

Prettl, Axel; von Hagen, Dominik

Article — Published Version

Multinational ownership patterns and anti-tax avoidance legislation

International Tax and Public Finance

Provided in Cooperation with:

Springer Nature

Suggested Citation: Prettl, Axel; von Hagen, Dominik (2022) : Multinational ownership patterns and anti-tax avoidance legislation, International Tax and Public Finance, ISSN 1573-6970, Springer US, New York, NY, Vol. 30, Iss. 3, pp. 565-634, <https://doi.org/10.1007/s10797-021-09719-5>

This Version is available at:

<https://hdl.handle.net/10419/311869>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>



Multinational ownership patterns and anti-tax avoidance legislation

Axel Prettl¹ · Dominik von Hagen²

Accepted: 19 November 2021 / Published online: 24 February 2022
© The Author(s) 2022

Abstract

We investigate whether controlled foreign corporation (CFC) rules influence cross-border merger and acquisition (M&A) activity on a global scale. CFC rules are one main anti-tax avoidance measure and potentially lead to immediate taxation of foreign subsidiaries' income at parent level. Analyzing a large M&A data set and detailed self-compiled CFC rule data from 27 countries using two different econometric perspectives, we show if and how CFC rules distort firm behavior and ownership patterns. First, we find that the probability of being the acquirer of a low-tax target decreases if CFC rules may be applicable to this target's income. Second, we show that CFC rules alter an acquirer's choice of targets' location. Altogether, our study shows that for affected acquirer countries, CFC rules lead to less M&A activity in low-tax countries due to potentially reduced incentives to shift income. However, these effects appear to be rather small in size and decrease over time. Thus, our study suggests that CFC rules do not substantially bias the market for corporate control as lobby groups partially claim and policy makers can be confident in reaching their goals of diminishing profit shifting with this increasingly important anti-tax avoidance rule.

Keywords CFC rules · M&A · International taxation · Tax avoidance

JEL Classification F23, G34, H25, H26, H32, H73

✉ Axel Prettl
axel.prettl@uni-tuebingen.de

¹ Chair of International Business Taxation, Faculty of Economics and Social Science, University of Tuebingen, Nauklerstr. 48, Tuebingen 72070, Germany

² Chair of Business Administration and Taxation, Business School, University of Mannheim, Mannheim 68131, Germany

1 Introduction

Empirical literature provides extensive evidence of tax-motivated profit shifting strategies within multinational enterprises (MNEs).¹ Over the past years, tax policy makers have implemented and discussed several anti-tax avoidance measures to fight against profit shifting. Examples are the US “Tax Cuts and Jobs Act” of 2017, which implemented the Global Intangible Low-Taxed Income (GILTI) rule, or discussions on a supranational level, such as the “Base Erosion and Profit Shifting” (BEPS) project of the Organisation for Economic Co-operation and Development (OECD) (OECD 2016) or the Anti Tax Avoidance Directive (ATAD) of the European Union (EU) (European Council 2016).² The ATAD, for example, mandates all EU Member States to implement certain anti-tax avoidance measures and several lobby groups as well as countries claim that these measures will lead to competitive disadvantages of MNEs.³ Indeed, empirical studies such as Altshuler and Hubbard (2003) or Ruf and Weichenrieder (2012) show that one ATAD measure—controlled foreign corporation (CFC) rules—lead to less profit shifting behavior within MNEs. In this study, we investigate whether CFC rules impose competitive disadvantages on MNEs in the global M&A market and thereby affect corporate ownership structures.

Understanding if and how taxes affect the market for corporate control should be in the interest of tax policy makers and several studies have already investigated this question. For example, the study of Feld et al. (2016) shows that acquirers under a worldwide tax system have a competitive disadvantage in bidding for foreign targets compared to acquirers who are not taxed on foreign income. Furthering this line of investigation, Bird et al. (2017) show that US-based acquirers—who were taxed on their worldwide income at that time—bidding for US targets are losing out to foreign acquirers who are tax-favored. Huizinga and Voget (2009) find that the prospect of higher international double taxation of foreign dividends decreases the probability of attracting parent firms in a cross-border M&A.⁴

Some empirical studies analyze the effects of CFC rules on firm behavior. Voget (2011) finds that the presence of CFC rules increases the likelihood of headquarters

¹ See, e.g., (Huizinga and Laeven 2008; Weichenrieder 2009; Grubert 2012; Dharmapala and Riedel 2013; Guenther et al. 2017). A typical profit shifting strategy looks as follows: An MNE equips a subsidiary in a low-tax country with intellectual property (IP) and equity. This subsidiary then licenses IP to the parent or subsidiaries in high-tax countries that pay transfer prices (royalties) in exchange for using IP; similarly, the low-tax subsidiary provides debt to the parent or subsidiaries in high-tax countries. These royalty and interest expenses reduce taxable income in high-tax countries and increase income in low-tax countries. Income shifting and profit shifting are used synonymously throughout this study.

² A further example is the implementation of a global multilateral standard for the Automatic Exchange Of Information regarding financial accounts, which is found to be effective as deposits in tax havens were significantly reduced after its implementation (Casi et al. 2020).

³ E.g., (OECD 2015a, b, c; Mazars 2015; PwC 2015; Picciotto 2017; Parnes 2018).

⁴ Several studies investigate further effects of taxes on M&A activity. For example, Hanlon et al. (2015) show that US acquirers use tax-induced locked-out cash (Nessa 2017) in foreign M&A, which are considered less value-enhancing by the market. Similarly, Edwards et al. (2016) find that firms with high amounts of locked-out cash engage in less profitable M&A. Further, several studies show distortions on M&A activity due to capital gains taxes, which are additional transaction costs for the seller (e.g., Ayers et al. 2003, 2007; Ohn and Seegert 2019; Todtenhaupt et al. 2020; Huizinga et al. 2018).

relocation. Altshuler and Hubbard (2003) show that tightening US CFC rules in 1986 has substantially reduced tax planning opportunities with financial services firms in low-tax countries. Ruf and Weichenrieder (2013) and Schenkelberg (2019) provide evidence that a mandatory loosening to CFC rules in all EU Member States in 2006 increased profit shifting within the EU. For German MNEs, Ruf and Weichenrieder (2012) detect that CFC rules are effective in reducing passive investments in low-tax countries. The studies of Prettl (2018) and Clifford (2019) show that CFC rules lead to less tax-motivated profit shifting within MNEs regarding greenfield investment. These studies suggest that CFC rules reach the intended goal of reducing profit shifting to low-tax subsidiaries. However, Egger and Wamser (2015) find that subsidiaries of German MNEs, who are subject to CFC rules, show significantly lower fixed assets. They conclude that CFC rules lead to an increase in cost of capital if subsidiaries are subject to CFC rules. Hence, by also influencing real business activity abroad, CFC rules lead to non-intended “real business” effects.

In this study, we aim to answer the open question whether CFC rules affect cross-border M&A activity. This question is of interest because an MNE can engage in tax avoidance, or extend its existing tax avoidance strategies, by acquiring a target in a low-tax country;⁵ however, CFC rules counteract these strategies by potential immediate taxation of this target’s profit in the acquirer’s country.⁶ Consequently, MNEs with parents in non-CFC rule countries may calculate higher reservation prices for low-tax targets than MNEs with parents in CFC rule countries, because these targets could be used as valuable profit shifting vehicles within non-CFC rule MNEs. CFC rule MNEs, on the other side, have to account for potential CFC rule application on low-tax targets’ income, which decreases after-tax cash flows. Based on this argumentation, the parallel presence and non-presence as well as different characteristics of CFC rules could distort the global market for corporate control and target location decisions of MNEs. Lobbyists even claim these distortions severely influence cross-border M&A, leading to competitive disadvantages for MNEs headquartered in CFC rule countries.⁷

To investigate the influence of CFC rules on the global market of corporate control, we apply various multinomial choice models on a global M&A data set with more than 14,000 observations for the period 2002 to 2014. As our identification strategy, we use variation in low-tax rate thresholds of CFC rules and in statutory corporate income tax rates (STR), which vary over time and between countries. We find that the probability of acquiring a low-tax target is negatively influenced by potential CFC rule application on this target’s income. We show this result from two opposite perspectives in two distinguished data sets: First, from an *acquirer country perspective* by addressing the question whether CFC rules affect the outcome

⁵ Alternatively, the MNE could set up a new subsidiary in the low-tax country (greenfield investment) or decide not to engage in foreign direct investment (FDI) at all. In that regard, our sample is selected by focusing only on one form of FDI, cross-border M&A. See Clifford (2019) for a study on the greenfield case.

⁶ See Sect. 2 on how CFC rules generally work.

⁷ E.g., (OECD 2015b, c; Shaxson 2015; Mazars 2015; Elschner et al. 2017; Gilmour 2018; Dreier and Weeks 2018; Parnes 2018; Wagman et al. 2018).

of which potential acquirer will finally buy a specific target. Second from a *target country perspective* by addressing the question whether CFC rules affect the outcome of which potential target will finally be bought by a specific acquirer.

We find that the economic magnitude of this effect is rather small: A ten percentage-point increase in additional CFC rule taxation leads to a 0.5% lower likelihood that an acquisition takes place. In additional analyses, we show that the effect in the acquirer perspective becomes insignificant over time, which may be due to coordination efforts in supranational organizations resulting in a convergence of CFC rules worldwide. Another potential reason might be that countries implementing CFC rules later in time do so rather due to outside pressure and not due to self-motivation, which could lead to lower law enforcement in these countries for these specific regulations. However, in the target perspective, the effect remains significant, which may indicate that one intended effect of CFC rules (not buying low-tax targets for profit shifting) remains.

Our study contributes to tax research as well as economic considerations in three ways. First, we contribute to empirical tax research on the effects of anti-tax avoidance measures on firm behavior, where little research has been undertaken so far. As Egger and Wamser (2015) point out, the reason why there are only a few empirical studies on CFC rules may be due to the difficulty of identifying the effect of anti-tax avoidance measures on MNEs that operate in multiple jurisdictions and avail complex group interrelations. To overcome these identification difficulties, we investigate the effect of CFC rules on the decision to integrate foreign firms into an MNE, which can be clearly identified via observed cross-border M&A. Moreover, we leverage the examined details of each country's CFC rules by considering individual components of these rules such as low-tax rate thresholds and passive-to-active-income ratio thresholds.

Second, we contribute to empirical research in the field of M&A and their tax-related determinants. Indeed, there are many empirical studies on the effect of tax regulations on M&A from various perspectives, for example, repatriation taxes (Hanlon et al. 2015; Edwards et al. 2016; Feld et al. 2016; Bird et al. 2017), international double taxation (Huizinga and Voget 2009; Huizinga et al. 2012; von Hagen and Pönnighaus 2017) or capital gains taxation (Ayers et al. 2003, 2007; Todtenhaupt et al. 2020; Huizinga et al. 2018). However, besides Voget (2011), our study is the first one that compares the effect of the increasingly important CFC rule on cross-border M&A activity.⁸

Third, understanding how CFC rules distort the global market of corporate control is also of interest from an economic perspective, as cross-border M&A accounted globally for around 500 billion USD or 37% of global FDI (UNCTAD 2020). These numbers show that M&A are almost as important as greenfield investment, the other prominent form of FDI.

The remainder of this paper proceeds as follows. Section 2 outlines our empirical approach and Sect. 3 describes our data set. Section 4 provides our analysis of the

⁸ As shown in Fig. 5, 29 out of 49 countries of the OECD, G20 and EU Member States have implemented CFC rules in 2015 vs. 22 countries in 2002.

CFC rule effect on the acquisition of low-tax targets. Finally, Sect. 5 sets forth our conclusions.

2 CFC rules and the acquisition of low-tax targets

2.1 Hypotheses development

Non-CFC rule MNEs face fewer constraints in implementing profit shifting strategies within their group than CFC rule MNEs, because the latter potentially have to apply CFC rules on profits of low-tax subsidiaries. Thereby, typical profit shifting strategies may be less attractive for a CFC rule MNE.⁹

Generally CFC rules work as follows: The foreign subsidiary has to (1) be controlled by the parent, (2) be located in a low-tax country and, often, (3) generate some passive income.¹⁰ If these requirements are met, at least part of the subsidiaries' profit is taxed by the MNE's parent country, even if no repatriation takes place. Following Egger and Wamser (2015), CFC rules may even increase the cost of capital of subsidiaries that fall under the scope of these rules. Consequently, it should be less attractive for a CFC rule MNE to acquire a low-tax target that may fall under the scope of CFC rules compared to a non-CFC rule MNE. Put differently, for a non-CFC rule MNE, a low-tax target could function—in addition to other synergies—as a profit shifting vehicle within the MNE. This additional function could make a candidate target more valuable for this MNE compared to a CFC rule MNE without such profit shifting opportunities. Due to this competitive advantage, non-CFC rule MNEs may calculate higher reservation prices for low-tax targets compared to CFC rule MNEs. We, therefore, hypothesize the following, stated in alternative form:

HYPOTHESIS 1 In a choice set of candidate acquirers from various countries bidding for a given foreign low-tax target, the probability of being the actual acquirer is higher for a non-CFC rule MNE compared to an MNE that potentially has to apply CFC rules on this target's income.

Hypothesis 1 investigates the influence of CFC rules on the likelihood of being the acquirer of a given target that acquirers from various countries bid for. For theoretical

⁹ In our study, we consider CFC rules in the country of the MNE's parent to be relevant. The reason is straightforward: First, a non-CFC rule MNE gets into a worse tax position if the acquisition is done via a CFC rule subsidiary; hence, the MNE would not acquire through this subsidiary. In support of this reasoning, Lewellen and Robinson (2013) find that the likelihood of choosing a subsidiary as a holding firm within an MNE is significantly lower if that subsidiary resides in a CFC rule country. Second, a CFC rule MNE does not get into a better tax position if the acquisition is done via a non-CFC rule subsidiary, because the parent's CFC rule would overall still be applicable within the MNE.

¹⁰ In some countries, more requirements have to be fulfilled by the parent or subsidiary. Within our study, we do not take them into account due to comprehensibility reasons and the fact that other mentioned CFC rule studies focus as well on only these three—or less—crucial requirements.

understanding, one can think of a setting with the *choice between various acquirer reservation prices for a given target* resulting in the finally observed M&A price.

However, we also take the opposite perspective, i.e., a given acquirer has the choice to buy a specific target out of a pool of targets from various countries. Now this set of targets becomes the choice set. From this perspective, one can think of a setting with the *choice between various target valuation prices of a given acquirer* resulting in the finally observed M&A price. Based on the reasoning above—it is less attractive for a CFC rule MNE to acquire a low-tax target that may fall under the scope of CFC rules compared to a target that does not fall under the scope of CFC rules—we hypothesize the following, stated in alternative form:

HYPOTHESIS 2 In a choice set of candidate targets from various countries, the probability of being the actual target of a given acquirer is lower for targets that potentially fall under the scope of CFC rules of this acquirer compared to targets that do not fall under the scope of CFC rules of this acquirer.

The distinction between these two perspectives may reveal interesting details about firm behavior and tax policy recommendations: Do we observe that the acquirer country's tax law has the power to influence cross-border M&A (Hypothesis 1)? And/or do we observe that targets become more or even less attractive by being located in an appealing low-tax country (Hypothesis 2)? There are three advantages by considering both perspectives in our study: First, we learn not only more about how to be an appealing country for acquirers (presence vs. non-presence of CFC rules), but also more on how to be an appealing country for targets (level of tax rates). Second, by investigating both perspectives, we are able to reduce minor endogeneity concerns one might have regarding country-specific time-variant effects, which can—by research design—only be included for one involved M&A party per perspective. Third, analyzing two distinguished data sets in two different perspectives—e.g., regarding the impact of varying CFC rule settings, STR-pairs of acquirers and targets, etc.—further improves confidence in our results.

2.2 Empirical approach

2.2.1 Acquirer perspective

Empirical model

Our empirical approach to analyze Hypothesis 1, i.e., the probability of being the actual acquirer country among the choice set of several candidate acquirer countries, follows the common assumption in M&A literature that M&A reflect synergies from combining two firms with all assets being priced at their fair value (e.g., Mitchell and Mulherin 1996; Becker and Fuest 2010, 2011; Feld et al. 2016) where

$$V_{ijk} = \alpha CFC_{ijk} + \beta^T x_{ijk} + \varepsilon_{ijk} \quad (1)$$

is the value of target k in country j if it was owned by an acquirer from country i .¹¹ The term CFC_{ij} reflects the higher burden of potential taxation of target profit due to CFC rules in the acquirer country i if the target is located in country j . The variable vector \mathbf{x}_{ijk} and the residual ε_{ijk} contain various observable and unobservable variables to capture owner-country-specific synergies realized through a potential M&A. Coefficients α and β^T are the estimated parameters. This approach builds on the methodology used by Feld et al. (2016), where the target is the same for every concerned potential M&A as well; therefore, we automatically account for target firm, target country, and year fixed effects as they appear in the numerator and denominator and, therefore, cancel each other out as they equally affect all candidate acquirers. Hence, the year of acquisition is given and these fixed effects do not need to be included. To control for acquirer country differences and specific effects, we include acquirer country fixed effects. In robustness checks, we also include target- and acquirer-specific control variables such as total assets and return on assets.¹²

We use the fact that a foreign firm from country i will acquire a target if the value for this target is higher than for any other candidate acquirer from country h , i.e.,

$$V_{ijk} \geq V_{hjk}, \forall h \in (1, \dots, I), \quad (2)$$

where I indicates the number of candidate acquirer countries which constitutes the choice set here. We analyze the probability that a particular acquirer buys a fixed target, depending on potential application of CFC rules in the country of that particular acquirer and given that we know that the transaction takes place, which is given by:

$$P(V_{ijk} > V_{hjk} \mid CFC_{1jk}, \mathbf{x}_{1jk}, \dots, CFC_{Ijk}, \mathbf{x}_{Ijk}) = \frac{\exp(\alpha CFC_{ij} + \beta X_{ijk})}{\sum_{l=1}^I \exp(\alpha CFC_{lj} + \beta X_{ljk})} \forall h, \quad (3)$$

where I stands for the candidate acquirer countries.¹³ Expression (3) considers a choice model assuming that M&A reflect synergies from combining two firms and that acquirers value the individual firms and the M&A correctly at their fair value.¹⁴ In particular, the dummy variable in this choice model takes the value of 1 if the

¹¹ We suppress a time subscript t in the interest of readability of the model.

¹² As Feld et al. (2016), we are not able to control for country-pair specific fixed effects due to computational limitations: The number of required dummy variables is too large to be able to computationally solve the maximum likelihood estimations. However, to account for relationships between countries, we include control variables such as *Common language*, *Distance* or *Common legal system*.

¹³ As in Feld et al. (2016), at this point it is sufficient to analyze matching target firms with acquiring countries instead of matching target firms with particular acquiring firms, for which (1) the construction of an appropriate choice set would be challenging and (2) we do not have necessary data. Instead, accounted country-specific effects include variations in the number of candidate acquiring firms across countries.

¹⁴ In the models of Becker and Fuest (2010, 2011), target corporate income tax is capitalized in the acquisition price, i.e., this tax always has to be paid, independent of who owns the firm. Thus, at first glance, a target's tax rate may not affect the probability of who becomes the final acquirer; however, depending on whether or not a target may be used as a profit shifting vehicle, a target's tax rate (and potential CFC rules in the bidder country) may affect the probability of who becomes the final acquirer.

fixed target alternative k in country j is chosen by the potential acquirer i . If the potential acquirer is from another country, where we do not observe this deal, the choice dummy takes the value 0. Our variable of interest, and especially its sign, is CFC_{ij} , which is further described below.

Using conditional logit and mixed logit regression models, we aim to calculate Expression 2.¹⁵ The mixed logit model extends the standard conditional logit model by allowing one or more of the parameters to be randomly distributed and, thereby, overcomes limitations of standard conditional models as it allows the coefficients in the model to vary across decision makers, i.e., acquirers within our study. Due to potential correlation between alternatives, the mixed conditional logit approach with random drawing of observations is preferred as it allows us to model (i) random variations in the response probability to changes in variables, (ii) unrestricted substitution patterns, and (iii) correlated unobserved factors, which allows to account for the assumption of Independence from Irrelevant Alternatives (IIA).

