

WHAT DO WE KNOW ABOUT THE TAX PLANNING OF GERMAN-BASED MULTINATIONAL FIRMS?

SHAFIK HEBOUS¹ AND
ALFONS WEICHENRIEDER²

Introduction

Amazon, Caterpillar, Google, and Starbucks are just a few examples of multinational firms that recently managed to make headlines with creative tax avoidance strategies.³ Abundant anecdotal evidence supports the result of rigorous research that confirm the existence of various forms of international tax planning by multinational firms.

While the above examples are all US-based firms, the increasing availability of administrative data for research purposes has enabled researchers to study not only the behavioural responses of US-based firms to taxation, but also those of European and other multinationals. For example, researchers have analysed European financial data such as Amadeus (from Bureau van Dijk), tax return data, and the German MiDi dataset. The MiDi is a confidential database available at the research centre of the *Deutsche Bundesbank* and it includes all German enterprises investing abroad and satisfying the reporting requirements (Lipponer 2011).

As shown in Figure 1, the German statutory corporate income tax rate has halved from 60 percent in 1981 to some 30 percent in 2014, although it remains above the simple OECD average. The survey of Leibrecht and Hochgatterer (2012) suggests that the pattern of declining corporate tax rates of OECD members is driven by tax competition between countries that compete for corporate tax base and foreign firms. In spite of declining

tax rates, the ratio of revenues from corporate income to GDP in Germany has been rather stable in the last few years at around two percent (five percent of total revenues). This stability of corporate tax revenues is, in part, due to an increase in the share of the incorporated sector (Fuest and Weichenrieder 2002).

Germany, like most developed countries except the US, uses an exemption system. In essence, this implies that the relatively high German rate on profits applies to German plants, but not to foreign investments abroad, leaving potential gains for tax planning. Indeed, taxation and tax differentials can affect multinational firms' decisions in various ways. What did we learn from recent studies on tax avoidance strategies by multinational firms in general, and on German multinationals in particular?

The location choice of FDI projects

Table 1 displays the top five locations of reported after-tax-profit generated by German affiliates abroad in 2012. China is at the top of the list with about €19 billion, followed by the Netherlands. In terms of total (tangible and intangible) assets, the top three locations are the US, the UK and China.

While taxation is just one of many country characteristics, international differences in tax systems affect location choices for new FDI projects. Empirical studies addressing this issue typically specify a discrete choice model to estimate how a change in taxes influences the probability of receiving a new FDI project. The analysis can rely on cross-section observations or on a panel structure allowing for controlling for unobserved time-invariant heterogeneity at the firm-level by using a parent-firm-fixed effect. However, in the panel analysis, the computation and interpretation of an average partial effect is not straightforward since predicted probabilities are estimated for each group as a whole, and not for individual observations. Büttner and Ruf (2007) use a fixed-effect logit model and find that the statutory corporate tax rate has a higher predictive power than the effective average tax rate.

