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IZA DP No. 16144

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Winners and Losers in the Race
for Mergers and Acquisitions**

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ISSN: 2365-9793

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ABSTRACT

Minimum Global Tax: Winners and Losers in the Race for Mergers and Acquisitions

This study aims to quantify the impact of the global minimum corporate tax rate – a pillar of the OECD’s reform of international taxation – on cross-border mergers and acquisitions (M&A) involving large multinational enterprises (MNEs). First, the influence of differences in capital taxation on bilateral cross-border M&A is assessed using a structural gravity model. The resulting estimated coefficients are then applied to evaluate the impact of a 15% global minimum tax rate on cross-border investments by firms whose revenue exceeds €750 million, whenever the target country’s corporate tax rate is lower. The study exploits a large, disaggregated dataset of 13,562 investor-firm M&A data points from 2001 to 2020 relating to 516 industries, defined at the 4-digit level of the NACE Rev. 2 classification, in 109 ‘source’ countries, and 559 industries (defined at the same of detail) in 161 ‘target’ countries. The empirical results suggest that M&A flows are higher when the source and target countries have similar tax rates, while the overall effect of the global minimum corporate tax on M&A flows would be negative (as expected), but small.

JEL Classification: H2, H87, F23

Keywords: global tax rate, bilateral foreign direct investment, profit shifting, Structural Gravity model

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1 Introduction

Globalisation has brought many benefits to the world in the form of greater mobility of goods, capital and production factors, which in turn has supported GDP growth in countries all over the world (Clausing, 2013). One of the most important features of the globalisation process has been the growing importance of foreign direct investment (FDI). These dynamic patterns of international asset purchases have led to the integration of capital markets.

The macroeconomic causes of international capital flows have been analysed in various streams of literature. One such stream, commonly used in the trade literature, adopts gravity models and emphasises fundamental 'pull' factors, such as GDP growth, the quality of institutions, openness to trade, and technological differences (Di Giovanni, 2005; Head and Ries, 2008; Coeurdacier et al., 2009; Erel et al., 2012); another strand focuses on external 'push' factors such as financial market failures and asymmetric information flows (Daude and Fratzscher, 2008; Hyun and Kim, 2010). Financial market failures and information asymmetry offer arbitrage opportunities for private operators, who are however constrained by both taxation and domestic regulations.

In the search for business opportunities, agents naturally move from one market to another. While this phenomenon can certainly be regarded as a positive externality given that it boosts competition, it also gives rise to innovative mechanisms to avoid, elude and/or optimise tax burdens by shifting profits towards tax haven host nations, a negative externality that leads to the under-provision of public goods and services. This tax avoidance mechanism aspect of international capital flows has been facilitated in recent decades by market integration, by the spread of information and communication technologies (ICTs), and by the emergence and growth of numerous web-based businesses (such as social media and e-commerce) whose spheres of operations are loosely defined and thus difficult to regulate. Tax evasion (or tax avoidance) via international channels is a practice commonly adopted by multinational enterprises (MNEs) that have the size and tools to move resources across borders; these firms generate substantial gains by engaging in profit-shifting activities. In this context, MNEs, on one hand, see opportunities to evade unfavourable national tax regulations by shifting profits to more favourable countries; national governments, on the other hand, see their financial stability endangered as their base of tax receipts is eroded. Hence the OECD's term 'Base Erosion and Profit Shifting' (BEPS) used in the organisation's policy response to the phenomenon (OECD, 2021).

Initial attempts to tackle profit shifting specifically designed for tax avoidance date back to the 1990s, when the Ruding Committee (Devereux, 1992) proposed a minimum corporate tax rate of approximately 30% to be applied by all Member States of the European Union. However, the proposal never became law.

In 2015, OECD countries released six indicators to track the amount of profit shifting taking place (OECD, 2015). Based on these indicators, the OECD has estimated that BEPS practices cost countries \$100 – 240 billion in tax revenue each year, equivalent to four to ten percent of global corporate income tax revenue. Such substantial losses are especially harmful to countries already suffering from high levels of public debt and thus dependent on the strategic behaviour of international investors.

Based on this evidence, in 2019 the OECD members launched a policy plan called Inclusive Framework on BEPS, committed to setting minimum tax rates for all member states and envisaging joint political measures to prevent BEPS (OECD, 2021). This framework has been shaped into a policy package composed of two pillars that address BEPS. 'Pillar One' introduces the principle of *profit reallocation* among the countries agreeing to the global taxation blueprint. It applies to MNEs whose global annual revenues exceed €20 billion and whose profit margins are above 10%. These corporations' excess profits are to be reallocated proportionally to the jurisdictions where their consumers are located, regardless of those firms' physical presence.

'Pillar Two'¹ establishes a minimum corporate tax rate of 15% applicable to all MNEs with

¹Pillar Two was proposed by France and Germany, whose political leaders stated that a global tax on corporations

over €750 million in annual revenue. Three rules will govern how the tax is applied: i) the income inclusion rule (IIR), ii) the under-taxed payments rule (UTPR), and iii) the subject to tax rule (STTR). IIR taxes, collected in the jurisdiction of an MNE's head registered office (headquarters), consist in a top-up tax on income earned in jurisdictions where corporate income tax is below 15%. The UTPR comes into play if the headquarter jurisdiction itself has a tax rate below 15%. In this way, the IIR and UTPR together ensure that the corporation will pay no less than 15% regardless of headquarter or subsidiary location. Finally, the STTR separately ensures that covered payments between connected entities will be subject to a minimum tax rate of 9% wherever neither the source country nor the country of residence apply a tax or withholding of at least 9% on the transaction.

The full OECD policy package has been agreed by 137 countries (Kenya, Nigeria, Pakistan and Sri Lanka are the only members of the BEPS Inclusive Framework that have yet to sign). Discussions on how to turn the agreement into law are now ongoing, so as to begin implementation procedures by the end of 2023 (with some exceptions such as Switzerland, which will postpone adoption until 2024 as constitutional reforms are needed).

This paper seeks to contribute to the emerging literature on the global minimum corporate tax rate (GMCTR), which discusses the implications of its institutional design and implementation (Devereux et al., 2020; Englisch and Becker, 2021). This is the first study that focuses on the impact of GMCTR on cross-border mergers and acquisitions (M&A). Recent studies have assessed how the global minimum tax will shape national tax policies and welfare (Johannesen, 2022) and make projections of its effects on revenue (Clausing et al., 2021; Barake et al., 2021; Janeba and Schjelderup, 2022). These studies find that: a) the GMCTR overall welfare effect will not be negative in tax havens; b) the GMCTR overall welfare effect will be unambiguously positive when the global minimum tax rate is high enough to end profit shifting; c) the revenue effects of the GMCTR depend on the instruments governments use to attract firms.