Another possibility to account for the IIA assumption is using latent class models as the underlying discrete choice model. The latent class model assumes that a discrete number of latent classes are sufficient to account for preferred heterogeneity across classes. The unobserved heterogeneity is captured by these latent classes in the observations, where each latent class is associated with a different parameter vector in the corresponding utility. Thus, and to provide more robust results, we extend the fundamental conditional logit by incorporating a discrete representation of unobserved preference heterogeneity across decision makers and use a latent class conditional logit model in additional tests.

Identification

Our identification strategy is mainly based on acquirer country CFC rules and STRs as well as target country STRs. In particular, whether a certain target is potentially treated by CFC rules is due to substantial variation of CFC rules among candidate acquirer countries and, in addition, variation in STRs among target countries. For example, if a candidate acquirer country lowers the low-tax rate threshold of its CFC rules, some targets in various countries that were previously captured by the CFC rule are now not affected anymore, whereas if a target country lowers its STR, targets located in this country may now be considered low-tax targets by some CFC rules. In a stylized example, Table 8 in Appendix 1 shows variation in CFC rule application over time that we use as our identification strategy.¹⁶ Table 9 in Appendix 1 shows our CFC rule data set with substantial variation of the characteristics of CFC rules between countries and within countries over time. Together with several

¹⁵ This multinomial choice model is based on Feld et al. (2016), p. 15, and can be understood as the polar case of a zero-sum world where the gain of one acquirer is the loss of all other potential acquirers. A comparable approach is taken by Behrendt and Wamser (2018) researching double tax treaties.

¹⁶ The observed CFC rule implementations and changes are either due to a country's own tax policy reasons (e.g., tax base protection) or due to stipulation by supranational organizations. The low-tax rate threshold of CFC rules is often bound to the country's STR, e.g., set at 60% of the country's own STR. If that STR changes, which happens quite frequently in our observed time period, the threshold changes as well. Moreover, this change affects only some potential target countries and adds further variation to our identification.

STR changes over time between and within countries, this variation constitutes the foundation of our identification strategy.

In our first approach, the difference between CFC rules among candidate acquirer countries is shown by a simple dummy variable. This dummy variable is coded one if a CFC rule is enacted in acquirer country i and is potentially applicable on target income, i.e., the STR in target country j is below the minimum low-tax rate threshold of the CFC rule of the candidate acquirer country i . Almost all observed CFC rules have such a threshold to determine whether a foreign subsidiary's country is considered a low-tax country. Hence, the first variable of interest is constructed as

$$CFC_{ij}^{dummy} = \begin{cases} 1, & \text{if } t_{i_{threshold}} > t_j \text{ or country } i \text{ applies CFC} \\ & \text{rules without a low-tax rate threshold} \\ 0, & \text{otherwise,} \end{cases} \quad (4)$$

where $t_{i_{threshold}}$ is the low-tax rate threshold of the CFC rule of the candidate acquirer country i and t_j is the STR in the target country j .

In this first approach, the treatment effect is assumed to be homogeneous, as we are pooling treatments of different intensities. In a second approach, we consider heterogeneity by using the tax rate differential between the acquirer and target country as a finer metering of the treatment. In particular, we consider the additional taxes payable due to CFC rule application if the target is used as a profit shifting vehicle:

$$CFC_{ij}^{diff} = \begin{cases} \tau_i - \tau_j, & \text{if } t_{i_{threshold}} > t_j \text{ or country } i \text{ applies CFC} \\ & \text{rules without a low-tax rate threshold} \\ 0, & \text{otherwise,} \end{cases} \quad (5)$$

where $\tau_i(\tau_j)$ is the statutory tax rate in the candidate acquirer (target) country.¹⁷ For both approaches, we expect a negative sign of the regression coefficients α according to Hypotheses 1 and 2 as derived in Sect. 2.

In a robustness test, we check whether our results are robust to considering effective average tax rates (EATRs), as CFC rules usually take into account the effective tax burden of the foreign low-tax subsidiary.¹⁸ Because we do not observe the actual effective tax burden of the targets, we use country-level EATRs from the Oxford University Centre for Business Taxation to determine whether a target may fall under the scope of CFC rules:

¹⁷ $\tau_i - \tau_j$ (and not fully τ_i) are the additional taxes, because the observed CFC rules grant a credit for the taxes paid by the foreign subsidiary in its residence country.

¹⁸ For more details about effective tax rates see, for example, Dyreng et al. (2017).

$$CFC_{ij}^{diffEATR} = \begin{cases} \tau_i - \tau_j, & \text{if } t_{i_{\text{threshold}}} > t_{j_{\text{EATR}}} \text{ or country } i \text{ applies CFC} \\ & \text{rules without a low-tax rate threshold} \\ 0, & \text{otherwise.} \end{cases} \quad (6)$$

In a further robustness test, we consider the scope of income included by the CFC rule. While some CFC rules only include passive income of the subsidiary, other CFC rules include passive and active income of the foreign subsidiary in determining the tax base. We exploit variation in this regard and let the treatment effect differ as follows:

$$CFC_{ij}^{taxbase} = \begin{cases} \tau_i, & \text{if } t_{i_{\text{thresh}}} > t_j \text{ or country } i \text{ applies CFC} \\ & \text{rules without a low-tax rate threshold} \\ & \text{and has a full (active + passive) income tax base} \\ \frac{(\tau_i + \tau_j)}{2}, & \text{if } t_{i_{\text{thresh}}} > t_j \text{ or country } i \text{ applies CFC} \\ & \text{rules without a low-tax rate threshold} \\ & \text{and has a passive income tax base} \\ \tau_j, & \text{otherwise.} \end{cases} \quad (7)$$

According to this differentiation, all targets are taxed at the STR of their residence country. Further, this differentiation considers the additional CFC rule tax burden—assuming that active income and passive income at the target are at the same height—in the following way: If CFC rules include the full target income, the total tax burden is set to the acquirer STR. If CFC rules include only the target's passive income, the total tax burden is set to the average between target and acquirer STR.

Following M&A literature, we include several country-specific control variables (X). We control for STR and economic indicators, such as GDP per capita, GDP growth, stock market capitalization, and size of private credit market in the candidate acquirer country. Further, we control for distance variables, such as distance between acquirer and target country, whether acquirer and target have a common language, whether acquirer and target were in a colonial relation, and whether the legal systems of acquirer and target country have common legal origins. Therefore, the array of the main country-specific determinants, which significantly influence cross-border M&A—summarized by Xie et al. (2017)—is controlled for. Additionally, we include country-pair trade flows in a robustness check. The data sources of the variables can be found in Table 11 in Appendix 2.

2.2.2 Target Perspective

The approach presented above takes an *acquirer perspective* by analyzing the role of CFC rules if a *given target* is bought by a candidate acquirer from a specific country (Hypothesis 1). In a second analysis, we follow the same logic but take a *target perspective* by analyzing the influence of CFC rules on the choice of a *given acquirer*

to buy a candidate target from a specific country (Hypothesis 2).¹⁹ This target choice is potentially influenced by the target country's STR; thereby, this target perspective sheds further light on the question whether countries can attract more FDI in the form of M&A through lowering their STRs and, especially, whether CFC rules in the acquirer country may counteract such M&A.

Building on Expression 1, we use the fact that a foreign firm will acquire a target in country j if the value for this target is higher than for any other candidate target from country g , i.e.,

$$V_{jik} \geq V_{gik}, \forall g \in (1, \dots, J), \quad (8)$$

where J indicates the number of candidate target countries which constitutes the choice set in this perspective. We analyze the probability that an acquirer buys a specific target from the choice set, depending on potential application of CFC rules in the country of the acquirer and given that we know that the transaction takes place, which is given by:

$$\begin{aligned} P(V_{jik} > V_{gik} \mid CFC_{1ik}, \mathbf{x}_{1ik}, \dots, CFC_{Jik}, \mathbf{x}_{Jik}) \\ = \frac{\exp(\alpha CFC_{ji} + \beta X_{jik})}{\sum_{l=1}^J \exp(\alpha CFC_{li} + \beta X_{lik})} \forall g, \end{aligned} \quad (9)$$

where J stands for the candidate target countries. Expression 9 considers again a choice model assuming that M&A reflect synergies from combining two firms and that acquirers value the individual firms and the M&A correctly at their fair value. In particular, the dummy variable in this choice model takes the value of 1 if target k in country j is chosen by acquirer i . As discussed above in the empirical model of the acquirer perspective, we use conditional logit and mixed logit regression models to calculate Expression 9 of this target perspective.²⁰ Further, we also use latent class models and apply the same CFC variable differentiation method with the same identification strategy as in the acquirer perspective. In addition to the above-mentioned fixed effects and country-specific control variables, we include variables to control for the institutional framework of candidate target country, such as corruption control, business start-up cost, unemployment rate, and number of domestic firms listed on the stock market. Therefore, the array of most crucial country-specific determinants which influence cross-border M&A—summarized by Xie et al. (2017)—is controlled for. Additionally, we include country-pair trade flows in a robustness check. The data sources of the variables can be found in Table 14 in Appendix 2.

3 Data

Data for the empirical analysis are taken from the Thomson Financial SDC database, which contains worldwide M&A transactions. We have selected all completed M&A for the period 2002 to 2014 through which majority control (>50%) of targets

¹⁹ Such a target perspective is also taken by Arulampalam et al. (2019).

²⁰ This multinomial choice model builds on Feld et al. (2016) and Arulampalam et al. (2019).

has been attained.²¹ Further, for each M&A, the country of the acquirer ultimate parent, direct acquirer, target ultimate parent, and direct target must be given. In addition, we require that the acquirer ultimate parent and the direct target reside in different countries and that the acquirer ultimate parent and direct acquirer reside in the same country to reduce the possibility of a third country subsidiary being involved. To keep the mixed logit regressions computationally feasible, we have to reduce the choice set of candidates in each perspective: We restrict the candidate acquirer countries (Hypothesis 1) or candidate target countries (Hypothesis 2) to the 30 most frequent acquirer countries or the 30 most frequent target countries, respectively. Thereby, the final sample to investigate Hypothesis 1 consists of 14,421 cross-border M&A involving 27 candidate acquirer²² and 55 target countries. The final sample to investigate Hypothesis 2 consists of 13,447 cross-border M&A involving 28 candidate target²³ and 54 acquirer countries. Tables 10 and 13 give an overview on whether CFC rules are implemented in the acquirer countries and on the number of acquirer ultimate parents and targets in the respective cross-border M&A sample. In line with Di Giovanni (2005), we observe that countries with the largest financial markets have the most observations in both samples.

Data on CFC rules are self-compiled and are based on IBFD (2002–2016), various corporate tax guides (Ernst & Young 2004–2016; Deloitte 2015; KPMG 2003–2018), and the specific tax law of each country. We sampled various dimensions of CFC rules for the period 2002–2014, such as

- low-tax rate threshold that triggers CFC rule,
- country lists that trigger (blacklists) or do not trigger (whitelists) CFC rule,
- threshold for passive-to-active-income ratio that triggers CFC rule,
- whether active or only passive income of CFCs is included at the parent level,
- significant exemptions to CFC rule.

Table 9 shows the details of CFC rules of the countries in our sample, including CFC rule changes over our observed time period. Together with changes in STR over time, these variations constitute the base of our identification strategy.

4 Results

4.1 General graphical analysis

In this section, we graphically analyze whether acquisition behavior is affected by CFC rules. In particular, Fig. 1 shows variation in acquisition behavior of acquirers from countries with and without CFC rules. We observe that acquirers from CFC

²¹ All CFC rules in our data set have a participation threshold >50% so that the majority control requirement is fulfilled.

²² Important acquirer control variables are missing for Guernsey, Luxembourg, and Taiwan, so that we effectively consider 27 candidate acquirer countries.

²³ Important control variables are missing for Indonesia and Sweden, so that we effectively consider 28 candidate target countries.

rule countries tend to buy targets in high-tax countries, whereas acquirers from non-CFC rule countries tend to buy targets in low-tax countries: The left red shaded area—with the "No CFC rules" line being above the "CFC rules" line—covers target STRs from 13 to 23%, the right blue shaded area—with the "CFC rules line" being above the "No CFC rules" line—covers target STRs from 23% to 40%. At first sight, one may find this a bit surprising: One may initially think that CFC rule and non-CFC rule acquirers value targets from medium-tax to high-tax countries at similar prices; consequently, these targets would have a similar probability of acquisition by CFC rule and non-CFC rule acquirers. However, reasons for this observation may be limitations on available capital of CFC rule MNEs or profit shifting opportunities of CFC rule acquirers, which are not captured by CFC rules as the target STR is above the low-tax rate threshold.²⁴ Taken together, Fig. 1 provides first compelling visual evidence supporting Hypotheses 1 and 2.

To investigate these profit shifting opportunities of CFC rules acquirers, we show in Fig. 2 the distribution of targets depending on whether their STR is below or above the low-tax rate threshold of the acquiring country's CFC rule. One can see that observed acquisitions increase significantly if the target is located in a country slightly above the low-tax rate threshold: The summed up number of acquisitions included in the 5 percentage point range above the low-tax rate threshold accounts for more than 40% of all observed acquisitions. This threshold is purely random from a *non-tax* perspective; however, from a *tax* perspective the explanation of this observation is as follows: Acquirers from CFC rule countries choose targets with an STR slightly above the low-tax rate threshold to use these targets for profit shifting opportunities. In other words, these acquirers can shift profits to lower taxed countries without potential CFC rule application; yet, they are restricted in that behavior by the low-tax rate threshold compared to acquirers from non-CFC rule countries.

Finally, we investigate the issue of potential non-application of CFC rules within the European Economic Area (EEA) due to the Cadbury-Schweppes ruling of the European Court of Justice in 2006. This ruling triggered a substantial mitigation of CFC rule application within the EEA.²⁵ As expected, Fig. 3 shows that EEA acquirers from CFC rule countries acquire more low-tax EEA targets after the judgment in 2006 than before.

²⁴ This reasoning is indicated by Prettl (2018) and Clifford (2019); deeper analysis of this topic would go beyond the scope of this study and will not be further analyzed.

²⁵ In simple words, the low-tax rate threshold of CFC rules could be circumvented by a potential acquirer within the EEA, if the EEA target was still in compliance with another—less rigorous—threshold about the passive-to-active-income ratio of that target. In line with this argumentation, Ruf and Weichenrieder (2013) find evidence for a relative increase in passive investments in low-tax EEA subsidiaries and a parallel decrease in passive investments in non-EEA subsidiaries. Schenkelberg (2019) detects that pre-tax earnings in low-tax have increased by 10% after the Cadbury-Schweppes ruling.

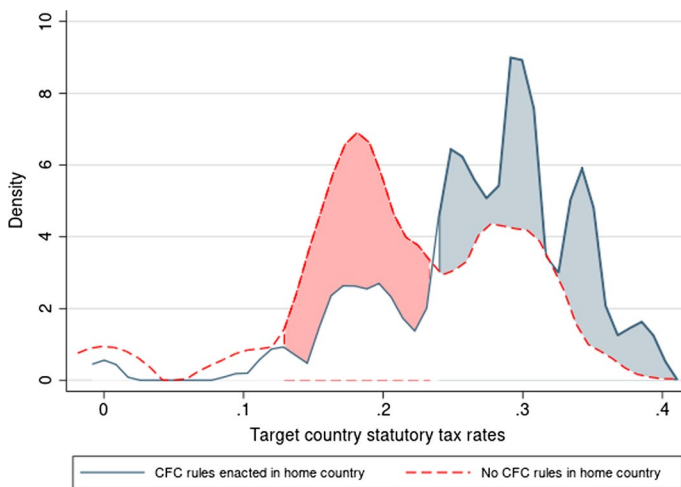


Fig. 1 Distribution of target country STR. Notes: For our M&A data sample this figure shows the distribution of target country STR depending on whether the acquirer country applies CFC rules (blue) or not (red). M&A are included only if the target STR is below the acquirer STR and profit shifting could be beneficial. It is clearly visible that acquirers from CFC rule countries acquire less low-tax targets than acquirers from non-CFC rule countries. Source: M&A data set (Color figure online)

Taken together, the graphical analyses suggest that acquirers are influenced by CFC rules in their acquisition behavior.²⁶ In the following, we investigate whether this graphical evidence is confirmed in a multivariate regression analysis.

4.2 Acquirer perspective

Baseline results

Table 1 presents the baseline results of different multinomial choice models to test Hypothesis 1 on the influence of CFC rules on the likelihood of being the acquirer country of a given target (acquirer perspective). For each deal, the dependent variable equals one for the actual acquirer country of origin and zero for all other counterfactual acquirer countries. For definitions, data sources, and summary statistics of all variables, see Table 11 in Appendix 2.

In conditional logit Regression (1), CFC^{dummy} from Expression 4 is the variable of interest, which indicates potential taxation via CFC rules in the acquirer country via a dummy variable approach. We observe a negative, yet insignificant coefficient, which suggests that potential taxation in the acquirer country due to CFC rule application has a weak negative influence on the probability of being the acquirer country for a given target. To be more specific, we consider CFC^{diff} from Expression 5 in

²⁶ Due to data restrictions, we are not able to analyze if the acquired targets are actually used for profit shifting. However, there do not seem to be any obvious non-tax reasons for the observed acquisition behavior around the thresholds in the graphical analyses.

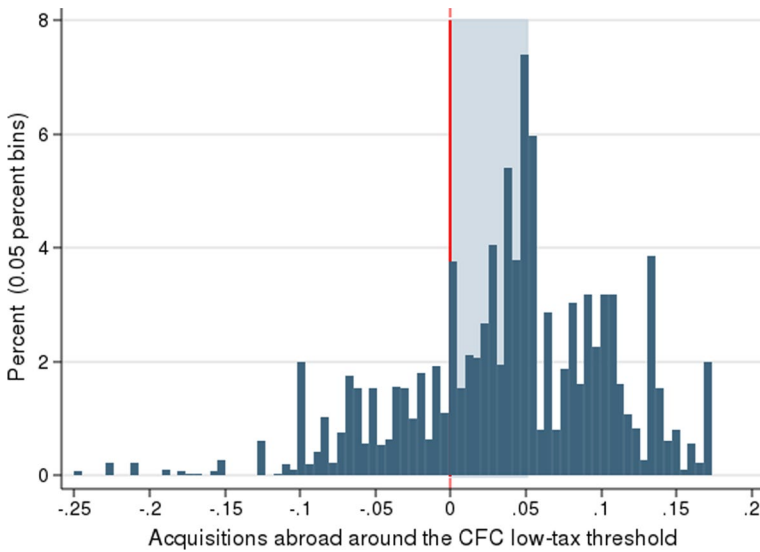


Fig. 2 Distribution of cross-border M&A for acquirers from CFC rule countries. Notes: This figure shows the distribution of acquired targets around the low-tax rate threshold of CFC rules if target STR is lower than acquirer STR. It is clearly visible that acquirers from CFC rule countries acquire less (more) targets if these targets have an STR below (above) the low-tax rate threshold. The summed up number of acquisitions included in the 5 percentage point range above the low-tax rate threshold, the light-blue shaded area, accounts for more than 40% of all observed acquisitions of CFC rule acquirers. Source: M&A data set (Color figure online)

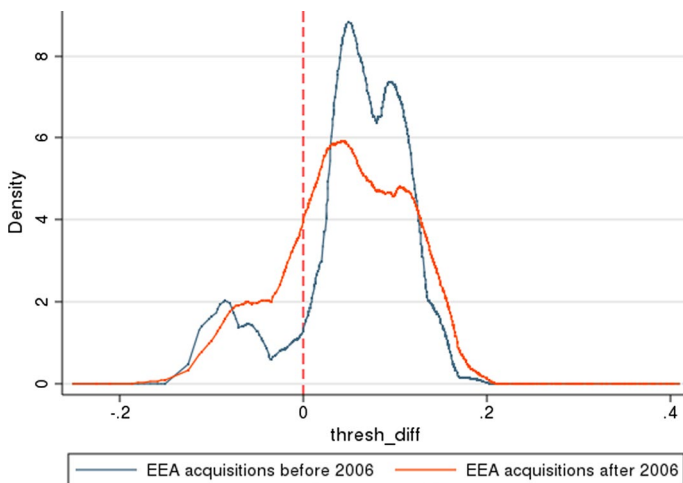


Fig. 3 Distribution of cross-border M&A for acquirers from CFC rule countries within the EEA before and after the Cadbury-Schweppes ruling in 2006. Notes: This figure shows the distribution of acquired targets around the low-tax rate threshold of CFC rules if target STR is lower than acquirer STR and acquirer and target reside within the EEA. It is clearly visible that acquisitions increased in low-tax EEA countries after the Cadbury-Schweppes ruling of the European Court of Justice in 2006. Source: M&A data set