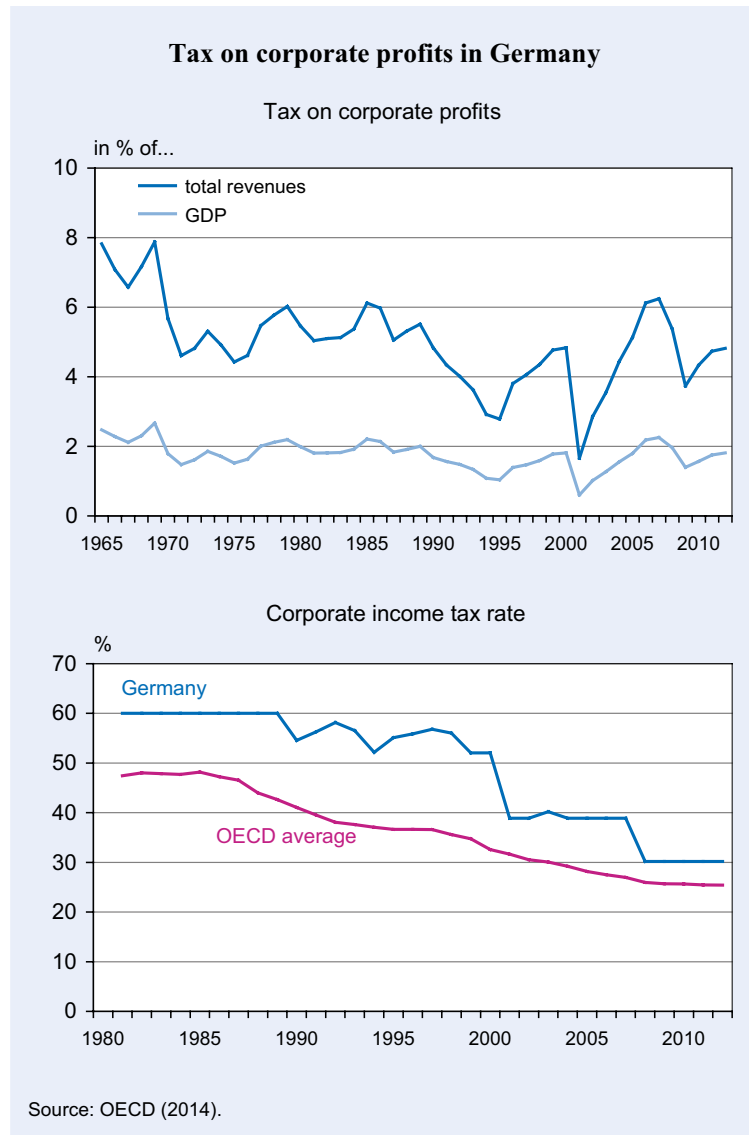


¹ Goethe University Frankfurt and CESifo.

² Goethe University Frankfurt and CESifo. Affiliated with the Vienna University of Economics and Business and the Ifo Institute.

³ See for example, Walsh (2014) and BBC (2013).

Figure 1



Investment in old capital, in the form of acquiring an already existing firm (M&A activities), may be expected to have a lower elasticity with respect to taxes than the establishment of new structures (Greenfield). The argument is that high taxes reduce the expected future cash flows of the firm and thus will, at least partially, be capitalised in the acquisition price. Typically, this is not a viable option in the case of Greenfield investments. Hebous, Ruf and Weichenrieder (2011) estimate a conditional logit model including all new outbound FDI projects for the years 2005–2007 and explicitly distinguishing between Greenfield and M&A investments. The evidence indicates that location decisions related to M&A investments are less sensitive to differences in statutory corporate income tax rates than location decisions related to Greenfield investments. The esti-

estimated elasticity suggests that an increase in the rate of ten percent reduces the probability of choosing a country to host a Greenfield investment by about 6.4 percent. However, the tax elasticity for M&A investments seems significantly smaller.

The above mentioned studies focus on the extensive margin of FDI, i.e., completely focusing on new FDI entries. A number of studies consider the effects of taxation on the intensive margin of FDI, i.e., the values of investments. This is related to the broader issue of the effects of the user cost of capital on domestic investment in general (not only FDI). Most of these studies are based on a panel of cross-countries. A recent example is Bond and Xing (2013). This study documents the significant reactions of capital stocks to changes in the user cost of capital in a panel of OECD members.

The ownership structure and holding companies

About 15 percent of outbound German FDI affiliates in 2012 are held via an intermediate company in a third country. For German investors, the Netherlands is the most important location of the so-called conduit entities. Other important locations are Switzerland and Hong Kong. By using several conduit entities, the ownership chain may become arbitrarily complicated (Mintz and Weichenrieder 2010, ch. 4).

Table 1

Top five locations of profits and assets of outbound German FDI

Rank	Country	Profit	Country	Fixed and intangible assets
1	China	18,900	US	199,000
2	The Netherlands	17,200	UK	47,400
3	US	15,800	China	45,800
4	Luxemburg	7,683	France	34,900
5	Austria	7,120	Austria	26,400

Source: MiDi Data. Numbers are in million Euros and correspond to 2012.

