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Research

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The Consequences of the TCJA's International Provisions: Lessons from Existing Research

Abstract

This paper discusses the potential consequences of the international tax provisions of the recent Tax Cut and Jobs Act (TCJA), drawing on existing research. The TCJA's dividend exemption provision is expected to eliminate distortions to the amount and timing of dividend repatriations. However, the efficiency gains from increased repatriations – which are primarily expected to increase shareholder payout – are likely to be modest. The paper uses the observed behavior of firms during the repatriation tax holiday implemented in 2005 to infer the relative magnitudes of the burdens created by the repatriation tax under the old (pre-TCJA) regime and by the TCJA's new "Global Intangible Low-Taxed Income" (GILTI) tax. It concludes that the TCJA increases the tax burden on US residence for many, and perhaps most, US MNCs. The paper also argues that the GILTI and "Foreign-Derived Intangible Income" (FDII) provisions are likely to create substantial distortions to the ownership of assets, both in the US and around the world. Overall, the scholarly evidence implies that the international provisions of the TCJA can reasonably be expected to create potentially large efficiency losses.

JEL-Codes: H250.

Keywords: international taxation, tax reform, tax cut and jobs act, GILTI, FDII.

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1) Introduction

In December 2017, Congress enacted what is formally known as “An Act to provide for reconciliation pursuant to titles II and V of the concurrent resolution on the budget for fiscal year 2018” (Public Law 115-97). This legislation is informally (and rather more concisely) referred to as the “Tax Cut and Jobs Act of 2017” (TCJA). Among other things, the TCJA enacted far-reaching reforms to the US system of international taxation. The aim of this paper is to review the most important of these new international tax provisions and to discuss their potential consequences, drawing on existing scholarly research. An important caveat is that many uncertainties remain about the interpretation and future implementation of these provisions. Moreover, some of the new rules are quite novel, and there are thus significant challenges in extrapolating from prior research. For these reasons, this paper is merely a preliminary attempt to understand some of the consequences of the TCJA. The paper is quite limited in scope, ignoring many complications and details in the interests of clarity and brevity.

Prior to the TCJA, the US imposed a system of worldwide taxation on US-based multinational corporations (MNCs) (e.g. Dharmapala, 2017). The income generated by foreign affiliates of US parents was taxed by the US at the time dividends were paid (or “repatriated”) to the US parent. A substantial body of empirical evidence shows that the US tax imposed upon the repatriation of dividends created an incentive to delay repatriation, and led to the accumulation of cash holdings - estimated at about \$2.1 trillion in 2015¹ - in foreign affiliates. It was frequently argued that these funds were “locked out” of the US parent, with the US tax cost of repatriation hindering the frictionless allocation of internal funds within the MNC (e.g. Graham, Hanlon and Shevlin, 2010).

¹ This estimate is from the Citizens for Tax Justice report on “\$2.1 Trillion in Corporate Profits Held Offshore: A Comparison of International Tax Proposals” at <http://ctj.org/pdf/repatriation0715.pdf>.

This “lockout” effect constituted one component of the additional tax burden imposed by US taxation on the foreign activities of MNCs resident in the US, beyond the burden of source-based taxes imposed by host countries. MNCs resident in countries with “territorial” (or, more precisely, “participation exemption”) tax regimes, in which income attributable to the activities of foreign affiliates is exempt, face no such additional home-country tax burden. One well-publicized consequence was the growing pressure for “inversion” transactions, where the erstwhile US parent becomes a subsidiary of a foreign parent. Inversions were strongly deterred by anti-inversion rules adopted in 2004.² However, inversions are arguably merely a symptom of the tax disadvantages of US residence, which the anti-inversion rules do not solve (and may indeed exacerbate).

Contemporary theories of multinational business emphasize that the identity of the firm that owns an asset significantly affects the productivity of that asset. This insight has led tax scholars to formulate a principle of “capital ownership neutrality” (CON), which entails that tax rules should not distort patterns of ownership of assets across locations (Devereux, 1990; Desai and Hines, 2003). Empirical evidence on cross-border mergers and acquisitions suggests that the tax burden on US residence significantly affected global patterns of ownership of assets, with US MNCs being at a disadvantage in acquiring foreign assets. In particular, distortions are created when a US MNC would be the most productive owner of a foreign asset, but that asset is instead owned by a non-US MNC due to the US tax burden on the US MNC. The efficiency cost in this scenario is the lower productivity of such assets as a result of ownership distortions. In addition, the tax burden on US residence entails that US MNCs are disfavored as vehicles for global portfolio investment. Desai and Dharmapala (2009) find evidence that the additional US tax on foreign income induced US portfolio investors to supply less capital to the US MNCs. Moreover,

² I.R.C. § 7874.

the US appeared increasingly isolated in its insistence on imposing worldwide taxation, especially after major territorial reforms in the UK and Japan in 2009.

The TCJA established a dividend exemption system for repatriations from foreign affiliates to their US parents. While this reform solves the lockout problem, the TCJA regime is a far cry from the participation exemption ideal advocated by proponents of territorial taxation. In particular, it imposes a new type of US tax on foreign income, known as the “Global Intangible Low-Taxed Income” (GILTI) tax. This is a tax on the income of a US MNC’s foreign affiliates, net of a presumptive “routine” return on tangible assets. It is imposed on an immediate basis (i.e. without regard to whether the foreign income is repatriated) on the aggregate foreign income of the US MNC (rather than on its affiliates on a per-country basis). Although it does not distort repatriation decisions, it imposes a potentially significant US tax burden on US residence. The analysis in Section 3 below uses the observed behavior of firms during the repatriation tax holiday implemented in 2005 to infer the relative magnitudes of the burdens created by the repatriation tax under the old (pre-TCJA) regime and by the GILTI tax. It concludes that the GILTI tax – and thus the TCJA, in its entirety – may increase the tax burden on US residence for many, and perhaps most, US MNCs.

Another important element of the TCJA is the “Foreign-Derived Intangible Income” (FDII) provision. This establishes a preferential 13.125% tax rate (as opposed to the standard 21% rate) for US corporations’ income, net of a presumptive “routine” return on tangible assets, based on the fraction of the corporation’s income derived from exports. The GILTI-FDII framework introduced by the TCJA adopts a formulaic approach to taxing income that is presumptively derived from intangible assets. The analysis in Section 4 below shows that this framework is likely to create ownership distortions. In particular, US MNCs are now tax-favored owners of tangible

assets in foreign countries and tax-disfavored owners of tangible assets in the US. The GILTI-FDII framework has not previously been implemented in any other country (perhaps, as discussed below, with good reason), and so there is no direct evidence on its impact. However, simulations undertaken by Altshuler and Grubert (2010) to study a broadly similar context – a system of formula apportionment based on tangible assets – suggests that large changes in ownership patterns and substantial inefficiencies will ensue.

There are a number of other notable international provisions of the TCJA that are not addressed here in detail due to a lack of space.³ The primary focus of the paper is on ownership distortions, because of the extensive evidence of their importance and because of their clear relationship to tax policy. However, a more complete assessment would of course take account of other dimensions, such as the impact of the TCJA on profit shifting, revenue, and distribution. This paper does not attempt to undertake such a comprehensive assessment. However, for the GILTI-FDII framework to be optimal, it would have to be the case that the costs of profit shifting would have to be much larger (relative to the costs of ownership distortions) for the US than for comparable countries.

Section 2 analyzes the potential consequences of the abolition of the US repatriation tax. Section 3 broadens the discussion to the likely impact of the TCJA reforms – and especially of the new GILTI tax - on the tax burden associated with US residence. Section 4 provides simple examples of how the GILTI and FDII provisions may lead to ownership distortions. Section 5 concludes by discussing the wider implications of the reforms.

