Tax Aggressiveness in an International Setting

Bachelor Thesis

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Contents

List of Abbreviations

BTD book-tax difference. 5 7

CEO chief executive officer. 10

ETR effective tax rate. 5, 6

EU European Union. 1, 15

EVS European Value Study. 22, 23

FASB Financial Accounting Standards Board. III, 4, 7

FIN FASB interpretation. 7

GAAP generally accepted accounting principles. 5, 6

ISSP International Social Survey Programme. 22

MLTN more likely than not. 4, 7

OECD Organisation for Economic Co-operation and Development. 14, 15, 18

U.K. United Kingdom. 18, 20

U.S. United States. 13, 14, 16, 17, 20, 23, 24

UTB unrecognised tax benefit. 5, 7

WVS World Value Survey. 22, 23

1 Introduction

Two things are said to be certain in life: death and taxes. While this might have some truth to it for individual citizens, it may not necessarily hold true for corporations. Neither do all companies have a predetermined finite lifetime, nor do all pay taxes, at least not to the extent they are supposed to.

Ever since governments introduced taxes, tax payers have searched for ways to reduce their tax burden. Numerous scandals have showcased the creativity of some companies in designing effective tax strategies. While some of these strategies might be fully compliant with a country's tax law, others certainly are not. The globalised world of today has brought to light new tax loopholes and equipped especially multinational companies with further tax avoiding options. A recent issue covered in an EU court hearing deals with the mismatch of Apple Inc.'s very low tax payments relative to its enormous profits in the EU. The company is said to have paid an effective income tax rate of solely 0,005% on its profits earned in the EU from 2003 to 2014. This was made possible by a complex tax construction under toleration of Ireland's government. EU competition regulators consider this practice to be illegal and demand that Apple Inc. refunds $13 billion to Ireland's tax authority (Kehlbach, 2020).

The incident indicates the importance of shedding light on corporate tax activities not only in a single country, but concurrently in an international setting. It is essential for governments and legislators to comprehend the perspective of companies and the dynamics of tax avoidance in an international setting.

In corporate finance taxes are perceived as an obstacle in the way of maximum profit. Meanwhile, from a societal perspective corporate tax payments are considered to be a crucial contribution to a well-functioning society or even as 'the lifeblood of democratic government and the social contract' (Christensen and Murphy, 2004, p. 37). Tax revenue is a vital means for financing public goods and services.

In this light, societal debates often discuss companies' tax avoiding activities in a normative manner. Slemrod (2004) deals with an economic perspective on corporate tax noncompliance and refers to 'Corporate Tax Selfishness' in the title of his work.

Similar, Christensen and Murphy (2004) name their paper 'The Social Irresponsibility of Corporate Tax Avoidance'. Moreover, Zehner (2016) points out that tax aggressiveness itself is a normative term, indicating that more intense tax avoidance is perceived negatively by society. In that respect, it could be assumed that more aggressive tax strategies create higher differentials between the firm's tax planning and the societal norms on taxation. This could cause anger in society which may eventually hit back and damage the respective company's reputation.

Some companies were found to avoid taxes more than others. While some companies' tax strategies fully stay within the legal frame, others certainly exceed the legal boundary, thus are more tax aggressive (see section 2.1 for a precise definition of tax aggressiveness). Extensive literature deals with a variety of factors that are believed to account for the degree of tax aggressiveness on firm and sector level (e.g. Slemrod, 2004). However, most of this research was conducted on companies within single countries and therefore provides only a limited explanation for the varying degree of corporate tax aggressiveness across different countries (e.g. Tang, 2015; Duţulescu and Nişulescu-Asfrahzadeh, 2019; Atwood et al., 2012; Leuz et al., 2003).

Notwithstanding the relevance of firm or sector-specific factors, this paper attempts to answer the question of what determines international differences in corporate tax aggressiveness.

Therefore this paper will proceed as follows: First, in section 2.1 tax aggressiveness will be defined and positioned in context with related terms. Subsequently, section 2.2 will present commonly applied methods of measurement of tax aggressiveness and section 2.3 assesses the process by which companies determine their degree of tax aggressiveness. Thereafter, chapter 3 will examine selected country-specific determinants and present international findings.

2 Tax Aggressiveness

2.1 Definition

Despite a wide range of literature dealing with tax aggressiveness in a variety of contexts, a conclusive definition of the term has not been commonly adopted yet (Hanlon and Heitzman, 2010; Lalak, 2018). While some use the term tax aggressiveness interchangeably with related terms such as tax avoidance, others perceive distinctive differences in the meanings (Lietz, 2013). For instance, Yee et al. (2018) refer to tax avoidance as being solely legal tax planning. Meanwhile, Hanlon and Heitzman (2010) apply tax avoidance to describe both legal and illegal tax activities. Sometimes even combinations of several terms are used, e.g. 'aggressive tax avoidance' (Rego and Wilson, 2012, p. 784).

