Foreign Investment Responses to the Tax Cuts and Jobs Act: Evidence from US Multinationals in Germany

Camille Semelet*

1 Introduction

The 2017 Tax Cuts and Jobs Act (TCJA) marked a fundamental shift in US corporate taxation, lowering the statutory tax rate from 35% to 21% and overhauling international tax provisions.[1] The Global Intangible Low-Taxed Income (GILTI) regime, in particular, highlights the complexity of new investment incentives abroad (Clausing, 2020). A key question following its enactment has been whether these reforms led US multinationals (MNEs) to reallocate investment from foreign to domestic operations, as policymakers intended. Importantly, the TCJA is unique because it simultaneously altered the effective price of both domestic and foreign investment for the firms.

In this paper, I study how the TCJA reshaped the foreign investment patterns of US multinationals, with a focus on affiliates located in Germany. I employ a difference-in-differences approach comparing the investment behaviors of US-owned subsidiaries with those of non-US-owned subsidiaries in Germany. The relative stability of effective tax rates for non-US MNEs from other OECD countries provides a suitable control group. To further isolate the role of GILTI, I exploit variation in firms' pre-reform exposure to the minimum tax provisions, comparing GILTI-exposed firms to non-GILTI firms based on their pre-TCJA characteristics. I combine affiliate-level data from Orbis on all foreign subsidiaries operating in Germany with parent-level financial information from Compustat, allowing me to link subsidiary investment responses to parent group characteristics and GILTI exposure. Germany provides an ideal laboratory for this analysis as a high-tax

*University of Munich (LMU), ifo Institute, and World Bank, semelet@ifo.de. This research was supported by the ifo Institute and Ludwig-Maximilians-Universität (LMU) Munich. I declare that I have no relevant financial interests or other potential conflicts of interest.

[1]TCJA introduced several provisions: domestically, it imposed limits on interest deductibility and changes to net operating loss rules. Internationally, the TCJA moved the previous US worldwide tax system to a territorial one, and introduced a repatriation tax. It also introduced the Foreign-Derived Intangible Income (FDII) deduction, which favors US exports, and the Base Erosion and Anti-Abuse Tax (BEAT), which restricts deductible payments to foreign affiliates.

country where GILTI incentives are most likely to play out; it is also one of the main trade partners of the US.[2]

My preliminary results show that US affiliates in Germany increased tangible investment by approximately 10% following the TCJA, with the effect concentrated among affiliates of large multinational groups and those subject to GILTI provisions. These findings suggest that the investment incentives embedded in GILTI dominated any potential substitution effects from the domestic corporate tax cut, but it does not rule out the possibility that those results are also driven by scale or complementarity effects. These results are in line with recent findings by Chodorow-Reich et al. (2024), who find substantial increases in both domestic and foreign investment among US firms, consistent with complementarities between domestic and foreign capital.[3] This paper provides novel evidence on the international spillovers of domestic tax reforms by examining how the TCJA affected US multinationals' investment in Germany, a major high-tax country. To my knowledge, this is the first study to systematically analyze TCJA's impact outside the United States and to benchmark US affiliates directly against non-US affiliates operating in the same market.

Beyond documenting investment responses, the TCJA provides a rare opportunity to estimate comparable elasticities of domestic and foreign investment from the same policy shock affecting the same firms. Most existing work examines either domestic or foreign responses in isolation, making it difficult to compare elasticities across different studies and contexts. The TCJA's simultaneous impact on both margins allows me to directly test whether substitution dominates or whether scale effects and complementarity lead both to increase together. In the next step, I will use this setting to provide comparable elasticity estimates of domestic and foreign investment to tax changes. Finally, it offers policy-relevant insights for debates on minimum tax design and international tax coordination, highlighting how domestic reforms can have unintended cross-border consequences.

2 Data and Measurement

Affiliates data from Orbis I use affiliate-level data from the Orbis database by Bureau van Dijk, focusing on foreign affiliates located in Germany between 2014 and 2021. Ownership links allow me to identify the Global Ultimate Owner (GUO) of each affiliate. I proxy investment with the logarithm of tangible assets, which are reported net of accumulated depreciation and impairment;

[2] As a second pillar of my empirical analysis, I plan to use administrative data on the universe of foreign affiliates in Germany. Access to this data has been granted.