This paper attempts to assess the expected change in M&A flows as a consequence of the GMCTR. It exploits purpose-built, disaggregated dataset on M&A flows from 13,562 investor firms operating in 516 industries (at the 4-digit level of the Statistical Classification of Economic Activities in the European Community, commonly referred to as NACE, Rev. 2) in 109 countries operating to 559 sectors (at the same level of detail) located in 161 different countries, over the period from 2001 to 2020. A structural gravity model assesses the role played by differences in corporate tax rates between countries in shaping the direction and the intensity of M&A. Industry-wide bilateral gross capital flow data is typically rare, but we can fill this gap using a comprehensive dataset of cross-border mergers and acquisitions. The Zephyr database provides comprehensive reports on these transactions with integrated and detailed business information. Although M&A are not the only form of FDI (one notable other form is greenfield investments), they are generally the most common form of cross-boarders investment activities, also called 'brownfield FDI' (Herger et al., 2008). UNCTAD estimates that in 2021, M&A accounted for around 43% of the total value of global FDI outflows and 48.5% of flows from developed economies.

In order to assess how these M&A figures may be affected by the GMCTR, we must first settle on how to measure taxation, which is not a trivial issue given that various measures have been used in the literature (see Wier and Zucman (2022)). We adopt the effective tax rates on capital, recently constructed by Bachas et al. (2022), and compute the *effective* tax rates differential as the difference between the tax rates in the host and the investor country.

To assess the impact of the GMCTR scheme, we use the estimated coefficients to simulate the counterfactual change in M&A by MNEs with annual revenues greater than €750 million. In other words, we simulate what would happen when the GMCTR is 15% and a target country has a lower tax rate. Our analysis highlights that the overall effect of the GMCTR on M&A flows would be negative, but small. We do find that differences in tax rates between countries have an overall negative effect on the intensity of M&A.

had risen to the top of their agenda.

The paper is structured as follows. Section 2 briefly summarises the literature on the determinants of FDI and provides a theoretical background for our empirical approach. Section 3 introduces the empirical strategy and the econometric model. Section 4 describes the sources of our data and how they have been purpose-built, presenting some descriptive statistics. Section 5 presents and discusses the results of the empirical analysis in detail, and Section 6 concludes.

2 Literature review on corporate tax rates and FDI

The theoretical foundations of international corporate tax competition have been underpinned by the seminal paper of (Wilson, 1986), with further analysis conducted in (Wilson, 1999) and (Wilson and Wildasin, 2004). Recent evidence suggests that countries are competing against each other to attract FDI by lowering their corporate tax rates. Egger and Raff (2015) discover strategic behaviour across OECD countries (and some emerging economies), which tend to lower their statutory tax rates and raise depreciation allowances when rival governments cut corporate taxes. Furthermore, membership in regional free trade areas seems to make tax competition even tougher. Azémar et al. (2020) find that corporate tax competition is stronger when geographically proximate countries share high economic performances, particularly within more developed and internationally integrated areas of the world. A meta-analysis by Heckemeyer et al. (2021) on 33 primary studies confirms the existence of corporate tax competition, although the intensity of the phenomenon varies by country size and partisan politics.

Some scholars have studied the topic from a theoretical point of view and predicted that lowering capital taxation is not necessarily an optimal strategy for governments. For example, according to Hong and Smart (2010)'s model, in the presence of opportunities for international tax planning and if the corporate tax rate is not too high, governments might even wish to increase statutory and effective tax rates, as domestic welfare would increase whilst FDI outflows would not occur. Starting from evidence of complementarity between domestic and foreign investment, Becker and Riedel (2012), Becker and Riedel (2013) show that a large share of multinational companies can mitigate tax competition and allow countries to levy higher corporate taxes. Indeed, further factors can shape international capital mobility, keeping capital tax rates relatively high. The Tian (2018) theoretical model compares the effectiveness of reducing taxes and subsidising investments to increase inbound FDI. She finds that tax reductions should be preferred to subsidies only for investment projects with high growth rates and volatility and low discount rates, such as investments in high-tech industries. Reducing taxes would enable sharing of FDI-related (high) risks between investors and the government. Furthermore, as long as good public infrastructure is financed, a highly educated labor force is resourced, and access to new technology is supported, a higher tax rate might be linked to greater FDI inflows Genschel and Schwarz (2011); Garrett (1998); Besley and Persson (2014).

There is also ample literature that has investigated the role of corporate tax rates as determinants of the direction and intensity of FDI flows, including cross-border M&A. Meta-analysis-based reviews of the empirical literature (Mooij and Ederveen, 2008; Feld and Heckemeyer, 2011; Heckemeyer and Overesch, 2017) elicit that corporate tax rates do have a negative impact on attracting FDI. However, the results of specific studies vary across econometric strategies, control variables, and measures of corporate taxes.

We first look at a strand of empirical works focusing on firm-level location choice models. The seminal work by Devereux and Griffith (1998) explores the location choice of US MNEs investing in Europe, finding that the effective average tax rate of the destination country drives the choice between different European countries by affecting the level of net profits after taxes. Instead, the work by Buettner and Ruf (2007) investigates the location choice of German MNEs when investing abroad. While the marginal effective tax rate and effective average tax rate turn out to have weak predictive power, the statutory tax rate has a significant (negative) effect on the choice of where to

invest abroad. In addition, the labour cost difference between the origin and destination countries of investments has the same predictive power as tax rate difference. Barrios et al. (2012) focus on EU MNEs' strategy for their foreign subsidiary locations. They find that the probability of investing in a given country is negatively correlated with both host country taxation and additional taxation in the home country. Among highly profitable foreign subsidiaries, location choice is actually less correlated than average to corporate taxation, since high profitability might be related to favourable location-specific rents that would not be available in alternative locations, notwithstanding higher taxes. By contrast, subsidiaries with low fixed assets are more sensitive to both host and home country taxation. Egger et al. (2014) similarly analyse the sensitivity to tax rates of German MNEs, but also take into account whether the investor-firm can be categorised as a tax evader. They find that the location choice of tax-evader investors (about 11% of the sample) is not affected by the host country's corporate taxation, unlike non-tax-evaders. Merz et al. (2017) study the location of German MNEs' foreign affiliates in the financial sector. The probability of selecting a given foreign destination turns out to be negatively correlated to the host country's corporate tax rate. Merz et al. (2017) also estimate the impact of a change in taxation in one country on the probability that a different country will be chosen as the destination, finding complementarities, meaning that a tax rate reduction in one country is helpful to other countries (such as in the case of the US, Canada and Australia).

Secondly, we move to another strand of empirical literature that employs macro-level gravity models. Bellak and Leibrecht (2009) investigate factors driving FDI flows from EU countries and the US to central and eastern European host countries, finding that the bilateral effective average tax rate has a negative effect. Egger et al. (2009)'s work focuses on outward stocks of bilateral FDI among OECD countries, showing a positive effect of both home and destination country tax rates and a negative effect of the bilateral effective tax rate. Van't Riet and Lejour (2018) maps the international tax system across 108 countries, taking into account not only corporate tax rates but also withholding taxes on dividends and double tax treaties. Using network analysis, they compute cross-border investment patterns minimising MNEs' tax payments when profits are repatriated. They identify countries (such as the US, Luxembourg and the Netherlands) that are most likely to be used as conduits to reduce the tax burden. Therefore, they include "centrality indexes" in a gravity model and find that they are significant drivers of bilateral FDI stocks.