Table 1 Effect of acquirer CFC rules on probability of being the *acquirer* country

Explanatory variables	(1)	(2)	(3)	(4)
	Conditional logit	Conditional logit	Mixed logit	Mixed logit
<i>CFC^{dummy}</i>	−0.0523 ^a (0.0407)			
<i>CFC^{diff}</i>		−1.4569*** (0.3277)	−1.2387*** (0.3482)	−1.2387** [0.5606]
<i>STR</i>	−2.0538*** (0.6319)	−1.7568*** (0.633)	−2.0903*** (0.6442)	−2.0903** [0.8423]
<i>GDP per capita</i>	1.0541*** (0.1619)	1.0452*** (0.1625)	1.1104*** (0.1652)	1.1104*** [0.2118]
<i>GDP growth</i>	−0.0034 (0.0076)	−0.0032 (0.0075)	−0.0041 (0.0076)	−0.0041 [0.0099]
<i>Stock market capitalization per GDP</i>	0.0005*** (0.0002)	0.0005*** (0.0002)	0.0005*** (0.0002)	0.0005 [0.0003]
<i>Size of private credit market</i>	0.0007 (0.0006)	0.0006 (0.0006)	0.0007 (0.0006)	0.0007 [0.0011]
<i>Distance</i>	−0.5852*** (0.0114)	−0.5789*** (0.0115)	−0.5906*** (0.0119)	−0.5906*** [0.0217]
<i>Common language</i>	1.8148*** (0.062)	1.8112*** (0.062)	1.8494*** (0.0629)	1.8494*** [0.1289]
<i>Past colonial relationships</i>	0.3020*** (0.036)	0.2868*** (0.0359)	0.2994*** (0.0364)	0.2994*** [0.0569]
<i>Common legal system</i>	0.1029*** (0.0251)	0.1145*** (0.0252)	0.1117*** (0.0254)	0.1117** [0.047]
Acquirer country FE & target country FE & target firm FE & year FE	YES	YES	YES	YES
Observations	317,835	317,835	317,835	317,835
Log-likelihood	−32,188	−32,178	−32,165	−32,165

Note: The table shows regressions of probability of being the acquirer country on (potential) CFC rule application; see Expression 2. For each deal, the dependent variable equals one if country *i* is the actual acquirer's country of origin, and zero if country *h* is a counterfactual acquirer country. For variable definitions and data sources, see Table 11. The country-specific control variables stand for the acquirer country. Only cross-border M&A where the direct acquirer country is equal to the acquirer ultimate parent country are considered. All regressions control for acquirer country fixed effects, which are available upon request. The variables of interest follow a random distribution in the mixed logit regressions. Regressions (1) and (2) are estimated by a conditional logit model, and regressions (3) and (4) are estimated by a mixed logit model. Regression (4) is identical to regression (3) except for standard errors, which are robust to clustering on the target-country-year level. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust (Clustered) standard errors are provided in parentheses (brackets). ^a The level of statistical significance is 19.9%

Regression (2). *CFC^{diff}* is a continuous variable with values between 0 and 0.409, and it measures the magnitude of potential additional tax burden due to CFC rule application. The coefficient is significantly negative and the substantially lower

p -value of CFC^{diff} ($p < 0.000\%$) compared to CFC^{dummy} ($p = 19.9\%$) is probably due to introducing heterogeneity to the binary indicator variable by considering the specific tax rate differential between the acquirer and target country in case CFC rules apply. As average partial effect, the coefficient of -1.4569 implies that—for a CFC rule treated target—a 1% higher STR differential faced by an acquirer in country i decreases the likelihood that an acquirer is located in this specific country by 0.05%. For the given number of deals over the complete observed time period, this translates into 7 potentially affected deals by CFC rules for a 1% higher STR differential.

In support of Hypothesis 1, we provide evidence that potential CFC rule application on a target's profit reduces the probability of acquiring this target. However, the economic effect seems to be very low for small STR differences. Therefore, countries should not expect large distorting effects of CFC rule implementation on their MNE's cross-border M&A activity.

As argued in Feld et al. (2016), a violation of the assumption of the independence of irrelevant alternatives (IIA) in the conditional logit model could be problematic because estimates may be biased. Further, and in our case potentially even more important, there may be unobserved heterogeneity in how CFC rules affect acquirers' target valuation. To account for such heterogeneity across firms in terms of M&A decisions and to address the IIA assumption, we randomize this heterogeneity and assume it to be normally distributed. Consequently, we randomize our variables of interest, CFC_{ij} , by using a mixed logit estimator. This randomization follows a normal distribution with mean g and covariance W ; the parameters are estimated by simulated maximum likelihood with 50 Halton draws.²⁷ In our mixed logit regressions, we observe that the estimated standard deviations of the normal distribution are highly statistically significant; therefore, we prefer this approach and apply mixed logit regressions in the remaining exercises.

In Regression (3), we observe that applying the mixed logit model does not change the basic results: CFC^{diff} remains significantly negative at the 1% level and quantitatively stable. In Regression (4), we cluster the standard errors at the target-country/year level and observe that CFC^{diff} is significant at the 5% level.

Most control variables are highly significant and show the expected signs. Regarding STR , we find a negative effect on the likelihood to be the successful bidder if the bidder is located in a high-tax country. This finding is in line with Becker and Riedel (2012), who find a negative effect of parent STR on investment in foreign subsidiaries. Similar to other studies, we use GDP per capita and GDP growth as proxies for acquirer country productivity levels. A control for productivity is crucial, as Helpman (2014) shows that a firm's productivity level influences its investments abroad and firms with the highest productivity engage in FDI. We find that GDP per capita has a significantly positive coefficient, while GDP growth is insignificant. Hence, as expected, a high level of GDP per capita has a positive impact on cross-border M&A activity. Stock market capitalization per GDP has the expected positive

²⁷ In untabulated regression results, we find that using 100 Halton draws produces very similar results in both the acquirer and target perspective; these results are available upon request.

Table 2 Robustness tests of effect of acquirer CFC rules on probability of being the *acquirer* country

Explanatory variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Controlling for exemption or credit method	Using target effective average tax rate	Considering EAA exemption (post 2006)	Considering included income of CFC rule	Randomizing STR	Excl. acquirers from AU&CA&NZ	Excl. acquirers from CA&UK&US	OLS regression
<i>CFC^{diff}</i>	−0.6035* (0.3472)				−1.2130*** (0.3507)	−1.6977*** (0.3588)	−1.0453* (0.5643)	−0.1245*** (0.014)
<i>CFC^{diff}EATR</i>		−1.2961*** (0.3162)						
<i>CFC^{diff}EEA</i>			−1.5406*** (0.3491)					
<i>CFC^{taxbase}</i>				−1.7810*** (0.3993)				
<i>STR</i>	−2.3967*** (0.6431)	−1.9075*** (0.6363)	−1.9575*** (0.6440)	−2.0217*** (0.6433)	−2.1346*** (0.6472)	−1.6298** (0.6774)	−1.9436*** (0.7260)	−0.0019 (0.0196)
<i>Exemption-Method</i>	0.8440*** (0.0859)							
<i>GDP per capita</i>	1.2497*** (0.1661)	1.0501*** (0.1621)	1.1225*** (0.1655)	1.1152*** (0.1653)	1.0906*** (0.1666)	1.1571*** (0.1680)	1.0672*** (0.1805)	0.0112*** (0.0043)
<i>GDP growth</i>	−0.0071 (0.0077)	−0.0034 (0.0076)	−0.0040 (0.0076)	−0.0044 (0.0076)	−0.0046 (0.0077)	0.0051 (0.0085)	−0.0106 (0.0086)	0.0001 (0.0003)
<i>Stock market capitalization per GDP</i>	0.0006*** (0.0002)	0.0005*** (0.0002)	0.0005*** (0.0002)	0.0005*** (0.0002)	0.0005*** (0.0002)	0.0004*** (0.0002)	0.0003** (0.0002)	0.0000*** (0.0000)
<i>Size of private credit market</i>	0.0012* (0.0007)	0.0006 (0.0006)	0.0007 (0.0006)	0.0007 (0.0006)	0.0007 (0.0007)	0.0006 (0.0008)	0.0010 (0.0010)	0.0000 (0.0000)
<i>Distance</i>	−0.5657*** (0.0121)	−0.5890*** (0.0115)	−0.5884*** (0.0119)	−0.5948*** (0.0119)	−0.5919*** (0.0119)	−0.5696*** (0.0143)	−0.6515*** (0.0175)	−0.0351*** (0.0007)

Table 2 (continued)

Explanatory variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Controlling for exemption or credit method		Using target effective average tax rate	Considering EAA exemption (post 2006)	Considering included income of CFC rule	Randomizing STR	Excl. acquirers from AU&CA&NZ	Excl. acquirers from CA&UK&US	OLS regression
<i>Common language</i>	1.9151*** (0.0641)	1.8596*** (0.0625)	1.8491*** (0.0630)	1.8603*** (0.0631)	1.8598*** (0.0627)	1.9410*** (0.0676)	2.2097*** (0.0770)	0.0954*** (0.0041)
<i>Past colonial relationships</i>	0.2454*** (0.0370)	0.3005*** (0.0360)	0.2971*** (0.0364)	0.3004*** (0.0365)	0.2937*** (0.0371)	0.2334*** (0.0388)	0.4303*** (0.0475)	0.0124*** (0.0019)
<i>Common legal system</i>	0.0946*** (0.0258)	0.1030*** (0.0251)	0.1139*** (0.0254)	0.1136*** (0.0254)	0.1122*** (0.0256)	0.1244*** (0.0258)	0.1925*** (0.0277)	0.0048*** (0.0010)
Acquirer country FE & target country FE & target firm FE & year FE	YES	YES	YES	YES	YES	YES	YES	YES
Observations	294,697	317,835	317,835	317,835	317,835	243,136	151,651	317,835
Log-likelihood	-30,936	-32,175	-32,164	-32,161	-32,164	-25,945	-19,203	
R squared adjusted								0.137

Note: The table shows regressions of probability of being the acquirer country on (potential) CFC rule application; see Expression 2. For each deal, the dependent variable equals one if country i is the actual acquirer's country of origin, and zero if country h is a counterfactual acquirer country. For variable definitions and data sources, see Table 11. The country-specific control variables stand for the acquirer country. Only cross-border M&A where the direct acquirer country is equal to the acquirer ultimate parent country are considered. All regressions control for acquirer country fixed effects, which are available upon request, and are estimated by a mixed logit model. The variables of interest follow a random distribution. Regression (1) additionally controls for double taxation avoidance method, Regression (2) checks whether our variable of interest is robust to using effective average tax rates instead of statutory tax rates, Regression (3) considers potential non-application of CFC rules within the EEA, and Regression (4) considers the included income by CFC rules as shown in Sect. 2. In Regression (5), also STR follows a random distribution. Regressions (6) and (7) exclude certain countries. Regression (8) is estimated by an OLS regression; the constant is not reported but available upon request. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses

coefficient, which indicates that well-developed stock markets in the acquirer country offer good financing conditions to raise capital to fund cross-border M&A. The size of the private credit market has no significant effect. Cross-border M&A literature finds that lower bilateral transaction costs between the acquirer and target due to less cultural and geographic distance positively affect M&A activity (e.g., Di Giovanni 2005). In line with these findings, we observe that distance, common language, past colonial relation, and common legal system show the expected signs and are highly significant.

Robustness tests

Table 2 provides the results of our check on whether our baseline results are robust to specification variations. A country's method to avoid cross-border double taxation could be potentially correlated with whether or not this country has CFC rules. The reason is as follows: If a country taxes foreign dividends under the credit method system, profit shifted to tax havens will—theoretically—be ultimately taxed upon profit repatriation. However, the important difference between CFC rules and taxing foreign dividends taxation is the timing of taxation: While under CFC rules foreign profits may be immediately taxed at parent level irrespective of dividend distribution, taxation under the pure credit method system can be deferred by the parent company until the actual dividend distribution taxation takes place. Therefore, in Regression (1), we include a dummy variable capturing the unilateral method to avoid double taxation on foreign dividends (credit or exemption method on foreign dividends). The differences of these systems were researched by Markle (2016) and the impact of repatriation taxes in an M&A context by Feld et al. (2016). Under the exemption method system, profits shifted to tax havens are not taxed upon repatriation and the country may therefore be more prone to introduce CFC rules. Indeed, under the Tax Cuts and Jobs Act of 2017, the USA changed its international corporate tax system towards the exemption method system and at the same time strengthened its former rather weak CFC rules by introducing the GILTI rule.²⁸ To control for this potential interdependency, we include a variable for the method *ExemptionMethod*, which is one (zero) if the acquirer applies the territorial or exemption (worldwide or credit) tax system to avoid double taxation. The coefficient of *CFC^{diff}* remains significantly negative; however, the coefficient decreases by around half. The significantly positive coefficient of *ExemptionMethod* indicates that the likelihood of being the acquirer increases if the acquirer resides in a country that exempts foreign dividends of the target from taxation (territorial system). This finding is in line with Markle (2016) and Feld et al. (2016) who apply different underlying data and econometric methods. Although results about CFC rule influence were not tabulated by Markle (2016), it is stated that these rules do not greatly affect, or are not influenced by, the general difference of profit shifting between worldwide and territorial tax systems. This is generally in line with our results as well, as *CFC^{diff}* remains significantly negative.

²⁸ The US CFC rules are broadly known as “Subpart F income” rules and can be circumvented relatively easily via the “check-the-box rule” (see, e.g., Grubert and Altshuler 2006).

In Regression (2), we vary the calculation of our variable of interest by considering target effective average tax rates ($CFC^{diffEATR}$) from Expression 6 instead of statutory tax rates to account for potentially lower actual tax rates. Regression (3) considers potential non-application of CFC rules within the EEA ($CFC^{diffEEA}$) due to specific exemption and Regression (4) investigates the actual included income by CFC rules ($CFC^{taxbase}$) from Expression 7. In Regression (5), we additionally randomize STR and in Regression (6), we exclude acquirers from Australia, Canada, and New Zealand because their CFC rules do not explicitly mention a low-tax rate threshold that potentially changes country-pairwise over time, from which our main identification is coming from.

Regression (7) excludes the largest acquirer countries (Canada, UK, and USA), which account for around half of our observations. The exclusion of the USA further checks for a potential bias due to the so-called check-the-box rule, which was introduced in the USA in 1997 and may allow for an escape from CFC rules for US MNEs under specific circumstances by using hybrid entities (see e.g., Rego 2003; Grubert and Altshuler 2006; Mutti and Grubert 2009). Finally, in Regression (8), we run an ordinary least squares (OLS) regression with acquirer country, target country, and year fixed effects, i.e., assuming that the probability is a linear function of the explanatory variables. The coefficient of CFC^{diff} is significantly negative at the 1% level. However, given that the range of probabilities of the logistic regression is from 0.01 to 0.823, assuming a linear function is not appropriate and linear probability regressions lead to biased estimates. Therefore, we do not use OLS regression in our baseline results. Taken together, we observe that all robustness tests validate our baseline results, both quantitatively and qualitatively.

Table 3 provides further robustness tests. In Regression (1), we exclude all control variables except for the acquirer country fixed effects to check if there is a bias due to correlation between CFC^{diff} and the control variables. We find that CFC^{diff} decreases substantially and remains significant. As mentioned above, we cannot include country-pair fixed effects due to computational limitations. A further way of dealing with potentially unobserved effects—beyond the control variables in the main regressions—is to include country-pair trade flows. Therefore, in Regression (2), we include trade flows of country-pairs and the results stay significant and even increase. To account for potential endogeneity concerns, we lag the trade flows by two years; the results hardly change when we run the regression with a one-year lag. In all cases, the new variable of trade flows shows an expected positive and statistically significant coefficient and strengthens the baseline findings.²⁹ Langenmayr and Lester (2018), De Simone et al. (2017), Maydew (1997) and others show that loss-making firms can be a preferred target, especially in the context of profit shifting. Therefore, we check whether CFC rule influence differs between profitable and loss-making targets in Regression (3). Unfortunately, due to partially missing firm-level variables, the sample size decreases substantially. We find that the coefficients

²⁹ One should keep in mind that there could be misreporting of trade flows involved as Bussy (2020) points out, although, the used trade flows are aggregated on a high country-pair level and the potential bias should be negligible.

Table 3 Further robustness tests of effect of acquirer CFC rules on probability of being the *acquirer* country

Explanatory variables	(1) Excl. control variables	(2) Incl. trade flows	(3) Profitable vs. non-profitable targets	(4) Incl. target assets & target return on assets	(5) Incl. target sales	(6) Incl. target EBITDA	(7) w/o STR
<i>CFC^{diff}</i>	-4.1258*** (0.3294)	-1.5050*** (0.3368)		-3.1934*** (1.1995)	-2.8136*** (0.7548)	-2.1391* (1.2086)	-1.3561*** (0.3438)
<i>Trade flow</i>		0.0012*** (0.0003)					
<i>CFC^{nonprofitable}</i>			-1.9250** (0.9653)				
<i>CFC^{nonprofitable}</i>			-5.5943*** (1.7488)				
<i>STR</i>		-1.9469*** (0.6462)	0.8489 (1.5131)	0.4872 (1.5582)	-0.6872 (1.2818)	-0.5640 (1.8920)	
<i>GDP per capita</i>		1.1014*** (0.1651)	1.6639*** (0.3762)	1.8388*** (0.3851)	1.2574*** (0.3246)	1.1308** (0.5062)	1.2740*** (0.1573)
<i>GDP growth</i>		-0.0050 (0.0076)	0.0383** (0.0195)	0.0455** (0.0202)	0.0166 (0.0176)	0.0272 (0.0258)	-0.0042 (0.0076)
<i>Stock market capitalization per GDP</i>		0.0005*** (0.0002)	0.0003 (0.0004)	-0.0002 (0.0005)	-0.0000 (0.0004)	-0.0007 (0.0006)	0.0004*** (0.0002)
<i>Size of private credit market</i>		0.0005 (0.0006)	0.0001 (0.0017)	0.0003 (0.0018)	-0.0010 (0.0014)	-0.0008 (0.0023)	0.0003 (0.0006)
<i>Distance</i>		-0.5885*** (0.0120)	-0.5018*** (0.0313)	-0.4904*** (0.0338)	-0.4932*** (0.0266)	-0.5148*** (0.0422)	-0.5892*** (0.0119)
<i>Common language</i>		1.9086*** (0.0627)	1.7924*** (0.1765)	1.6550*** (0.1951)	1.5999*** (0.1562)	1.4257*** (0.2360)	1.8476 (0.0629)

Table 3 (continued)

Explanatory variables	(1) Excl. control variables	(2) Incl. trade flows	(3) Profitable vs. non-profitable targets	(4) Incl. target assets & target return on assets	(5) Incl. target sales	(6) Incl. target EBITDA	(7) w/o STR
<i>Past colonial relationships</i>		0.2826*** (0.0367)	0.2783*** (0.0862)	0.2070*** (0.0921)	0.1570** (0.0731)	0.1919* (0.1080)	0.2977*** (0.0363)
<i>Common legal system</i>		0.1035*** (0.0257)	0.2239*** (0.0654)	0.3270*** (0.0713)	0.3013*** (0.0560)	0.3555*** (0.0860)	0.1121*** (0.0254)
Acquirer country FE & target country FE & target firm FE & year FE	YES	YES	YES	YES	YES	YES	YES
Observations	317,835	312,817	55,715	52,809	78,495	34,405	317,835
Log-likelihood	-35,450	-31,676	-5,495	-5,157	-7,715	-3,287	-32,171

Note: Regressions of probability of being the acquirer country on (potential) CFC rule application; see Expression 2. For each deal, the dependent variable equals one if country i is the actual acquirer's country of origin, and zero if country h is a counterfactual acquirer country. For variable definitions and data sources, see Table 11. The country-specific control variables stand for the acquirer country. Only cross-border M&A where the direct acquirer country is equal to the acquirer ultimate parent country are considered. All regressions control for acquirer country fixed effects, which are available upon request, and are estimated by a mixed logit model. The variables of interest follow a random distribution. Regression (1) drops all control variables and Regression (2) includes trade flows. Regression (3) distinguishes between profitable and non-profitable targets. Regressions (4), (5), and (6) include the interaction between acquirer country fixed effects and *TargetAssets* and *TargetROA*, *TargetSales*, and *TargetEBITDA*. Regression (7) excludes the control variable acquirer STR. The coefficients and standard errors of these interactions are shown in Table 12. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses

taking into account whether the target is profitable ($CFC^{profitable}$) or non-profitable ($CFC^{non_profitable}$) remain significantly negative. Interestingly, the effect is more pronounced for loss-making targets; the difference between the coefficients is significant at a p -value of 1.9% (two-sided). One possible reason could be that non-CFC rule acquirers are more interested in acquiring low-tax loss-making targets than CFC rule acquirers, because non-CFC rule acquirers may shift profits to the loss-making targets and, thereby, net out the target's losses or even use existing loss carryforwards of the target; CFC rule acquirer on the other hand is restricted in their shifting possibilities as these rules often do not allow much financial income to be allocated to the target. This explanation would be in line with the former-mentioned results of Langenmayr and Lester (2018), De Simone et al. (2017) and Maydew (1997). Unfortunately, we do not have detailed financial data to investigate whether low-tax targets are used merely as profit shifting vehicles or if these targets are also used to do real business. However, in Regressions (4), (5), and (6), we include the available financial data to check if target-specific characteristics bias our results: We interact consolidated profit and loss statement as well as balance sheet items of the target (total assets, return on assets, sales as well as earnings before interest, taxes, depreciation, and amortization) with each candidate acquirer country. While again the sample size decreases substantially, we observe that CFC^{diff} remains significantly negative. Finally, in a Regression (7), we exclude acquirer STR, which is also used to compose our variable of interest; we observe that our results remain stable.

