensive review is beyond the scope of this paper, the obvious place

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<sup>42</sup> Id. at 1644 (“The new challenge is to explain what happens when there are no physical assets involved or when these assets are simple commodities and, hence, easily replaceable. This is tantamount to explaining how a third party can have control over human capital in a world where labor has been liberated not only from slavery but also from the modern form of indenture represented by the uniqueness of the assets that labor specialized to.”).

<sup>43</sup> Ronald J. Gilson, Charles F. Sabel & Robert E. Scott, *Contracting for Innovation: Vertical Disintegration and Interfirm Collaboration*, 109 *Colum. L. Rev.* 431 (2009).

<sup>44</sup> Id. at 435 (“The explicit and implicit obligations interact within a formal governance structure that regulates the exchange of highly revealing information but does not necessarily impose legally enforceable obligations to buy or sell anything. This braiding creates an interactive process that constrains opportunism as the parties’ investments in detailed knowledge of each other’s character and capabilities raise switching costs—the costs one party to a contract must incur in order to replace the other party to the contract.”)

<sup>45</sup> Not surprisingly, tax economists have made important contributions, including Slemrod, Auerbach, Desai, Dharmapala, etc.

<sup>46</sup> Zingales.

to start is Modigliani & Miller.<sup>47</sup> Modigliani and Miller established that in a world without transaction costs, bankruptcy costs, or taxes, the capital structure of a firm does not affect its value.<sup>48</sup> It follows that capital structure decisions can often be understood as methods of economizing on transaction costs and taxes.

A great deal of public finance scholarship has been devoted to how tax considerations can distort capital structure. Under the new view of dividend policy, for example, scholars postulate that managers assume profits will eventually be distributed to shareholders in transactions taxed at the same rate.<sup>49</sup> If so, tax may not distort dividend policy in the long-run because the tax consequences of current versus future dividends may be equivalent.<sup>50</sup> However, this analysis may be more complicated in the international context, as the repatriation tax can be avoided (at least for purposes of financial accounting) if profits earned overseas by foreign subsidiaries are permanently reinvested overseas.<sup>51</sup>

There is some literature on the effect of tax policy on managerial incentives to alter organizational form. Perhaps closest to the spirit of this paper, Desai and Hines studied how the enactment of the Tax Reform Act of 1986 affected international joint ventures. That law rendered international joint ventures, particularly with low-tax affiliates, less attractive.<sup>52</sup> Following the tax change, Desai and Hines indeed found that more multinationals opted to have majority-owned affiliates—which more people would consider to be inside the boundaries of the firm—as compared to minority-owned joint ventures—which would conventionally be considered outside the boundaries of the firm. They conclude that the

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<sup>47</sup> Modigliani & Miller, *The Cost of Capital, Corporation Finance and the Theory of Investment*, 48 *Am. Econ. Rev.* 261 (1958); see also Miller, *The Modigliani-Miller Propositions After Thirty Years*, 2 *J. Econ. Persp.*, Fall 1988, at 99 (1988); Modigliani & Miller, *Corporate Income Taxes and the Cost of Capital: A Correction*, 53 *Am. Econ. Rev.* 433 (1963).

<sup>48</sup> [More precisely . . . ]

<sup>49</sup> David Bradford, *The Incidence and Allocation Effects of a Tax on Corporate Distributions*, 15 *J. PUB. ECON.* 1 (1981); Alan J. Auerbach, *Wealth Maximization and the Cost of Capital*, 93 *Q.J. ECON.* 433 (1979); Mervyn A. King, *Taxation and the Cost of Capital*, 41 *REV. ECON. STUD.* 21 (1974). For a useful discussion, see Steven A. Bank, *Dividends and Tax Policy in the Long Run*.

<sup>50</sup> [Cites]

<sup>51</sup> [Cites]

<sup>52</sup> Mihir A. Desai & James R. Hines, Jr., “Basket Cases”: Tax Incentives and International Joint Venture Participation by American Multinational Firms, 71 *J. Pub. Econ.* 379 (1999). See also Mihir A. Desai, C. Fritz Foley & James R. Hines, Jr., *The Costs of Shared Ownership: Evidence From International Joint Ventures*, 73 *J. Fin. Econ.* 323 (2004).

organization of international business “is very sensitive to its tax treatment.”<sup>53</sup>

In sum, while a great deal of finance literature exists on distortions to the capital structure, there is much less research investigating asset distortions and changes to organizational form. Implicitly, of course, tax distortions on the right hand side of the balance sheet affect the left hand side as well; for example, managers of highly leveraged firms can be expected to be more risk-seeking than managers of firms without debt. But the literature has not discussed in depth how tax induces firms to accumulate assets in order to exploit tax arbitrage opportunities.

#### D. Legal Scholarship: The Splintering of the Firm

Most of the legal scholarship referencing the theory of the firm literature has been concentrated in corporate law.<sup>54</sup> This literature has largely focused on the relationship between shareholders and managers, and debates about the proper goals of corporate governance.<sup>55</sup> The takeover literature incorporates tax to the extent that it recognizes the debt-equity distortions described in the finance literature, but to date has focused on whether LBOs are tax-favored.<sup>56</sup> Only a few legal scholars have devoted significant attention to hybrid forms of organization, like relationships with outsourcing firms.<sup>57</sup>

More recently, legal scholars outside of corporate law have begun to examine how specific doctrinal areas of law affect the boundaries of the firm. For example, a number of scholars have drawn on the property rights theory of the firm literature to make normative arguments about intellectual property law.<sup>58</sup> In addition, legal scholars have begun to

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<sup>53</sup> Desai & Hines, *Basket Cases*, at 400.