Thirdly, we look at the literature on the role of corporate taxes in international capital mobility, specifically in relation to cross-border M&A. Di Giovanni (2005) employs a country-level gravity model to test the drivers of a large set of worldwide cross-border M&A operations between 1990 and 1999. Their empirical analysis shows that the level of financial development of the investor country is an important factor driving investments abroad. In addition, the host country's corporate tax rate reduces flows of cross-border M&A. Coeurdacier et al. (2009) explore the role of corporate tax rates on a panel of cross-border M&A transactions across the largest industrialised markets. Through a country-industry level gravity model, they reveal that the differential between host and home country tax rates is negatively correlated with the volume of cross-border M&A. However, this effect is significant only in manufacturing sectors and is stronger in horizontal acquisitions. Huizinga and Voget (2009) investigate the drivers of cross-border M&A across EU countries, the US and Japan. Using a country-level gravity model, they show that the number of foreign acquisitions is negatively affected by both the target country's tax rate and by double taxation imposed by investors' home countries on foreign-sourced income. Similar results are reported in Herger et al. (2016), a study that also tests the difference of the taxation impact in vertical and horizontal cross-border M&A, finding that vertical deals turn out to be generally more sensitive to taxation. Arulampalam et al. (2019) test a location choice model on worldwide cross-border M&A data, combined with investor-level information, over the 2008-2016 period. They estimate a random parameter logit model and obtain three main results: (i) a high corporate tax rate reduces the probability of a country hosting cross-border M&A; (ii) the latter result is weakened if the investor's origin country taxes worldwide

profits through a credit on host country taxation; (iii) heterogeneity across investors' characteristics is relevant: for instance, companies owning foreign subsidiaries in the base year are less sensitive to international taxation since they can more easily undertake international tax planning and profit shifting.

More recent literature has stressed further factors of cross-border capital flows, which are related to cross-border tax evasion, tax avoidance and transfer pricing activities and illegal, borderline, or even legal practices of international corporations that move capital across borders with the aim of 'optimising' their tax burdens (Zucman, 2015, 2014; Johannesen and Zucman, 2014; Hebous and Johannesen, 2021; Tørsløv et al., 2023). Profit shifting has increased in countries that have abolished taxation of profits earned abroad, such as (Langenmayr and Liu, 2023). In response, some countries have implemented rules on controlled foreign corporations in their tax systems (Clifford, 2019; Fonseca et al., 2023), which limit the extent of tax avoidance practices, particularly when adopted cooperatively Haufler et al. (2018); Amendolagine et al. (2021).

Finally, works associated with the 'new economic geography' literature have highlighted the role of firm heterogeneity in shaping profit-shifting opportunities. (Krautheim and Schmidt-Eisenlohr, 2011) has fully modelled the impact of firms' heterogeneity on the propensity of MNEs to shift profits abroad via capital outflows, which both increases tax competition and reduces tax receipts at home with detrimental effects to the provision of public goods. Finally, Baldwin and Okubo (2009); Davies and Eckel (2010) investigate how firms' heterogeneity (especially in terms of size) and asymmetric tax provision from different countries impact location choices.

3 Empirical strategy

The specific formula we have adopted to assess how the difference in corporate tax rates between two countries affects M&A flows between those countries is as follows:

$$M\&A_{ifh,jz,t} = \exp[\alpha + \beta TrDiff_{ji,t} + \chi GRAVITY + \gamma_{ifh} + \delta_{jz} + \eta_{hz} + \theta_t] \times \epsilon_{ifh,jz,t} \quad (1)$$

where $M\&A_{ifh,jz,t}$ is the value of mergers and acquisitions from firm "f" operating in sector "h" in country "i" to sector "z" in country "j" in the year t .

As far as transaction costs are concerned, the empirical trade literature on FDI flows highlights the role of geography, i.e. the distance between the main cities of country "i" and country "j". To capture the costs involved in cross-border M&A operations, the vector $GRAVITY$ includes the standard gravity variables as the logarithm of the distance and economic size; these are accompanied by dummy variables for a common border, common language, colonial links, and whether the countries are part of a regional trade agreement.

We also inflate our specification by including a set of dummies for firm acquirer-sector γ_{ifh} , target-sector δ_{jz} , sector-pair η_{hz} , and time-specific θ_t , to control for unobservable and/or imperfectly measured variables (Campos et al., 2021). This structure of fixed effects also takes the 'multilateral resistance term' into account (Anderson and van Wincoop, 2003). Trade costs are not confined to the bilateral barriers between two countries; they are not country-pair-specific and they assume a multilateral nature.

Since M&A patterns are not homogeneous over time, instead tending to come in waves, the dependent variable is constructed as the average value over five periods of four years, taken from pooled data from 2001 to 2020. For all gravity controls, we take the initial value in each period, while for the tax rate differential for each period, we take the four-year average value with a one-year lag.

The variable of interest is the difference in tax rates between the host country ('j') and the home country ('i'):

$$TrDiff_{ji,t} = Tr_{j,t} - Tr_{i,t} \quad (2)$$

We use the effective tax rates on capital compiled by Bachas et al. (2022), which capture all taxes paid at all levels of government (corporate income, individual income, payroll, property, estate and inheritance, consumption, and other indirect taxes), based on national accounts harmonised across countries².

The difference in tax rates may be positive or negative. A positive difference means the host country has a higher effective tax rate on capital than the home country; therefore, sending capital abroad would entail being subject to higher taxes. Why would an MNE send its capital to a country where it would be taxed more? Actually, many reasons could justify such a decision. The benefits of access to a range of human capital, material capital or specialised capital could offset the increased tax costs. Vice-versa, a negative difference signifies that the host country has a lower effective tax rate on capital vis-à-vis the home country. Our model captures this dichotomy by classifying a 'directional' dummy $D_{ji,t}$ (0 = positive or null difference and 1 = strictly negative difference).

While FDI might be important for economic growth (Bruno et al., 2018), not all FDI is of the same nature. One way to classify FDI is by the investor's motivations for it, using a framework established by British economist John Dunning (Dunning and Lundan, 2008):

- Natural resource-seeking investment: Motivated by investor interest in accessing and exploiting natural resources.
- Market-seeking investment: Motivated by investor interest in serving domestic or regional markets.
- Strategic asset-seeking investment: Motivated by investor interest in acquiring strategic assets (brands, human capital, distribution networks, etc.) that will enable a firm to compete in a given market. It takes place through mergers and acquisitions.
- Efficiency-seeking investment: FDI that comes into a country seeking to benefit from factors that enable it to compete in international markets.

The last category, efficiency-seeking FDI, is the one that comprises companies that choose to become international in order to lower the total amount of tax paid to governments. By operating in several countries, these efficiency seekers might be able to lower their tax burden. Firms have an incentive to locate FDI in countries where corporate tax rates are lower.