Table 2

Selected withholding tax rates applied by Germany

Investor	Withholding tax rate on dividends
Australia	15
Brazil	21.1
Canada	5
China	10
EU	0
India	10
Japan	15
Mauritius	5
New Zealand	15
Norway	0
Russia	5
Saudi Arabia	21.1
Singapore	5
South Africa	7.5
Switzerland	0
Turkey	15
United Arab Emirates	5
United States	0
Non-treaty countries	21.1

Note: Rates refer to cases in which an incorporated investor holds at least 25% of a German affiliate.

Source: Deloitte, Worldwide Corporate Tax Guide 2012; double tax treaties.

ident withholding taxes, other investors, like those in Australia, Brazil, or Japan, are subject to German dividend taxes in cases of direct participations.

Mintz and Weichenrieder (2010, ch. 4) study the pattern of treaty shopping and the tax incentives of establishing holding companies in the case of inward FDI in Germany. The findings indicate that foreign investors confronted with high German withholding taxes in the case of direct ownership are indeed more likely to own their German affiliates via third countries.⁴ Using MiDi

⁴ In addition, FDI affiliates with ultimate owners located in countries with credit systems are more likely to route their FDI to Germany through a third country.

data, Dreßler (2012) provides confirming evidence for such treaty shopping.

Financial structure

In most countries around the world, interest payments on loans are deductible from the corporate tax base, while dividends are not. There are an extensive number of studies that indicate a debt-bias in corporate financial structure that results from tax asymmetries. Evidence from German firms is cited by a large number of authors, including Hebous and Weichenrieder (2010), Fuest, Hebous and Riedel (2011), and Mintz and Weichenrieder (2010). When it comes to multinationals, intra-group loans can be a simple tax-sparing strategy. Affiliates in low-tax jurisdictions grant loans to group members located in high-tax countries. Hence, interest payments in high-tax countries are deductible from taxes, whereas interest earned on loans are taxed at lower rates.

However, despite a variety of estimates reported in the literature, as surveyed by Feld, Heckemeyer and Overesch (2013), the magnitude of the estimated elasticity of corporate debt with respect to the

tax rate tends to be moderate. For example, the results of Büttner and Wamser (2013) suggest that profit shifting by means of internal debt conducted by German firms, while statistically significant, is of limited importance. This finding is also in line with the survey of de Mooij and Ederveen (2008). Overall, most papers suggest that an increase in a country's corporate tax by ten percentage points will lead to an increase in the debt-to-asset ratio of foreign owned affiliates by two–three percentage points. A consensus has emerged from the empirical literature that there is significant debt shifting, but other tax planning instruments, including the transfer pricing strategies of affiliated companies, are more important for tax base shifting (e.g., Heckemeyer and Overesch 2013).

A few countries, notably Belgium and Italy, recently endorsed tax systems that offer Allowances for Corporate Equity (ACE). In addition to interest on debt, these systems also allow a deduction for the use of equity; and thereby reduce (or eliminate) tax incentives that favor debt over equity. Hebous and Ruf (2014) evaluate the effects of ACE on the leverage of German affiliates and find evidence that the introduction of ACE succeeded in lowering the debt ratio.

The literature on this topic is largely silent as regards the size of the social welfare costs engendered by distorting the financial structure. An attempt to address this issue is made by Weichenrieder and Klautke (2008). Back-of-the-envelope calculations suggest that a ten-percentage point difference between the corporate tax and the personal income tax may lead to yearly efficiency costs of around 0.1 percent of the invested capital. In addition, de Mooij (2012), among others, emphasizes that excessive levels of corporate debt, especially in the financial sector, can exacerbate the consequence of macroeconomic crises.

Location of intangibles, transfers pricing, and intra-firm trade flows

The UK has recently embraced an *Intellectual Property Box regime*. This is one example of policies offering reduced *effective* tax rates applied to income from patents, copyrights, and other similar sources of income such as trademarks. In July 2013, the current German finance minister, Wolfgang Schäuble, called for a ban on the patent box tax break offered by the UK, the Netherlands and some other EU members arguing that such tax breaks generate unfair competition over foreign investment.⁵

A number of studies based on European data provide evidence to support the hypothesis that firms tend to locate intangible assets in low tax jurisdictions (e.g., Karkinsky and Riedel 2012). However, Baumann, Knoll and Riedel (2014) suggest that the overwhelming majority of the R&D activity that a country may induce by giving preferential tax treatment to R&D is generated at the expense of other countries' research, instead of inducing additional R&D.