<sup>54</sup> See literature review in Jason Scott Johnston, *The Influence of the Nature of the Firm on the Theory of Corporate Law*, 18 *J. Corp. L.* 213 (1993).

<sup>55</sup> E.g., D. Gordon Smith, *The Critical Resource Theory of Fiduciary Duty*, 55 *Vand. L. Rev.* 1399, 1444-47 (2002).

<sup>56</sup> Bartlett, *Taking Finance Seriously: How Debt Financing Distorts Bidding Outcomes in Corporate Takeovers*, 76 *Fordham L. Rev.* 1975 (2008); Gilson & Scholes.

<sup>57</sup> George S. Geis, *The Space Between Markets and Hierarchies*, 95 *Va. L. Rev.* 99, 121-26 (2009) (offering a theoretical justification for hybrid organizational contracting); George S. Geis, *An Empirical Examination of Business Outsourcing Transactions*, 96 *Va. L. Rev.* 241 (2010).

<sup>58</sup> See Dan L. Burk & Brett H. McDonnell, *The Goldilocks Hypothesis: Balancing Intellectual Property Rights at the Boundary of the Firm*, 2007 *U. ILL. L. REV.* 575 (2007); Dan L. Burk & Brett H. McDonnell, *Patents, Tax Shelters, and the Firm*, 26 *VA. TAX REV.* 981 (2007); Dan L. Burk & Brett H. McDonnell, *Trademarks and the Boundaries of the Firm*, 51 *WM. & MARY L. REV.* 345 (2009), Dan L. Burk, *Intellectual Property and the Firm*, 71 *U. Chi. L. Rev.* 3 (2004), Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 *J. L. Econ.* 265 (1977), Oren Bar-Gill & Gideon Parchomovsky, *Intellectual Property Law and the Boundaries of the Firm*, David

consider the distinction between the economic and legal boundaries of the firm.<sup>59</sup> Iacobucci & Triantis argue that legal partitions within an economically integrated firm, such as subsidiaries, may be explained as an efficient method of obtaining asset-specific or industry-specific financing.<sup>60</sup> But Iacobucci and Triantis do not consider tax as an explanation for partitions within the firm, nor do they address how tax policy affects hybrid vehicles like special purpose entities used in project finance or securitizations. Most practitioners would readily acknowledge the first-order importance of tax in this context.

[add hansmann & ayotte]

[add Gelpern & Bratton paper]

[add discussion of Partnoy Shapeshifting paper]

#### E. Tax Law Literature: Relational Tax Planning

Legal scholars in tax have focused on doctrinal distortions, like the corporate “double” tax on earnings. As with the public finance literature, there has been little attention paid to distortions of the size of the firm and the composition of assets.

For example, legal scholars have examined how the presence of the corporate tax distorts economic behavior.<sup>61</sup> They have discussed the capital lock-in effect as an explanation for the origins of the corporate tax.<sup>62</sup> They have described how corporate managers benefit from the retained earnings trap, creating political opposition or ambivalence towards corporate integration.<sup>63</sup>

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McGowan, Legal Implications of Open Source Software, 2001 U. Ill. L. Rev. 241 [add cite to Robert Merges]

<sup>59</sup> Scott E. Masten, *A Legal Basis for the Firm*, 4 J.L. ECON. & ORG. 181, 185-94 (1988) (arguing that legal agency relationships in employment are central to the theory of the firm). Eric W. Orts, *Shirking and Sharking: A Legal Theory of the Firm*, 16 YALE L. & POL'Y REV. 265, 291 (1998) (“Firms are creatures of law as well as transaction costs.”).

<sup>60</sup> Edward M. Iacobucci & George G. Triantis, *Economic and Legal Boundaries of Firms*, 93 VA. L. REV. 515, 521 (describing tradeoff between economic integration and tailoring capital structure to specific asset types).

<sup>61</sup> Shaviro book, Schlunk, Weisbach, Steven A. Bank, *A Capital Lock-In Theory of the Corporate Tax*.

<sup>62</sup> Bank, *Capital Lock-In*.

<sup>63</sup> Arlen & Weiss, *A Political Theory of the Corporate Taxation*, 105 Yale L. J. 325 (1995); Doran.

In the international context, recent work on “stateless income” focuses on how firms exploit cross-border planning techniques to reduce both U.S. and global tax rates.<sup>64</sup> [more]

Most relevant here is Alex Raskolnikov’s work on relational tax planning. [summary]

### III. THEORETICAL FRAMEWORK

Having laid out the relevant background and context regarding the extant literature on the theory of the firm, we now turn to the effects of the income tax on the boundary of the firm. In doing so, we cluster these effects into four groups: Price-mechanism distortions are those that arise from the income tax’s reliance on arm’s-length transactions, and the pricing they provide, to calculate incomes. Doctrinal distortions arise from choices in the design of our income tax laws, such as the decision not to integrate corporate and shareholder-level taxes, to restrict the transfer of tax credits and net operating losses, and to accord tax benefits to small businesses. Intrafirm distortions stem from provisions that apply different rules to different parts of the same economic enterprise. As a result, they can change how the enterprise and its activities evolve over time. Finally, we discuss how regulatory arbitrage can enable firms to gain the tax benefits they desire without having to make significant changes to their real economic activities.

#### A. The Price Mechanism Distortion

Introducing tax to the classic model distorts the entrepreneur’s use of the price mechanism. Tax exerts an effect on the margin of the “make or buy” decision. Our realization-based income tax system relies on the existence of a market transaction to measure the timing and amount of tax liability.<sup>65</sup> Firms can more easily manipulate intrafirm transactions to defer income, allocate taxable income to a low-tax jurisdiction, allocate deductions to a high-tax jurisdiction, or convert ordinary income into capital gain.