4.3 Target perspective

Baseline Results

As described in Sect. 2, we analyze for each given acquirer the origin of the actual target country among a choice set of various target countries. Table 4 presents the baseline results of different multinomial choice models to test Hypothesis 2 on the influence of CFC rules on the likelihood of being chosen as the target country of a given acquirer (target perspective). For each deal, the dependent variable equals one for the actual target country of origin and zero for all other counterfactual target countries. For definitions, data sources and summary statistics of all variables, see Table 14.³⁰

In conditional logit Regression (1), the dummy variable CFC^{dummy} has a significantly negative coefficient, which indicates that potential CFC rule application on a candidate target's profit has a negative effect on actually choosing the target country as a location. CFC^{diff} in Regression (2) is a continuous variable and takes values between 0 and 0.284; it measures in more detail the magnitude of a potential additional tax burden due to CFC rule application and—similar to the result in Sect. 4—the significance level increases compared to the mere dummy variable approach (CFC^{dummy}). In line with Hypothesis 2, this finding indicates that potential CFC rule

³⁰ The underlying base data in both perspectives are the same. The actual observations in both perspectives differ slightly, which is due to availability restrictions of different necessary control variables.

application on a target's profit negatively influences the target location choice of a given acquirer. Therefore, from a global perspective and with an increasing number of countries introducing or strengthening CFC rules, this finding may further indicate higher overall tax revenue due to potentially less profit shifting from firms in high-tax countries. The coefficient of -1.7115 is slightly larger than the coefficient under the acquirer perspective and may indicate that CFC rules have a somewhat stronger effect on target location choice than on who becomes the acquirer. As average partial effect, the coefficient implies that—for a potentially CFC rule treated target—a 1% higher STR differential faced by a target in country i decreases the likelihood that a target is located in this specific country by 0.06%. For the given number of deals over the complete observed time period, this translates into 8 potentially affected deals by CFC rules for a 1% higher STR differential.

To cope with a possible violation of the IIA and the potentially unobserved heterogeneity in how CFC rules affect acquirers' target valuation decisions (see Sect. 4), we use again a mixed logit estimator and randomize our variables of interest in the remaining regressions. Again, we observe that the estimated standard deviations of the normal distribution are highly significant; therefore, we prefer this approach and apply mixed logit regressions in the remaining regressions. We observe a further decrease of CFC^{diff} and the significance level remains stable in Regressions (3) and (4).

Regarding significant control variables, we observe that target STR has a positive effect on target location choice, which is an unexpected result at first sight as FDI literature generally suggests a negative effect of host country STR on investment (e.g., Feld and Heckemeyer 2011; Davies et al. 2021). Referring to M&A literature, an explanation for this result could be that cross-border M&A are less sensitive to host country STRs (e.g., Hebous et al. 2011; Herger et al. 2016; Davies et al. 2018), as the target tax rate may be capitalized in the acquisition price, or that profit shifting structures within the acquiring MNE mitigate this effect (e.g., Arulampalam et al. 2019). From a technical perspective, variation of STR is also used to compose our variable of interest, which may lead to interdependencies; to test whether these interdependencies do not affect our results, we include a robustness test excluding STR and observe that our results remain stable (Regression (7) of Table 6). Furthermore, the effect STR may control for, could be additionally captured within the other target country control variables and fixed effects. Finally, the positive effect of STR becomes insignificant in some robustness tests. Due to these reasons, we are not much concerned about this initially unexpected sign of target STR.

Regarding further control variables, GDP per capita and stock market capitalization per GDP have statistically insignificant coefficients, whereas GDP growth has a significantly positive effect in some regressions, i.e., targets located in growing economies are more likely to be acquired. Further, the control variable for the size of the private credit market has a significantly negative effect on target location choice. The explanation for this finding may be the following: If a target is located in a country with a low ratio of private credits granted to the private sector, the supply of credits may be limited. Consequently, credit supply for internal expansion is limited, which makes targets in these countries more likely to be acquired (Arulampalam et al. 2019). Similar to the findings in Sect. 4,

Table 4 Effect of acquirer CFC rules on probability of being the *target* country

Explanatory variables	(1) Conditional logit	(2) Conditional logit	(3) Mixed logit	(4) Mixed logit
<i>CFC^{dummy}</i>	−0.1078** (0.0450)			
<i>CFC^{diff}</i>		−1.7115*** (0.3921)	−2.8880*** (0.5306)	−2.8880*** [0.8075]
<i>STR</i>	2.6019*** (0.6293)	2.4139*** (0.6309)	2.0753*** (0.6398)	2.0753** [0.8535]
<i>GDP per capita</i>	−0.0639 (0.1740)	−0.0388 (0.1739)	−0.0848 (0.1744)	−0.0848 [0.3059]
<i>GDP growth</i>	0.0142* (0.0081)	0.0143* (0.0081)	0.0134* (0.0081)	0.0134 [0.0112]
<i>Stock market capitalization per GDP</i>	−0.0003 (0.0002)	−0.0003 (0.0002)	−0.0003 (0.0002)	−0.0003 [0.0003]
<i>Size of private credit market</i>	−0.0019** (0.0008)	−0.0019** (0.0008)	−0.0021*** (0.0008)	−0.0021** [0.0011]
<i>Distance</i>	−0.5799*** (0.0112)	−0.5740*** (0.0114)	−0.5736*** (0.0114)	−0.5736*** [0.0188]
<i>Common language</i>	1.9043*** (0.0639)	1.9006*** (0.0638)	1.9162*** (0.0641)	1.9162*** [0.1225]
<i>Past colonial relationships</i>	0.2992*** (0.0375)	0.2777*** (0.0377)	0.2712*** (0.0378)	0.2712*** [0.0489]
<i>Common legal system</i>	0.0172 (0.0269)	0.0311 (0.0271)	0.0345 (0.0272)	0.0345 [0.0483]
<i>Corruption control</i>	0.1651* (0.0859)	0.1644* (0.0860)	0.1600* (0.0863)	0.1600 [0.1337]
<i>Business start-up cost</i>	−0.0073** (0.0033)	−0.0072** (0.0033)	−0.0075** (0.0033)	−0.0075* [0.0044]
<i>Unemployment rate</i>	−0.0004 (0.0064)	0.0001 (0.0064)	0.0004 (0.0064)	0.0004 [0.0085]
<i>Domestic firms</i>	0.1775** (0.0848)	0.1651* (0.0846)	0.1834** (0.0848)	0.1834 [0.1338]
Acquirer country FE & target country FE & acquirer firm FE & year FE	YES	YES	YES	YES
Observations	317,444	317,444	317,444	317,444
Log-likelihood	−31,158	−31,151	−31,144	−31,144

Note: Regressions of probability of being the target country on (potential) CFC rule application in acquirer country; see Expression 9. For each deal, the dependent variable equals one if country j is the actual target's country of origin, and zero if country g is a counterfactual target country. For variable definitions and data sources, see Table 14. The country-specific control variables stand for the target country. Only cross-border M&A where the direct acquirer country is equal to the acquirer ultimate parent country are considered. All regressions control for target country fixed effects, which are available upon request. The variables of interest follow a random distribution in the mixed logit regressions. Regressions (1) and (2) are estimated by a conditional logit model, and regressions (3) and (4) are estimated by a mixed logit model. Regression (4) is identical to regression (3) except for standard errors, which are robust to clustering on the acquirer-country-year level. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust (Clustered) standard errors are provided in parentheses (brackets)

we observe that lower bilateral transaction costs between the acquirer and target positively affect target location choice: distance, common language, and past colonial relationships have the expected significant coefficient; the variable controlling for common legal system has an expected positive though insignificant estimate. Finally, the control variables for the institutional framework in the candidate target country have significant explanatory power. High degree of corruption control, large number of listed firms, and low business start-up cost increase the chances to be chosen as a target location; unemployment rate has an insignificant effect.

Robustness tests

In Table 5, we provide similar robustness tests as in Table 2 and yield similar results. Regressions (1), (2), and (3) take into account target effective average tax rates ($CFC^{diffEATR}$), potential non-application of CFC rules within the EEA ($CFC^{diffEEA}$) and the included income by CFC rules ($CFC^{taxbase}$). In Regression (4), we additionally randomize *STR* and in Regression (5), we exclude acquirers from Australia, Canada, and New Zealand because their CFC rules do not explicitly mention a low-tax rate threshold. Regression (6) excludes the largest target countries (Germany, UK, and USA), which account for almost half of our observations. In Regression (7), we include a variable controlling for the extent of business disclosure as a further variable for the institutional framework in the candidate target country. This variable is not included in our baseline results because its inclusion significantly drops the observation number. Finally, in Regression (8), we run an OLS regression for this target perspective as well. The coefficient of CFC^{diff} is significantly negative at the 1% level; however, given that the range of probabilities is from a 0.01 to 0.779, linear probability regressions lead to biased estimates. Therefore, we again do not use OLS regression in our baseline results. We observe that all robustness tests resemble our baseline results, both quantitatively and qualitatively.

Table 6 provides further robustness tests yielding similar results as presented in Table 3. In Regression (1), we exclude all control variables except for the target country fixed effects. Again, we find that CFC^{diff} decreases substantially and remains significant. Regression (2) shows the results of including two-year lagged country-pair trade flows to deal with potentially unobserved effects on a country-pair level beyond our main control variables. Again, the results stay robust and even increase slightly, while trade flow shows an expected positive and statistically significant coefficient. Further, we check whether our results are robust to differentiating between profitable and loss-making targets in Regression (3). We find that the coefficients of $CFC^{profitable}$ and $CFC^{non_profitable}$ remain significantly negative; however, in this robustness test, there is no significant difference between the coefficients of $CFC^{profitable}$ and $CFC^{non_profitable}$. Finally, in regressions (4), (5), and (6), we include acquirer-specific financial data (total assets, return on assets, sales as well as earnings before interest, taxes, depreciation, and amortization) by interacting these consolidated profit and loss statement and balance sheet items with each candidate target country. We again observe a substantial sample decrease due to missing firm-level variables, but the results prove to be robust.

Table 5 Robustness tests of effect of acquirer CFC rules on probability of being the *target* country

Explanatory variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Using target effective average tax rate	Considering EAA exemption (post 2006)	Considering included income of CFC rule	Randomizing STR	Excl. acquirers from AU&CA&NZ	Excl. acquirers from CA&UK&US	Incl. business disclosure index	OLS regression
<i>CFC^{diff}</i>				−2.9635*** (0.5612)	−3.0176*** (0.5315)	−1.9885*** (0.6091)	−2.1462*** (0.5646)	−0.1175*** (0.0090)
<i>CFC^{diff}EATR</i>	−1.6836*** (0.4775)							
<i>CFC^{diff}EEA</i>		−3.2489*** (0.5360)						
<i>CFC^{diff}taxbase</i>			−1.3819 ^a (0.9350)					
<i>STR</i>	2.3923*** (0.6354)	1.9682*** (0.6407)	3.8860*** (1.0668)	1.8021*** (0.6577)	2.2549*** (0.6744)	−0.7337 (0.9266)	1.8860** (0.7650)	0.0481* (0.0250)
<i>GDP per capita</i>	−0.0710 (0.1744)	−0.0803 (0.1749)	−0.1884 (0.1798)	−0.3431* (0.1848)	0.0169 (0.1825)	−0.5203*** (0.1978)	0.3354 (0.2291)	0.0141*** (0.0063)
<i>GDP growth</i>	0.0139* (0.0081)	0.0137* (0.0081)	0.0140* (0.0082)	0.0119 (0.0083)	0.0109 (0.0087)	0.0186** (0.0093)	0.0204** (0.0087)	0.0004* (0.0002)
<i>Stock market capitalization per GDP</i>	−0.0003 (0.0002)	−0.0003 (0.0002)	−0.0002 (0.0002)	−0.0001 (0.0002)	−0.0003 (0.0002)	−0.0002 (0.0002)	−0.0002 (0.0003)	−0.0000*** (0.0000)
<i>Size of private credit market</i>	−0.0020** (0.0008)	−0.0022*** (0.0008)	−0.0018** (0.0008)	−0.0022*** (0.0008)	−0.0029*** (0.0009)	−0.0034*** (0.0011)	−0.0025*** (0.0009)	−0.0001*** (0.0000)
<i>Distance</i>	−0.5834*** (0.0113)	−0.5712*** (0.0115)	−0.5919*** (0.0122)	−0.5985*** (0.0125)	−0.5562*** (0.0145)	−0.6799*** (0.0166)	−0.5717*** (0.0123)	−0.0321*** (0.0007)
<i>Common language</i>	1.9332*** (0.0639)	1.9217*** (0.0640)	1.9710*** (0.0670)	2.0260*** (0.0684)	1.9892*** (0.0685)	2.0413*** (0.0805)	1.9405*** (0.0687)	0.1316*** (0.0007)

Table 5 (continued)

Explanatory variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Using target effective average tax rate	Considering EAA exemption (post 2006)	Considering included income of CFC rule	Randomizing STR	Excl. acquirers from AU&CA&NZ	Excl. acquirers from CA&UK&US	Incl. business disclosure index	OLS regression
<i>Past colonial relationships</i>	0.2986*** (0.0377)	0.2636*** (0.0378)	0.2760*** (0.0384)	0.2637*** (0.0387)	0.2214*** (0.0403)	0.3984*** (0.0485)	0.2497*** (0.0413)	0.0027 (0.0018)
<i>Common legal system</i>	0.0139 (0.0269)	0.0364 (0.0272)	0.0282 (0.0278)	0.0315 (0.0280)	0.0482* (0.0278)	0.0919*** (0.0341)	0.0162 (0.0291)	0.0026*** (0.0012)
<i>Corruption control</i>	0.1784** (0.0860)	0.1504* (0.0865)	0.1641* (0.0875)	0.1525* (0.0889)	0.1277 (0.0922)	0.0777 (0.1113)	0.3170*** (0.1135)	0.0031 (0.0027)
<i>Business start-up cost</i>	-0.0074** (0.0033)	-0.0074** (0.0033)	-0.0076** (0.0033)	-0.0081** (0.0034)	-0.0052 (0.0035)	-0.0071* (0.0037)	-0.0064* (0.0036)	0.0002** (0.0001)
<i>Unemployment rate</i>	0.0003 (0.0064)	0.0002 (0.0064)	-0.0026 (0.0065)	-0.0032 (0.0065)	0.0033 (0.0067)	-0.0134* (0.0081)	0.0055 (0.0071)	0.0006*** (0.0002)
<i>Domestic firms</i>	0.1715** (0.0848)	0.1794** (0.0849)	0.2252*** (0.0861)	0.2844*** (0.0876)	0.2078** (0.0883)	0.2547*** (0.0907)	0.0623 (0.1015)	0.0018 (0.0018)
<i>Business disclosure</i>							0.0820 (0.0686)	
Acquirer country	YES	YES	YES	YES	YES	YES	YES	YES
FE & target country								
FE & acquirer firm								
FE & year FE								
Observations	317,444	317,444	317,444	317,444	255,172	161,910	264,159	317,444
Log-likelihood	-31,155	-31,140	-31,136	-31,119	-26,594	-19,327	-26,172	

Table 5 (continued)

Explanatory variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Using target effective average tax rate	Considering EAA exemption (post 2006)	Considering included income of CFC rule	Randomizing STR	Excl. acquirers from AU&CA&NZ	Excl. acquirers from CA&UK&US	Incl. business disclosure index	OLS regression
R squared adjusted								0.188

Note: Regressions of probability of being the target country on (potential) CFC rule application in acquirer country; see Expression 9. For each deal, the dependent variable equals one if country j is the actual target's country of origin, and zero if country g is a counterfactual target country. For variable definitions and data sources, see Table 14. The country-specific control variables stand for the target country. Only cross-border M&A where the direct acquirer country is equal to the acquirer ultimate parent country are considered. All regressions control for target country fixed effects, which are available upon request, and are estimated by a mixed logit model. The variables of interest follow a random distribution in the mixed logit regressions. Regression (1), (2), and (3) check whether our variable of interest is robust to using effective average tax rates, considering potential non-application of CFC rules within the EEA, and considering the included income by CFC rules. In regression (4), also STR follows a random distribution. Regressions (5) and (6) exclude certain countries, and Regression (7) considers a further control variable (*Business disclosure*). Regression (8) is estimated by an OLS regression; the constant is not reported but available upon request. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses.