Hebous and Johannesen (2014) examine German data and find that international trade with certain services,

such as R&D related categories, is disproportionately higher when the German firm is present in a tax haven. This piece of evidence is based on flow variables in contrast to most available evidence from stock (balance sheet) variables.

A long-standing concern is the ability of multinational firms to set transfer prices on intra-company transactions that shift taxable profits to low-tax jurisdictions. While the strategic setting of transfer prices is not restricted to the trade in intangibles, it is obvious that the uniqueness of intangibles makes it particularly difficult for tax authorities to determine an arm's-length price, i.e., the hypothetical price that two unaffiliated companies would have agreed on; and empirical results confirm this view (Beer and Loerprick 2014).

Tax havens

About 12 percent of outbound German FDI affiliates are located in tax havens according to the list in Hines (2010). However, the term tax haven lacks a universal definition. While most tax-haven lists agree that the Cayman Islands is a tax haven, other countries, such as Ireland, appear only in selected lists (see Hebous (2014) for an overview).

What determines demand for tax haven locations? Hebous and Lipatov (2014) find that firms that are present in high tax countries or highly corrupt countries are more likely to own an affiliate in a tax haven. Secrecy is a distinctive characteristic that distinguishes a tax haven from simply being a low (or zero) tax country. Intuitively, concealment services are very relevant for personal tax evasion by the wealthy, but it is not completely clear why locating a member of a corporate group in a tax haven should be influenced by secrecy provision unless the motive is illegal, e.g., bribery related activities and obscure ownership structure for tax evasion purposes.

In its effort to counter offshore tax evasion, since 2008, Germany has signed a number of bilateral Tax Information Exchange Agreements (TIEAs) with jurisdictions such as Bermuda, Cayman Islands, Jersey, Liechtenstein, and Monaco. Braun and Weichenrieder (2014) suggest that the formation of TIEAs has had detrimental effects on the use of the respective jurisdictions by German multinationals when compared to other tax haven countries.

⁵ See for example Breidhardt (2013).

Shifting channels and firm heterogeneity

The design of anti-tax avoidance measures benefits from a sound understanding of how different types of firms employ different strategies and from a knowledge about the relative importance of the various tax-planning instruments for various industries. While there is scope for more research on comparing responses of firms to taxation, there are several contributions on this front. For instance, Heckemeyer and Overesch (2013) find that transfer pricing and licensing seem to be among the leading profit-shifting channels as compared to intra-company debt policy. Overesch and Wamser (2009) report that the reaction of vertically integrated FDI in the manufacturing sector to corporate taxation is more pronounced than that of horizontal FDI.

Certainly, international tax planning is not only limited to the aspects listed above. Corporate taxation can affect the additional margins of decisions and may trigger several other behavioural responses of firms. For example, Dreßler and Overesch (2013) use the MiDi data to study international differences in the treatment of losses. They find that, inter alia, a group-tax-regime gives incentives to offset current taxable profits with losses carried forward and minimize the overall tax bill.

While several studies examine the exact channel of international profit shifting, one route to provide indirect empirical evidence of profit shifting is to look directly at the reaction of reported corporate profits to international differences in corporate tax systems. Weichenrieder (2009) considers partially owned affiliates as a control group and reports that wholly owned German affiliates react more strongly to changes in the host country corporate taxes.

What are the costs of tax avoidance?

It is not straightforward to quantify the cost of tax avoidance. These tax strategies operate within the legal framework. Clearly, tax loopholes and the existence of tax havens cause an erosion of the tax base in non-haven countries. However, for example, Dharmapala (2008) stresses that tax planning can increase the efficiency of firms and alleviate the intensity of tax competition. It has been argued that institutions that allow a differentiated tax policy towards internationally mobile and immobile tax bases can increase welfare even for high-tax countries (Hong and Smart 2010; Keen 2001).