The key theoretical intuition is that managers will shape the boundaries of the firm, on the margin, to avoid market transactions if doing so reduces tax liability. This means that there will be some situations in which managers will choose an intra-firm transaction even if it would be more efficient (in a no-tax world) to use a market transaction. Firms would be smaller, and the boundaries of the firm tighter, in a world without taxes.

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<sup>64</sup> Kleinbard

<sup>65</sup> Notable exceptions include the original issue discount rules, constructive receipt rules.



Tax relies on the price mechanism of the market because that mechanism is useful to the tax collector in much the same way that it is useful to the entrepreneur. So long as the added costs of keeping economic activity within the firm are less than the tax savings, the entrepreneur will grow the firm at the margin.<sup>66</sup> For example, U.S. corporations often create subsidiaries in Delaware or Nevada to hold intellectual property, which is then leased to other subsidiaries, effectively shifting income from a high tax state (like California) to a low tax state (like Nevada).

The implications of this tax distortion—the *price mechanism distortion*—are potentially vast.<sup>67</sup> Recall that, in a Coasean world without transaction costs, the boundary of the firm is set at the place where transaction costs outside the firm and the costs of directing production inside the firm are minimized overall. A realization-based tax system systematically puts market transactions at a disadvantage. The tax distortion creates private costs, as firms accept higher agency costs, shirking, information costs, and other costs within the firm as the price for reducing taxes. And the tax distortion creates social costs in the form of inefficient allocation of economic resources and reduced tax revenue.

## B. Doctrinal Distortions

Tax law creates additional distortions on firms because of doctrinal choices underlying the structure of our tax code. First, there is an

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<sup>66</sup> In some cases, tax could cause a firm to shrink at the margins. For example, a corporation might sell a depreciated asset in order to realize a tax loss.

<sup>67</sup> Coase explored this possibility in *The Nature of the Firm* (p. 391):

Another factor that should be noted is that exchange transactions on a market and the same transactions organized within a firm are often treated differently by Governments or other bodies with regulatory powers. If we consider the operation of a sales tax, it is clear that it is a tax on market transactions and not on the same transactions organized within the firm. Now since these are alternative methods of organization—by the price mechanism or by the entrepreneur—such a regulation would bring into existence firms which otherwise would have no *raison d'être*. It would furnish a reason for the emergence of a firm in a specialized exchange economy. Of course, to the extent that firms already exist, such a measure as a sales tax would merely tend to make them larger than they would otherwise be. Similarly, quota schemes, and methods of price control which imply that there is rationing, and which do not apply to firms producing such products for themselves, by allowing advantages to those who organize within the firm and flow through the market, necessarily encourage the growth of firms. But it is difficult to believe that it is measures such as have been mentioned in this paragraph which have brought firms into existence. Such measures would, however, tend to have this result if they did not exist for other reasons.

*agglomeration/disintegration distortion.* Unlike the price mechanism distortion, which follows as a consequence of using a realization-based tax system, the agglomeration/disintegration distortion stems from the existence of a firm-level tax. In the United States, we have a classical corporate tax which imposes a separate tax on both a corporation and its shareholders. Doctrinal corporate tax law thus creates an agglomeration distortion that tends to expand the boundaries of the firm. On the margins, tax law encourages corporations to reinvest earnings rather than distribute out to shareholders.<sup>68</sup>

One might be tempted to say, therefore, that tax tends to expand the boundaries of the firm. This agglomeration distortion may be offset by a disintegration distortion, however. The disintegration distortion takes two forms: splitting apart existing firms, and avoiding the corporate form altogether.

This can even incentivize the disintegration of existing firms; MLPs, UpREITS. [Explain more and add in discussions of doctrinal treatment of losses and credits and their transferability. Discuss examples of provisions that favor small businesses, including both those that do so explicitly and those that merely do so effectively (e.g. Section 179, which allows expensing of otherwise depreciable property, up to a cap).]

### C. Intrafirm Distortions

[Explain

### D. Regulatory Arbitrage

The real situation is not quite as dire as the initial theoretical intuition suggests. The legal boundaries of the firm and the economic boundaries of the firm are not one and the same. In some cases, modern tax planning techniques allow firms to approximate (but not replicate) the economic arrangements that they would have had in a world without taxes.<sup>69</sup>

The firm's first response to the tax distortion is an expansion of the legal boundaries of the firm. Expansion of the economic boundaries of the firm is a secondary effect that occurs when regulatory arbitrage strategies are unavailable or incomplete. The gap between the economics of a

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<sup>68</sup> An important caveat: the existence of a corporate tax encourages entrepreneurs to avoid or defer incorporation of a business. But practical constraints lead most large firms to incorporate.

<sup>69</sup> Fleischer, *Regulatory Arbitrage* (Texas L Rev 2010).

transaction and its legal treatment for tax purposes creates a *regulatory arbitrage effect* where parties manipulate the legal structure of transactions to achieve a different tax treatment while disrupting the underlying economic relationships as little as possible. For example, firms may limit the effect of the agglomeration/disintegration distortion by issuing hybrid instruments that function like equity from an economic perspective but have payments that are treated like interest, not dividends.<sup>70</sup> This enables the firm to leave the locus and scope of underlying economic activity unchanged, while paying only one level of tax, at the investor level.

A firm's ability to engage in regulatory arbitrage is constrained, however, by transaction costs within the firm. In particular, tax planning increases agency costs by reducing shareholders' ability to monitor what managers are doing. When a firm stockpiles cash in the Cayman Islands, for example, it is unclear whether managers are doing so to reduce taxes, because they lack good investment options, or both. A firm's ability to engage in arbitrage does not mean that there are no intrafirm transaction costs; rather, it means that the tax savings outweigh the increase in agency costs or other wasteful effects.