3.1 Non-linearity

Multiplicative interaction models are common in quantitative social science literature (Brambor et al., 2006). Researchers include interaction terms when conditional hypotheses have to be tested. A conditional hypothesis is one in which a relationship between two or more variables depends on the value of one or more other variables³. Extending the equation 1 (this time omitting dummies and control variables for simplicity), we can write:

$$M\&A_{ifh,jz,t} = \exp[\alpha + \beta_1 TrDiff_{ji,t} + \beta_2 D_{ji,t} + \beta_3 (TrDiff_{ji,t} \times D_{ji,t}) + \dots] \times \epsilon_{ifh,jz,t} \quad (3)$$

²Bachas et al. (2022) page 1: "The construction of our effective tax rates proceeds in three steps. Using national accounts data we first compute total labor and capital income in each country. Using government revenue statistics we then classify all government revenue sources into either labor taxes, capital taxes, or indirect taxes. Combining these two inputs, we compute effective macroeconomic tax rates on labor and capital by dividing 1 labor or capital tax paid by the corresponding income flow. The database—including detailed decomposition by type of tax—is available online at <https://globaltaxation.world>."

³The simplest conditional hypothesis is: H_1 : An increase in X is associated with an increase in Y when condition Z is met, but not when condition Z is absent.

It is now possible to interpret the coefficient as follows:

$$\begin{cases} \beta_1 TrDiff_{ji,t} + \beta_3 TrDiff_{ji,t} \times 1 = (\beta_1 + \beta_3) TrDiff_{ji,t} \\ \beta_1 TrDiff_{ji,t} + \beta_3 TrDiff_{ji,t} \times 0 = \beta_1 TrDiff_{ji,t} \end{cases} \quad (4)$$

The impact of the tax differential on M&A conditional to a **negative** difference is $(\beta_1 + \beta_3)$, whilst the impact of the tax differential on M&A conditional to a **positive** difference is "only" β_1 .

In order to additionally test for any impact owing to similarities or differences in countries' institutional frameworks (the 'institutional distance impact'), we use the Grubel-Lloyd indicator of institutional similarity, as follows:

$$GrubelLloyd_{ji,t} = 1 - \frac{|Tr_{j,t} - Tr_{i,t}|}{Tr_{j,t} + Tr_{i,t}} \quad (5)$$

The advantages of the Grubel-Lloyd index are its convenient scaling between bounded values $[0, 1]$ and its methodologically stronger affinity with the concept of proximity (1 being identical, 0 completely disparate). Countries with a G-L index approaching 1 tend to have much more similar respective tax rates (as institutional framework includes factors such as tax systems, public good provisions and the structure of the actual marginal rates). Vice-versa, country pairs with a low G-L index will have tax systems with substantially different characteristics.

3.2 Simulated Scenario

Finally, to estimate the effects of the implementation of the global minimum corporate tax as planned by the OECD, we introduce a simulated scenario in which a minimum tax rate of 15% is applied to all multinational groups with revenue exceeding €750 million. We modify Eq. (1) to calculate the new tax rate differential that will result from such policy, obtaining the simulated change in M&A activity. The percentage change in M&A activity can thus be computed as follows:

$$Tr^{min}effect = \frac{\sum_{ifh,jz=1} (E[M\&A_{ifh,jz} TrDiff_{ji}] - E[M\&A_{ifh,jz} TrDiff_{ji}^{min}])}{\sum_{ifh,jz=1} E[M\&A_{ifh,jz} TrDiff_{ji}]} \quad (6)$$

According to Equation 6, the difference represents the M&A activity that either would (if positive) or would not (if negative) take place under the minimum global tax.

4 Data

The empirical investigation described in the previous section builds upon the compilation of a M&A database drawn from the Bureau van Dijk Zephyr database⁴, which provides information on the deal value, the industry sector and the geographical location of both the acquirer and the target company, along with their financial profiles. Most of the deals included in the M&A database (7%) consist of an acquisition of a majority stake (i.e. larger than 50%) of the target company. We consider worldwide cross-border deals carried out between 2001 and 2020; and the final dataset in our analysis includes information on M&A of 13,562 investor-firm operating in 516 industries, defined at the 4-digit level of the NACE Rev. 2 classification, in 109 'source' countries, to 559 industries (defined at the same of detail) in 161 'target' countries. For both the acquirer and the target company, the dataset includes the NACE-4 digit industry and country-level location. For the acquirer, it also contains operating revenue for the latest year available⁵. After removing any deals where the information on any of the dimensions listed above is missing or incomplete, we end

⁴<https://www.bvdinfo.com/en-gb/>

⁵We prefer using the last available year rather than the pre-deal one-year lagged value since the latter is missing in about 8% of cases.

up with 22,915 deals, for an aggregate transaction amount of €5.7 billion. These operations were undertaken by 13,579 distinct investors, operating in primary (5.5%), manufacturing (41%) and service (53.5%) sectors. Notably, about 3,000 investors (22% of the total) exceeded the €750 million revenue threshold, which implies they will be subject to the OECD global minimum tax evaluated in this paper. As shown in Table 1, the acquirer and target companies share the same sector in about one-third of the deals. Furthermore, 90% of M&A transactions in our dataset originate in high-income countries (96% in value), while 70% originate and end in high-income countries (84.4% in value)⁶. About three-quarters of the deals from low/middle-income countries target high-income countries. In terms of time distribution, the largest share of the number of deals was carried out in the four years before the financial crisis (26%), while the other periods (2001-2005, 2009-2012, 2013-2016, 2017-2020) each accounted for about 18% of the total. However, in terms of aggregate value, 2013-2016 was the period with the highest value of deals in our dataset (27.5% of the total).

Table 1: Descriptive statistics

	# Deals	%	Aggreg. value (in € million)	%
<i>Type</i>				
Horizontal (Acquirer sector = Target sector)	7,570	33	2,450	42.6
Vertical (Acquirer sector \neq Target sector)	15,345	66.9	3,290	57.4
<i>Direction (from-to)</i>				
High Income - High income	16,038	69	4,850	84.4
High Income - Low/Middle Income	4,882	21.3	570	9.9
Low/Middle Income - High Income	1,417	6.2	272	4.8
Low/Middle Income - Low/Middle Income	578	2.5	53.7	0.9
<i>Period</i>				
2001-2004	4,114	18	802	13.9
2005-2008	5,953	26	1,300	22.6
2009-2012	4,190	18	787	13.7
2013-2016	4,579	20	1,580	27.5
2017-2020	4,079	18	1,280	22.3
<i>Total</i>	22,915	100	5,749	100

Data for the *gravity* variables are extracted from the CEPII dataset⁷. The gravity variables included in the model are:

- the origin and destination nominal GDP per capita, in US dollars, respectively, $GDP_{i,t}$ and $GDP_{j,t}$;
- the geodesic weighted distance between country i and country j , $Distance_{ij}$;
- the dummy $Colony_{ij}$ equal to 1 if i and j are linked by colonial ties;
- the dummy $Language_{ij}$ equal to 1 if i and j share the same official language;

⁶We use World Bank income classification: <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>.