^a The level of statistical significance is 13.9%

Table 6 Further robustness tests of effect of acquirer CFC rules on probability of being the *target* country

Explanatory variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Excl. control variables	Excl. control variables	Incl. trade flows	Profitable vs. non-profitable targets	Incl. acquirer assets & acquirer return on assets	Incl. acquirer sales	Incl. acquirer EBITDA	Excl. target STR
<i>CFC^{diff}</i>	-6.4155*** (0.4292)	-3.1742*** (0.5335)		-3.5409*** (0.6830)	-3.4268*** (0.6655)	-3.2957*** (0.7050)	-3.3487*** (0.5241)
<i>Trade flow</i>		0.0014*** (0.0003)					
<i>CFC^{profitable}</i>			-6.4673*** (1.6700)				
<i>CFC^{non-profitable}</i>			-7.2323*** (1.9287)				
<i>STR</i>		2.1561*** (0.6412)	-1.8795 (1.7514)	2.4216*** (0.7889)	2.7097*** (0.7979)	2.7031*** (0.8450)	
<i>GDP per capita</i>		0.1580 (0.1775)	0.2851 (0.5944)	-0.1952 (0.2289)	-0.0804 (0.2319)	-0.3150 (0.2494)	-0.2458 (0.1673)
<i>GDP growth</i>		0.0125 (0.0082)	-0.0329 (0.0227)	0.0119 (0.0101)	0.0107 (0.0104)	0.0096 (0.0111)	0.0149* (0.0081)
<i>Stock market cap. per GDP</i>		-0.0002*** (0.0002)	-0.0003 (0.0007)	0.0000 (0.0003)	-0.0002 (0.0003)	-0.0000 (0.0003)	-0.0002 (0.0002)
<i>Size of private credit market</i>		-0.0021** (0.0008)	-0.0050*** (0.0018)	-0.0027*** (0.0010)	-0.0029*** (0.0010)	-0.0026** (0.0011)	-0.0017** (0.0008)
<i>Distance</i>		-0.5817*** (0.0115)	-0.4524*** (0.0303)	-0.5450*** (0.0145)	-0.5504*** (0.0152)	-0.5388*** (0.0162)	-0.5731*** (0.0114)
<i>Common language</i>		1.9574*** (0.0645)	2.0888*** (0.1776)	1.6471*** (0.0896)	1.5955*** (0.0895)	1.4247*** (0.1006)	1.9030*** (0.0641)
<i>Past colonial relation-ships</i>		0.2735*** (0.0380)	0.2331*** (0.0901)	0.2761*** (0.0462)	0.2821*** (0.0468)	0.2991*** (0.0489)	0.2753*** (0.0378)

Table 6 (continued)

Explanatory variables	(1) Excl. control variables	(2) Incl. trade flows	(3) Profitable vs. non-profitable targets	(4) Incl. acquirer assets & acquirer return on assets	(5) Incl. acquirer sales	(6) Incl. acquirer EBITDA	(7) Excl. target STR
<i>Common legal system</i>		0.0313 (0.0276)	0.1076 (0.0681)	0.1376*** (0.0363)	0.1668*** (0.0363)	0.2000*** (0.0388)	0.0387 (0.0271)
<i>Corruption control</i>		0.1454* (0.0868)	0.0070 (0.0865)	0.1240 (0.1076)	0.0248 (0.1088)	0.0192 (0.1168)	0.1613* (0.0860)
<i>Business start-up cost</i>		-0.0079** (0.0033)	-0.0087 (0.0089)	-0.0122*** (0.0041)	-0.0110*** (0.0042)	-0.0091*** (0.0046)	-0.0075** (0.0033)
<i>Unemployment rate</i>		-0.0007 (0.0064)	-0.0252 (0.0160)	-0.0091 (0.0081)	-0.0124 (0.0082)	-0.0128 (0.0087)	0.0030 (0.0063)
<i>Domestic firms</i>		0.1910** (0.0853)	0.4353* (0.2224)	0.1074 (0.1060)	0.0945 (0.1069)	0.1462 (0.1119)	0.1885** (0.0846)
Acquirer country FE & target country FE & acquirer firm FE & year FE	YES	YES	YES	YES	YES	YES	YES
Observations	317,444	315,242	53,270	215,197	206,176	180,202	317,444
Log-likelihood	-34,219	-30,956	-5,028	-20,617	-19,818	-17,463	-31,285

Note: This table shows regressions of probability of being the target country on (potential) CFC rule application in acquirer country; see Expression 9. For each deal, the dependent variable equals one if country j is the actual target's country of origin, and zero if country g is a counterfactual target country. For variable definitions and data sources, see Table 14. The country-specific control variables stand for the target country. Only cross-border M&A where the direct acquirer country is equal to the acquirer ultimate parent country are considered. All regressions control for target country fixed effects, which are available upon request, and are estimated by a mixed logit model. The variables of interest follow a random distribution in the mixed logit regressions. Regression (1) drops all control variables and Regression (2) includes trade flows. Regression (3) distinguishes between profitable and non-profitable targets. Regressions (4), (5), and (6) include the interaction between target country fixed effects and *AcquirerAssets* and *AcquirerROA*, *AcquirerSales*, and *AcquirerEBITDA*. Regression (7) excludes the target country STR. The coefficients and standard errors of these interactions are shown in Table 15. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses

Table 7 Further robustness tests of effect of acquirer CFC rules on probability of being the *acquirer* country and the *target* country

Explanatory variables	Acquirer Perspective		Target Perspective	
	(1)	(2)	(3)	(4)
	Mixed Logit	Latent Class Logit	Mixed Logit	Latent Class Logit
<i>CFC^{diff}</i>	-1.2387*** (0.3482)		-2.8880*** (0.5306)	
<i>CFC^{diff}</i> [Class 1]		-3.6614*** (1.1565)		-35.448*** (9.2510)
<i>CFC^{diff}</i> [Class 2]		15.056 (11.09)		0.0267 (0.5730)
<i>STR</i>	-2.0903*** (0.6442)	-2.2647*** (0.6452)	2.0753*** (0.6398)	1.6520** (0.6583)
<i>GDP per capita</i>	1.1104*** (0.1652)	0.7583*** (0.1867)	-0.0848 (0.1744)	-0.1706 (0.1851)
<i>GDP growth</i>	-0.0041 (0.0076)	-0.0132* (0.0077)	0.0134* (0.0081)	0.0191** (0.0082)
<i>Stock market capitalization per GDP</i>	0.0005*** (0.0002)	0.4513*** (0.0620)	-0.0003 (0.0002)	-0.0409 (0.0555)
<i>Size of private credit market</i>	0.0007 (0.0006)	0.1919** (0.0949)	-0.0021*** (0.0008)	-0.1135 (0.0936)
<i>Distance</i>	-0.5906*** (0.0119)	-0.5897*** (0.0113)	-0.5736*** (0.0114)	-0.5789*** (0.0115)
<i>Common language</i>	1.8494*** (0.0629)	1.8638*** (0.0626)	1.9162*** (0.0641)	1.9073*** (0.0641)
<i>Past colonial relationships</i>	0.2994*** (0.0364)	0.2959*** (0.0355)	0.2712*** (0.0378)	0.2834*** (0.0382)
<i>Common legal system</i>	0.1117*** (0.0254)	0.1155*** (0.0255)	0.0345 (0.0272)	0.0374 (0.0270)
<i>Corruption control</i>			0.1600* (0.0863)	0.1648* (0.0857)
<i>Business start-up cost</i>			-0.0075** (0.0033)	-0.0087*** (0.0033)
<i>Unemployment rate</i>			0.0004 (0.0064)	0.0000 (0.0065)
<i>Domestic firms</i>			0.1834** (0.0848)	0.1886** (0.0861)
Acquirer country FE & target country FE & acquirer firm FE & year FE	YES	YES	YES	YES
Observations	317,835	317,835	317,444	317,444
Log-likelihood	-32,165	-32,139	-31,144	-31,278

Table 7 (continued)

Note: This table shows regressions of probability of being the acquirer (target) country on potential CFC rule application in the acquirer country; see Expression 9. For each deal, the dependent variable equals one if country i (j) is the actual acquirer's (target's) country of origin, and zero if country h (g) is a counterfactual acquirer (target) country in the relevant perspective shown alternately. For variable definitions and data sources, see Tables 10 and 13. Only cross-border M&A where the direct acquirer country is equal to the acquirer ultimate parent country are considered. All regressions control for target (acquirer) country fixed effects, which are available upon request. Regressions (1) and (3) are estimated by a mixed logit model, and the variables of interest follow a random distribution and are the same as in the baseline Regression (3) in Tables 1 and 4. Regressions (2) and (4) are latent class regressions with two latent classes, including the variable of interest. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses

In Regression (7), we exclude the target STR control variable and the results stay robust.

4.4 Comparison and further robustness tests on both perspectives

In this subsection, we apply another regression method to further prove the robustness of our findings, show new insights, and to compare the results of the acquirer and target perspective. As explained in Sect. 2, another possibility to account for differences among decision makers—acquirers in the context of our study—is latent class models. In the present profit shifting setting, the choice of two latent classes seems obvious: the potential profit shifting acquirer and the potential non-profit shifting acquirer.

In Table 7, we include two regressions from the acquirer and target perspective of the analysis above. Regressions (1) and (2) show the acquirer perspective and Regressions (3) and (4) show the target perspective.³¹ While the underlying control variables remain the same as in our baseline regressions, we apply latent class regressions with two classes. We interpret these two classes of different decision makers as: Acquirers potentially engaging in profit shifting, most probably found within Class 1, and non-shifters that acquire foreign targets for real business activities and are potentially not influenced by CFC legislation, most probably found within Class 2. As one can see, acquirers from Class 1 are significantly negatively influenced in their decisions by potential CFC rule application. We observe this result in both perspectives; however, the influence seems to be stronger in the target perspective, i.e., the target choice is influenced by CFC rules more heavily leading to less acquisitions in low-tax countries for potential profit shifting, which is what these rules are aiming for. In both cases, the results for Class 2 are insignificant and the sign of the variable of interest even turns positive. This shows that the second group of companies, the potential non-shifters, are not negatively influenced by CFC rules, which only aim to affect the decisions of potential profit shifting acquirers. This analysis shows in a different way that CFC rules seem to influence corporate

³¹ Regressions (1) and (3) are identical to baseline Regression (3) in Tables 1 and 4 and included for comparability reasons.

decisions in the cross-border M&A market in the way they were intended by tax policy makers.

Finally, we aim to address the question why the economic effect of CFC rules on cross-border M&A activity is overall apparently rather small in size. Consulting empirical literature, Voget (2011) finds that CFC rule presence in a country has a positive effect on headquarters relocation away from that country. Consequently, one answer could be that MNEs, who are active on the M&A market, may first move to a non-CFC rule country before acquiring low-tax targets. This two-step effect would not be detected with our approach. However, we still observe a significant (yet overall small) effect and investigate an additional potential answer to this question: During the past two decades, coordinated efforts across countries in curbing tax avoidance by promoting CFC rule implementation and closing loopholes in these rules lead to stronger and converging CFC rules. Could it be that we see this effect in our data?

In this light, M&A valuation differences between acquirers from different countries, due to CFC rules, possibly decreased over time: It may be less likely that acquirers from different countries would obtain different valuations on a low-tax target caused by different CFC rules, as more countries adopt such rules or strengthen them. Another potential influence could be that countries feel international pressure to implement CFC rules in their tax frameworks officially, but the law enforcement of these rules is rather low, which could be known to companies and influence their M&A valuation. To investigate this potential time trend in our data set, we run four-year time window regressions. Indeed, our results shown in Fig. 4 confirm a decreasing influence of CFC rules on cross-border M&A activity: The CFC rule coefficients decrease over time.³² Comparing both perspectives, the coefficients in the acquirer perspective (blue solid line) become insignificant from 2010 onward, whereas the coefficients in the target perspective (red dashed line) remain significant. Therefore, the influence of CFC rules on where the acquirer is located becomes weaker, but the influence of CFC rules on target choice remains present. In other words, a target potentially treated by globally converged CFC rules still has a lower likelihood to be acquired, yet the ownership question is not distorted. Consequently, the intended effect of CFC rules of preventing profit shifting by acquiring low-tax targets is still achieved, but ownership patterns become less distorted.

5 Conclusion

We investigate the impact of an increasingly important anti-tax avoidance measure—CFC rules—on cross-border M&A activity on a global scale. In particular, we consider key characteristics of these rules from various countries and apply different logit regression models on a large cross-border M&A data set

³² Qualitatively the same results occur if we use five-year or three-year time windows, if we consider only two time windows (i.e., split the sample into two parts), or if we use the other CFC rule variables. The regressions include all control variables and provide a feasible number of observations.

considering individual deals. First, we find that the probability of being the acquirer of a given low-tax target decreases if CFC rules may be applicable on this target's income. This observation may be explained by higher reservation prices of non-CFC rule acquirers due to potential target value increasing profit shifting opportunities after the M&A. Hence, acquirers from non-CFC rule countries have a competitive advantage in bidding for targets in low-tax countries. Second, we show that an acquirer's location choice of targets is negatively affected if a target may fall under the scope of CFC rules. The reasoning behind this result is the same as before but the perspective is different: While the first finding indicates that *acquirers from CFC rule countries* have competitive disadvantages on the global M&A market, the second finding indicates that *low-tax target countries*, who aim to attract FDI via M&A, may be less attractive for MNEs resident in CFC rule countries.

However, the economic magnitude of the effects is rather small: In our sample of more than 14,000 deals, only 7 to 8 deals are affected by a 1% higher STR differential between target and CFC rule acquirer country. Further, we observe that the effects decrease over time. This finding may be due to globally converging CFC rules, which shrink the differences in cross-border M&A valuation resulting in a more equal playing field. A further explanation for the decreasing time trend could be that countries adopted CFC rules later in time only due to pressure from supranational organizations and these countries may have less strong

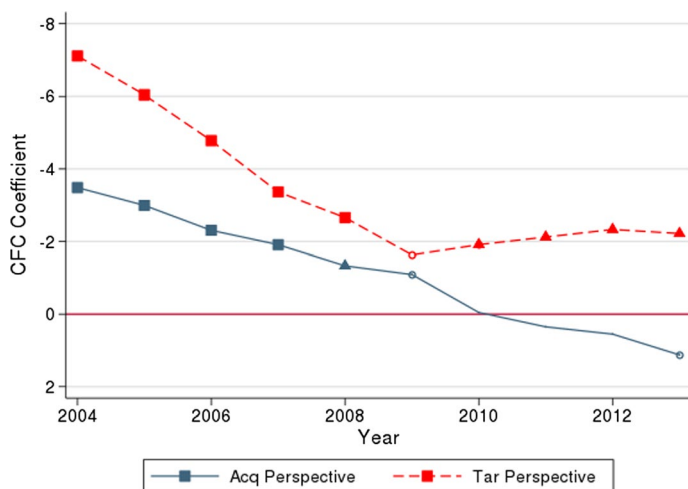


Fig. 4 Decreasing influence of cross-border CFC rule differences on cross-border M&A. Notes: This graph shows the development of the CFC rule coefficients over time, calculated with four-year time window regressions. Note that the y-axis are inverted to avoid the impression of increasing coefficients. The blue, solid line accounts for the acquirer perspective and the red, dashed line accounts for the target perspective. Squares, triangles, and circles denote statistical significance at the 1%, 5%, and 10% level of the CFC rule coefficients, respectively. We correct for as many alternative tax explanations as possible in our data set by including a control variable for the method to avoid double taxation on foreign dividends (credit or exemption method) and using the specified CFC rule coefficient accounting for potential non-application of CFC rules within the EEA after the Cadbury-Schweppes ruling in 2006. Source: Regressions in Tables 16 and 17 (Color figure online)

law enforcement of these rules. Due to the significant yet small effect size, our results should not be interpreted as suggesting that countries should abolish CFC rules. On the contrary, the specific way of acquiring low-tax targets to shift profits becomes less attractive if CFC rules are present in the acquirer country. Therefore, CFC rules rather correct for the exploitation of tax rate differentials among countries and could even result in a tax revenue increase on a global scale, while ownership patterns are only distorted by a very low degree, which contradicts arguments of lobby groups.

Finally, our findings are particularly interesting in light of current tax policy developments. While the BEPS project of the OECD *only recommends* CFC rule implementation in OECD and G20 countries (OECD 2016), the European Council issued a *legally binding* directive requiring EU Member States to implement CFC rules (European Council 2016). In other words, EU firms may face competitive disadvantages in M&A activities compared to firms residing in OECD and G20 Member States not following the OECD's recommendation to implement CFC rules. Consequently, we may observe increasing variation in CFC rules again potentially distorting global M&A markets.

Appendix A: Stylized identification variable example and CFC rule data

See Fig. 5 and Tables 8 and 9.

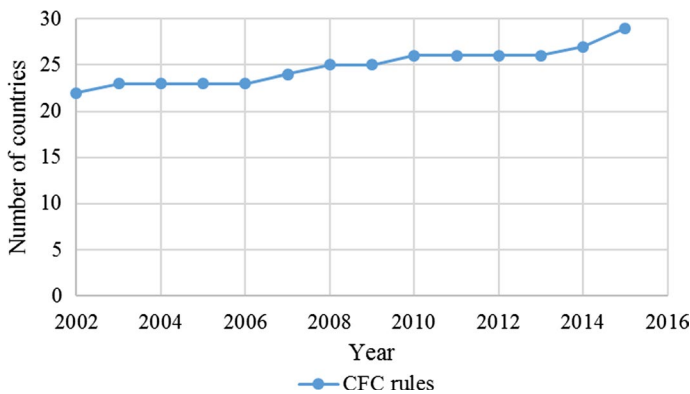


Fig. 5 Presence of CFC rules over time for 49 countries (all OECD, G20 or EU members). Notes: This figure provides an overview on how many countries have implemented CFC rules. Source: Own data collection

Appendix B: Descriptives and robustness tests

See Tables 10, 11, 12, 13, 14, 15, 16 and 17.

Table 8 Identification variable exampleBaseline case in $t = 0$

	Parent Country 1	Parent Country 2	Parent Country 3
STR Parent	30%	26,25%	20%
CFC rule with min. tax threshold at	< 25%	< 90% of own STR (i.e., 23.63%)	none
Subsidiary Country A (STR = 20,5%)	X	X	
Subsidiary Country B (STR = 19%)	X	X	
Subsidiary Country C (STR = 12%)	X	X	

Change in **parent CFC rule threshold** in $t=1$

	Parent Country 1	Parent Country 2	Parent Country 3
STR Parent	30%	26,25%	20%
CFC rule with min. tax threshold at	< 20%	< 80% of own STR (i.e., 21%)	none
Subsidiary Country A (STR = 20,5%)		X	
Subsidiary Country B (STR = 19%)	X	X	
Subsidiary Country C (STR = 12%)	X	X	

Change in **parent country STR** in $t=2$

	Parent Country 1	Parent Country 2	Parent Country 3
STR Parent	25%	21,25%	16%
CFC rule with min. tax threshold at	< 20%	< 80% of own STR (i.e., 17%)	none
Subsidiary Country A (STR = 20,5%)			
Subsidiary Country B (STR = 19%)	X		
Subsidiary Country C (STR = 12%)	X	X	

Change in **subsidiary country STR** in $t=3$

	Parent Country 1	Parent Country 2	Parent Country 3
STR Parent	25%	21,25%	16%
CFC rule with min. tax threshold at	< 20%	< 80% of own STR (i.e., 17%)	none
Subsidiary Country A (STR = 18%)	X		
Subsidiary Country B (STR = 16%)	X	X	
Subsidiary Country C (STR = 10%)	X	X	

Note: An "X" indicates that this subsidiary country is potentially affected by CFC rules of the corresponding parent country. These shown changes in CFC rule characteristics occur over time in various countries in our data set. Therefore, several subsidiaries may be affected by CFC rules and others are not. In our regressions, we use various fixed effects and country-specific control variables to account for other potentially influencing effects

Table 9 Data about CFC rules for the relevant countries of our data set over the considered time period 2002–2014

Country	Years	Tax base	Min. control	Low-tax rate threshold at CIT rate	EEA exemption saveharbour	Passive income	White list/ black list
Australia	2002–2014	Passive income	50%*	0%	–	5%***	wl
Brazil	2002–2014	Full income	20%*	0%	–	–	–
Canada	2002–2008	Passive income	10%	0%	–	–	–
	2009–2014	Quasi passive income	10%	0%	–	–	–
China	2008–2014	Full income	50%*	12.5%	–	50%	wl ^a
Denmark	2002–2005	Passive income	50%*	22.5%	–	33%	wl
	2006	Passive income	50%*	21%	–	33%	wl
	2007–2014	Full income	50%*	12.5%	^b	50%	wl
Estonia ^c	2002–2010	Full income	50%*	7%	–	–	wl
	2011–2014	Full income	50%*	7%	–	50%	wl
Finland	2002–2004	Full income	50%*	17.4%	–	50%***	–
	2005–2008	Full income	50%*	15.6%	–	50%***	–
	2009–2011	Full income	50%*	15.6%	Yes	50%***	–
	2012–2013	Full income	50%*	14.7%	Yes	50%***	bl
	2014	Full income	50%*	12%	Yes	50%***	bl
France	2002	Full income	50%*	21%	Yes	50%***	–
	2005–2014	Full income	50%*	16.67%	Yes	50%***	–
Germany	2002–2006	Passive income	50%	25%	–	10%	^d
	2007–2014	Passive income	50%	25%	Yes	10%	–
Greece	2014	Full income	50%	13%	Yes	30%	bl
Hungary	2002–2007	Dividends	1%	10.67%	–	10%***	–
	2008–2009 ^e	Dividends	1%	10.67%	Yes	10%***	–
	2010	Dividends and more	25%*	12.67%	Yes	50%***	–
	2011–2014	Dividends and more	25%*	10%	Yes	50%***	–

Table 9 (continued)

Country	Years	Tax base	Min. control	Low-tax rate threshold at CIT rate	EEA exemption saveharbour	Passive income	White list/ black list
Iceland	2010	Full income	50%	12%	Yes	–	–
	2011–2014	Full income	50%	13.33%	Yes	–	–
Israel	2003–2013	Passive income	50%	20%	–	50%	–
	2014	Passive income	50%	15%	–	50%	–
Italy	2002–2009	Full income	50%	–	–	–***	bl
	2010–2014	Full income	50%	15.7%	Yes	50%***	bl
Japan	2002–2009	Full income	50%	25%	–	–	–
	2010–2014	Full income	50%	20%	–	0%***	–
Lithuania	2002–2014	Passive income	50%	11.25% ^f	–	–	bl & wl
Mexico	2002–2004	Quasi passive income	50%	–	–	20%	bl
	2005–2014	Quasi passive income	50%	22.50% ^g	–	20%	bl
New Zealand	2002–2009	Quasi passive income	50%	–	–	–	wl
	2010–2014	Quasi passive income	50%	–	–	5%***	–
Norway	2002–2006	Full income	50%	18.67%	–	– ^h	–
	2007–2013	Full income	50%	18.67%	Yes	–	–
	2014	Full income	50%	18%	Yes	–	–
Portugal	2002–2006	After tax income	50%	16.5%	–	25% ⁱ	bl
	2007–2011	After tax income	50%	15%	–	25%	bl
	2012–2013	After tax income	50%	15%	Yes	25%	bl
	2014	After tax income	50%	13.8%	Yes	25%	bl
South Africa	2002–2007	After tax income	50%	–	–	5%***	–
	2008–2012	After tax income	50%	25.91%	–	5%***	–
	2013–2014	After tax income	50%	21%	–	5%***	–