³ These include the “Base Erosion Anti-Abuse Tax” (BEAT), a new minimum tax regime that disallows deductions for payments to foreign related parties in certain circumstances. The TCJA also imposes a one-time tax on foreign cash holdings (through a deemed repatriation mechanism), but this is not intended to have ongoing applicability. The drastic reduction in the corporate tax rate from 35% to 21% has various implications for international taxation, for instance with regard to incentives for profit shifting, that are briefly discussed in Section 5 below.

2) The End of the Repatriation Tax

One of the elements of the TCJA's international tax reforms that has enjoyed wide support is the abolition of the repatriation tax. As is well-known, the old regime imposed US tax on dividend repatriations from foreign affiliates at the time of repatriation. There is a substantial body of empirical evidence (e.g. Desai, Foley and Hines, 2001) showing that repatriations by foreign affiliates of US MNCs were sensitive to the repatriation tax. Moreover, empirical evidence on the effects of the 2009 tax reforms in the UK and Japan – which also abolished repatriation taxes – bears out the natural expectation that dividend exemption will lead to increased repatriations. Egger et al. (2015) find a substantial increase in repatriations by UK-owned foreign affiliates, using affiliate-level data; their estimated effect amounts to over 25% of the mean level of repatriations by UK-owned affiliates in their sample. Hasegawa and Kiyota (2017) find that repatriations from Japanese-owned foreign affiliates with large amounts of retained earnings increased after Japan's 2009 reform. Increased repatriations would be expected to lead to lower levels of cash being accumulated within foreign affiliates; indeed, Xing (2018) finds that Japanese-owned foreign affiliates that previously faced high tax costs of repatriation reduced cash holdings after the reform.

The clearest evidence on the consequences of higher levels of repatriations from US-owned foreign affiliates is from a body of literature on the American Job Creation Act (AJCA) enacted by Congress in 2004. The AJCA contained a provision that enabled US MNCs to repatriate at a significantly reduced US tax rate of 5.25% during 2005. This provision gave rise to a dramatic temporary increase in repatriations (as documented, for instance, in Redmiles (2008)). Researchers have used this episode to construct quasi-exogenous shocks to repatriations that can shed light on

the consequences of repatriation increases. For instance, Dharmapala, Foley and Forbes (2011) use an instrumental variables (IV) strategy based on ownership characteristics (such as the presence of tax haven affiliates and holding company structures) that were determined prior to the AJCA. They identify the effects of exogenous increases in repatriations on a variety of outcomes related to firm behavior.

The general consensus from this literature (e.g. Blouin and Krull, 2009; Dharmapala, Foley and Forbes, 2011) is that the primary impact of increased repatriations is an increase in shareholder payout. In contrast, the AJCA had no detectable impact on US investment or employment levels.⁴ While the ability to freely repatriate funds from abroad to finance share repurchases or dividends is undoubtedly beneficial to firms and their shareholders, the efficiency gains are likely to be modest.⁵ This is because the change in shareholder payout is primarily a matter of timing – firms are able to accelerate payout relative to the delayed timing under the old regime. However, shareholders' intertemporal pattern of consumption is unlikely to have been distorted by the deferral of payout under the old regime, as stock is mostly owned by households with higher incomes and access to credit.

On the other hand, it is possible that dividend exemption may reduce agency costs of free cash flow in foreign affiliates. For example, Hanlon, Lester and Verdi (2015) find smaller positive market responses to announcements of acquisitions when the acquirer is a US MNC with large tax-induced foreign cash holdings. Egger et al. (2015) find that UK-owned foreign affiliates reduced investment following the 2009 dividend exemption reform. It is possible that the tax

⁴ However, there are some papers that argue that a subset of US MNCs that were financially constrained increased their domestic investment (e.g. Faulkender and Petersen, 2012).

⁵ Consistent with this view, estimates in the literature of the deadweight cost of the repatriation tax tend to be relatively small, typically around 1% of foreign income (e.g. Desai, Foley and Hones, 2001). Grubert and Altshuler (2013) argue that the deadweight cost rises with the amount of cash accumulated. They use a 5% effective rate, but this includes both the deadweight cost and actual repatriation taxes paid.

advantage to deferring repatriations created the potential for obfuscation about whether the retention of cash in foreign affiliates stemmed from tax motivations or from agency costs (as in the model of corporate tax avoidance developed by Desai and Dharmapala (2006)). However, dividend exemption does not eliminate these agency costs; it merely limits one particular channel for obfuscation. Thus, the extent to which the reform will affect the prevalence of negative-value investments is unclear.

Prior to the passage of the TCJA, the Council of Economic Advisors claimed that “U.S. workers would retain 30 percent of the 2016 profits of U.S. firms earned abroad and not currently repatriated.”⁶ While there is some ambiguity about how this should be interpreted, the suggestion appears to be that higher repatriations will result in substantially higher wages for US workers via rent-sharing between employers and employees.⁷ Conceptually, this claim is problematic, as the foreign profits of US MNCs are reported net of rents shared with workers employed by foreign affiliates; it is unclear why the firm would bestow part of its own share of these rents on US workers (who played no role in generating them). In any event, the proposition that repatriations increase US wages has already been tested: Dharmapala, Foley and Forbes (2011) regress employee compensation at US MNCs’ domestic operations on AJCA repatriations, and find no detectable effect.⁸ While this is not evidence of the absence of an effect, it suggests that there is no evidence supporting the claim that increased repatriations will increase US wages.

⁶ Council of Economic Advisors *Corporate Tax Reform and Wages: Theory and Evidence*, October 2017, available at: <https://www.whitehouse.gov/sites/whitehouse.gov/files/documents/Tax%20Reform%20and%20Wages.pdf> (p. 9).

⁷ Alternatively, this claim may refer to profit shifting rather than to repatriations. Note, however, that there is also no evidence that reductions in outbound profit shifting would increase wages.

⁸ See p. 768, Table III, Columns 3 and 4. The OLS estimate is essentially zero, albeit statistically insignificant. The IV estimate (using the strategy described above) is negative but very imprecise. It should be noted, however, that wages may in principle be affected by other provisions of the TCJA (although there are reasons to be skeptical here as well, as discussed in Section 5 below).

3) The Overall Tax Burden on US Residence

The repatriation tax and its consequences (such as the lockout effect) represent only one possible type of tax burden on US corporate residence. For instance, a system of immediate worldwide taxation by the US of foreign affiliates' income (without deferral) would not create any distortion to the amount or timing of repatriations. However, it would clearly impose a tax burden on US residence, as foreign activity would be subject to US taxation in addition to source country taxation. It is thus important to focus on the broader question of how the TCJA's provisions, taken together, affect the tax burden on US residence.

A central focus of the recent literature on MNCs is the importance of patterns of ownership of assets that maximize their productivity. Assets' productivity typically depends on the identity and characteristics of the firm that owns them. A substantial and growing body of evidence shows that residence-based taxation of foreign income has significant effects on the patterns and value of cross-border mergers and acquisitions (M&A), thus creating distortions to patterns of ownership (in particular, to which affiliates are owned by which parents).⁹ For example, Huizinga and Voget (2009) estimate that eliminating the US residence-based tax would have increased the prevalence of post-merger entities with US domiciles from 53% to 58% for cross-border M&A transactions over 1985-2004. Voget (2011) finds that a 10 percentage point higher repatriation tax increases MNCs' propensity to relocate their headquarters by a third. Feld et al. (2013) find that the number of M&A transactions with a Japanese acquirer increased by about 32% following the 2009 Japanese reform. They also estimate that a similar reform of the US tax system would increase the number of M&A transactions with US acquirers by 17%.

⁹ This evidence is discussed in more detail in Dharmapala (2017). On the other hand, Clausing (2016a) argues that US MNCs have thrived over this period, being disproportionately represented, for instance, in the Forbes Global 2000 list of firms.

Residence-based taxation can also lead to distortions to the scale of MNC activity, as well as to ownership patterns. Liu (2018) finds that the 2009 UK territorial reform increased UK MNCs' investment in lower-tax foreign countries, where the repatriation tax was previously most burdensome and where UK MNCs were at a greater competitive disadvantage. However, this increase was not accompanied by a detectable decrease in activity in higher-tax foreign countries or in the UK itself.