Anti-avoidance measures and German experiences

Controlled foreign companies (CFC) rules

According to CFC rules, passive income of a foreign affiliate (e.g., derived from the holding of bonds or lending activities) may be part of the taxable income of the German resident shareholders if it accrues to a German majority-owned corporation in a low-tax country. Ruf and Weichenrieder (2012) document evidence suggesting that German CFC rules are effective in limiting the relocation of passive investments by German affiliates.

While there is evidence that unilateral measures can help to restrict the tax planning of MNEs, in the EU several court rulings have covered the applicability of tax-avoidance measures. In its Cadbury-Schweppes decision of 12 September 2006, the European Court of Justice decided that British CFC rules implied a discrimination against investment in Ireland and a restriction of the freedom of establishment when applied with respect to affiliates in EU countries. Consequently, many EU countries had to change their CFC rules to make a distinction between EU and non-EU affiliates. The Cadbury-Schweppes case provides a nice opportunity to test for an asymmetric effect on the allocation of passive assets. Ruf and Weichenrieder (2014) show that the preferences of German multinational firms for locating passive investments in low tax countries within the EU have indeed significantly increased the following of the verdict as compared to locations outside the EU.

Thin capitalisation rules (TCR)

Thin capitalization rules place a limit of the deduction of interest payments from the corporate tax bill if the value of the loans is deemed excessive. Weichenrieder and Windischbauer (2008) discuss the evolution of the German TCR. The study exploits the 2001 reform of TCR that considered an interest payment as a dividend if the loans granted by an investor exceeded her share of the corporate equity by 50 percent. This requirement, however, did not apply to holding companies. The evidence suggests that the reform limited the attractiveness of intra-company loans for international debt shifting purposes, but at the same time may have increased the demand for holding companies as a tool to shift intra-company loans. Büttner et al. (2012) examine the MiDi data and find that German-owned affiliates abroad reduced their leverage in response to tight TCR in the host country. Again, this provides evidence that unilat-

eral measures can be effective in curbing multinationals' tax-planning activities.

Transfer pricing rules

In recent years, several countries have tried to restrict the strategic setting of international transfer prices and Germany is no exception. Again, empirical research suggests that countries can reduce profit shifting by implementing anti-tax avoidance measures: the effect that changes in corporate tax have on the reported profitability of foreign owned affiliates seems to be smaller in countries with strict documentation requirements for transfer prices (Beer and Loeprick 2014).

European and international actions

Most loopholes are rooted in asymmetric national rules. Although unilateral anti-avoidance measures can be successful to some extent, the highly integrated global economy may require multilateral actions to combat tax avoidance and tax evasion practices, particularly when anti-avoidance measures have positive spillover effects on partner countries.

The European Commission suggested installing a Common Consolidated Corporate Tax Base (CCCTB) in the EU. In such a scenario, the tax base of a consolidated group of companies would be distributed among members based on a formula containing tangible assets, workers, payroll and the sales of the affiliated firms. The CCCTB proposal entails a wide range of aspects, and it is discussed in several papers (e.g., Fuest 2008). Among other things, a CCCTB would greatly reduce the incentives for shifting debt into high-tax countries and for using transfer-pricing strategies. At the same time, it is unclear whether location decisions would become more efficient as the choice of tax rates would stay in the domain of member states (Wissenschaftlicher Beirat beim Bundesfinanzministerium 2008).

In its St. Petersburg meeting in 2013, the G20 called on the OECD to develop an action plan to address Base Erosion and Profit Shifting (BEPS). The plan identifies 15 key area (actions). These include, inter alia, addressing tax challenges of the digital economy, strengthening CFC rules, and preventing tax treaty abuse (OECD 2013). On the 16th of September 2014, the OECD released its first recommendation addressing seven actions. A key issue of this recommendation is avoiding double non-taxation (OECD 2014).

Experiences with national anti-tax avoidance measures suggest that BEPS measures should be able to curb tax-planning activities by multinationals, including double non-taxation. A trickier question is whether a partial harmonization of BEPS measures is beneficial given that tax rates continue to be set at the country level.

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