Table 9 (continued)

Country	Years	Tax base	Min. control	Low-tax rate thresh- old at CIT rate	EEA exemption saveharbour	Passive income	White list/ black list
South Korea	2002–2005	Full income	50%	15%	–	50% ^{**}	bl
	2005–2009	Full income	20%	15%	–	50% ^{**}	bl
	2010–2011	Full income	20%	15%	–	50% ^{**}	–
	2012–2014	Full income	10%	15%	–	50% ^{**}	–
Spain	2002–2006	Passive income	50%	26.25%	Yes	15%	–
	2007	Passive income	50%	24.38%	Yes	15%	–
	2008–2014	Passive income	50%	22.5%	Yes	15%	–
	2002–2007	Full income	25%	15.4%	–	–	wl
Sweden	2008	Full income	25%	15.4%	Yes	–	wl
	2009–2012	Full income	25%	14.47%	Yes	–	wl
	2013–2014	Full income	25%	12.1%	Yes	–	wl
	2007–2014	Full income	50%	10%	–	25%	–
Turkey UK	2002–2006	Full income	50%	22.5%	–	50%	–
	2007	Full income	50%	22.5%	Yes	50%	–
	2008–2010	Full income	50%	21%	Yes	50%	–
	2011	Full income	50%	19.5%	Yes	50%	–
USA	2012	Full income	50%	18%	Yes	50%	–
	2013	Passive income	50%	17.25%	Yes	50%	–
	2014	Passive income	50%	15.75%	Yes	50%	–
	2004–2014	Quasi passive income	50%	36%	–	5% ^d	–

Table 9 (continued)^aEffective since 2009^bNo clear exemption but law adjustments for national positions^cThe Estonian CFC rules are only applicable on Estonian individuals, not on companies^dNo legally binding black or white list exists in Germany, but there is an unofficial list as guidance for all years^eUntil end of 2009, CFC rules affected only Hungarian individuals and no corporations^fLithuania had a 15% low-tax rate threshold in 2009^gMexico had a low-tax rate threshold of 21.75% in 2006 and 21% from 2007 to 2009^hOver the complete time period, Norway had an CFC exemption if the subsidiary is in a tax treaty country and has mainly active incomeⁱOver the complete period, Portugal does not apply CFC rules if income derives from real business activity and is mainly not financial^jThe USA had the "check the box" rule enacted, which allowed easy circumvention of CFC rules (e.g., Grubert and Altshuler 2006)

* Or de facto control. ** An active business test is enacted

Source: Information is gathered from various country tax laws, the European Tax Handbooks, which are published every year by the International Bureau for Fiscal Documentation (IBFD), and various other sources

Table 10 Cross-border M&A sample (2002–2014) for analyzing the effect of acquirer CFC rules on the probability of being the *acquirer* country (Sect. 4)

Country	CFC rule	Number of acquirers	Number of targets	Country	CFC rule	Number of acquirers	Number of targets
Australia	1	923	663	Japan	1	529	166
Austria	0	125	73	Korea, Rep.	1	187	147
Belarus	n/a	none	6	Latvia	n/a	none	2
Belgium	0	154	186	Lithuania	n/a	none	14
Bermuda	n/a	none	29	Malaysia	0	212	157
Brazil	n/a	none	251	Malta	n/a	none	4
British Virgin Islands	n/a	none	70	Mexico	n/a	none	197
Bulgaria	n/a	none	30	Netherlands	0	421	355
Canada	1	1,124	1,074	New Zealand	1	68	196
Cayman Islands	n/a	none	17	Norway	1	296	144
Chile	n/a	none	95	Panama	n/a	none	10
China	1	338	846	Poland	n/a	none	140
Croatia	n/a	none	20	Portugal	n/a	none	69
Cyprus	n/a	none	16	Russian Federation	0	39	112
Czech Republic	n/a	none	81	Seychelles	n/a	none	2
Denmark	1	42	158	Singapore	0	490	271
Estonia	n/a	none	12	Slovak Republic	n/a	none	16
Finland	1	62	142	Slovenia	n/a	none	15
France	1	644	667	South Africa	n/a	none	119
Germany	1	622	842	Spain	1	324	360
Greece	n/a	none	25	Sweden	1	71	369
Hong Kong SAR, China	0	560	343	Switzerland	0	344	209
Hungary	n/a	none	45	Taiwan, China	n/a	none	105
Iceland	n/a	none	3	Turkey	n/a	none	79
India	0	337	214	Ukraine	n/a	none	31

Table 10 (continued)

Country	CFC rule	Number of acquirers	Number of targets	Country	CFC rule	Number of acquirers	Number of targets
Ireland	0	342	152	UK	1	1670	1772
Israel	1	206	129	USA	1	4020	2857
Italy	1	271	314	Total		14,421	14,421

Note: This table shows the number of acquirer ultimate parents and targets per country in our cross-border M&A sample to investigate Hypothesis 1. In this context, cross-border M&As are defined as acquirer ultimate parent and target residing in different countries: the direct acquirer and acquirer ultimate parent reside in the same country. In this table, CFC rule takes the value one, if the acquirer country has implemented CFC rules in 2014, and zero otherwise; n/a indicates that the sample does not include acquirers from this country, which is done to keep the mixed logit regressions computationally feasible as outlined in Sect. 3

Table 11 Definition, data sources and summary statistics of variables for analyzing effect of acquirer CFC rules on probability of being *acquirer* country (Sect. 4)

Variable	Definition	Data source	Obs.	Mean	Std. Dev.	Min	Max
CFC^{dummy}	Binary dummy variable coded one if target country STR is smaller than acquirer country's low-tax rate threshold of CFC rule or acquirercountry applies CFC rules without a low-tax rate threshold, and 0 otherwise	TG	317,835	0.111	0.315	0	1
CFC^{diff}	Difference between acquirer country STR and target country STR if target country STR is smaller than acquirer country's low-tax rate threshold of CFC rule or acquirer country applies CFC rules without a low-rate threshold, and 0 otherwise	TG	317,835	0.012	0.043	0	0.409
$CFC^{diffEATR}$	Difference between acquirer country STR and target country STR if target country EATR is smaller than acquirer country's low-tax rate threshold of the CFC rule or acquirer country applies CFC rules without a low-tax rate threshold, and 0 otherwise	TG; CBT	317,835	0.011	0.039	-0.011	0.409
$CFC^{diffEEA}$	Same as CFC^{diff} ; however, set to zero if acquirer and target country are both EEA member states and M&A year is after 2006	TG	317,835	0.012	0.042	0	0.409
$CFC^{database}$	See expression 7	TG	317,835	0.318	0.066	0	0.409
$CFC^{nonprofitable}$	Same as CFC^{diff} ; however, for non-profitable targets set to zero	TG; SDC; CNA; CG	55,715	0.007	0.034	0	0.395
$CFC^{non_profitable}$	Same as CFC^{diff} ; however, for profitable targets set to zero	TG; SDC; CNA; CG	55,715	0.003	0.021	0	0.409
STR	STR in candidate acquirer country, including typical local taxes	TG	317,835	0.291	0.071	0.125	0.409

Table 11 (continued)

Variable	Definition	Data source	Obs.	Mean	Std. Dev.	Min	Max
<i>Exemption</i>	Binary dummy variable coded one if candidate acquirer country unilaterally applies the exemption method to avoid double taxation of foreign dividends, and 0 if it unilaterally applies the credit method	TG	294,697	0.606	0.489	0	1
<i>GDP per capita</i>	GDP per capita in candidate acquirer country (natural logarithm)	World Bank	317,835	10.416	0.62	7.942	11.284
<i>GDP growth</i>	Growth of GDP in candidate acquirer country (in %)	World Bank	317,835	3.095	3.168	-7.821	15.240
<i>Stock market capitalization per GDP</i>	Stock market capitalization of listed domestic firms in candidate acquirer country (in % of GDP)	World Bank	317,835	121.5	175.6	15.767	1,254.5
<i>Size of private credit market</i>	Domestic credit to private sector in candidate acquirer country (in % of GDP)	World Bank	317,835	115.3	39.525	31.081	233.4
<i>Distance</i>	Simple distance (in km) between most populated cities of candidate acquirer and target country (natural logarithm)	Mayer and Zignago (2011)	317,835	8.498	1.100	4.088	9.883
<i>Common language</i>	Common language index between candidate acquirer and target country (0 (low) to 1 (high similarity))	Melitz and Toubal (2014)	317,835	0.242	0.217	0	0.983
<i>Past colonial relationships</i>	Binary dummy variable coded one if candidate acquirer and target country were ever in a colonial relationship, and 0 otherwise	Mayer and Zignago (2011)	317,835	0.095	0.294	0	1
<i>Common legal system</i>	Binary dummy variable coded one if legal system of candidate acquirer and target country have common legal origins, and 0 otherwise	Head et al. (2010)	317,835	0.319	0.466	0	1
<i>Trade flow</i>	Trade flow between candidate acquirer and target country in billion USD	BACI/Comtrade	312,817	-3.163	29.812	-316.870	316.870

Table 11 (continued)

Variable	Definition	Data source	Obs.	Mean	Std. Dev.	Min	Max
<i>TargetAssets</i>	Pre-deal consolidated target total assets in the last year before the effective M&A date (natural logarithm)	SDC; CNA; CG	52,809	18.118	2.297	11.513	28.060
<i>TargetROA</i>	Pre-deal consolidated target pre-tax income in the last year before the effective M&A date divided by pre-deal consolidated target total assets in the last year before the effective M&A date	SDC; CNA; CG	52,809	-0.036	0.844	-11.800	18.000
<i>TargetSales</i>	Pre-deal consolidated target net sales in the last year before the effective M&A date (natural logarithm)	SDC; CNA; CG	78,495	17.667	2.320	6.908	26.216
<i>TargetEBITDA</i>	Pre-deal consolidated target EBITDA (earnings before interest, taxes, depreciation, and amortization) in the last year before the effective M&A date (natural logarithm)	SDC; CNA; CG	34,405	16.369	2.093	7.601	24.300

Note: Data on country fixed effects are not reported but are available upon request. 'TG' stands for Tax Guides; 'CBT' stands for Oxford University Centre for Business Taxation; 'SDC' stands for Thomson Financial SDC database; 'CNA' stands for Compustat North America database; 'CG' stands for Compustat Global database; 'BACI' stands for the BACI trade flow data set from Cepii which builds on the UN Comtrade data

Table 12 Supplemental regression results for candidate acquirer country fixed effects interacted with target-specific financial data

Regression (3) of Table 3	Regression (4) of Table 3	Regression (5) of Table 3	
<i>Australia*TargetAssets</i>	-0.1275** (0.0526)	<i>Australia*TargetSales</i> -0.1167*** (0.0417)	<i>Australia*TargetEBITDA</i> -0.1229* (0.0696)
<i>Austria*TargetAssets</i>	0.0927 (0.0960)	<i>Austria*TargetSales</i> 0.0242 (0.0851)	<i>Austria*TargetEBITDA</i> 0.2592** (0.1150)
<i>Belgium*TargetAssets</i>	0.0394 (0.0890)	<i>Belgium*TargetSales</i> -0.0256 (0.0693)	<i>Belgium*TargetEBITDA</i> 0.0561 (0.1021)
<i>Canada*TargetAssets</i>	-0.1606*** (0.0541)	<i>Canada*TargetSales</i> -0.1735*** (0.0380)	<i>Canada*TargetEBITDA</i> -0.1486** (0.0643)
<i>China*TargetAssets</i>	0.0502 (0.0579)	<i>China*TargetSales</i> -0.0781 (0.0507)	<i>China*TargetEBITDA</i> -0.0301 (0.1096)
<i>Denmark*TargetAssets</i>	0.0591 (0.1467)	<i>Denmark*TargetSales</i> 0.0749 (0.1215)	<i>Denmark*TargetEBITDA</i> 0.0275 (0.1813)
<i>Finland*TargetAssets</i>	-0.0130 (0.1863)	<i>Finland*TargetSales</i> -0.1980*** (0.0728)	<i>Finland*TargetEBITDA</i> 0.0561 (0.0490)
<i>France*TargetAssets</i>	0.1841*** (0.0477)	<i>France*TargetSales</i> 0.1561*** (0.0420)	<i>France*TargetEBITDA</i> 0.1999*** (0.0603)
<i>Germany*TargetAssets</i>	0.1779*** (0.0482)	<i>Germany*TargetSales</i> 0.1239*** (0.0479)	<i>Germany*TargetEBITDA</i> 0.2245*** (0.0636)
<i>HongKongSARChina*TargetAssets</i>	-0.0375 (0.0544)	<i>HongKongSARChina*TargetSales</i> -0.0809* (0.0477)	<i>HongKongSARChina*TargetEBITDA</i> -0.0597 (0.0725)
<i>India*TargetAssets</i>	-0.1437** (0.0591)	<i>India*TargetSales</i> -0.0593 (0.0369)	<i>India*TargetEBITDA</i> -0.3182*** (0.0755)
<i>Ireland*TargetAssets</i>	-0.1022** (0.0504)	<i>Ireland*TargetSales</i> -0.0565 (0.0410)	<i>Ireland*TargetEBITDA</i> -0.1737** (0.0714)
<i>Israel*TargetAssets</i>	-0.0013 (0.0810)	<i>Israel*TargetSales</i> -0.0859 (0.0572)	<i>Israel*TargetEBITDA</i> 0.0781 (0.1288)

Table 12 (continued)

Regression (3) of Table 3	Regression (4) of Table 3	Regression (5) of Table 3
<i>Italy*TargetAssets</i>	0.0162 (0.0585)	<i>Italy*TargetEBITDA</i> 0.0067 (0.0457)
<i>Japan*TargetAssets</i>	0.1112** (0.0461)	<i>Japan*TargetEBITDA</i> 0.1007** (0.0404)
<i>KoreaRep*TargetAssets</i>	0.0875 (0.1026)	<i>KoreaRep*TargetEBITDA</i> -0.0338 (0.0893)
<i>Malaysia*TargetAssets</i>	-0.1075 (0.1090)	<i>Malaysia*TargetEBITDA</i> -0.1171* (0.0707)
<i>Netherlands*TargetAssets</i>	0.1765*** (0.0504)	<i>Netherlands*TargetEBITDA</i> 0.0893* (0.0458)
<i>NewZealand*TargetAssets</i>	-0.0111 (0.1395)	<i>NewZealand*TargetEBITDA</i> 0.2038** (0.0951)
<i>Norway*TargetAssets</i>	-0.2134*** (0.0732)	<i>Norway*TargetEBITDA</i> -0.1773*** (0.0423)
<i>RussianFederation*TargetAssets</i>	0.0481 (0.2429)	<i>RussianFederation*TargetEBITDA</i> -0.1325 (0.1597)
<i>Singapore*TargetAssets</i>	-0.0009 (0.0640)	<i>Singapore*TargetEBITDA</i> -0.0877 (0.0580)
<i>Spain*TargetAssets</i>	0.2229*** (0.0759)	<i>Spain*TargetEBITDA</i> 0.1261** (0.0589)
<i>Sweden*TargetAssets</i>	0.3177*** (0.1215)	<i>Sweden*TargetEBITDA</i> -0.0665 (0.0901)
<i>Switzerland*TargetAssets</i>	0.1798*** (0.0563)	<i>Switzerland*TargetEBITDA</i> 0.0347 (0.0557)
		<i>Switzerland*TargetEBITDA</i> 0.1748** (0.0872)

Table 12 (continued)

Regression (3) of Table 3	Regression (4) of Table 3	Regression (5) of Table 3
<i>UnitedKingdom*TargetAssets</i>	<i>UnitedKingdom*TargetSales</i>	<i>UnitedKingdom*TargetEBITDA</i>
–0.0638 (0.0475)	–0.1709*** (0.0314)	–0.0150 (0.0577)
<i>Australia*TargetROA</i>		
0.0451 (0.1562)		
<i>Austria*TargetROA</i>		
–0.3821** (0.1873)		
<i>Belgium*TargetROA</i>		
0.0782 (0.3381)		
<i>Canada*TargetROA</i>		
0.0885 (0.2366)		
<i>China*TargetROA</i>		
–0.3323** (0.1653)		
<i>Denmark*TargetROA</i>		
0.3034 (0.2514)		
<i>Finland*TargetROA</i>		
0.4007*** (0.1818)		
<i>France*TargetROA</i>		
0.1699 (0.1596)		
<i>Germany*TargetROA</i>		
–0.3493** (0.1597)		
<i>HongKongSARChina*TargetROA</i>		
0.0771 (0.1329)		
<i>India*TargetROA</i>		
0.0564 (0.1776)		

Table 12 (continued)

Regression (3) of Table 3	Regression (4) of Table 3	Regression (5) of Table 3
<i>Ireland*TargetROA</i>	0.2417* (0.1374)	
<i>Israel*TargetROA</i>	-0.3429** (0.1377)	
<i>Italy*TargetROA</i>	-0.1279 (0.1952)	
<i>Japan*TargetROA</i>	0.4780*** (0.1482)	
<i>KoreaRep*TargetROA</i>	-0.3778** (0.1693)	
<i>Malaysia*TargetROA</i>	0.1243 (0.1701)	
<i>Netherlands*TargetROA</i>	0.3409 (0.2256)	
<i>NewZealand*TargetROA</i>	0.3107*** (0.1298)	
<i>Norway*TargetROA</i>	-0.0062 (0.1873)	
<i>RussianFederation*TargetROA</i>	0.1880 (0.3663)	
<i>Singapore*TargetROA</i>	-0.2435* (0.1407)	
<i>Spain*TargetROA</i>	0.1719 (0.2793)	

Table 12 (continued)

Regression (3) of Table 3	Regression (4) of Table 3	Regression (5) of Table 3
<i>Sweden*TargetROA</i>	7.1903** (3.2794)	
<i>Switzerland*TargetROA</i>	-0.2943* (0.1715)	
<i>UnitedKingdom*TargetROA</i>	0.2905** (0.1420)	

Note: Table reports supplemental results of Regressions (3), (4), and (5) of Table 3. In particular, the coefficient of the interaction between candidate acquirer country fixed effects with target-specific consolidated financial data (target total assets, target return on assets, target net sales, and target earnings before interest, taxes, depreciation, and amortization) are shown. In all regressions, the US represent the base category. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses

Table 13 Cross-border M&A sample (2002–2014) for analyzing effect of acquirer CFC rules on probability of being the *target* country (Sect. 4)

Country	CFC rule	Number of acquirers	Number of targets	Country	CFC rule	Number of acquirers	Number of targets
Australia	1	712	801	Japan	1	431	170
Austria	0	77	none	Korea, Rep.	1	162	153
Belarus	0	1	none	Lithuania	1	5	none
Belgium	0	123	197	Malaysia	0	178	174
Bermuda	0	56	none	Malta	0	5	none
Brazil	1	40	320	Mexico	1	54	270
British Virgin Islands	0	28	none	Netherlands	0	296	404
Bulgaria	0	1	none	New Zealand	1	92	141
Canada	1	1,824	594	Norway	1	130	260
Cayman Islands	0	17	none	Panama	0	5	none
Chile	0	19	none	Poland	0	25	170
China	1	271	897	Portugal	1	35	none
Croatia	0	1	none	Russian Federation	0	51	82
Cyprus	0	35	none	Seychelles	0	7	none
Czech Republic	0	7	none	Singapore	0	416	290
Denmark	1	118	35	Slovak Republic	0	2	none
Estonia	0	1	none	Slovenia	0	5	none
Finland	1	112	44	South Africa	1	58	156
France	1	490	708	Spain	1	239	369
Germany	1	433	951	Sweden	1	365	none
Greece	1	17	none	Switzerland	0	268	240
Hong Kong SAR, China	0	487	377	Taiwan, China	0	90	none
Hungary	1	7	none	Turkey	1	17	none
Iceland	1	38	none	Ukraine	0	8	none
India	0	295	227	UK	1	2,023	1,084