Overall, the available evidence and the experience of the UK and Japan suggest that there are considerable potential benefits from reducing the burden of residence-based taxation. While the dividend exemption provision of the TCJA (taken in isolation) reduces the tax burden on US residence, other provisions of the TCJA may vitiate the types of benefits that the UK and Japan have achieved through territorial tax reform. Particularly important in this context is the GILTI tax. This is a new US tax on above-normal foreign returns, imposed immediately (i.e. without deferral). It does not distort repatriation behavior and does not create a lockout problem; nonetheless, it creates a potentially significant burden on US residence.

A crucial question is thus whether the burden of the GILTI tax is likely to exceed the burden of the old regime's repatriation tax. Suppose that under the old regime, the foreign affiliates of a US MNC earned (aggregate) pretax income of Y_F , taxed by the foreign governments at a rate $\tau_F \leq 0.35$. At some future time, the affiliates repatriate the remaining amount $(1 - \tau_F)Y_F$ to the US parent. At that time, the amount subject to US tax was "grossed up" to Y_F , with a foreign tax credit (FTC) for the tax paid to foreign governments. Thus, the US tax liability imposed upon repatriation was $(0.35 - \tau_F)Y_F$.¹⁰ However, the overall burden of the repatriation tax should take account of the

¹⁰ It is possible that the firm does not expect to pay 35% upon repatriation, for instance because it anticipates a future repatriation tax holiday. However, replacing 35% by some other rate would not fundamentally affect the argument regarding the relative burdens of the GILTI tax and the old regime.

value of deferral and of the costs of tax planning incurred by firms. Thus, the burden of the repatriation tax can be characterized as:

$$\delta(0.35 - \tau_F)Y_F + C_P \quad (1)$$

Here, $\delta \leq 1$ denotes a discount factor that takes account of the expected deferral of repatriation (and so measures the burden of the tax in present value terms), while $C_P \geq 0$ is the cost of tax planning to achieve deferral of the repatriation tax.¹¹

Of course, both δ and C_P (and hence the expression in Equation (1)) are difficult to observe. However, the AJCA repatriation tax holiday described above allows some inferences to be drawn about its relative magnitude. Under the AJCA, US MNCs were permitted to repatriate in 2005 at a tax rate that was reduced by 85% (with the FTC also reduced by the same proportion). This implied a tax rate of 5.25% instead of the usual 35%, with an FTC of 15% of foreign taxes paid.¹² The US tax imposed on repatriations under the AJCA, denoted T_{AJCA} , was thus:

$$T_{AJCA} = 0.15(0.35 - \tau_F)Y_F = 0.0525Y_F - 0.15\tau_F Y_F \quad (2)$$

As is well-known, large amounts were repatriated under the AJCA (e.g. Redmiles, 2008). What is less often emphasized is that only a relatively small fraction of US MNCs chose to repatriate under the AJCA, despite the apparently very favorable tax rate. Redmiles (2008) reports that there were 843 AJCA repatriators out of 9700 US firms that report owning foreign affiliates (controlled foreign corporations, or CFCs) on their tax returns. This represents 7% of the universe of (publicly-listed and privately-held) US MNCs. Blouin and Krull (2009) construct a sample that

¹¹ This is assumed to be a fixed cost, but it could be assumed to be a function of δ and/or τ_F without affecting the basic argument.

¹² There were certain limitations on the amount that could be repatriated, based on the amounts that had previously been designated as “permanently reinvested earnings” (PRE) in financial statements. Firms were also required to produce a “dividend reinvestment plan” (DRIP), as the AJCA ostensibly required that funds repatriated at the lower tax rate be used to increase US investment and employment (but note that the findings discussed earlier that firms increased shareholder payout do not indicate violations of the AJCA, due to the fungibility of the repatriated funds – see Graham, Hanlon and Shevlin (2010)). However, the transactions costs of repatriating under the AJCA were arguably relatively small, and are ignored in what follows.

consists of all firms in the Compustat database (i.e. all publicly-listed US firms) that report items related to foreign activity. They hand-collect data on whether these firms repatriated under the AJCA from firms' 10-K disclosures. Of their sample of 2696 firms, 357 (about 13%) repatriated under the AJCA. Repatriating firms tended to be larger in size. If firms are weighted by their worldwide assets, then about 49% of asset-weighted firms repatriated. Thus, even when weighting by assets, repatriation under the AJCA was far from universal.¹³

For those firms that chose not to repatriate under the AJCA, it can reasonably be inferred that $T_{AJCA} > \delta(0.35 - \tau_F)Y_F + C_P$: the tax liability they faced under the AJCA in 2005 exceeded the burden of the US repatriation tax that they typically faced in non-AJCA years. In reality, the repatriation tax burden varied across foreign countries, depending on the local tax rate, the availability of profitable local investment opportunities, and other factors. Thus, a stronger claim can be made about AJCA non-repatriators: for such firms, the AJCA tax exceeded the repatriation tax burden in *any* country in which the firm had affiliates. This implies that even for some AJCA repatriators (that repatriated only from high-burden countries), the average repatriation tax burden may have been sufficiently low that it is exceeded by the GILTI tax burden. Taking account of variations in the repatriation tax burden across countries would thus tend to reinforce the basic conclusions below, and so these variations are ignored in the discussion that follows.

The GILTI tax is a minimum tax on foreign income imposed without regard to whether that income is repatriated.¹⁴ It is imposed on the aggregate foreign income of the US MNC (rather than on its affiliates on a per-country basis). Thus, the extent to which a US MNC is subject to the

¹³ The fraction of repatriators is higher in Dharmapala, Foley and Forbes (2011, p. 764): they report that 261 out of 924 firms in their sample (i.e. about 28%) repatriated under the AJCA. However, their sample consists of firms for which both micro-level BEA data and Compustat data are available, so the universe it represents is less clear. Graham, Hanlon and Shevlin (2010) find that 105 out of 411 firms that responded to their survey repatriated under the AJCA; again, however, it is unclear what population the 411 respondent firms represent.

¹⁴ IRC § 951A.

GILTI tax depends on its “blended” (i.e. weighted average) foreign tax rate across all of its foreign affiliates and its average return on foreign tangible assets, rather than on the tax rate in any given foreign jurisdiction. Consequently, an incremental foreign project undertaken by the MNC – if it is sufficiently small in relation to existing activities – will face the same GILTI tax burden regardless of its location.

The “tested income” of a US parent is defined as its pretax foreign income (denoted above by Y_F) aggregated over all of its foreign affiliates (more precisely, its CFCs), subtracting certain exclusions and deductions. The exclusions relate mostly to Subpart F income, and are ignored here. The deduction that is of most relevance here is for foreign taxes. Thus, simplifying significantly, tested income can be defined as $(1 - \tau_F)Y_F$. The GILTI concept allows the US corporation a presumptive return of 10% on its tangible foreign assets, denoted by A_F . The value of A_F is determined by the affiliates’ basis in depreciable physical assets, or “Qualified Business Asset Investment” (QBAI). GILTI is defined as the excess of tested income over the presumptive 10% return on foreign tangible assets.¹⁵ Thus:

$$GILTI = (1 - \tau_F)Y_F - 0.1A_F \quad (3)$$

The GILTI tax (at a 10.5% tax rate, which represents a 50% deduction relative to the baseline 21% corporate tax rate) is applied to Equation (3), where the latter is grossed up to reflect foreign taxes under § 78, and with a partial (80%) FTC. To determine the amount of foreign tax attributable to GILTI, this calculation uses an “inclusion percentage” that is the ratio of GILTI to tested income (i.e. $\frac{GILTI}{(1-\tau_F)Y_F}$), multiplied by the foreign tax paid ($\tau_F Y_F$). This yields the gross-up

¹⁵ Net interest expense is added to GILTI, but it is assumed here that net interest expense is zero. Assuming a positive net interest expense would make the GILTI tax more burdensome, and thus would tend to reinforce the basic conclusions below.

amount of $\frac{GILTI}{(1-\tau_F)}\tau_F$, so that grossed-up GILTI is $(GILTI + \frac{GILTI}{(1-\tau_F)}\tau_F)$. Thus, the GILTI tax liability,

denoted T_{GILTI} , can be defined as follows:

$$T_{GILTI} = 0.105 \left(GILTI + \frac{GILTI}{(1-\tau_F)}\tau_F \right) - 0.8 \left(\frac{GILTI}{(1-\tau_F)}\tau_F \right) \quad (4)$$

for $\tau_F \leq 0.13125$ (otherwise, $T_{GILTI} = 0$). Simplifying:

$$T_{GILTI} = \frac{GILTI}{(1-\tau_F)}(0.105 - 0.8\tau_F) \quad (5)$$

It is clear from Equation (5) that (in the absence of expense allocation, which is discussed below)

$T_{GILTI} = 0$ when $\tau_F = 13.125\%$.