⁷http://www.cepii.fr/CEPII/en/bdd_modele/bdd_modele_item.asp?id=8

- the dummy $Contiguity_{ij}$ equal to 1 if i and j share a land border;
- the dummy for membership in a shared regional trade agreement, RTA_{ij} .

In the Appendix, we provide descriptive statistics of the main variables in our dataset used in the empirical analysis.

5 Econometric results

5.1 How differences in corporate tax rates affect cross-border M&A

Our results show that an increase in the difference between the target and the home tax rate entails a drop in M&A investments. This is illustrated numerically in Table 2 below, which shows the output of Equation 1 in column (1), of the sample split for the dummy $D_{ji,t}$ in columns (2) and (3), and finally of the interacted model formulated in Equation 3 in column (4). The coefficient β_1 in column (1) is negative and statistically significant. The estimated β_1 coefficient of 0.74 (column (1) in Table 2), which is statistically significant at the 1% level, implies that an increase in the tax rate differential of one standard deviation (0.17%) reduces cross-border M&A by 0.13%.

However, it must be kept in mind that this 'overall' coefficient comprises both instances in which the difference is negative and those in which the difference is positive (or null). In the former case, the host country has a lower tax rate than the home country; this set is presented in column (2) of Table 2. For a more concise interpretation of the coefficient, the $TrDiff_{ji,t}$ variable is taken in absolute terms. We show that the increase in the absolute value of the difference still implies lower investment in M&A: the lower the tax rate in the target country (compared to the acquirer country's tax rate), the lower the incentive to invest. Column (3) in Table 2 shows the results for the set of transactions involving positive tax rate differences.

These results suggest that the higher the tax rate of the target country (again, relative to that of the acquirer country), the lower the incentive to invest. There is a notable difference: the coefficient in column (2) is much lower (and statistically different) from the coefficient in column (3). Indeed, the distance effect curtailing M&A in the two sub-cases is different, where the negative distance case strongly attenuates this mechanism, possibly due to profit shifting. Column (4) in Table 2 allows us to make the distinction between negative and positive differences for the full set directly within an interacted model (Eq. 3).

Table 2: Baseline results

	(1)	(2)	(3)	(4)
	Full sample	$Tr_{j,t} < Tr_{i,t}$	$Tr_{j,t} \geq Tr_{i,t}$	Interacted
$\beta_1 : TrDiff_{ji,t}$	-0.74*** (0.27)	-2.03*** (0.51)	-3.34*** (0.63)	-3.23*** (0.61)
$\ln(Distance_{ij})$	-0.12* (0.07)	0.16* (0.09)	-0.42*** (0.10)	-0.11 (0.07)
$Contiguity_{ij}$	0.51*** (0.17)	1.33*** (0.20)	-0.50* (0.25)	0.60*** (0.16)
$\ln(GDP_{i,t})$	0.79 (0.64)	1.48 (1.06)	0.59 (0.65)	0.77 (0.65)
$\ln(GDP_{j,t})$	0.75*** (0.07)	0.64*** (0.09)	0.74*** (0.11)	0.70*** (0.07)
$Language_{ij}$	0.74*** (0.10)	0.28** (0.13)	1.34*** (0.16)	0.69*** (0.10)
$Colony_{ij}$	0.23 (0.20)	0.22 (0.20)	0.48* (0.27)	0.22 (0.19)
RTA_{ij}	-0.46*** (0.12)	-0.14 (0.14)	-0.90*** (0.21)	-0.44*** (0.12)
$\beta_2 : D_{ji,t}$				-0.24* (0.13)
$\beta_3 : (TrDiff_{ji,t} \times D_{ji,t})$				2.54*** (0.90)
<i>Constant</i>	0.23 (2.45)	-4.02 (4.04)	4.66* (2.49)	0.78 (2.47)
N. of Obs.	486,662	327,226	159,436	486,662
Pseudo R ²	0.46	0.46	0.55	0.46

Notes: PML results; $TrDiff_{ji,t}$ in columns 2-4 is in absolute terms; ***, ** and * refer to significance level at 1%, 5% and 10%, respectively. Robust standard error in parentheses. Fixed Effects: fh fz hz period.

To interpret the overall effect of tax differences on M&A, we rely upon Equation (4). For negative tax rate differences, we need to look at the sum of β_1 and β_3 . We show that this is still negative ($-3.23 + 2.54 = -0.69$), meaning that when the target country tax rate is lower than the home country tax rate, there is a *relatively* greater incentive for M&A to flow than when the opposite is true. In other words, the institutional distance (proxied by the absolute tax difference) matters *much less* if the decision to invest is rooted in fiscally less stringent countries. This statistical evidence suggests that profit shifting may be taking place. Where the tax rate difference is positive, we need to look at the coefficient of β_1 only, which is negative with an order of magnitude of -3.23. When the host country tax rate is higher than the home country tax rate, the incentive to invest in M&A is lower.

As regards the role of geographical settings on FDI flows, the coefficient of the distance between countries, indicated by $Distance_{ij}$, is negative and significant, correctly capturing the greater costs associated with investing further from home. The only exception occurs where the tax differential is negative: in this case, distance does not seem to negatively affect FDI. As expected, the economic variables ($GDP_{i,t}$ and $GDP_{j,t}$) have a positive and significant impact on FDI. Similarly, the positive and statistically significant coefficients of the variables *Colony*, *Language*, and *Contiguity* imply that if two countries are linked by colonial ties, share the same language or a land border,

the transaction costs for investing are reduced and stimulate FDI flows between these two countries. The regional trade agreement coefficient is negative and significant, which incidentally supports literature that views FDI as a substitute for trade (Helpman, 2006); M&A therefore tends to be higher in countries that do not belong to a trade agreement.

All the results shown in Table 2 are confirmed by the robustness check performed using a similarity index in Table 3, where the G-L index coefficient (Eq. 5) is positive and significant: countries that are institutionally 'closer' to each other register higher M&A activity, but the effect is attenuated in the context of negative host-home tax rate differences (when the home country tax rate is higher).

A hypothetical change in institutional similarity from nil (0) to total proximity (1) will translate into higher M&A: the estimated coefficient of β_1 equal to 1.21 (column (1) in Table 3), statistically significant at the 1% level, implies that an increase in the G-L index of one standard deviation (0.19%) generates an increase in cross-border M&A of 0.36%. The β_1 coefficient in column (2), equal to 1.34, is lower than the β_1 coefficient in column (3) of 2.42, the latter estimated taking the set of positive host-home tax rate differentials. Meanwhile, the β_3 coefficient in the interacted model in column (4) is -1.18, lower than the 1.98 β_1 coefficient, again confirming the previous result: the sum between the two coefficients ($1.98 + (-1.18) = -0.8$) indicates that the more similar the tax rates of a country pair, the higher the incentive for M&A.