Table 13 (continued)

Country	CFC rule	Number of acquirers	Number of targets	Country	CFC rule	Number of acquirers	Number of targets
Ireland	0	253	181	USA	1	2,647	3,818
Israel	1	172	none				
Italy	1	198	334	Total		13,447	13,447

Note: This table shows the number of acquirer ultimate parents and targets per country in our cross-border M&A sample to investigate Hypothesis 2. In this context, cross-border M&As are defined as acquirer ultimate parent and target residing in different countries; the direct acquirer and acquirer ultimate parent reside in the same country. To keep the mixed logit regressions computationally feasible, the set of considered candidate target countries is restricted as outlined in Sect. 3. In this table, CFC rule takes the value one, if the acquirer country has implemented CFC rules in 2014, and zero otherwise

Table 14 Definition, data sources and summary statistics of variables for analyzing effect of acquirer CFC rules on probability of being *target* country (Sect. 4)

Variable	Definition	Data source	Obs.	Mean	Std. Dev.	Min	Max
CFC^{dummy}	Binary dummy variable coded one if target country STR is smaller than acquirer country's low-tax rate threshold of CFC rule or acquirer country applies CFC rules without a low-tax rate threshold, and 0 otherwise	TG	317,444	0.345	0.475	0	1
CFC^{diff}	Difference between acquirer country STR and target country STR if target country STR is smaller than acquirer country's low-tax rate threshold of CFC rule or acquirer country applies CFC rules without a low-tax rate threshold, and 0 otherwise	TG	317,444	0.037	0.063	0.000	0.284
$CFC^{diffEATR}$	Difference between acquirer country STR and target country STR if target country EATR is smaller than acquirer country's low-tax rate threshold of the CFC rule or acquirer country applies CFC rules without a low-tax rate threshold, and 0 otherwise	TG; CBT	317,444	0.031	0.057	-0.033	0.284
$CFC^{diffEEA}$	Same as CFC^{diff} ; however, set to zero if acquirer and target country are both EEA member states and M&A year is after 2006	TG	317,444	0.035	0.062	0.000	0.284
$CFC^{database}$	See expression 7.	TG	317,444	0.305	0.058	0.125	0.409
$CFC^{nonprofitable}$	Same as CFC^{diff} ; however, for non-profitable targets set to zero	TG; SDC; CNA; CG	53,270	0.026	0.057	0.000	0.284
$CFC^{non_profitable}$	Same as CFC^{diff} ; however, for profitable targets set to zero	TG; SDC; CNA; CG	53,270	0.013	0.042	0.000	0.277
STR	STR in candidate target country, including typical local taxes	TG	317,444	0.287	0.071	0.125	0.409
GDP per capita	GDP per capita in candidate target country (natural logarithm)	World Bank	317,444	10.267	0.687	7.942	11.284
GDP growth	Growth of GDP in candidate target country (in %)	World Bank	317,444	3.221	3.206	-7.821	15.240

Table 14 (continued)

Variable	Definition	Data source	Obs.	Mean	Std. Dev.	Min	Max
<i>Stock market capitalization per GDP</i>	Stock market capitalization of listed domestic firms in candidate target country (in % of GDP)	World Bank	317,444	124.1	178.4	17.020	1,254.5
<i>Size of private credit market</i>	Domestic credit to private sector in candidate target country (in % of GDP)	World Bank	317,444	109.5	47.091	13.353	233.4
<i>Distance</i>	Simple distance (in km) between most populated cities of acquirer and candidate target country (natural logarithm)	Mayer and Zignago (2011)	317,444	8.609	1.046	5.153	9.883
<i>Common language</i>	Common language index between acquirer and candidate target country (0 (low similarity) to 1 (high similarity))	Melitz and Toubal (2014)	317,444	0.235	0.212	0.000	0.991
<i>Past colonial relationships</i>	Binary dummy variable coded one if acquirer and candidate target country were ever in a colonial relationship, and 0 otherwise	Mayer and Zignago (2011)	317,444	0.103	0.304	0	1
<i>Common legal system</i>	Binary dummy variable coded one if legal system of acquirer and candidate target country have common legal origins, and 0 otherwise	Head et al. (2010)	317,444	0.329	0.470	0	1
<i>Corruption control</i>	Corruption control index of candidate target country (-3 (low control) to 3 (high control))	World Bank	317,444	1.072	0.976	-1.088	2.527
<i>Business start-up cost</i>	Cost of business start-up procedures in candidate target country (in % of GNI per capita)	World Bank	317,444	9.601	12.746	0.000	78.400
<i>Unemployment rate</i>	Unemployment rate in candidate target country (in % of total labor force)	World Bank	317,444	7.031	5.050	2.493	27.140
<i>Domestic firms</i>	Number of listed domestic firms in candidate target country (natural logarithm)	World Bank	317,444	6.426	1.232	3.714	8.638
<i>Business disclosure</i>	Business extent of disclosure index of in candidate target country (0 (less disclosure) to 10 (more disclosure))	World Bank	264,159	7.188	2.344	0	10

Table 14 (continued)

Variable	Definition	Data source	Obs.	Mean	Std. Dev.	Min	Max
<i>Trade flow</i>	Trade flow between candidate target and acquirer country in billion USD	BACIJ/Comtrade	315,242	4.643	28.596	-316,870	316,870
<i>AcquirerAssets</i>	Pre-deal consolidated acquirer total assets in the last year before the effective M&A date (natural logarithm)	SDC; CNA; CG	215,197	20.280	2.808	11.513	28.710
<i>AcquirerROA</i>	Pre-deal consolidated acquirer pre-tax income in the last year before the effective M&A date divided by pre-deal consolidated acquirer total assets in the last year before the effective M&A date	SDC; CNA; CG	215,197	0.035	5.999	-191.9	360.5
<i>AcquirerSales</i>	Pre-deal consolidated acquirer net sales in the last year before the effective M&A date (natural logarithm)	SDC; CNA; CG	206,176	19.979	2.732	8.219	26.834
<i>AcquirerEBITDA</i>	Pre-deal consolidated acquirer EBITDA (earnings before interest, taxes, depreciation, and amortization) in the last year before the effective M&A date (natural logarithm)	SDC; CNA; CG	180,202	18.594	2.365	9.210	24.723

Note: Data on country fixed effects are not reported but are available on request

Table 15 Supplemental regression results for candidate target country fixed effects interacted with acquirer-specific financial data

Regression (3) of Table 6	Regression (4) of Table 6	Regression (5) of Table 6	
<i>Australia*AcquirerAssets</i>	-0.0867*** (0.0194)	<i>Australia*AcquirerSales</i> -0.0542*** (0.0199)	<i>Australia*AcquirerEBITDA</i> -0.0819*** (0.0230)
<i>Belgium*AcquirerAssets</i>	-0.0737** (0.0302)	<i>Belgium*AcquirerSales</i> -0.0633** (0.0301)	<i>Belgium*AcquirerEBITDA</i> -0.1133*** (0.0389)
<i>Brazil*AcquirerAssets</i>	0.0321 (0.0301)	<i>Brazil*AcquirerSales</i> 0.1174*** (0.0373)	<i>Brazil*AcquirerEBITDA</i> 0.1288*** (0.0361)
<i>Canada*AcquirerAssets</i>	-0.1900*** (0.0244)	<i>Canada*AcquirerSales</i> -0.1707*** (0.0245)	<i>Canada*AcquirerEBITDA</i> -0.1391*** (0.0298)
<i>China*AcquirerAssets</i>	-0.1894*** (0.0212)	<i>China*AcquirerSales</i> -0.1697*** (0.0201)	<i>China*AcquirerEBITDA</i> -0.1784*** (0.0279)
<i>Denmark*AcquirerAssets</i>	-0.0393 (0.0754)	<i>Denmark*AcquirerSales</i> -0.0148 (0.0855)	<i>Denmark*AcquirerEBITDA</i> -0.0599 (0.0968)
<i>Finland*AcquirerAssets</i>	-0.0406 (0.0725)	<i>Finland*AcquirerSales</i> 0.0486 (0.0660)	<i>Finland*AcquirerEBITDA</i> -0.1441 (0.1023)
<i>France*AcquirerAssets</i>	-0.0699*** (0.0168)	<i>France*AcquirerSales</i> -0.0638*** (0.0174)	<i>France*AcquirerEBITDA</i> -0.1531*** (0.0216)
<i>Germany*AcquirerAssets</i>	-0.0929*** (0.0156)	<i>Germany*AcquirerSales</i> -0.0944*** (0.0160)	<i>Germany*AcquirerEBITDA</i> -0.1481*** (0.0196)
<i>HongKongSARChina*AcquirerAssets</i>	-0.2496*** (0.0345)	<i>HongKongSARChina*AcquirerSales</i> -0.2166*** (0.0277)	<i>HongKongSARChina*AcquirerEBITDA</i> -0.2576*** (0.0399)
<i>India*AcquirerAssets</i>	0.0178 (0.0334)	<i>India*AcquirerSales</i> 0.0684* (0.0371)	<i>India*AcquirerEBITDA</i> 0.0444 (0.0420)
<i>Ireland*AcquirerAssets</i>	-0.0215 (0.0349)	<i>Ireland*AcquirerSales</i> -0.0067 (0.0344)	<i>Ireland*AcquirerEBITDA</i> -0.0489 (0.0421)
<i>Italy*AcquirerAssets</i>	0.0233 (0.0291)	<i>Italy*AcquirerSales</i> 0.0241 (0.0300)	<i>Italy*AcquirerEBITDA</i> -0.0159 (0.0359)

Table 15 (continued)

Regression (3) of Table 6	Regression (4) of Table 6	Regression (5) of Table 6
<i>Japan*AcquirerAssets</i>	<i>Japan*AcquirerSales</i>	<i>Japan*AcquirerEBITDA</i>
0.0125 (0.0403)	-0.0390 (0.0456)	-0.0462 (0.0554)
<i>KoreaRep*AcquirerAssets</i>	<i>KoreaRep*AcquirerSales</i>	<i>KoreaRep*AcquirerEBITDA</i>
0.0294 (0.0504)	0.0095 (0.0494)	0.0552 (0.0542)
<i>Malaysia*AcquirerAssets</i>	<i>Malaysia*AcquirerSales</i>	<i>Malaysia*AcquirerEBITDA</i>
-0.2115*** (0.0426)	-0.1429*** (0.0421)	-0.2109*** (0.0558)
<i>Mexico*AcquirerAssets</i>	<i>Mexico*AcquirerSales</i>	<i>Mexico*AcquirerEBITDA</i>
-0.3658*** (0.0316)	-0.1508*** (0.0437)	-0.0526 (0.0550)
<i>Netherlands*AcquirerAssets</i>	<i>Netherlands*AcquirerSales</i>	<i>Netherlands*AcquirerEBITDA</i>
-0.0799*** (0.0209)	-0.0567*** (0.0215)	-0.1291*** (0.0259)
<i>NewZealand*AcquirerAssets</i>	<i>NewZealand*AcquirerSales</i>	<i>NewZealand*AcquirerEBITDA</i>
-0.1727*** (0.0307)	-0.1197*** (0.0266)	-0.3288*** (0.0381)
<i>Norway*AcquirerAssets</i>	<i>Norway*AcquirerSales</i>	<i>Norway*AcquirerEBITDA</i>
-0.1155*** (0.0273)	-0.0915*** (0.0262)	-0.1021*** (0.0340)
<i>Poland*AcquirerAssets</i>	<i>Poland*AcquirerSales</i>	<i>Poland*AcquirerEBITDA</i>
-0.0356 (0.0452)	-0.0602 (0.0441)	-0.0928* (0.0500)
<i>RussianFederation*AcquirerAssets</i>	<i>RussianFederation*AcquirerSales</i>	<i>RussianFederation*AcquirerEBITDA</i>
-0.0841 (0.0558)	-0.1421** (0.0607)	-0.0242 (0.0884)
<i>Singapore*AcquirerAssets</i>	<i>Singapore*AcquirerSales</i>	<i>Singapore*AcquirerEBITDA</i>
-0.1589*** (0.0315)	-0.1096*** (0.0268)	-0.1836*** (0.0356)
<i>SouthAfrica*AcquirerAssets</i>	<i>SouthAfrica*AcquirerSales</i>	<i>SouthAfrica*AcquirerEBITDA</i>
-0.1952*** (0.0376)	-0.1524*** (0.0371)	-0.1421*** (0.0543)
<i>Spain*AcquirerAssets</i>	<i>Spain*AcquirerSales</i>	<i>Spain*AcquirerEBITDA</i>
-0.0371 (0.0317)	-0.0328 (0.0312)	-0.0454 (0.0358)

Table 15 (continued)

Regression (3) of Table 6	Regression (4) of Table 6		Regression (5) of Table 6	
<i>Switzerland*AcquirerAssets</i>	-0.0841 *** (0.0264)	<i>Switzerland*AcquirerSales</i>	-0.0741 *** (0.0285)	<i>Switzerland*AcquirerEBITDA</i> -0.0619* (0.0350)
<i>UnitedKingdom*AcquirerAssets</i>	-0.0884 *** (0.0174)	<i>UnitedKingdom*AcquirerSales</i>	-0.0762 *** (0.0179)	<i>UnitedKingdom*AcquirerEBITDA</i> -0.1113 *** (0.0214)
<i>Australia*AcquirerROA</i>	-0.0370 (0.0295)			
<i>Belgium*AcquirerROA</i>	0.0158 *** (0.0057)			
<i>Brazil*AcquirerROA</i>	-0.0375 (0.0277)			
<i>Canada*AcquirerROA</i>	-0.0413 (0.0390)			
<i>China*AcquirerROA</i>	-0.0043 (0.0112)			
<i>Denmark*AcquirerROA</i>	0.0424 (0.5075)			
<i>Finland*AcquirerROA</i>	-0.1937 (0.1496)			
<i>France*AcquirerROA</i>	0.0021 (0.0058)			
<i>Germany*AcquirerROA</i>	0.0108 *** (0.0053)			
<i>HongKongSARChina*AcquirerROA</i>	-0.0648* (0.0355)			

Table 15 (continued)

Regression (3) of Table 6	Regression (4) of Table 6	Regression (5) of Table 6
<i>India*AcquirerROA</i>	-0.0484 (0.0374)	
<i>Ireland*AcquirerROA</i>	-0.0134 (0.0453)	
<i>Italy*AcquirerROA</i>	-0.0068 (0.0254)	
<i>Japan*AcquirerROA</i>	-0.0642* (0.0346)	
<i>KoreaRep*AcquirerROA</i>	-0.0577* (0.0337)	
<i>Malaysia*AcquirerROA</i>	0.0007 (0.0079)	
<i>Mexico*AcquirerROA</i>	-0.0010 (0.0081)	
<i>Netherlands*AcquirerROA</i>	-0.0154 (0.0531)	
<i>NewZealand*AcquirerROA</i>	0.0195 (0.0137)	
<i>Norway*AcquirerROA</i>	-0.0151 (0.0344)	
<i>Poland*AcquirerROA</i>	-0.0394 (0.0410)	
<i>RussianFederation*AcquirerROA</i>	-0.0564* (0.0339)	

Table 15 (continued)

Regression (3) of Table 6	Regression (4) of Table 6	Regression (5) of Table 6
<i>Singapore*AcquirerROA</i>	−0.0539 (0.0349)	
<i>SouthAfrica*AcquirerROA</i>	0.0006 (0.0076)	
<i>Spain*AcquirerROA</i>	−0.0365 (0.0386)	
<i>Switzerland*AcquirerROA</i>	0.0027 (0.0058)	
<i>UnitedKingdom*AcquirerROA</i>	−0.0098 (0.0196)	

Note: Table reports supplemental results of Regressions (3), (4), and (5) of Table 6. In particular, the coefficient of the interaction between candidate target country fixed effects with acquirer-specific consolidated financial data (acquirer total assets, acquirer return on assets, acquirer net sales, and acquirer earnings before interest, taxes, depreciation, and amortization) are shown. In all regressions, the US represent the base category. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses

Table 16 Four-year time window regressions of acquirer CFC rule effect on probability of being the acquirer country

Variables	(1) 2004	(2) 2005	(3) 2006	(4) 2007	(5) 2008	(6) 2009	(7) 2010	(8) 2011	(9) 2012	(10) 2013
<i>CFC^{diffEEA}</i>	-3.4839*** (0.6152)	-2.9931*** (0.6062)	-2.3048*** (0.5238)	-1.9105*** (0.5244)	-1.3317*** (0.5670)	-1.0918* (0.5988)	-0.0472 (0.6659)	0.4593 (0.6875)	0.5502 (0.6903)	1.1242* (0.6242)
<i>STR</i>	-0.4978 (2.0880)	1.0709 (2.3008)	-1.8303 (1.8513)	-3.4158*** (1.3378)	-3.1744*** (1.3291)	-3.2853*** (1.4526)	12.7537*** (0.8636)	-6.2966 (4.6053)	-6.2665 (4.2572)	-3.3593 (4.0877)
<i>Exemption method</i>	0.6447*** (0.2296)	1.8715*** (0.5116)	-4.0169*** (0.3344)	-4.3001*** (0.2610)	0.5546*** (0.1897)	0.6342*** (0.1644)	0.2733* (0.1484)	-4.1170*** (0.8584)	-3.8534*** (0.9171)	-3.5216*** (0.9007)
<i>GDP per capita</i>	1.4181 (1.4071)	1.6003 (1.1787)	1.7946* (1.0198)	2.9565*** (0.8061)	3.7128*** (0.7998)	2.0005*** (0.6678)	-0.6089* (0.3339)	0.2516 (0.8895)	-0.9324 (1.0653)	1.6982 (1.0667)
<i>GDP growth</i>	-0.0613** (0.0271)	-0.0233 (0.0248)	0.0364 (0.0271)	-0.0166 (0.0162)	-0.0704*** (0.0155)	-0.0267** (0.0127)	-0.0046 (0.0126)	-0.0166 (0.0124)	-0.0031 (0.0171)	0.0015 (0.0212)
<i>Stock market size</i>	0.0004 (0.0013)	-0.0006 (0.0007)	-0.0001 (0.0004)	0.0000 (0.0003)	0.0006* (0.0003)	0.0006* (0.0003)	0.0006 (0.0004)	0.0012 (0.0008)	0.0020** (0.0008)	0.0024** (0.0010)
<i>Private Credit</i>	0.0074** (0.0034)	0.0017 (0.0032)	-0.0001 (0.0012)	-0.0007 (0.0010)	-0.0013 (0.0012)	-0.0027 (0.0023)	0.0067*** (0.0013)	-0.0030 (0.0031)	0.0080* (0.0042)	0.0023 (0.0037)
<i>Distance</i>	-0.6057*** (0.0213)	-0.5731*** (0.0197)	-0.5829*** (0.0179)	-0.5688*** (0.0178)	-0.5566*** (0.0188)	-0.5551*** (0.0213)	-0.5005*** (0.0239)	-0.5002*** (0.0271)	-0.4973*** (0.0276)	-0.4761*** (0.0267)
<i>Common language</i>	1.7418*** (0.1234)	1.6772*** (0.1168)	1.6358*** (0.1072)	1.6154*** (0.1036)	1.6032*** (0.1053)	1.8135*** (0.1087)	2.1025*** (0.1195)	2.2687*** (0.1303)	2.5081*** (0.1284)	2.4864*** (0.1269)
<i>Colonial relationship</i>	0.2901*** (0.0642)	0.1875*** (0.0620)	0.1859*** (0.0567)	0.1522*** (0.0561)	0.1634*** (0.0598)	0.2341*** (0.0644)	0.3482*** (0.0720)	0.4310*** (0.0808)	0.3530*** (0.0806)	0.3289*** (0.0799)
<i>Common legal system</i>	0.1759*** (0.0498)	0.2131*** (0.0473)	0.2269*** (0.0436)	0.1869*** (0.0422)	0.1883*** (0.0425)	0.1027** (0.0437)	0.0420 (0.0465)	0.0523 (0.0482)	-0.0163 (0.0491)	-0.0364 (0.0487)
Observations	98,811	110,109	127,307	131,664	116,621	100,234	77,285	62,263	62,617	63,087

Table 16 (continued)