Whether the tax burden on US residence increases or decreases under the TCJA depends on whether T_{GILTI} exceeds the burden of the repatriation tax defined in Equation (1). For firms that chose not to repatriate under the AJCA, it can be inferred that T_{AJCA} exceeded the usual burden of the repatriation tax defined in Equation (1). Thus, for AJCA non-repatriators, a sufficient (though not necessary) condition for the GILTI tax to increase the tax burden on US residence is that $T_{GILTI} > T_{AJCA}$.¹⁶ Multiplying both T_{GILTI} and T_{AJCA} by $(1 - \tau_F)/A_F$ yields the following condition for T_{GILTI} to exceed T_{AJCA} :

$$\left((1 - \tau_F) \frac{Y_F}{A_F} - 0.1 \right) (0.105 - 0.8\tau_F) > (1 - \tau_F) \left(0.0525 \frac{Y_F}{A_F} - 0.15\tau_F \frac{Y_F}{A_F} \right) \quad (6)$$

¹⁶ In comparing these tax burdens, the locational patterns of MNC affiliates are implicitly held fixed. To the extent that the introduction of the GILTI tax may affect these locational patterns, the most natural assumption would be that it may result in fewer low-tax and haven affiliates (as profit shifting is curtailed under the GILTI regime, at least if it is effective in achieving its apparent aims). However, low-tax affiliates would, other things equal, have faced relatively large repatriation tax burdens under the old regime, and therefore would have been especially likely to repatriate under the AJCA. Consequently, eliminating some low-tax and haven affiliates would reduce the average repatriation tax burden and would reinforce the inclination of AJCA non-repatriators to refrain from repatriating under the AJCA. Taking account of this type of change in locational patterns would thus tend to strengthen the conclusions below.

The solution to Equation (6) depends on the ratio Y_F/A_F of pretax foreign income to foreign tangible assets. It is possible to compute a proxy for this ratio using data from the Bureau of Economic Analysis (BEA) survey of US MNCs. The most recent benchmark survey – for 2014 – implies a ratio of net income to net plant, property and equipment (PPE) for US-owned foreign affiliates (aggregated across all foreign countries) of about 0.65.¹⁷ This may seem quite high, but arguably simply reflects the important role of intangible assets in generating US MNCs’ income.

For a given ratio Y_F/A_F , Equation (6) can be solved straightforwardly for the critical value of the foreign tax rate τ_F^* below which T_{GILTI} exceeds T_{AJCA} . When $Y_F/A_F = 0.65$, the condition in Equation (6) is satisfied for foreign tax rates below about 6.8%. As the ratio Y_F/A_F may vary across firms, Table 1 reports values of τ_F^* for several possible values of Y_F/A_F . For very low values of Y_F/A_F , such as 0.2, the old repatriation tax is always more burdensome than the GILTI tax. However, Table 1 shows that for more typical values of Y_F/A_F , the critical foreign tax rate τ_F^* is around 6% or 7%, and is fairly robust to substantial variations in Y_F/A_F .

To place these values of τ_F^* in context, Blouin and Krull (2009) report that the mean foreign tax rate (based on financial statement data from Compustat) for firms in their sample that did not repatriate under the AJCA was 8.1%, while the median foreign tax rate for non-repatriators was zero.¹⁸ These numbers suggest that Equation (6) would be satisfied for a substantial fraction, and probably a majority, of firms that did not repatriate under the AJCA. For non-repatriating firms

¹⁷ The 2014 benchmark survey data is available at: <https://www.bea.gov/international/xls/usdia2014r/PartI-A1-A4.xls>. It reports net income (aggregated over all US-owned foreign affiliates in all foreign countries) of \$1,280,839 million. Net PPE is \$1,947,194 million. Using the 2015 preliminary BEA survey data (available at <https://www.bea.gov/international/pdf/usdia2015p/1-2015.pdf>) yields an even higher ratio of 0.75. Note that to the extent that the PPE measure includes land (which is not depreciable), this approach would tend to under-estimate Y_F/A_F .

¹⁸ The BEA’s 2014 survey shows that – across all US-owned foreign affiliates in all foreign countries – the average foreign tax rate is about 12.5%. Foreign income taxes (in the aggregate) are reported to be \$160,550 million, while net income is \$1,280,839 million – see <https://www.bea.gov/international/usdia2014r.htm>.

for which Equation (6) is satisfied, it follows *a fortiori* that the GILTI tax burden is larger than the burden of the repatriation tax under the old regime.

It should be emphasized that Equation (6) is a *sufficient* condition for $T_{GILTI} > T_{AJCA}$ to hold among non-repatriators; it is not a necessary condition. Moreover, it is also possible that many AJCA repatriators (especially those for which the expression in Equation (1) only slightly exceeded T_{AJCA}) face a higher US tax burden under the GILTI regime. For instance, suppose that a firm faces $\delta = 0.16$ and $C_p = 0$. Such a firm would choose to repatriate under AJCA for any τ_F . Suppose in particular that $\tau_F = 0$. Then, it can straightforwardly be shown that, for the average $Y_F/A_F = 0.65$, the GILTI tax liability exceeds the burden of the old repatriation tax.

A number of caveats should be noted. The 2005 AJCA episode is now several years in the past; however, there has been no subsequent event that provides quasi-exogenous variation in repatriations. The characterization of the GILTI tax above simplifies the applicable law considerably. However, the features that are ignored generally tend to increase the burden of the GILTI tax. For instance, assuming positive net interest expense would increase GILTI. In addition, the GILTI rate will increase to 13.125% from 2026, and thus make the GILTI tax more burdensome; however, the current 10.5% rate is used in the calculations above.¹⁹ Taking account of these features would only strengthen the basic conclusion.

Some AJCA non-repatriators may have failed to repatriate because they did not have any cash on hand in 2005, perhaps because retained profits had been reinvested in active business operations abroad. The discussion above treats such firms as not being burdened by the repatriation

¹⁹ The relatively low GILTI tax rate raises the question of whether the ownership distortions to which it gives rise are likely to be substantial in magnitude. Ultimately, this entails a judgment about how large an effect is relevant for policy. However, if this magnitude is viewed as being modest, the analysis above implies that for many US MNCs for which Equation (6) is satisfied, the burden of the repatriation tax was even more modest. Yet, the latter gave rise to substantial distortions in the cross-border M&A market, as reviewed above (e.g. Huizinga and Voget, 2009; Feld et al. (2013)).

tax, as they have sufficient investment opportunities abroad that they would not repatriate even absent the tax. While in general this approach appears reasonable, if the repatriation tax created sufficiently large agency costs of free cash flow, then it is possible that some of the foreign projects undertaken by these firms may have been value-decreasing and may not have been undertaken absent the repatriation tax. This would make the repatriation tax arguably more burdensome than assumed above.²⁰