Table 3: Similarity index

	Full sample	$Tr_{j,t} < Tr_{i,t}$	$Tr_{j,t} \geq Tr_{i,t}$	Interacted
$\beta_1 : Grubel - Lloyd_{ji,t}$	1.21*** (0.22)	1.34*** (0.31)	2.42*** (0.48)	1.98*** (0.43)
$\ln(Distance_{ij})$	-0.12 (0.07)	0.16* (0.09)	-0.42*** (0.10)	-0.12 (0.07)
$Contiguity_{ij}$	0.56*** (0.17)	1.33*** (0.19)	-0.55** (0.25)	0.57*** (0.17)
$\ln(GDP_{i,t})$	0.75 (0.65)	1.47 (1.06)	0.55 (0.65)	0.74 (0.65)
$\ln(GDP_{j,t})$	0.63*** (0.06)	0.61*** (0.09)	0.75*** (0.11)	0.67*** (0.07)
$Language_{ij}$	0.68*** (0.10)	0.29** (0.13)	1.36*** (0.16)	0.69*** (0.10)
$Colony_{ij}$	0.24 (0.19)	0.24 (0.20)	0.50* (0.27)	0.24 (0.19)
RTA_{ij}	-0.43*** (0.12)	-0.13 (0.14)	-0.90*** (0.21)	-0.43*** (0.12)
$\beta_2 : D_{ji,t}$				1.07** (0.50)
$\beta_3 : (Grubel - Lloyd_{ji,t} \times D_{ji,t})$				-1.18** (0.59)
<i>Constant</i>	-0.19 (2.42)	-5.22 (3.91)	2.44 (2.54)	-1.02 (2.53)
N. of Obs.	486,662	327,226	159,436	486,662
Pseudo R ²	0.46	0.46	0.55	0.46

Notes: PML results

***, ** and * refer to significance level at 1%, 5% and 10%, respectively.

Robust standard error in parentheses. Fixed Effects: fh fz hz period.

We now turn to further robustness checks based on the nature of M&A vertical versus horizontal (Table 4), the period of analysis (Table 5), and target country income level (Table 6).

Table 4 reports the results of the interacted model (column 4 in tables 2 and 3) and splits the set between M&A related to horizontal and vertical investments, respectively. The impact of the tax differential is generally negative and significant in both cases. The magnitude is similar when investments are directed towards countries with higher taxes on capital: β_1 is equal to -3.25 and -3.30, respectively, for horizontal and vertical investments. The tax rate differential impact is different, however, when investments are directed towards destinations with lower taxes on capital: $(\beta_1 + \beta_3)$ stands at -0.04 for horizontal M&A and -1.27 for vertical M&A. The tax rate seems to be a more relevant factor in vertical (efficiency-seeking) investments (Dunning and Lundan, 2008), which typically aim to reduce costs (possibly including taxes on capital), by moving a portion of production abroad.

Table 4: Results by type of M&A

	(1)	(2)
	Horizontal	Vertical
$\beta_1 : TrDiff_{ji,t}$	-3.25*** (0.95)	-3.30*** (0.80)
$\beta_2 : D_{ji,t}$	-0.39* (0.21)	-0.12 (0.15)
$\beta_3 : (TrDiff_{ji,t} \times D_{ji,t})$	3.21** (1.50)	2.03* (1.09)
$\ln(Distance_{ij})$	-0.18 (0.12)	-0.06 (0.08)
$Contiguity_{ij}$	0.56** (0.28)	0.63*** (0.20)
$\ln(GDP_{i,t})$	0.84 (0.65)	0.88 (1.32)
$\ln(GDP_{j,t})$	0.58*** (0.11)	0.83*** (0.07)
$Language_{ij}$	0.73*** (0.19)	0.65*** (0.11)
$Colony_{ij}$	0.37 (0.34)	0.09 (0.16)
RTA_{ij}	-0.58*** (0.22)	-0.33** (0.13)
$Constant$	1.64 (2.64)	-0.67 (4.90)
N. of Obs.	165564	321098
Pseudo R ²	0.432	0.487

Notes: PML results; $TrDiff_{ji,t}$ is in absolute terms; ***, ** and * refer to significance level at 1%, 5% and 10%, respectively.
Robust standard error in parentheses.
Fixed Effects: fh fz hz period.

Table 5 displays a chronological breakdown of the results. From column (1), we notice that for the 2001-2004 period, the overall impact on M&A is weak since only β_3 is significant at 10%, although the slope coefficient suggests a robust (3.74*) preference for countries with a lower tax rate than the home country. This may stem from the intensive increase in financial speculation on the real economy that characterised these years, where economic operators were tempted to overlook strategic factors (Epstein, 2005).

Moving to Column (2), for 2005-2008, we observe that the aggregate coefficient $\beta_1 + \beta_3$ is negative, and strongly significant only for β_1 (-3.51***). This major difference from the previous four-year period can be attributed to the effects of the financial collapse that occurred in 2007 in the United States and then spread throughout the eurozone before inflicting damage on economies worldwide.

International capital mobility dynamics show a sign of recovery from the 2007 financial crisis in the 2009-2012 period (column 3): the significance and sign of the slope coefficients are the same as in the previous period, but the negative impact is slightly weaker, at -2.48*** (β_3 is not significant).

Turning to the 2013-2016 period (column 4), we see that both β_1 and β_3 are significant at 5% and equal -3.00** and -3.78**, respectively. The aggregate coefficient is positive and steered by

the preference for host countries with lower tax rates ($D_{ji,t} = 1$). This result suggests that during this period, the intense increase in capital mobility was linked to MNEs' efforts to recover from the effects of the 2007 crisis by pursuing efficiency (in some case profit-shifting) strategies (Dunning and Lundan, 2008).

In subsequent years, debates unfolded over the pitfalls of a "race to the bottom" taxation scenario stemming from competition to attract such efficiency-seeking investments, drawing the attention of policymakers internationally (Heckemeyer et al., 2021). This is the context behind the aggregate negative impact on the dependent variable observed for the 2016-2019 period, with $\beta_1 = -4.10^{***}$ and $\beta_3 = 2.81$ (not significant), as shown in column 5. This result is also partly attributable to the fact that other priorities rose to the top of many governments' agendas, such as the need to rebuild the fundamentals of socioeconomic systems in order to foster more sustainable development; in turn, economic actors were therefore encouraged to reallocate resources to focus on real economic value over speculative financial operations. It is also worth mentioning here that, as argued by Bilicka et al. (2022), the critical issue around tax avoidance through international capital mobility is that it endangers the sustainability of public budgets by eroding the taxable income base. In recent years, governments suffering from longstanding public debt burdens have established measures and enforced rules to prevent such profit-shifting and limit tax base erosion. An example of the effects of these recent tax policy changes can be seen in Clausen et al. (2021), who show that the percentage of American MNEs' income declared in the seven leading tax havens has dropped since 2016.