An extended example may help illustrate the point. Suppose the U.S.-based technology company Apple wants to assemble phones in China, where engineers and factory workers are plentiful, talented, and cheap. In a world without taxes, assume that Apple would simply buy the assembled phones from a manufacturer in China at a low price. This market-based option is, by assumption, economically efficient. It is tax-inefficient, however, because much of Apple's income would be sourced and taxed in the United States, as U.S. consumers buy its phones. In response to tax distortions, Apple could create a new corporate subsidiary in China to manufacture the new iPhone, which would allow it to manipulate transfer prices to ensure that more profits were allocated to the in-China activities of the Chinese subsidiary. The creation of a manufacturing subsidiary in China would be a real tax-induced change in

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<sup>70</sup> Unlike the price mechanism distortion, the agglomeration distortion is not an intrinsic feature of a realization-based income tax. It is the product of the doctrinal architecture of a classical corporate tax that aims to tax earnings at both the entity and shareholder level. Doctrinal choices could mitigate the distortion, albeit at the cost of eroding the corporate tax base. For example, consider the relative difficulty, from a tax perspective, of divesting a business compared to acquiring a business. It is easy to incorporate a business without triggering tax liability, and it is relatively easy to acquire another company using stock as acquisition currency without triggering shareholder or corporate-level taxes. By contrast, it is more difficult to break apart companies without realizing shareholder or corporate-level gains. The reasons are purely doctrinal: in the absence of our desire to enforce an entity-level tax, there would be no need to police against the bailout of corporate earnings and profits in a spin-off or other distribution to shareholders.

the economic boundaries of the firm and, again by assumption, less economically efficient than simply buying the phones on the market.

But there is a third alternative. Rather than opening a subsidiary in China, Apple could create a sourcing subsidiary in Singapore that contracts with a manufacturing company in China. The Singapore subsidiary marks up the price of the phones before reselling to its U.S. and overseas affiliates, and Apple uses other planning techniques (like interest stripping) to reduce both its U.S. and global effective tax rate.<sup>71</sup> The Singapore subsidiary is legally part of Apple. But from an economic point of view, the production input in question—assembling the phones—remains outside the boundaries of the firm.

While arbitrage strategies allow the core production function to remain outside the firm, other transaction costs increase. An offshore legal structure leaves Apple with offshore cash, leaving three basic options: (1) repatriate the cash, paying tax at 35% (in the absence of a tax holiday) prior to re-investing in the U.S. or distributing a dividend to shareholders, (2) hoard the cash in a tax haven while awaiting a tax holiday, or (3) reinvest the cash offshore. Accounting considerations combine with tax incentives to encourage offshore reinvestment, even at a relatively low rate of return—a new distortion of the boundaries of the firm.

To briefly recapitulate, this theoretical framework suggests that we should observe tax exerting four primary pressures on the boundaries of the firm: (1) a *price mechanism* distortion, where firms expand the firm to hide market transactions from the tax collector, (2) doctrinal distortions, which can cause firms to expand or shrink on the margin as a result of structural choices such as having a separate entity-level tax, (3) intrafirm distortions, in which differential treatment of different parts of the same economic enterprise cause some parts to grow faster or slower than they otherwise would, and (4) a *regulatory arbitrage* effect, where firms engage in tax planning that allows the legal boundaries of the firm to shift while the economic boundaries of the firm remain closer to what would be optimal in a world without taxes. One may think of these economic distortions as the “implicit corporate tax”—the usual deadweight loss associated with tax-induced changes in economic behavior. Unlike prior literature, however, our focus here is on the left hand side of the balance sheet: how tax distorts the nature, location, and amount of assets held by firms. These distortions drive up agency costs and lead to an inefficient allocation of economic resources.

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<sup>71</sup> Kleinbard, *Stateless Income*. In this case, it would be necessary to transform the income from Singapore (where it might be foreign base company sales income and subject to current inclusion under subpart F) into deferred income.

## IV. CASE STUDY: CROSS-BORDER INCOME SHIFTING

## A. Market Pricing vs. Transfer Pricing

Imagine a global economy with a single firm, a conglomerate that controls all of the corporations in the world.<sup>72</sup> Tax collectors would find it challenging to collect the right amount of tax. When subsidiary A in country X sells a product to subsidiary B in country Y, who is to say if the transfer price is appropriate? There would be no comparable arms-length transactions to compare it to. Market transactions are necessary to accurately measure income, and in the absence of a market transaction, the tax collector is at a disadvantage.

By contrast, life would be easier for the tax collector in a global economy with no firms at all. The value of each economic input would be broken down into its component parts. Each step of the global supply chain could be observed and value attributed accordingly. Human capital could remain difficult to sort out;<sup>73</sup> for example, where an individual contributes both labor and capital, it may be difficult to separate the two activities for tax purposes.<sup>74</sup> Still, eliminating firms—the common ownership of assets—would allow the tax collector to observe far more market transactions and enforce the law more accurately.