One particularly noteworthy element of the GILTI tax ignored in the discussion above relates to expense allocation rules. In general, the FTC is limited to the US tax on foreign income. In determining this FTC limitation, the § 861 regulations require that some expenses incurred in the US are allocated (for FTC purposes) to foreign operations. Suppose that expenses E are allocated in this manner; then, the FTC is limited to 21% of foreign income, calculated with a deduction for E . In the GILTI context, this implies that T_{GILTI} can be expressed as:

$$T_{GILTI} = 0.105 \left(GILTI + \frac{GILTI}{(1 - \tau_F)} \tau_F \right) - \min \left\{ 0.8 \left(\frac{GILTI}{(1 - \tau_F)} \tau_F \right), 0.21 \left(GILTI + \frac{GILTI}{(1 - \tau_F)} \tau_F - E \right) \right\} \quad (7)$$

Unfortunately, there is no straightforward way to calculate typical values of E using publicly available data. However, it is clear that when the FTC limitation is binding, expense allocation

²⁰ The discussion above also ignores the financial accounting cost of repatriating foreign earnings that have previously been designated as “permanently reinvested.” This designation allows the firm to defer recognition of the US repatriation tax for financial accounting purposes. However, if the firm were to subsequently repatriate these earnings, it must recognize the US repatriation tax expense (thereby resulting in lower reported after-tax earnings). Blouin, Krull and Robinson (2012) use BEA micro-level data for the pre-AJCA period (1999-2004) and find that these financial reporting incentives decrease repatriations by 17% to 21%. The financial reporting incentives apply to both AJCA and non-AJCA repatriations. However, if the perceived cost of lower reported earnings is convex, firms may have reduced repatriations under the AJCA to avoid “bunching” financial reporting costs in 2005. Even so, however, it appears unlikely that this would substantially change the conclusion that a significant fraction of US MNCs may be worse off under the GILTI tax.

will result in a higher T_{GILTI} , and hence a greater likelihood that the burden of the GILTI tax exceeds the burden of the old repatriation tax.

In summary, the TCJA may well increase the tax burden of US residence for many (and perhaps most) US MNCs. It follows that the TCJA is unlikely to generate the types of benefits documented in the empirical literature on the territorial reforms carried out in the UK and Japan. Rather, the impetus for inversions, the competitive disadvantage for US MNCs in cross-border acquisitions, and the tendency for US MNCs to be disfavored as vehicles for portfolio investment will continue (indeed, possibly to an even greater extent than before). All of this assumes, of course, that the GILTI tax cannot be easily avoided, an issue addressed in the next section below.

4) Ownership Distortions from the GILTI and FDII Provisions

The GILTI tax is a novel provision that imposes immediate US tax (without deferral) on the above-normal foreign returns of US MNCs. As such, it burdens US residence, and (as discussed above) may do so to greater extent than the repatriation tax regime that it replaces. Despite the use of the term “intangible,” the GILTI concept has no formal connection to intellectual property – rather, foreign returns in excess of 10% of foreign tangible assets are presumed to be derived from intangibles. This presumptive element of the GILTI tax has some commonalities with a formula apportionment (FA) system based on tangible assets. In particular, the nature of the inefficiencies these taxes create is similar, involving ownership distortions. However, the incentives are somewhat different. An FA system with a formula based on tangible assets would encourage firms to acquire tangible assets in low-tax countries. The GILTI tax instead encourages US firms to acquire tangible assets in foreign countries, regardless of the local tax rate.

It is readily apparent from the definition of GILTI (Equation (3)) that the acquisition of tangible assets abroad creates a shield against the GILTI tax. To illustrate this, consider the simple example depicted in Figure 1. Suppose that a US MNC has affiliates in two foreign jurisdictions – country F (which imposes a 25% tax rate) and a haven (with a zero tax rate). The F affiliate owns tangible assets with basis of \$1000 (i.e. $A_F = \$1000$) and generates \$200 of income, all of which is shifted to the H affiliate (which owns no tangible assets). Applying the formula in Equation (3), $GILTI = 200 - 0.1(1000) = \100 . Applying the formula in Equation (4), the GILTI tax liability = $0.105(100) = \$10.50$.

Now suppose that (as shown in Figure 2) the F affiliate acquires an additional \$1000 of tangible assets that generate routine returns, for instance by buying a factory or a chain of restaurants in F. Assume that these additional tangible assets generate income of \$66.67, net of depreciation deductions. Given the routine nature of the activity, it is assumed that this income cannot be shifted to the H affiliate.²¹ Thus, the F affiliate pays tax of \$16.67 to the F government. Applying the formula in Equation (3), $GILTI = 266.67 - 16.67 - 0.1(2000) = \50 .²² Applying the formula in Equation (4), the Section 78 gross-up is \$3.33 and the FTC is $(0.8)(3.33) = \$2.67$. Thus, the GILTI tax liability = $0.105(66.67 + 3.33) - 2.67 = \2.93 . The US MNC's GILTI tax liability thus falls by \$7.57 when it buys the additional tangible assets in country F.

This simple example illustrates how one of the inefficiencies created by the GILTI tax is that US MNCs become tax-favored buyers of routine foreign tangible assets. If the US MNC were to pay the fair market value of the new assets (which would reflect local taxes and depreciation

²¹ If the routine income could be shifted to H, then the purchase of these assets would be even more attractive to the US MNC. The payment of foreign taxes (assumed here to be unavoidable) reduces the GILTI tax liability. However, it is of course costly to the firm (especially as only a partial FTC is available under the GILTI regime). In contrast, the purchase of foreign tangible assets at fair market value entails no such cost (ignoring financial frictions and transaction costs), and so is preferable as a means of reducing the GILTI tax liability.

²² Note that the equivalent of τ_F in Equation (3) is not the tax rate in country F but rather a blended tax rate across F and H, which in this instance is about 6%.

deductions), it would enjoy a surplus of \$7.57 per year in GILTI tax savings that are unavailable to domestic F buyers or non-US MNCs. Thus, the US MNC is willing to bid more for these assets than are other potential buyers, and will acquire for tax reasons assets that are less productive under its ownership than they would be under alternative ownership.²³ Note that the implicit counterfactual used in defining this distortion is a territorial system that does not include a GILTI provision (rather than the old repatriation tax regime, as in Section 3).

Deadweight losses from GILTI-induced changes in ownership may arise if there are negative synergies between the US MNC's core business activities and the routine activities associated with the new assets. For example, a technology firm may have limited expertise in operating a chain of restaurants. Nonetheless, it is entirely possible that firms will be able to avoid such inefficiencies, even if large changes in ownership patterns were to occur. For instance, deadweight losses could be minimized if sale-leaseback transactions were to be respected for GILTI tax purposes (so that US MNCs could buy foreign tangible assets and lease them back to the prior owners, while using the assets' basis in computing the GILTI tax).²⁴ Even in a scenario where ownership inefficiencies are minimal, firms would incur tax planning costs. Moreover, the GILTI regime (while it would not create inefficiency) would also be ineffective in achieving any

²³ For instance, assuming the \$7.57 GILTI tax savings are enjoyed in perpetuity and the discount rate is 5%, the US MNC would be willing to bid about an additional \$150 for the asset. A complication is that the benefit from the GILTI tax reduction depends on the basis, and hence on how much is paid. However, this does not affect the basic point made by this example.

²⁴ However, it is not yet clear what restrictions will be placed on asset acquisition and transfer. The TCJA provides that:

“The Secretary shall issue such regulations or other guidance as the Secretary determines appropriate to prevent the avoidance of the purposes of this subsection, including regulations or other guidance which provide for the treatment of property if

(A) such property is transferred, or held, temporarily, or

(B) the avoidance of the purposes of this paragraph is a factor in the transfer or holding of such property.” (I.R.C. § 951A(d)(4)).

of its positive aims (such as constraining profit shifting). Arguably, it would be better to achieve the same substantive results via repeal of the GILTI regime.