Table 5: Results by period

	(1)	(2)	(3)	(4)	(5)
	2001-2004	2005-2008	2009-2012	2013-2016	2016-2019
$\beta_1 : TrDiff_{ji,t}$	-2.52 (1.54)	-3.51*** (1.25)	-2.48*** (0.90)	-3.00** (1.16)	-4.10*** (1.25)
$\beta_2 : D_{ji,t}$	-0.15 (0.25)	-0.13 (0.25)	-0.08 (0.24)	-0.55** (0.25)	-0.18 (0.27)
$\beta_3 : (TrDiff_{ji,t} \times D_{ji,t})$	3.74* (2.07)	0.52 (1.73)	1.08 (1.53)	3.78** (1.83)	2.81 (1.73)
$\ln(Distance_{ij})$	0.19 (0.15)	-0.30 (0.20)	-0.04 (0.15)	-0.20 (0.13)	0.00 (0.11)
$Contiguity_{ij}$	0.91*** (0.33)	0.34 (0.29)	0.60* (0.33)	0.23 (0.38)	1.03*** (0.34)
$\ln(GDP_{j,t})$	0.98*** (0.12)	0.39** (0.16)	0.59*** (0.12)	0.86*** (0.13)	0.85*** (0.10)
$Language_{ij}$	0.59*** (0.19)	0.33* (0.17)	0.62*** (0.21)	1.16*** (0.21)	0.52*** (0.19)
$Colony_{ij}$	0.37 (0.31)	0.41 (0.29)	0.13 (0.29)	0.40 (0.46)	-0.11 (0.31)
RTA_{ij}	0.43 (0.27)	-0.36 (0.25)	-0.41 (0.30)	-0.76*** (0.26)	-0.48** (0.23)
$Constant$	-0.45 (1.43)	6.58*** (2.09)	2.70* (1.49)	4.04*** (1.06)	2.30* (1.18)
N. of Obs.	91,701	123,162	86,795	98,205	84,185
Pseudo R ²	0.490	0.494	0.423	0.520	0.483

Notes: PML results; $TrDiff_{ji,t}$ is in absolute terms;

***, ** and * refer to significance level at 1%, 5% and 10%, respectively.

Robust standard error in parentheses. Variable $\ln(GDP_{i,t})$ is dropped by fixed effects.

Fixed Effects: fh fz hz.

Table 6 documents the results from pairing subsets of countries based on income levels. Specifically, in column (1) we investigate the relationship when both home and host countries belong to the *high income* group. In line with the baseline results, we find that: i) there is a negative overall impact as the sum of β_1 and β_3 is negative and strongly significant (-0.55); ii) relative to the *high income* group, host countries with lower tax rates are preferred over those that implement higher tax rates. Column (2) provides evidence of the estimates where home countries with *high income* are paired with *low income* host countries. Slope coefficient results show that while β_1 is negative and significant at 10% (-7.08*), β_3 is not significant (albeit positive).

Accordingly, the overall impact on M&A flows is negative when the difference between the tax rates of home and host countries rises. This case may account for those MNEs pursuing natural resource-seeking investments (Dunning and Lundan, 2008) as the endowment of natural resources essential to supply advanced economies is mostly placed in *low income* countries (Besley and Persson, 2014; Sachs and Warner, 2001).

Column (3) reverses the pairing, by drawing attention to the slope coefficients of the subset of *low income* home countries and *high income* host countries. In this case, note that while β_1 is not significant, β_3 is strongly significant and negative, with a slope coefficient of -17.86***. This suggests that M&A activity is firmly driven by institutional factors (both formal and informal) that are crucial to the success of the investment from a strictly economic standpoint (Besley and Persson,

2014), the type described by Dunning and Lundan (2008) as "strategic asset-seeking" investments.

Finally, in column (4), we report the estimates of the subset pairing *low income* countries together as both home and host. Only the β_1 slope coefficient is significant at 10%, amounting to -7.62*. Overall, this means that an increase in the difference between tax rates leads to a decrease in M&A flows. Therefore, on the one hand, M&A intensity is decidedly lower than in other income-group subsets; on the other hand, it also suggests that when capital flows take place between *low income* countries, investors (on average) do pay attention to institutional factors.

Table 6: Results by target country income

	(1) High-High	(2) High-Low	(3) Low-High	(4) Low-Low
$\beta_1 : TrDiff_{ji,t}$	-3.35*** (0.67)	-7.08* (4.06)	-0.11 (1.17)	-7.62* (3.97)
$\beta_2 : D_{ji,t}$	-0.21 (0.14)	-0.59** (0.30)	1.33*** (0.38)	-0.71 (0.56)
$\beta_3 : (TrDiff_{ji,t} \times D_{ji,t})$	2.80*** (0.98)	4.65 (4.40)	-17.86*** (5.41)	6.40 (5.94)
$\ln(Distance_{ij})$	-0.09 (0.08)	-0.21 (0.22)	0.03 (0.24)	-0.50 (0.37)
$Contiguity_{ij}$	0.63*** (0.18)	1.21* (0.64)	1.22** (0.59)	-0.08 (0.45)
$\ln(GDP_{i,t})$	-0.31 (0.79)	4.51** (1.89)	1.09 (1.65)	4.14* (2.21)
$\ln(GDP_{j,t})$	1.04*** (0.09)	0.11 (0.14)	0.59*** (0.21)	-0.04 (0.15)
$Language_{ij}$	0.63*** (0.11)	-0.17 (0.38)	0.83*** (0.24)	0.54 (0.38)
$Colony_{ij}$	0.19 (0.21)	1.19*** (0.39)	-0.14 (0.39)	0.85 (0.82)
RTA_{ij}	-0.58*** (0.14)	0.59** (0.26)	-0.02 (0.22)	-0.67 (0.60)
$Constant$	3.47 (3.05)	-9.49 (7.34)	0.06 (3.23)	3.60 (5.38)
N. of Obs.	275,120	34,642	15,486	2,305
Pseudo R ²	0.473	0.487	0.486	0.510

Notes: PML results; $TrDiff_{ji,t}$ is in absolute terms;

***, ** and * refer to significance level at 1%, 5% and 10%, respectively.

Robust standard error in parentheses. Fixed Effects: fh fz hz period.

5.2 How the global minimum tax rate will impact FDI

The overall results discussed in the section above have substantial implications. Firstly, it is apparent that significant home-host country tax rate differences are detrimental to FDI flows in the form of M&A, regardless of whether the host country's tax rate is higher or lower than the home country's. Corporate tax rate differences seem to constrain the full expression of market globalisation. This implies that theoretically, an optimal scenario could be convergence toward a standard global corporate tax rate - not just a minimum rate. In such a scenario, international

economic operators would seek value in the tangible and intangible resources offered by each country, including formal and informal institutional quality. In this way, competition between countries for foreign investments would hinge upon productive capabilities; it would also make the investment more secure in the long term. In practice, however, given the major differences that currently exist between nations in terms of structural economic factors (for instance, in debt to GDP ratio), this scenario is completely unrealistic for the foreseeable future. What is realistic is a global system where all countries are required to abide by a minimum rate.