The Coasean framework assumes that when transaction costs define the boundaries of the firm, the result is not only privately optimal, but socially optimal as well. Tax shows that this basic assumption is flawed in two significant ways. First, firms may expand the boundaries of the firm to reduce the number of market transactions visible to the tax collector, incurring higher agency costs within the firm than the transaction costs outside the firm that they would incur in a world without taxes. Second, the resulting tax avoidance reduces tax revenue, which

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<sup>72</sup> Cf. WALL-E (Pixar Animation 2008); See also Pixar Wiki, *Buy N Large*, available at [http://pixar.wikia.com/Buy\\_N\\_Large](http://pixar.wikia.com/Buy_N_Large) (“However, by the year 2057, as shown on the Buy n Large website, the conglomerate became a worldwide leader in the fields of aerospace, agriculture, construction, consumer goods, corporate grooming, earth transport, electronics, energy, engineering, finance, food services, fusion research, government, hydro-power, infrastructures, media, medical science, mortgage loans, pet care, pharmaceuticals, psychotherapies, ports and harbors, real estate, repairs, retail, robotics, science/health, space, storage, super centers, super grids, travel services, utilities, and watermills. ... Buy n Large continued to expand its efforts for control so much that by the year 2105, Buy n Large had over two million wholly owned subsidiaries, governmental bodies, and health care centers.”).

<sup>73</sup> Even in a world with no legal firms, humans would become a one person “firm” that provided a bundle of services and capital to another contracting party.

<sup>74</sup> The capital gains preference often makes this distinction important. For extended discussion of the human capital problem, see Fleischer, *Taxing Founders’ Stock*; Fleischer, *Two and Twenty*.

(assuming constant government spending)<sup>75</sup> requires higher overall tax rates and further distorts behavior.<sup>76</sup>

We focus our analysis on transfer pricing, although the broader point can be generalized. The tax code contains many provisions that impute a price to a transaction where actual market prices are unknown or easily manipulated. The OID rules, for example, impute an interest rate on bonds that have a redemption price that is higher than the issue price. Section 7872 imputes an interest rate where the stated rate of interest between the lender and borrower is below the market rate. Leases may include imputed rental payments for tax purposes. The partnership tax rules impute sales prices on certain disguised sales among partners. And so on. In each case, the tax code responds to a potential distortion of economic transactions where a firm engages in an intrafirm transaction or a transaction with a related party to achieve a tax objective.<sup>77</sup>

More broadly, the tax code contains many rules, such as the related party rules (section 318), the partnership anti-abuse regulation, and section 269 (an anti-abuse rule related to corporate formation) that try to constrain the ability to avoid taxes by creating legal relationships with parties that are not at arms-length. These rules, like the transfer pricing rules, are not always effective. We focus on transfer pricing because while the problem is pervasive, the economic distortions are broader in the cross-border context and the shifting of economic activity overseas represents a grave threat to the U.S. corporate tax base, which tends to get the attention of lawmakers.

## B. The Basics of Transfer Pricing

Transfer pricing is the pricing of the movement of goods, services, and intellectual property between affiliated companies or subsidiaries. When two companies are under common control, the managers must reach an agreement on the transfer price in the absence of an arms-length relationship.<sup>78</sup> Transfer pricing can be used to finance subsidiaries by

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<sup>75</sup> Relaxing this assumption does not solve the problem, either, as then we are forgoing (presumably) valuable public goods.

<sup>76</sup> The first type of cost—the private cost of distorting firm boundaries—can often be mitigated but not eliminated through regulatory arbitrage, as firms manipulate legal boundaries while keeping economic activity mostly unchanged. The second type of cost—the social cost of reduced tax revenue—is not mitigated by regulatory arbitrage.

<sup>77</sup> [Another way to conceptualize the problem is that market transactions create a positive externality in the form of information that may be observed by the tax collector. The firm has no way of internalizing this benefit, creating a gap between the privately optimal amount of market transactions and the socially optimal amount of market transactions.]

<sup>78</sup> The transfer pricing rules of section 482 may apply in situations beyond where the U.S. corporation controls the foreign business venture. Wayne M. Gazur, *The Forgotten Link: "Control" in Section 482*, 15 NW. J. INT'L L & BUS. 1, 64-69 (discussing possibility

overpaying for goods, or to repatriate funds by underpaying for goods. From a tax perspective, the transfer price can be manipulated to minimize profit in high-tax jurisdictions and shift it to lower-tax jurisdictions.

Section 482 of the Internal Revenue Code gives the IRS the authority to reallocate income, deductions, credits or allowances between related corporations in order to more accurately reflect income. Under the traditional approach, the ideal is an arm's length price, i.e., the price that would be reached if the buyer and seller had a straightforward market relationship. Because of differences in quality, quantity, timing of sales, long-term relationships, custom-designed items, and intellectual property, however, in practice it is often difficult to determine the arm's length price. Evidence of a correct transfer price may be inferred from resale prices (less appropriate markups for distribution and value added), or a "cost-plus" method that estimates the value added by the subsidiary. While the IRS often negotiates advanced pricing agreements, wiggle room in the system allows a great deal of income to be shifted to lower-tax jurisdictions.

From a Coasean perspective, the use of comparable market transactions to determine the appropriate transfer price is fundamentally flawed.<sup>79</sup> The firm incurs an increase in intrafirm transaction costs precisely because there are higher costs (search costs, negotiation costs, holdup risk, etc.) associated with comparable market transactions. The use of market transactions to set the transfer price understates the true cost of buying those inputs from the market. All else equal, accurate enforcement of an arms-length standard (but one that excludes transaction costs) by an omniscient tax collector would discourage intrafirm transactions.

In practice, however, the difficulty of enforcing the arms-length standard gives firms a reason to expand the firm and in engage in more, not fewer, intrafirm transactions. Firms put tax collectors at a severe information disadvantage when they move economic activity inside the firm. The tax advantages of multinational tax planning more than offset the increase in intrafirm transaction costs. Tax favors expansion of the firm across borders.

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of control definition including compulsion or influence over a supplier). Purely contractual relationships, however, are unlikely to be construed as "control" for purposes of section 482. *Id.* at 71 (Noting that while contractual alliances can show elements of compulsion or influence over pricing similar to an ownership relationship, "the enforcement of an even broader standard [defining control] would be difficult to administer.").