Given the novelty of the GILTI tax, there is of course no evidence on its effects. However, some idea of the sensitivity of the ownership patterns of routine assets to tax considerations can be gleaned from a study by Altshuler and Grubert (2010). They model the differences between the then-existing corporate tax system and a hypothetical alternative – an FA system with a formula based on tangible assets. Their model consists of two countries – one high-tax and the other low-tax – with two different types of capital – high-tech and routine – located in each country. An FA system renders strategic transfer pricing pointless. However, changes in the ownership of capital across countries will affect tax liabilities. In particular, there is an incentive for MNCs to increase their in-house capital in the low-tax country by buying the assets of what would otherwise be arm’s-length suppliers.

Altshuler and Grubert (2010) use simulations to estimate these changes in the ownership of capital as a result of the FA system. When there is a 10 percentage point difference between the high-tax country and the low-tax country (which approximates the GILTI tax rate when the foreign tax rate is zero, as in Figure 1), their simulations imply that routine in-house capital owned by the MNC in the low-tax country would increase by 23%. Indeed, they find that the efficiency costs of these ownership distortions essentially cancel out the efficiency gains from moving to an FA system, even when assuming very large resource costs of income shifting under the then-current system. While their results are derived in a different context, they suggest that ownership patterns of routine assets outside the US would be highly sensitive to the incentives created by the GILTI tax regime. Indeed, under the GILTI regime, the purchase of tangible assets could be in any country

(not only in low-tax countries, as under FA), and so might be expected to be even more responsive to taxes.

The FDII provision provides a reduced tax rate for US firms' export income. In particular, the component of income (above a presumed normal return on US tangible assets) derived from exports is taxed at 13.125% rather than the standard 21% rate. This is perhaps a distinctive US version of the "patent box" (or "intellectual property (IP) box") regimes adopted by a number of European countries and China. However, patent boxes involve favorable treatment of income derived from patents, while the FDII does not depend in any direct way on the holding of IP, but rather solely on generating extra-normal returns relative to tangible assets. The existing evidence suggests that MNCs are highly responsive to tax differences in deciding which of their affiliates holds IP (e.g. Dischinger and Riedel, 2011; Karkinsky and Riedel, 2012; Alstadsæter et al., 2018). This implies that countries can attract substantial IP holdings by applying lower tax rates, which perhaps explains the spread of this type of policy.

Unlike the existing patent box regimes, however, the FDII provision applies *only* to exports. As such, it potentially violates WTO rules and thus faces an uncertain future. While extensive analysis of its structure and consequences may thus represent misplaced effort, a brief description is presented here. Let Y_{US} be the pretax income of a US corporation, and let Y_{USE} be that corporation's export income (derived from property sold to a foreign buyer for a foreign use or services provided to anyone outside the US). Assume that the US corporation has basis of A_{US} in tangible assets located in the US. Then, FDII is defined as:

$$FDII = (Y_{US} - 0.1A_{US})\left(\frac{Y_{USE}}{Y_{US}}\right) \quad (8)$$

Thus, FDII is defined as a presumptive return to intangible assets held in the US, allowing for a 10% normal return on tangible assets (as in the calculation of GILTI). The US corporation's US corporate tax, denoted T_{US} , is then defined as:

$$T_{US} = (0.13125)FDII + (0.21)(Y_{US} - FDII) \quad (9)$$

As the formula in Equation (8) indicates, lowering A_{US} enables more of the firm's income to benefit from the FDII tax preference. To illustrate this, imagine a US firm with \$1000 of tangible assets located in the US. Suppose that these routine tangible assets generate (domestic) income of \$63.33. In addition, the firm generates \$200 of export income from intangible assets. Applying the formula in Equation (8), the firm's FDII = $(263.33 - 0.1(1000))(200/263.33) = \124 . Suppose now that the firm sells its tangible assets to an unrelated party (and no longer generates the routine return of \$63.33). The firm's FDII is now \$200. Applying the formula in Equation (9), the firm's US tax liability falls by about \$10: divesting itself of US tangible assets enables more income to be taxed at the favorable FDII rate. If the firm were to sell its US tangible assets at fair market value, it would enjoy a surplus of about \$10 per year in FDII tax savings.²⁵ Thus, the firm will sell for tax reasons tangible assets that are more productive under its ownership than they would be under alternative ownership. This ownership inefficiency is of course in addition to the obvious inefficiencies created by the international trade effects of the export subsidy.

As with the GILTI provision, some insight into the consequences of the FDII tax preference can be gained from the simulations conducted by Altshuler and Grubert (2010). In particular, they consider a scenario in which an FA system is implemented with a formula that depends on tangible assets, where the tax rate difference between the two countries is 10 percentage points (which

²⁵ For instance, assuming the \$10 FDII tax savings are enjoyed in perpetuity and the discount rate is 5%, the firm would find the tangible asset to be worth \$200 less than would a buyer that had no export income (or that earned only routine returns below 10%).

approximates the 7.875 percentage point advantage to FDII under the TCJA). In these circumstances, an MNC based in the high-tax (home) country has an incentive to divest itself of what would otherwise be in-house routine capital located in the high-tax country. The simulations of Altshuler and Grubert (2010) imply that the amount of routine capital owned by the MNC in the home country declines by 24%. This suggests that ownership patterns of routine assets in the US may be highly sensitive to the incentives created by the FDII regime.

5) Discussion and Conclusion

There are many elements of the TCJA that have not been discussed above. For instance, the drastic reduction in the corporate tax rate has significant implications for cross-border profit shifting. Dharmapala (2014) reports that the consensus of the recent literature using micro-level data is a semi-elasticity of reported income with respect to the tax rate differential across countries of 0.8.²⁶ This entails that a 10 percentage point increase in the tax rate difference between an affiliate and its parent (for instance, because the tax rate in the affiliate's country falls from 35% to 25%) would increase the pretax income reported by the affiliate by 8% (for example, from \$100,000 to \$108,000). When combined with typical state corporate tax rates, the TCJA's rate moves the US to a rough approximation to the average rate among Organisation of Economic Co-operation and Development (OECD) members of about 24%. Thus, revenue gains to the US from firms switching to inbound profit shifting are likely to be quite modest.

²⁶ However, it should be noted that larger estimates of the magnitude of profit shifting have been found using aggregate country-level data (e.g. Clausing, 2016b). The relatively small estimates have also been argued to be inconsistent with descriptive statistics on the fraction of MNC profit reported in tax haven jurisdictions. Dowd, Landefeld and Moore (2017) use US corporate tax return data for 2002-2010, with an empirical specification that allows for nonlinearities in the effect of the tax variable. Using this approach, they find a substantially larger semi-elasticity of reported profits with respect to the tax variable for zero-tax locations. However, their results would not seem to imply that profit shifting into a country with a roughly average tax rate (such as the post-TCJA US) would be particularly large.

Moreover, there are significant questions about the sustainability of the TCJA's new 21% tax rate. For many years, one of the most common themes in arguments for tax reform was the claim that the US had one of the highest corporate tax rates in the OECD, and in the world more generally. However, comparisons with other countries should take account of the fact that - for reasons that have been widely debated but not fully resolved (e.g. Shaviro, 2018; Dharmapala, 2018) - the US lacks a value-added tax (VAT) that can be used to make up revenue losses from reduced corporate income tax rates. Conditional on the absence of a VAT, the optimal US corporate income tax rate may indeed be higher than that of other countries (at least if optimality is understood in a constrained sense, where governments are limited to incremental change to existing tax instruments). Arguably, the US cannot afford a corporate tax cut, especially of this magnitude, without introducing a VAT.²⁷ Given that there is politically no current prospect of a US VAT, an expectation that the corporate tax rate will increase in the future is far from unreasonable. Such an expectation would moderate any response by firms to the TCJA's tax rate reduction, especially with regard to new corporate investment (and hence to long-run wage increases) and to changes to the structure of profit shifting.