[3] Prior work on TCJA suggests that profit shifting has been only partially curtailed, with firms continuing to use tax havens (Clausing, 2020; Garcia-Bernardo et al., 2022). Surveying the evidence, Dharmapala (2024) concludes that the TCJA reduced US MNEs' foreign acquisitions, increased investment in routine tangible assets, had no significant impact on profit shifting, lowered the market value of US MNEs relative to domestic firms, and produced little measurable effect on aggregate domestic investment or wages.

I therefore interpret this variable as a measure of affiliates' capital stock rather than a direct flow of new investment.

Public Listed MNEs in Compustat North America and Global I merge affiliates in Orbis with Compustat North America and Global to obtain consolidated financial data at the group level. While most reporting is consolidated, geographic segment data for US groups allow me to separate domestic and foreign activity and construct comparable investment measures.

Predicting GILTI-exposed MNEs GILTI applies a minimum tax to the foreign profits of US multinationals above a 10 percent return on tangible assets. On one hand, GILTI raises the tax burden for firms with very low foreign tax rates, discouraging profit shifting to tax havens. On the other hand, its blended calculation across jurisdictions, combined with the 10% exemption for tangible assets and the 50% rate deduction, can make holding real assets in high-tax countries more attractive (Clausing, 2020). To compute GILTI exposure at the MNE level, I use pre-reform information on foreign profits, depreciable assets abroad, and foreign taxes paid. I proxy the GILTI income base as 10 percent of net foreign property, plant, and equipment; and subtract 80 percent of foreign taxes from the tax liability to account for the tax credit limitation. I define GILTI-exposed groups as those with a positive predicted liability, without distinguishing between true GILTI payers and those for which the foreign tax credit limit binds.

3 Empirical Strategy and Preliminary Results

3.1 Investment response of US affiliates compared to other foreign affiliates

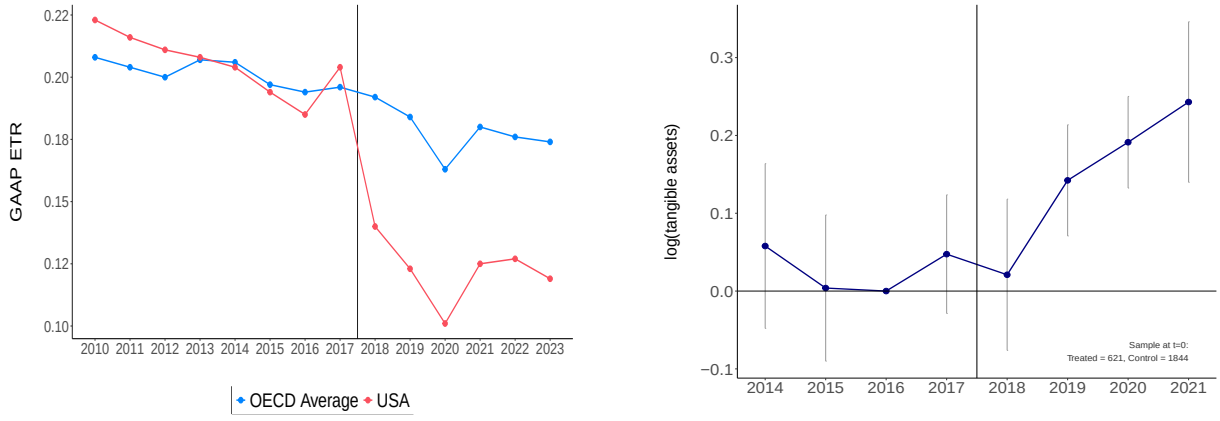
I compare the investment responses of subsidiaries of US MNEs to those of non-US MNEs before and after the TCJA tax reform. As shown in Figure 1a, German affiliates of MNEs from other OECD countries can be a suitable comparison group as their effective tax rates remained stable on average across the period of interest. Formally, I estimate the following event-study specification:

$$Y_{igt} = \sum_{\substack{t=-3 \\ t\neq -1}}^{4} \beta^t \cdot \mathbb{1}(EventTime = t) \cdot T_i + \alpha_i + \delta_g + \gamma_{sector,t} + \lambda_{nuts2,t} + \mathbf{X}_t\omega + \epsilon_{igt} \qquad (1)$$

where Y_{igt} is the natural logarithm of tangible assets of affiliate i, belonging to group g, in year t. The variable T_i is a treatment indicator equal to one if the affiliate belongs to a US-owned group and zero otherwise. The coefficients β^t trace the dynamic treatment effects for US affiliates compared to non-US affiliates in Germany.