<sup>79</sup> Langbein.

What is less clear is whether the expansion overseas is always a true expansion of the economic boundaries of the firm, or merely an expansion of the legal boundaries of the firm. That firms are able to reduce their global tax rates through transfer pricing shows that regulatory arbitrage techniques more than offset the implicit costs associated with transfer pricing. As Ed Kleinbard and others have emphasized, firms manipulate transfer prices, engage in interest stripping, and use other planning techniques to reduce both U.S. and foreign tax liability.

To choose a common example, consider U.S. private equity funds' inclusion of a Cayman Islands "blocker" corporation into the investment structure of their funds. If U.S. tax-exempt investors like pension funds and endowments invested directly into a private equity fund, and the fund's investment in portfolio companies generates active business income, the tax-exempt investors would be subject to tax on this unrelated business income, or UBTI. Similarly, foreign investors could risk paying tax on that active business income, which could be treated as effectively connected (ECI) with a U.S. trade or business. The fund's creation of a Cayman Islands entity, which checks the box to be treated as a corporation for U.S. tax purposes, transforms the active business income into passive income for these tax-exempt and foreign investors. It also may provide deferral benefits for the U.S. managers of the fund.<sup>80</sup>

By adding the foreign blocker corporation, the fund has expanded its boundaries offshore. But has tax really distorted the boundaries of the firm in the Coasean sense? Although the legal boundaries of the firm now include a Cayman Islands corporation, the economic activity is almost entirely unchanged. The private equity firm, based in the United States, continues to employ managers in New York, Boston, or Greenwich to make investments in the United States.<sup>81</sup>

It is not self-evident, therefore, whether the dominant effect of tax is economic (expansion of the real boundaries of the firm) or legal (regulatory arbitrage). As we discuss below, recent empirical work suggests that the economic distortion is real, and not just a problem of lawyers shuffling paper around.

### C. The Problem of Overseas Deferral

The phenomenon of "permanently reinvested earnings," or PRE, provides some empirical sense of the scope and importance of the

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<sup>80</sup> See 457A (restricting deferral benefits under certain conditions).

<sup>81</sup> From a Coasean perspective, the firm has increased its intrafirm transaction costs slightly, as it has to maintain separate books for the two "brother-sister" funds, and agency costs might increase slightly as compensation of the U.S.-based managers becomes more complicated.



problem. When firms engage in offshore activity, real or imagined, and generate earnings abroad, they face a potential repatriation tax of 35% when offshore subsidiaries return cash to the domestic U.S. parent company. This future tax creates the need for an accounting entry of a deferred tax liability. A company that parks \$1 billion in the Cayman Islands would record a deferred tax liability of up to \$350 million, discounted to present value if the company plans to defer repatriation. Companies can avoid this adverse accounting treatment, however, if the earnings are permanently reinvested overseas. If the earnings are permanently reinvested, there is no anticipated U.S. tax, and thus no need from an accounting standpoint to create a deferred tax liability.<sup>82</sup>

The increase in offshore cash holdings has been well-documented, although the importance of tax is debated.<sup>83</sup> Many large U.S. corporations, especially tech companies, have enormous amounts of cash sitting offshore. This cash has been generated in large part through effective tax planning. Foreign source income is deferred overseas, and what would otherwise be U.S. source income is effectively transferred overseas through planning techniques. Apple, for example, holds some \$60 billion in cash, mostly offshore.<sup>84</sup> Other companies with extensive cash holdings include Microsoft, Google, Cisco, Pfizer, GE, Conoco Philips. This is likely evidence of a tax distortion – price mechanism effect (transfer pricing) combined with the repatriation tax locking in earnings – although it does not tell us which effect dominates: (1) regulatory arbitrage, or (2) the price mechanism and doctrinal distortions.

If this were pure regulatory arbitrage, one would expect to see large cash holdings (which we indeed observe), waiting for another repatriation tax holiday. Foley et al. find evidence to this effect.<sup>85</sup> Recent evidence, however, also suggests an increase in real investments in overseas assets and an increase in foreign acquisitions by cash-rich firms. Blouin, Krull & Robinson find that the tax incentives to defer repatriations, combined with the accounting treatment of permanently reinvested earnings, appear to drive this reinvestment.<sup>86</sup> Importantly,

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<sup>82</sup> Add more detail here – to get APB 23 treatment, you have to show that the cash is not needed in the US.

<sup>83</sup> Lee Pinkowitz, Rene M. Stulz, & Rohan Williamson, *Multinationals and the High Cash Holdings Puzzle* (working paper (2012), at 6 (“Our findings suggest that the tax costs of repatriation are not the whole story for the increase in cash holdings of U.S. multinationals in the 2000s.”).

<sup>84</sup> [update and cite]

<sup>85</sup> Foley, C. Fritz, Jay Hartzell, Sheridan Titman, and Garry Twite, 2007, Why do firms hold so much cash? A tax-based explanation, *Journal of Financial Economics* 86, 579-607.

<sup>86</sup> Blouin, Krull & Robinson, *Where in the World are “Permanently Reinvested Earnings*, working paper (2012).

Edwards et al. find evidence that these real investments perform badly.<sup>87</sup> Firms with high levels of foreign earnings designated as PRE and held as cash are more likely to make value-destroying acquisitions of foreign target firms using cash consideration. As an example, they highlight Microsoft's decision to acquire Skype for \$8.5 billion; because Skype was a foreign company with headquarters in Luxemburg, Microsoft was able to use foreign cash "trapped" overseas to make the acquisition.