For many years, much of the impetus for international tax reform was spurred by concern about the US tax burden on US residence; a growing body of evidence suggested that the resulting distortions were quite large (as discussed, for instance, in Dharmapala (2017)). Yet, the TCJA contrives to make this problem arguably even worse. Any attempt to justify the introduction of the GILTI-FDII framework would thus have to establish that it has positive effects that outweigh this important disadvantage. Such positive effects could, for instance, be related to its ostensible

²⁷ Indeed, the TCJA has already led to a significant deterioration in the US fiscal position – see Alan J. Auerbach, William G. Gale and Aaron Krupkin “The Federal Budget Outlook: We Are Not Winning” *Tax Notes*, July 30, 2018, pp. 643-654.

purpose of limiting base erosion and profit shifting, for instance by inducing US MNCs to locate IP in the US rather than in foreign jurisdictions.²⁸

In principle, there is an argument for a well-designed minimum tax on foreign income as a means of achieving this aim (e.g. Grubert and Altshuler, 2013). However, any minimum tax regime involves a trade-off. Limiting outbound profit shifting increases revenue, but a minimum tax regime reduces both national and global welfare by imposing a home country tax burden on resident MNCs and thereby creating ownership distortions. Significantly, neither Japan nor the UK adopted a GILTI-type regime upon adopting territorial tax systems in 2009 (and nor have countries with longstanding territorial regimes adopted the GILTI approach), suggesting that the costs of a minimum tax regime outweigh the benefits. For the GILTI-FDII framework to be optimal, it would have to be the case that the trade-off between the social value of reducing profit shifting and the costs of ownership distortions is radically different for the US relative to comparable countries. In principle, this is entirely possible. However, proponents of the GILTI-FDII framework have not produced any evidence along these lines.²⁹

As argued above, to the extent that tax planning around the GILTI regime – whether through ownership changes or along other dimensions – is successful, the GILTI tax burden on US residence would be reduced or eliminated, apart from the tax planning costs that firms incur. On the other hand, to the extent that anti-avoidance rules are sufficiently effective that firms are

²⁸ Even if it were to succeed in this aim, however, the efficiency gains from reallocating IP across affiliates are likely to be small, especially if formal ownership of IP can be assigned without shifting the location of R&D activity. In contrast, the GILTI-FDII framework is likely to give rise to potentially large efficiency costs from ownership distortions.

²⁹ Moreover, if US policymakers are interested in combating profit shifting, it has surely not escaped their attention that there exists an ongoing multilateral process seeking to achieve precisely this aim: the Base Erosion and Profit Shifting (BEPS) initiative of the OECD and the G20 (e.g. OECD, *Action Plan on Base Erosion and Profit Shifting*, 2013 Paris: OECD, available at: <http://www.oecd.org/ctp/BEPSActionPlan.pdf>). Yet, the GILTI-FDII framework is an entirely unilateral provision that seems to be poorly coordinated with the action items proposed within the BEPS process.

unable to plan around the GILTI regime, a substantial new burden on US MNCs' foreign activity will be created. The evidence regarding potential consequences for cross-border acquisitions and investment has already been outlined. New evidence is now emerging that provides insights into the wider social costs of attempts to constrain profit shifting. Suarez Serrato (2018) analyzes the consequences of the 1996 repeal of § 936, a provision that facilitated profit shifting to Puerto Rico. Using establishment-level data, he finds substantial declines in investment and employment in the (mainland) US operations of US firms that previously engaged in profit-shifting to Puerto Rico. These firms tended to be concentrated in certain local regions and labor markets within the (mainland) US, and Suarez Serrato (2018) finds a long-term decline in employment and wage growth in areas that were more exposed to § 936-using firms. These results suggest that provisions intended to limit MNCs' tax planning (such as the GILTI tax and the BEAT) may have deeply harmful effects on local communities in the US.

In conclusion, there remain many uncertainties regarding the international provisions of the TCJA. This paper is a preliminary attempt to understand their probable consequences, drawing on scholarly research. As the discussion in this paper suggests, perhaps one of the firmer conclusions that can be reached is that the tax reform process that gave rise to the TCJA provides an illustration of the definition of politics that is attributed (perhaps apocryphally) to Groucho Marx, as “the art of looking for trouble, finding it everywhere, diagnosing it incorrectly and applying the wrong remedies.”

REFERENCES

- Alstadsæter, Annette, Salvador Barrios, Gaetan Nicodème, Agnieszka Maria Skonieczna, and Antonio Vezzani, 2018. "Patent Boxes Design, Patents Location and Local R&D." *Economic Policy* 33 (93): 131-177.
- Altshuler, Rosanne, and Harry Grubert, 2010. "Formula Apportionment: Is it Better Than the Current System and Are There Better Alternatives?" *National Tax Journal*, 63 (4), 1145-84.
- Blouin, Jennifer, and Linda Krull, 2009. "Bringing it home: A study of the incentives surrounding the repatriation of foreign earnings under the American Jobs Creation Act of 2004." *Journal of Accounting Research* 47 (4), 1027-1059.
- Blouin, Jennifer, Linda Krull, and Leslie A. Robinson, 2012. "Is US multinational dividend repatriation policy influenced by reporting incentives?" *The Accounting Review* 87 (5), 1463-1491.
- Clausing, Kimberly A., 2016a. "Competitiveness, Tax Base Erosion, and the Essential Dilemma of Corporate Tax Reform" *Brigham Young University Law Review*, 2016, 1649-1680.
- Clausing, Kimberly A., 2016b. "The Effect of Profit Shifting on the Corporate Tax Base in the United States and Beyond" *National Tax Journal*, 69 (4), 905-934.
- Desai, Mihir A. and Dhammika Dharmapala, 2006. "Corporate Tax Avoidance and High-Powered Incentives." *Journal of Financial Economics* 79 (1), 145-79.
- Desai, Mihir A. and Dhammika Dharmapala, 2009. "Taxes, Institutions and Foreign Diversification Opportunities." *Journal of Public Economics* 93 (5), 703-14.
- Desai, Mihir A., C. Fritz Foley, and James R. Hines, Jr., 2001. "Repatriation Taxes and Dividend Distortions." *National Tax Journal* 54 (4), 829-51.
- Desai, Mihir A., and James R. Hines, Jr., 2003. "Evaluating International Tax Reform." *National Tax Journal* 56 (3), 487-502.
- Devereux, Michael P., 1990. "Capital export neutrality, capital import neutrality, capital ownership neutrality and all that." Working Paper.
- Dharmapala, Dhammika, 2014. "What Do We Know About Base Erosion and Profit Shifting? A Review of the Empirical Literature." *Fiscal Studies* 35 (4), 421-48.
- Dharmapala, Dhammika, 2017. "The Economics of Corporate and Business Tax Reform" in Alan J. Auerbach and Kent A. Smetters (eds.) *The Economics of Tax Policy*, Oxford University Press: 231-258.