The specification includes a rich set of fixed effects: affiliate fixed effects α_i control for time-invariant characteristics of individual affiliates; group fixed effects δ_g account for common shocks at the multinational group level. I follow Zwick and Mahon (2017) and assume that the bonus depreciation effect is similar within industry based on asset composition. I thus control for sector-by-year fixed effects $\gamma_{sector,t}$ to absorb industry-specific shocks. I also add region-by-year fixed effects $\lambda_{nuts2,t}$ to account for local variation. This is especially relevant for Germany as business taxes are set at the municipality level. The vector $\mathbf{X}_t$ contains additional macro controls at the MNE headquarter level such as GDP growth, the statutory corporate tax rate, inflation, and bilateral exchange rates.

Figure 1: Corporate Effective Tax Rates and Investment Responses to the TCJA



(a) Effective tax rates of US and OECD MNEs

(b) Tangible assets of US affiliates in Germany

Note: Panel (a) plots the average effective tax rates (ETR) of publicly listed companies in the US and OECD countries using Compustat North America and Global. The ETR is defined as income taxes paid divided by pretax income, winsorized between 0 and 100. Panel (b) plots event–study coefficients for US-owned affiliates in Germany relative to non-US-owned affiliates. The outcome is the logarithm of tangible assets. Error bars indicate 95 percent confidence intervals, with standard errors clustered at the country level.

Figure 1b shows the results of the event study. Tangible assets of US affiliates in Germany remained stable before the TCJA and began to increase from 2019 onward, reaching about 20–25 percent above 2016 levels; given that the TCJA passed in December 2017, it is reasonable to expect a one-year lag in firms' investment responses.

3.2 GILTI exposed Groups

I further explore the impact of the GILTI provisions introduced under TCJA. Column (1) of Table 1 shows that US-owned affiliates in Germany increased their tangible assets by about 10 percent after the TCJA relative to other foreign affiliates. In column (2), I interact the treatment with a

GILTI exposure indicator based on pre-TCJA characteristics. The coefficient on the interaction is large and highly significant, indicating that GILTI-exposed affiliates expanded their tangible assets by an additional 56 percent after the reform. This pattern suggests that GILTI created strong incentives to hold tangible assets in high-tax countries like Germany, though the positive baseline effect shows investment growth was not limited to GILTI firms alone.[4]

Table 1: Difference-in-Differences Estimates: GILTI interaction

	log(tangible assets)	
	(1)	(2)
Treated × Post	0.1061***	0.0602*
	(0.0297)	(0.0312)
GILTI × Treated × Post		0.5661***
		(0.0456)
affiliate FE	Yes	Yes
year-sector FE	Yes	Yes
NUTS2-year FE	Yes	Yes
GUO FE	Yes	Yes
Observations	17,609	17,609
R^2	0.96	0.96

Notes: Standard errors clustered at the country level are in parentheses. Significance codes: *** 0.01, ** 0.05, * 0.1. Global Ultimate Owner is shorten GUO.

4 Next steps

This paper shows that US affiliates in Germany expanded their tangible assets following the TCJA, with effects strongest for firms exposed to GILTI. Going forward, I will use the affiliate- and group-level data to estimate comparable elasticities of domestic and foreign investment to tax changes, allowing me to disentangle whether substitution or scale effects dominate.

References

Chodorow-Reich, Gabriel, Matthew Smith, Owen M Zidar, and Eric Zwick, "Tax Policy and Investment in a Global Economy," Working Paper 32180, National Bureau of Economic Research March 2024.

Clausing, Kimberly A, "Profit shifting before and after the Tax Cuts and Jobs Act," *National Tax Journal*, 2020, *73* (4), 1233–1266.

Dharmapala, Dhammika, "The consequences of the 2017 US international tax reform: a survey of the evidence," *International Tax and Public Finance*, 2024, *31* (4), 1158–1178.

Garcia-Bernardo, Javier, Petr Janský, and Gabriel Zucman, "Did the Tax Cuts and Jobs Act Reduce Profit Shifting by US Multinational Companies?," Working Paper 30086, National Bureau of Economic Research May 2022.

Zwick, Eric and James Mahon, "Tax policy and heterogeneous investment behavior," *American Economic Review*, 2017, *107* (1), 217–248.

[4] Additional results confirm that this GILTI effect remains significant even after controlling for group size, indicating it captures more than just large MNE behavior.