Companies with large cash holdings have been lobbying for another repatriation tax holiday, which would arguably ease the economic distortion in the short run. Studies of the last repatriation holiday, however, shows little evidence of new domestic investment that would not have occurred otherwise in the absence of a tax holiday. More importantly, companies accumulate cash abroad in anticipation of another holiday, and indeed must show that the cash is not needed domestically to get favorable APB 23 treatment.

The evidence may suggest the worst of all worlds from a policy standpoint. Tax induces firms to use transfer pricing and other techniques to shift income offshore. Some of the cash is hoarded in tax havens. Other cash is reinvested in poorly performing projects to justify favorable accounting treatment. Tax revenue declines, as does economic performance, as the boundaries of the firm expand.

#### D. Location and the Theory of the Growth of the Firm

The literature on international trade has used an "eclectic paradigm" to predict how and when multinational firms engage in foreign direct investment. The paradigm, known as OLI, focuses on three factors: ownership, location, and internalization.<sup>88</sup> First, to make a foreign direct investment, a firm must have ownership advantages (O) over firms in other countries, such as intellectual property, knowledge, or a monopoly position in a market. Second, there must be internalization advantages (I) that make it more beneficial to use these advantages inside the firm rather than selling or leasing them to another firm. Third, the foreign market must have some location advantage (L) in some factor inputs, such as cheap labor or natural resources, compared to the home country.

U.S. tax policy may distort decision-making in terms of internalization, as selling or leasing firm-specific advantages creates a market transaction that could increase tax liability compared to an intrafirm transaction. One common tax-avoidance technique is to move intellectual property overseas, where it can be licensed back to the U.S.

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<sup>87</sup> Edwards et al 2011.

<sup>88</sup> Dunning 1977.

parent company, shifting the source of the income outside of the United States. Licensing the IP to a foreign firm, by contrast, would leave the income sourced in the United States.

U.S. tax policy creates an even larger distortion in terms of location; a firm might engage in foreign direct investment even if the target country has no advantage in a factor input such as labor or natural resources compared to the United States. Suppose Facebook wants to design a new mobile platform, and assume that it has valuable patents (O) that are best exploited within the firm (I) because the transaction costs of negotiating a license agreement would be prohibitive. Absent tax, California might be the optimal place to invest in this project. On the margins, tax policy would encourage this new investment to take place in Singapore, where the tax rate is lower, even if the labor rates and other factor inputs were comparable to the United States.

The phenomenon of offshoring is often attributed primarily to differences in factor inputs such as cheap labor, cost-of-living—in short, regional comparative advantage. But U.S. tax policy contributes to the problem by distorting the decision in favor of overseas direct investment.<sup>89</sup>

## V. POLICY IMPLICATIONS

This boundaries of the firm framework offers a new reason to focus on tax instruments that minimize the distortion of the price mechanism in guiding managerial behavior. In the domestic context, corporate tax reform efforts focus largely on capital structure distortions on the right hand side of the balance sheet, and the distortion of managerial incentives that follows. For example, policymakers have reduced dividend tax rates to diminish the debt-equity distortion. Paying attention to the boundaries of the firm, by contrast, provides a new reason to consider fully or partially replacing the classical corporate tax with a VAT, which, as we discuss below, could raise comparable amounts of revenue at a lower rate without distorting the make or buy decision. The boundaries of the firm analysis also suggests changes to the corporate tax rules, like the spin-off rules, that discourage the disaggregation of large firms. In the international context, the debate in the United States is focused largely on whether we should abandon our current system of worldwide taxation with deferral in favor of a territorial system, or instead move to a worldwide consolidation system without offshore deferral. Focusing on the distortions of the boundaries of the firm could tip the balance in favor of worldwide consolidation without deferral, or revitalize

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<sup>89</sup> Caveat here - Add discussion of Margolish – benefits of foreign direct investment over international trade.

support for a system that does not rely on transfer pricing, like a destination-based VAT or X-tax.

#### A. Maintaining the Integrity of the Price Mechanism

Maintaining the integrity of the price mechanism at the boundaries of the firm should be considered a goal of tax policy. The firm's use of market prices to allocate resources is the fundamental driver of economic efficiency. All taxes distort the price mechanism in some way, but some distortions are worse than others. Public finance scholarship studies the distortionary effects of different tax instruments, like a uniform commodity tax, taxes on capital income, and so on. The literature on the distortionary effects of the corporate tax is not as well-developed, however, in part because economists tend to be less familiar than lawyers with the ways in which deal structures can be modified to reduce distortions.<sup>90</sup> While the economics and finance literature traditionally has argued for no taxes on capital income (and, by extension, no tax on corporate income), such arguments offer little assistance to policymakers operating in a political environment that seeks to raise some revenue from business taxes. Given that constraint, this Article argues that the distortion of the boundary of the firm should not be overlooked.

The basic insight is that realization-based income taxes distort the decision of where to set the boundary of the firm. If a firm's tax liability depends on prices set within the firm's boundaries, opportunities for tax avoidance follow. All else equal, then, policymakers should prefer tax systems that set liability based only on market prices, or that set tax liability based on prices that can be imputed from observable arms-length transactions. If realization-based income taxes are fundamentally flawed in this regard, what are the viable alternative instruments?

The most obvious candidate is a VAT, a form of consumption tax that taxes a firm based on the difference in value between inputs and outputs. Both inputs and outputs are observable, and the administrative design of a VAT can incentivize more accurate reporting of prices. A VAT is not really a tax on firms in the same sense as a corporate tax, as the incidence of the tax would be different and, one can safely assume, be less burdensome to shareholders.

[destination-based preferable to origin-based because of transfer pricing]

[x-tax discussion – Bradford paper, Viard book]

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<sup>90</sup> Exceptions – Zingales, Desai, Dharmapala papers on tax and corporate governance.