Secondly, in a context where there are material tax rate differences, major corporations clearly prefer to invest in countries where they will be taxed less than they would at home. This naturally gives rise to race-to-the-bottom practices by some governments to attract capital, paving the way to profit-shifting.

In order to tackle these implications, a global minimum tax rate has been agreed upon. In this section, we employ Equation 6 to gain insight into the scenario where a global minimum tax rate is set at 15%, as envisaged under Pillar Two of the OECD Inclusive Framework.

For this analysis, it seems logical to focus on the most recent four-year time frame (2016–2019). Table 7 presents the effect of the GMCTR on horizontal and vertical M&A flows. The overall effect on M&A flows is negative to the tune of €1.346 billion, but that is a mere 0.1% of the total predicted flows. When we consider horizontal and vertical investments separately, we find a greater loss of horizontal M&A.

Focusing on the region of the *acquirer-country*, Table 8 suggests that the biggest loss of M&A investments would come from the Europe and Central Asia regions, where flows would fall by €822 million, followed by the East Asia and Pacific region (€251 million in lost M&A) and then North America (€218 million). These are regions where the majority of M&A activity takes place (see Table 1 and descriptive statistics in the Appendix). In relative terms, though, the largest loss is registered by investing firms in the Middle East and North Africa (0.4% of predicted flows), followed by Latin America and the Caribbean (0.2%) and the Sub-Saharan Africa (also 0.2%). The smallest loss would be regarding MNEs located in South Asia, from which M&A is predicted to fall by just €1 million (or 0.1% of the total predicted flows).

Table 7: Effect of the global minimum tax rate by type of M&A

	(1) Missing Flows ^a (in € million)	(2) M&A decrease: % of predicted flows
Horizontal	-977	-0.2
Vertical	-369	-0.1
Overall	-1,346	-0.1

Note: ^a Simulation over the period 2016-2019.

Breaking down the GMCTR effect on M&A by acquirer-country income level, flows from high-income OECD countries would be reduced by €1.259 billion. In relative terms, though, it is lower middle income countries that would be most affected, registering a 0.5% decrease in predicted flows. Focusing on target countries, the most significantly affected regions are the Middle East and North Africa (where inward flows would drop by 2.7%), South Asia (2.3%) and Sub-Saharan Africa (1.2%).

Table 8: Effect of the global minimum tax rate on acquirer countries

	(1)	(2)
	Missing Flows ^a	M&A decrease:
	(in € million)	% of predicted flows
Effect by regions		
East Asia & Pacific	-251	-0.1
Europe & Central Asia	-822	-0.1
Latin America & Caribbean	-14	-0.2
Middle East & North Africa	-20	-0.4
North America	-218	-0.1
South Asia	-1	-0.1
Sub-Saharan Africa	-19	-0.2
Effect by income		
High income: non-OECD	-6	0.0
High income: OECD	-1,259	-0.1
Upper middle income	-59	-0.1
Lower middle income	-22	-0.5
Overall	-1,346	-0.1

Note: ^a Simulation over the 2016-2019 period

Splitting target countries by income level, we see that all categories other than OECD countries would experience a decrease in inward flows. In relative terms, the most affected group would be *low income* countries, which would face a loss of 3.7% of predicted flows, while *lower middle income* countries would see a 1.6% drop. The majority of the missing flows, however, would be attributable to non-OECD high income countries, amounting to €821 million.

Table 9: Effect of the global minimum tax rate on target countries

	(1)	(2)
	Missing Flows ^a	M&A decrease:
	(in € million)	% of predicted flows
Effect by regions		
East Asia & Pacific	-5	0.0
Europe & Central Asia	-123	0.0
Latin America & Caribbean	-80	-0.2
Middle East & North Africa	-843	-2.7
North America	-0	0.0
South Asia	-136	-2.3
Sub-Saharan Africa	-122	-1.2
Effect by income		
High income: non-OECD	-821	-0.7
High income: OECD	-4	0.0
Upper middle income	196	-0.3
Lower middle income	-306	-1.6
Low income	-18	-3.7
Overall	-1,346	-0.1

Note: ^a Simulation over the 2016-2019 period

6 Conclusions

International capital mobility triggers the globalisation of markets, which is in turn a key condition for a more competitive economy and, consequently, for long-term economic growth. Over the last two decades, foreign direct investment in the form of mergers and acquisitions has been widely employed as a means of moving capital internationally. However, international capital mobility also provides a route to tax avoidance in the form of profit shifting. Governments around the world are concerned about profit shifting since it erodes their tax base and jeopardises public budgets. To tackle this issue, a global minimum corporate tax rate (GMCTR) of 15% has been agreed upon by 137 countries; with a few exceptions, this tax is expected to enter into force by the end 2023. With a step in the direction of international fiscal harmonisation now on the horizon, we have sought in this paper to investigate how differences in tax rates between the home and host countries of international corporate investors affect their propensity to invest.

Our results suggest that M&A activity is more intense when the relevant home and host countries have *similar* tax rates. Indeed, we observe that substantial tax rate differences are, on the whole, detrimental to investment flows. This highlights the relevance of institutional distance as a driver of capital flows Bruno et al. (2021); Jackson and Deeg (2008); Kostova et al. (2020), as greater institutional differences in a target foreign country tend to be associated with greater costs of doing business abroad for multinational enterprises (MNEs).

Moreover, a global scenario of wide differences in corporate tax rates from country to country gives rise to "race to the bottom" practices and the consequent issue of tax base erosion due to profit shifting, which has become a major concern for governments. Within such a scenario, MNEs act opportunistically, preferring to invest wherever they will be taxed least rather than based on the competitive merits of the target market.

Our analysis suggests that, on the one hand, imposing a global minimum tax rate might not, by

itself, prove to be an ideal solution to this market failure. We find that the GMCTR will have a negative but limited overall effect on M&A flows. In absolute terms, the biggest decrease in outflows (the sending side) will be most among OECD countries, while the biggest drop in inflows (the receiving side) will be among high-income non-OECD countries. In relative terms (as a percentage of expected flows), however, developing countries would experience the largest decrease. As such, as far as FDI flows are concerned, the GMCTR scenario would seem to benefit mainly the North American region, unloading the burden of a lower aggregate value of M&A activity onto the less-developed regions of the world.

On the other hand, in light of the limited impact that the GMCTR will have as a percentage of the total predicted M&A flows (for any region), our results nevertheless indicate that governments would be wise to continue pursuing joint fiscal policy agreements. Only through multilateral initiatives such as the GMCTR will governments manage to prevent a so-called *race to the bottom*⁸ and minimise profit-shifting tactics by MNEs. Indeed, if no joint actions are taken to curb fiscal competition, then MNEs will continue along the route of shifting capital into jurisdictions that comply with their desire for 'unnaturally' low taxes.

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⁸*Race to the bottom* here stands for initiatives or practices aimed at deregulating the business environment and reducing corporate tax rates to attract capital.

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