Variables	(1) 2004	(2) 2005	(3) 2006	(4) 2007	(5) 2008	(6) 2009	(7) 2010	(8) 2011	(9) 2012	(10) 2013
Acq country & tar country & acq firm & year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Log-likelihood	-9640	-10855	-12926	-13804	-12403	-10858	-8535	-6935	-6886	-6906

Note: The table shows regressions of probability of being the acquirer country on (potential) CFC rule application; see Expression 2. For each deal, the dependent variable equals one if country i is the actual acquirer's country of origin, and zero if country h is a counterfactual acquirer country. The temporal development of the variable of interest is illustrated in Fig. 4. For variable definitions and data sources, see Table 11. The country-specific control variables stand for the acquirer country. Only cross-border M&A where the direct acquirer country is equal to the acquirer ultimate parent country are considered. All regressions control for acquirer country fixed effects, which are available upon request, and are estimated by a mixed logit model. The variables of interest follow a random distribution. One four-year time window regression includes M&A observations of the two preceding year and the one consecutive year; thus, years 2002, 2003 and 2014 are not included in this comparison table. All regressions consider potential non-application of CFC rules within the EEA. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses

Table 17 Four-year time window regressions of acquirer CFC rule effect on the probability of being the *target* country

Variables	(1) 2004	(2) 2005	(3) 2006	(4) 2007	(5) 2008	(6) 2009	(7) 2010	(8) 2011	(9) 2012	(10) 2013
<i>CFC^{dHFEA}</i>	-7.1065*** (1.1316)	-6.0397*** (0.9243)	-4.7805*** (0.8433)	-3.3634*** (0.8520)	-2.6575*** (0.8927)	-1.6310* (0.8973)	-1.9116** (0.9655)	-2.1190** (0.9958)	-2.3283** (0.9548)	-2.2172** (0.9266)
<i>STR</i>	2.9780 (3.0300)	-1.7544 (2.4684)	-0.0384 (2.5108)	1.4070 (1.2069)	2.9365** (1.2690)	3.9370*** (1.2685)	-8.5438 (5.2338)	-4.5135 (6.7570)	-6.6024 (5.0200)	2.3693 (6.1847)
<i>GDP per capita</i>	-3.3607** (1.3941)	-1.2965 (0.7999)	-0.9867 (0.7686)	0.5056 (0.6599)	2.0542** (0.8058)	2.3346*** (0.8112)	0.5214 (0.8814)	-1.5464* (0.8532)	0.2708 (0.9527)	-1.3527 (1.0582)
<i>GDP growth</i>	0.0701** (0.0355)	0.0361 (0.0242)	-0.0014 (0.0252)	0.0172 (0.0177)	0.0133 (0.0166)	0.0131 (0.0124)	0.0240* (0.0124)	0.0152 (0.0132)	0.0216 (0.0175)	0.0435*** (0.0221)
<i>Stock market size</i>	-0.0010 (0.0026)	0.0004 (0.0006)	-0.0001 (0.0003)	-0.0001 (0.0003)	0.0000 (0.0003)	0.0001 (0.0004)	0.0003 (0.0005)	0.0003 (0.0011)	-0.0006 (0.0010)	-0.0015 (0.0012)
<i>Private Credit</i>	0.0034 (0.0066)	0.0024 (0.0033)	-0.0035** (0.0016)	-0.0035*** (0.0014)	-0.0008 (0.0014)	0.0032 (0.0025)	-0.0019 (0.0031)	-0.0075** (0.0036)	-0.0149*** (0.0048)	-0.0016 (0.0043)
<i>Distance</i>	-0.6223*** (0.0244)	-0.6059*** (0.0198)	-0.6161*** (0.0180)	-0.5897*** (0.0174)	-0.5760*** (0.0178)	-0.5717*** (0.0187)	-0.5330*** (0.0201)	-0.5666*** (0.0216)	-0.5449*** (0.0217)	-0.5300*** (0.0219)
<i>Common language</i>	1.8422*** (0.1391)	1.7226*** (0.1161)	1.6443*** (0.1064)	1.6134*** (0.1020)	1.5529*** (0.1025)	1.6895*** (0.1035)	1.8920*** (0.1102)	1.9669*** (0.1161)	2.2588*** (0.1155)	2.4112*** (0.1171)
<i>Colonial relationship</i>	0.3701*** (0.0749)	0.3221*** (0.0623)	0.3211*** (0.0570)	0.2843*** (0.0556)	0.2887*** (0.0577)	0.3047*** (0.0608)	0.2926*** (0.0671)	0.3103*** (0.0751)	0.2293*** (0.0766)	0.1905*** (0.0784)
<i>Common legal system</i>	0.1272** (0.0594)	0.1727*** (0.0488)	0.1776*** (0.0449)	0.1390*** (0.0429)	0.1351*** (0.0425)	0.0220 (0.0438)	-0.0352 (0.0458)	-0.0309 (0.0480)	-0.0782 (0.0490)	-0.0574 (0.0494)
<i>Corruption</i>	-0.1919 (0.2939)	0.1023 (0.1732)	0.0844 (0.1708)	0.3196 (0.2362)	0.2502 (0.3065)	0.5132 (0.3282)	0.5423* (0.3170)	0.1277 (0.3293)	-0.3477 (0.2944)	0.0839 (0.2498)
<i>Business startup cost</i>	0.0028 (0.0228)	-0.0012 (0.0088)	-0.0081 (0.0082)	-0.0213* (0.0128)	-0.0334 (0.0235)	-0.0180 (0.0127)	-0.0175* (0.0093)	-0.0042 (0.0119)	0.0068 (0.0177)	0.0077 (0.0102)

Table 17 (continued)

Variables	(1) 2004	(2) 2005	(3) 2006	(4) 2007	(5) 2008	(6) 2009	(7) 2010	(8) 2011	(9) 2012	(10) 2013
<i>Unemployment rate</i>	0.0024 (0.0671)	-0.0402 (0.0332)	-0.0066 (0.0286)	0.0293 (0.0241)	0.0253 (0.0168)	0.0202 (0.0159)	-0.0057 (0.0206)	-0.0807** (0.0328)	-0.0545* (0.0321)	-0.0048 (0.0298)
<i>Domestic firms</i>	1.1339** (0.4586)	0.3549 (0.3263)	-0.2299 (0.3040)	-0.3502 (0.3065)	-0.3145 (0.3317)	-0.1094 (0.4210)	-0.0804 (0.3606)	0.1052 (0.2715)	0.0301 (0.2417)	0.3131 (0.2264)
Observations	83,418	119,399	138,156	144,279	132,496	118,118	97,501	82,440	81,975	81,149
Acq country & tar country & tar firm & year FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Log-likelihood	-7771	-11308	-13211	-13933	-12906	-11673	-9823	-8397	-8385	-8185

Acknowledgements The authors gratefully acknowledge the constructive comments and suggestions from the Editor, Ron Davies, three anonymous referees, Lisa De Simone, Michael Devereux, Peter Eppinger, James Hines, Martin Jacob, Patrick Kline, Rebecca Lester, Edward Maydew, Maximilian Muller, Daniel Reck, Martin Ruf, Ulrich Schreiber, Martin Simmler, Johannes Voget, Alfons Weichenrieder, Hong Il Yoo, Gabriel Zucman, seminar participants at Stanford University, the University of North Carolina at Chapel Hill, Mannheim University, Tuebingen University, participants at the EAA Annual Congress 2017, OUC Conference 2018, CFC legislation conference by WU Vienna 2019, and the Annual Meeting of the Austrian Economic Association NOeG 2020. Finally, we thank for support by the German Research Foundation (DFG - Deutsche Forschungsgemeinschaft) and the bwHPC. Any errors, however, remain the responsibility of the authors.

Funding Open Access funding enabled and organized by Projekt DEAL.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Altshuler, R., & Hubbard, R. G. (2003). The effect of the tax reform act of 1986 on the location of assets in financial services firms. *Journal of Public Economics*, 87(1), 109–127.
- Arulampalam, W., Devereux, M., & Liberini, F. (2019). Taxes and the location of targets. *Journal of Public Economics*, 176, 161–178. <https://doi.org/10.1016/j.jpubeco.2019.05.005>
- Ayers, B. C., Lefanowicz, C. E., & Robinson, J. R. (2003). Shareholder taxes in acquisition premiums: The effect of capital gains taxation. *The Journal of Finance*, 58(6), 2783–2801.
- Ayers, B., Lefanowicz, C., & Robinson, J. (2007). Capital gains taxes and acquisition activity: Evidence of the lock-in effect. *Contemporary Accounting Research*, 24(2), 315–344.
- Becker, J., & Fuest, C. (2010). Taxing foreign profits with international mergers and acquisitions. *International Economic Review*, 51(1), 171–186.
- Becker, J., & Fuest, C. (2011). Source versus residence based taxation with international mergers and acquisitions. *Journal of Public Economics*, 95(1–2), 28–40.
- Becker, J., & Riedel, N. (2012). Cross-border tax effects on affiliate investment-Evidence from European multinationals. *European Economic Review*, 56(3), 436–450.
- Behrendt, S., Wamser, G. (2018). Tax-response heterogeneity and the effects of double taxation treaties on the location choices of multinational firms. CESifo Working Paper Series (6869).
- Bird, A., Edwards, A., & Shevlin, T. (2017). Does U.S. foreign earnings lockout advantage foreign acquirers? *Journal of Accounting and Economics*, 64(1), 150–166.
- Bussy, A. (2020). Corporate tax evasion: Evidence from international trade. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3607016>
- Casi, E., Spengel, C., & Stage, B. M. B. (2020). Cross-border tax evasion after the common reporting standard: Game over? *Journal of Public Economics*, 190, 104240. <https://doi.org/10.1016/j.jpubeco.2020.104240>
- Clifford, S. (2019). Taxing multinationals beyond borders: Financial and locational responses to CFC rules. *Journal of Public Economics*, 173, 44–71. <https://doi.org/10.1016/j.jpubeco.2019.01.010>
- European Council. (2016). Laying Down Rules Against Tax Avoidance Practices that Directly Affect the Functioning of the Internal Market.
- Davies, R. B., Desbordes, R., & Ray, A. (2018). Greenfield versus merger and acquisition FDI: Same wine, different bottles? *Canadian Journal of Economics*, 51(4), 1151–1190. <https://doi.org/10.1111/caje.12353>.

- Davies, R. B., Siedschlag, I., & Studnicka, Z. (2021). The impact of taxes on the extensive and intensive margins of FDI. *International Tax and Public Finance*, 28(2), 434–464. <https://doi.org/10.1007/s10797-020-09640-3>
- Deloitte. (2015). *Guide to Controlled Foreign Company Regimes*. <https://www2.deloitte.com/al/en/pages/tax/articles/guide-to-controlled-foreign-company-regimes.html>
- De Simone, L., Klassen, K. J., & Seidman, J. K. (2017). Unprofitable affiliates and income shifting behavior. *The Accounting Review*, 92(3), 113–136.
- Dharmapala, D., & Riedel, N. (2013). Earnings shocks and tax-motivated income-shifting: Evidence from European multinationals. *Journal of Public Economics*, 97, 95–107.
- Di Giovanni, J. (2005). What drives capital flows? The case of cross-border M&A activity and financial deepening. *Journal of International Economics*, 65(1), 127–149.
- Dreier, D., Weeks, G. (2018). New Tax Law May Result in Additional Taxes for Certain US Persons who Directly or Indirectly Own Equity in a Foreign Corporation. <https://www.whitecase.com/publications/alert/new-tax-law-may-result-additional-taxes-certain-us-persons-who-directly-or>.
- Dyrend, S. D., Hanlon, M., Maydew, E. L., & Thornock, J. R. (2017). Changes in corporate effective tax rates over the past 25 years. *Journal of Financial Economics*, 124(3), 441–463.
- Edwards, A., Kravet, T., & Wilson, R. (2016). Trapped Cash and the Profitability of Foreign Acquisitions. *Contemporary Accounting Research*, 33(1), 44–77.
- Egger, P., & Wamser, G. (2015). The impact of controlled foreign company legislation on real investments abroad. A multi-dimensional regression discontinuity design. *Journal of Public Economics*, 129, 77–91.
- Elschner, C., Hardeck, I., & Max, M. (2017). *Lobbying on the BEPS Project?* SSRN Electronic Journal: Assessing the Influence of Different Interest Groups.
- Ernst & Young. (2004–2016). *Worldwide Corporate Tax Guides*. <http://www.ey.com/gl/en/services/tax/global-tax-guide-archive>.
- Feld, L., & Heckemeyer, J. (2011). FDI and taxation: A meta-study. *Journal of Economic Surveys*, 25(2), 233–272.
- Feld, L., Ruf, M., Scheuring, U., Schreiber, U., & Voget, J. (2016). Repatriation taxes and outbound M&As. *Journal of Public Economics*, 139, 13–27.
- Gilmour, S. (2018). *South Africa 2018 budget: international tax proposals*. <http://www.internationaltaxreview.com/Article/3795544/South-Africa-2018-budget-international-tax-proposals.html>.
- Grubert, H. (2012). Foreign taxes and the growing share of U.S. Multinational Company Income Abroad: Profits, not Sales, are being globalized. *National Tax Journal*, 65(2), 247–282.
- Grubert, H., Altshuler, R. (2006). Corporate taxes in the world economy - reforming the taxation of cross-border income.
- Guenther, D. A., Matsunaga, S. R., & Williams, B. M. (2017). Is tax avoidance related to firm risk? *The Accounting Review*, 92(1), 115–136.
- Hanlon, M., Lester, R., & Verdi, R. (2015). The effect of repatriation tax costs on U.S. multinational investment. *Journal of Financial Economics*, 116(1), 179–196.
- Hebous, S., Ruf, M., & Weichenrieder, A. (2011). The effects of taxation on the location decision of multinational firms: M&A vs. *Greenfield Investments*. *National Tax Journal*, 64(3), 817–838.
- Helpman, E. (2014). Foreign trade and investment: Firm-level perspectives. *Economica*, 81(321), 1–14.
- Herger, N., Kotsogiannis, C., & McCorriston, S. (2016). Multiple taxes and alternative forms of FDI: Evidence from cross-border acquisitions. *International Tax and Public Finance*, 23(1), 82–113.
- Huizinga, H., & Laeven, L. (2008). International profit shifting within multinationals: A multi-country perspective. *Journal of Public Economics*, 92(5–6), 1164–1182.
- Huizinga, H., & Voget, J. (2009). International Taxation and the Direction and Volume of Cross-Border M&As. *The Journal of Finance*, 64(3), 1217–1249.
- Huizinga, H., Voget, J., & Wagner, W. (2012). Who bears the burden of international taxation? Evidence from cross-border M&As. *Journal of International Economics*, 88(1), 186–197.
- Huizinga, H., Voget, J., & Wagner, W. (2018). Capital gains taxation and the cost of capital: Evidence from unanticipated cross-border transfers of tax bases. *Journal of Financial Economics*, 129(2), 306–328.
- IBFD (2002–2016). *European Tax Handbook*.
- KPMG (2003–2018). *Corporate tax rates table*. <https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html>.
- Langenmayr, D., & Lester, R. (2018). Taxation and corporate risk-taking. *The Accounting Review*, 93(3), 237–266.

- Lewellen, K., & Robinson, L. (2013). Internal Ownership Structures of U.S. *Multinational Firms*. *SSRN Electronic Journal*.
- Markle, K. (2016). A comparison of the tax-motivated income shifting of multinationals in territorial and worldwide countries. *Contemporary Accounting Research*, 33(1), 7–43.
- Maydew, E. L. (1997). Tax-induced earnings management by firms with net operating losses. *Journal of Accounting Research*, 35(1), 83.
- Mazars (2015). Blog: BEPS- CFC - Let's Talk Tax. <http://blogs.mazars.com/letstalktax/2015/04/beps-cfc/>.
- Mitchell, M. L., & Mulherin, J. H. (1996). The impact of industry shocks on takeover and restructuring activity. *Journal of Financial Economics*, 41(2), 193–229.
- Mutti, J., & Grubert, H. (2009). The effect of taxes on royalties and the migration of intangible assets abroad. In *International Trade in Services and Intangibles in the Era of Globalization* (pp. 111–137).
- Nessa, M. L. (2017). Repatriation Tax Costs and U.S. Multinational Companies' Shareholder Payouts. *The Accounting Review*, 92(4), 217–241.
- OECD. (2015a). BEPS Action 3: Strengthening CFC rules: Comments received on Public Discussion draft. <https://www.oecd.org/tax/aggressive/public-comments-beps-action-3-strengthening-cfc-rules-part1.pdf>.
- OECD. (2015b). *Designing Effective Controlled Foreign Company Rules*. Action 3–2015 Final Report.
- OECD. (2015c). Public Consultation: Strengthening CFC Rules, 12. May 2015. <http://www.oecd.org/tax/aggressive/public-consultation-beps-action-3-strengthening-cfc-rules.htm>, OECD Conference Centre, Paris.
- OECD. (2016). BEPS Project Explanatory Statement. OECD. <https://doi.org/10.1787/9789264263437-en>
- Ohrn, E., & Seegert, N. (2019). The impact of investor-level taxation on mergers and acquisitions. *Journal of Public Economics*, 177, 104038. <https://doi.org/10.1016/j.jpubeco.2019.06.006>
- Parnes, A., Nussbaum, A.H., Gutwein, A., Hamilton, M.T., Corn, R.M., Hochenberg, M., Zelcer, A., Agatston, M.S., Semanski, K.R. (2018). Impact of Recent Tax Legislation on M&A Transactions. [https://www.proskauertaxtalks.com/2018/02/impact-of-recent-tax-legislation-on-ma-transactions/..](https://www.proskauertaxtalks.com/2018/02/impact-of-recent-tax-legislation-on-ma-transactions/)
- Picciotto, S. (2017). The G20 and the Base Erosion and Profit Shifting (BEPS) Project.
- Prettl, A. (2018). Profit Shifting & Controlled Foreign Corporation Rules the Thin Bridge between Corporate Tax Systems. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3102553>
- PwC (2015). How the amended CFC rules will work. <https://www.pwc.ru/en/tax-consulting-services/assets/legislation/tax-flash-report-2015-20-eng.pdf>.
- Rego, S. O. (2003). Tax-avoidance activities of U.S. multinational corporations. *Contemporary Accounting Research*, 20(4), 805–833.
- Ruf, M., & Weichenrieder, A. (2012). The Taxation of Passive Foreign Investment: lessons from German experience. *Canadian Journal of Economics*, 45(4), 1504–1528.
- Ruf, M., Weichenrieder, A. (2013). CFC Legislation, Passive Assets and the Impact of the ECJ's Cadbury-Schweppes Decision. CESifo Working Paper (4461).
- Schenkelberg, S. (2019). The cadbury schweppes judgment and its implications on profit shifting activities within Europe. *International Tax and Public Finance*, 27(1), 1–31. <https://doi.org/10.1007/s10797-019-09553-w>.
- Shaxson, N. (2015). Two new reports challenge the OECD's work on corporate tax cheating. <https://www.taxjustice.net/2015/05/04/two-new-reports-challenge-the-oecd-s-work-on-corporate-tax-cheating/>.
- Todtenhaupt, M., Voget, J., Feld, L. P., Ruf, M., & Schreiber, U. (2020). Taxing away M&A: Capital gains taxation and acquisition activity. *European Economic Review*, 128, 103505. <https://doi.org/10.1016/j.euroecorev.2020.103505>
- UNCTAD. (2020). *World Investment Report 2020: International Production Beyond the Pandemic*.
- Voget, J. (2011). Relocation of headquarters and international taxation. *Journal of Public Economics*, 95(9–10), 1067–1081.
- von Hagen, D., & Pönnighaus, F. N. (2017). International Taxation and M&A Prices. *SSRN Working Paper*.
- Wagman, P., Catalano, R., & Kravitz, A. (2018). Tax Reform Implications for U.S. *Businesses and Foreign Investments*. <https://corpgov.law.harvard.edu/2018/01/05/tax-reform-implications-for-u-s-businesses-and-foreign-investments/>.
- Weichenrieder, A. (2009). Profit shifting in the EU: Evidence from Germany. *International Tax and Public Finance*, 16(3), 281–297.

Xie, E., Reddy, K. S., & Liang, J. (2017). Country-specific determinants of cross-border mergers and acquisitions: A comprehensive review and future research directions. *Journal of World Business*, 52(2), 127–183.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.