An example can help illustrate these points. Suppose Apple wants to buy smartphones from China in an arms-length transaction to reap the benefit of the efficiency of a market transaction with its manufacturer. Might a VAT distort this decision?

Assume that the Chinese factory will sell the phone to Apple for \$100, and Apple sells the phone to a U.S. consumer for \$500. The input price for U.S. tax purposes, under a destination-based VAT, is zero, regardless of the actual price. If the VAT rate was 20%, it would raise \$100 regardless of what happened overseas. There is no distortion of the boundary of the firm.

It gets more complicated for overseas sales; if Apple sells the phone to a British consumer for \$500, there would be no tax collected in the United States. While this raises no revenue from a U.S. perspective, it is hardly clear that we collect much tax on overseas sales under the current system, and the tax system would not distort the location of production.

#### B. Worldwide vs. Territorial

[Territorial makes things worse by exempting foreign source income. Places too much pressure on transfer pricing.]

#### C. Implicit Cost of the Corporate Tax

Political debate about the U.S. corporate tax rate often focuses on its explicit cost—revenue paid by U.S. corporations to the Treasury—and vague references to the idea that a high corporate tax rate reduces U.S. competitiveness. More precision would be useful. Recently, scholars have focused some attention on the implicit cost of the corporate tax—the inefficient allocation of economic resources in response to the corporate tax.<sup>91</sup>

Expansion of the real boundaries of the firm beyond what would occur in a no-tax world is an important implicit cost of the corporate tax. Corporate managers hold on to underperforming divisions. The proliferation of offshore subsidiaries leads not only to reduced global tax revenue and work for tax lawyers and accountants, but distortion of real economic decisions. Treaty obligations and political constraints may limit the menu of available political options in the international context, but several domestic policy options are possible.

*Reducing the corporate tax rate.*—Reducing the U.S. corporate tax rate would tend to reduce the price mechanism distortion, as firms would

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<sup>91</sup> E.g., Grubert & Altshuler.

have less marginal incentive to reduce tax liability by expanding the firm to create income-shifting opportunities. To the extent that firms engage in regulatory arbitrage to mitigate the economic distortion, the need for wasteful tax planning strategies would be reduced as well. Reducing the corporate tax rate would likely reduce revenue, however.<sup>92</sup> Reducing the corporate tax rate could also amplify aspects of the agglomeration distortion. If we re-create a differential between high personal income tax rates and lower corporate tax rates, for example, the lock-in effect is magnified. Shareholders will be reluctant to distribute earnings from the corporation, which acts as a deferral device for the shareholders.

Base-broadening is an appealing option to make up for lower rates, although the political will for closing loopholes is questionable. Again, shifting the business tax base to a VAT or X-tax is a promising approach, as it reduces the distortion of the boundaries of the firm. Assuming the corporate income tax cannot be eliminated entirely, supplementing the existing system with a modest business VAT would allow for greatly lower corporate income tax rates. Whether such an approach is politically viable is hard to know, but the efficiency gains could be appealing to business leaders and revenue-raisers alike.

*Transparency.* If broad changes to the structure of the corporate tax are not feasible, a push for increased transparency may help. The effect of tax planning on firm value is often ambiguous.<sup>93</sup> Because shifting earnings for tax purposes often creates opportunities for accounting gamesmanship, shareholders do not always reward aggressive tax planning with higher share prices. It is difficult for shareholders to know if managers are hoarding cash in order to avoid taxes or because they cannot find good use for the money. Greater transparency of cash flows could reduce agency costs and allow shareholders to pressure managers more effectively for distributions or redemptions.

*Revise the spin-off rules.* The spin-off rules are necessary to protect the integrity of the corporate tax. In the absence of the spin-off rules, companies could bailout corporate earnings by funding a subsidiary entirely with cash or high-basis property and spinning off the subsidiary to shareholders, who could then sell the subsidiary for cash and recognize no gain. To protect against bailouts of corporate earnings, the Code

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<sup>92</sup> It is possible that we are on the wrong side of the Laffer curve, in which case reducing the corporate tax rate to, say, 25% would not reduce revenue. The evidence is mixed. See Jane G. Gravelle & Thomas L. Hungerford, *Corporate Tax Reform: Issues for Congress*, Congressional Research Service Report RL34229, at 10 (2011) ([T]he revenue maximizing tax rate can be no where near [as low as] the current 35% tax rate.); Alex Brill & Kevin Hassett, *Revenue-Maximizing Corporate Income Taxes: The Laffer Curve in OECD Countries* (finding evidence of Laffer Curve effects); Kimberly A. Clausing, *Corporate Tax Revenues in OECD Countries* (finding evidence of Laffer Curve effects)

<sup>93</sup> Desai & Dharmapala.

distinguishes between active businesses and passive investments. To qualify for reorganization treatment, which defers any inside or outside gain, a corporation must distribute a subsidiary containing a trade or business that has been active for at least five years, and retain at least one other distinct business with its own five-year history.<sup>94</sup> The effect of the rule is to make it somewhat more difficult for firms to disaggregate than to hold on to underperforming assets. One possibility to consider is elective nonrecognition, where disaggregating firms could choose to sell an active trade or business without incurring a corporate-level tax so long as cash proceeds are distributed to shareholders, triggering shareholder-level tax on gains.<sup>95</sup>

## VI. CONCLUSION

[to come]

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<sup>94</sup> § 355(b); Stephan, Disaggregation and Subchapter C: Rethinking Corporate Tax Reform, 76 Va. L. Rev. 655, 686.

<sup>95</sup> Stephan, *supra* note x, at 705, American Law Institute, Federal Income Tax Project—Acquisitions and Dispositions (1982), at 97.