- Dharmapala, Dhammika, 2018. “International Spillovers from Proposed US Tax Reforms” *Australian Tax Forum*, 33, 79-100.
- Dharmapala, Dhammika, C. Fritz Foley and Kristin J. Forbes, 2011. “Watch What I Do, Not What I Say: The Unintended Consequences of the Homeland Investment Act.” *Journal of Finance* 66 (3), 753-87.
- Dischinger, Matthias, and Nadine Riedel, 2011. “Corporate Taxes and the Location of Intangible Assets within Multinational Firms” *Journal of Public Economics* 95 (7-8), 691-707.
- Dowd, Tim, Paul Landefeld and Anne Moore, 2017. Profit shifting of US multinationals. *Journal of Public Economics*, 148, 1-13.
- Egger, Peter, Valeria Merlo, Martin Ruf, and Georg Wamser, 2015. “Consequences of the New UK Tax Exemption System: Evidence from Micro-level Data.” *Economic Journal* 125 (589), 1764-89.
- Faulkender, Michael, and Mitchell Petersen, 2012. “Investment and capital constraints: Repatriations under the American Jobs Creation Act.” *The Review of Financial Studies* 25 (11), 3351-3388.
- Feld, Lars P., Martin Ruf, Uwe Scheuering, Ulrich Schreiber, and Johannes Voget, 2013. “Effects of Territorial and Worldwide Corporation Tax Systems on Outbound M&As.” ZEW-Centre for European Economic Research Discussion Paper 13-088.
- Graham, John R., Michelle Hanlon, and Terry Shevlin, 2010. “Barriers to mobility: the lockout effect of US taxation of worldwide corporate profits.” *National Tax Journal* 63 (4), 1111-1145.
- Grubert, Harry, and Rosanne Altshuler, 2013. “Fixing the System: An Analysis of Alternative Proposals for the Reform of International Tax.” *National Tax Journal* 66 (3), 671-712.
- Hanlon, Michelle, Rebecca Lester, and Rodrigo Verdi, 2015. “The Effect of Repatriation Tax Costs on US Multinational Investment.” *Journal of Financial Economics* 116 (1), 179-96.
- Hasegawa, Makoto, and Kozo Kiyota, 2015. “The Effect of Moving to a Territorial Tax System on Profit Repatriations: Evidence from Japan” *Journal of Public Economics* 153 (2017), 92-110.
- Huizinga, Harry P., and Johannes Voget, 2009. “International Taxation and the Direction and Volume of Cross-Border M&As.” *Journal of Finance* 64 (3), 1217-49.
- Karkinsky, Tom, and Nadine Riedel, 2012. “Corporate Taxation and the Choice of Patent Location within Multinational Firms” *Journal of International Economics*, 88 (1), 176-85.
- Liu, Li, 2018. “Where Does Multinational Investment Go with Territorial Taxation? Evidence

from the UK” IMF Working Paper 18/7.

Redmiles, Melissa, 2008. “The one-time received dividend deduction.” *Statistics of Income Bulletin* 27, 103-117.

Shaviro, Daniel, 2018. “Goodbye to All That? A Requiem for the Destination-Based Cash Flow Tax” *Bulletin for International Taxation* Volume 72 (4/5), 1-10.

Suarez Serrato, Juan Carlos, 2018. “Unintended Consequences of Eliminating Tax Havens” NBER Working Paper #24850.

Voget, Johannes. 2011. “Relocation of Headquarters and International Taxation.” *Journal of Public Economics* 95 (9): 1067-81.

Xing, Jing, 2018. “Territorial tax system reform and multinationals’ foreign cash holdings: New evidence from Japan.” *Journal of Corporate Finance* 49: 252-282.

Figure 1: GILTI Tax

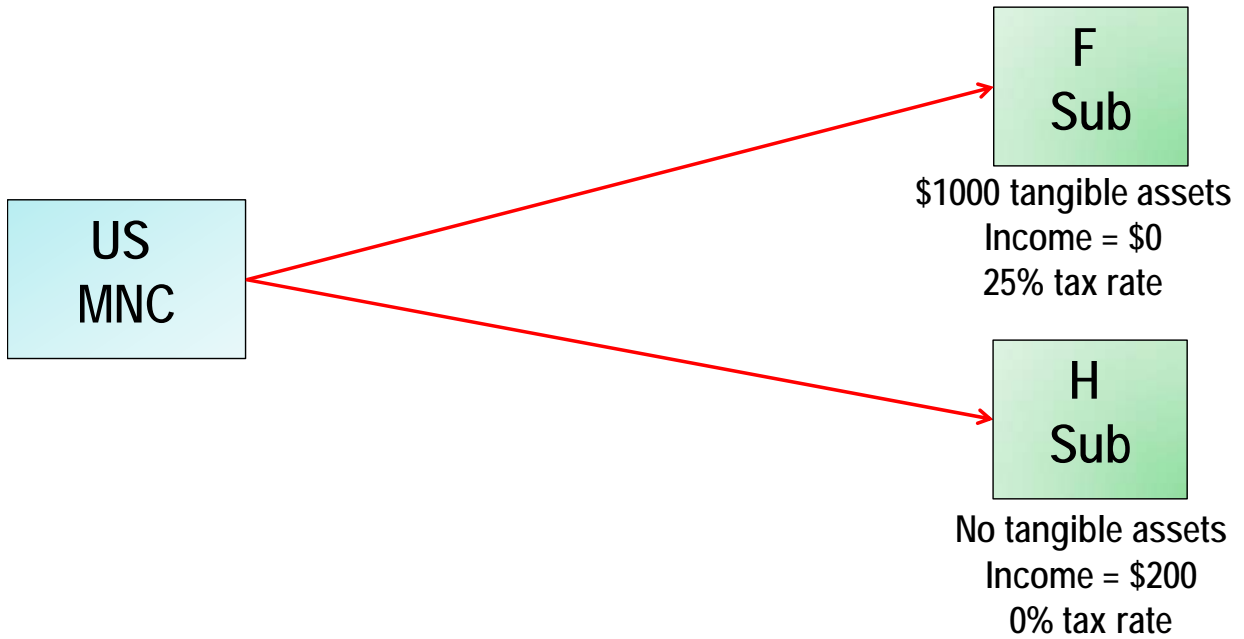


Figure 2: Ownership Distortions from the GILTI Tax

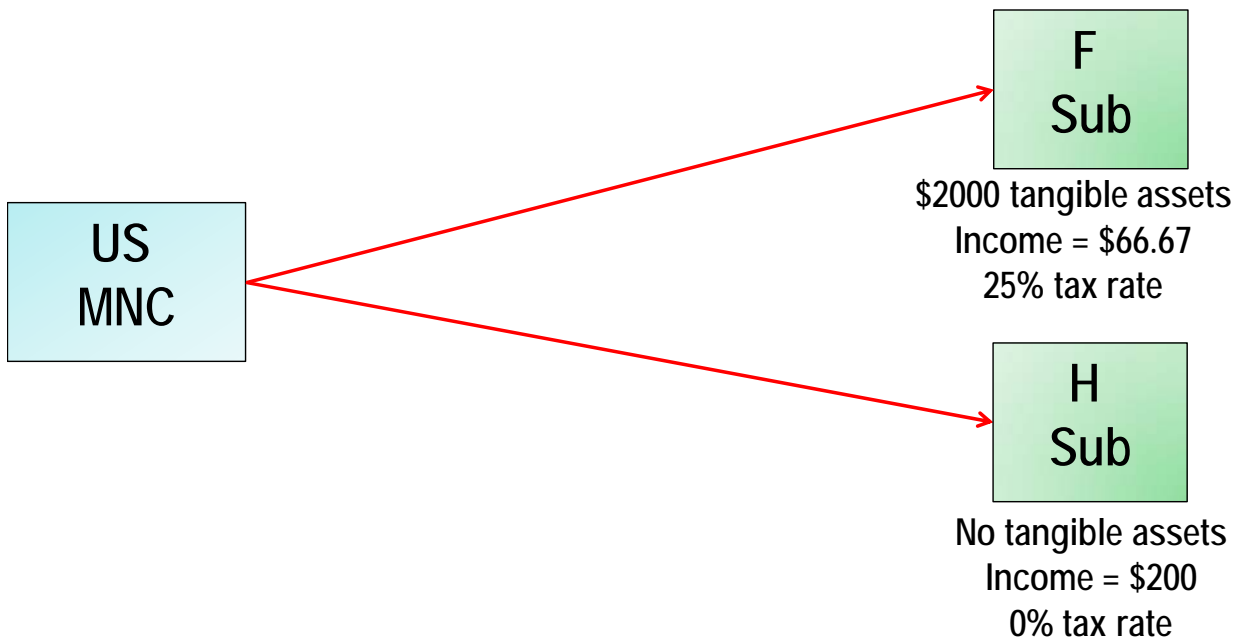


Table 1: Critical Values of Foreign Tax Rates for Selected Ratios of Foreign Income to Foreign Tangible Assets

Ratio of Foreign Income to Foreign Tangible Assets $\left(\frac{Y_F}{A_F}\right)$	Critical Value of the Foreign Tax Rate (τ_F^*) below which the GILTI Tax Burden Exceeds that of the AJCA Tax
0.2	0%
0.5	6.3%
0.65	6.8%
0.75	7%
1	7.3%