Tax planning strategies are often discussed in light of legitimacy in specification of lawful legitimacy and moral legitimacy. Therefore a common and clear definition is essential to avoid misunderstandings. There have been several literary approaches to clarify tax aggressiveness and to place it in context to related terms such as tax avoidance, tax evasion or tax sheltering. According to Hanlon and Heitzman (2010) tax aggressiveness can be conceptualised as a specification of tax avoidance, which they describe as a 'continuum of tax planning strategies' reaching from absolutely legal to illegal activities (Hanlon and Heitzman, 2010, p. 137). Relating to this notion of tax avoidance as a 'continuum', Lietz (2013) developed a conceptual framework unifying tax avoidance and tax aggressiveness. The basic construction of the framework builds upon the two dimensions of legality and compliance[1]. Alongside these dimensions different tax planning strategies can be ranked with respect to their specific characteristics. There might be certain tax strategies that factually are legal, but lack in compliance and thus violate the actual intent of tax-law.

In this sense, the terms tax avoidance, tax aggressiveness, tax evasion or tax sheltering can be understood as different expressions for different degrees of legality and

[1] The dimension of legality refers to the 'presumed degree of law-fullness' of a tax strategy, spanning fully legal, legal grey area and distinctly illegal measures. Meanwhile the scale of compliance relates to the adherence of the actual legal intent. This can exceed the measurement of formal legality. Within the framework compliance can vary from 'strict compliance' over 'unfavorable noncompliance' to 'apparent noncompliance' (Lietz, 2013, p. 4).

compliance of a tax planning action. Within the framework by Lietz (2013) the terms tax avoidance, tax aggressiveness and tax evasion are depicted as a subset of each other (see Lietz, 2013, p. 5). Tax avoidance is meant to cover the whole range from legal to illegal activities undertaken to reduce the tax burden. In contrast, tax aggressiveness is said to refer to the restricted range between rather grey scaled and clearly illegal activities. Lastly, tax evasion is related solely to apparent illegal activities with a clear intention to deceive.

The framework certainly helps to arrange different tax related terms in a respective order. However, a primary challenge consists in identifying a specific break-point at which a tax avoiding strategy can be denoted as aggressive (Blouin, 2014).

In order to meet this challenge, research shed light on tax risk (Lalak, 2018). Guenther et al. (2013) define tax risk as the uncertainty of a tax position to sustain in future. In other terms, tax risk could be understood as the likelihood of a current tax position to withstand legal audit or as the probability to cause further costs in future (see section 2.3). According to Blouin (2014) only those tax strategies carrying some tax risk can be claimed to be aggressive. Lietz (2013) distinguishes aggressive tax avoidance and non-aggressive tax avoidance according to the *more likely than not* (MLTN) criterion[2] that a tax position is 'being upheld under audit' (Lietz, 2013, p. 5).

In this sense, tax strategies being fully legal and compliant do not carry tax risk and thus are not considered to be aggressive. An example that falls in this category would be a firm buying municipal bonds with the purpose of obtaining low taxed income (Lalak, 2018). In contrast, a company adjusting transfer prices with the objective to shift taxable income to tax havens[3] might stay within the legal frame, but certainly contradicts the legal intent. Such a company would indeed be considered as tax aggressive. However, the most aggressive forms of tax avoidance are those which clearly violate tax law in its intent and formal phrasing. For instance, companies evading taxes by means of understated income or manipulated income statements mark the aggressive end of the 'continuum' as described by Hanlon and Heitzman (2010).

This paper will follow the conception by Lietz (2013) and will refer to the term aggressiveness to denote how close a respective tax activity is to the illegal end of the described 'continuum'.

[2]In relation to the MLTN criterion of the Financial Accounting Standards Board (FASB) interpretation No. 48 'Accounting for Uncertainty in Income Taxes' (FIN 48)(see section 2.2) (Lietz, 2013).

[3]Countries or regions requiring unusually low corporate tax rates.

2.2 Measurement

Finding a common definition for tax aggressiveness is difficult. It is even harder to derive a precise form of measurement. There is no single form of measurement which perfectly captures tax aggressiveness (Rego and Wilson, 2012). Therefore, in the literature on tax aggressiveness often several different methods of measurement are applied. Throughout this paper various findings on tax aggressiveness will be presented. These instruments of measurement partly differ in their range of measurement and bear diverse advantages and disadvantages.

Therefore this section attempts to provide a compact overview of three commonly applied methods of measurement and briefly outlines their basic interpretation (for a more detailed overview review see Lietz, 2013; Hanlon and Heitzman, 2010):

1. effective tax rate (ETR)
2. book-tax difference (BTD)
3. unrecognised tax benefit (UTB)

As Lietz (2013) points out, some of these forms of measurement might be more suitable to capture clearly aggressive tax activities, while others may also reflect fully legal and compliant, thus non-aggressive, tax avoiding practices.

1. Effective tax rates (ETRs) set a company's tax payment in relation to its ability to pay taxes (Lietz, 2013). More precisely, ETRs correspond to the division of an estimate for corporate tax liability in the numerator and a measure of pretax income or cash-flow in the denominator (Hanlon and Heitzman, 2010; Lietz, 2013). The basic interpretation of this method of measurement states that if a company is more tax aggressive than others, it pays less tax relative to its pretax income and thus exhibits a lower ETR.

However, there are various kinds of ETRs which differ in the applied estimates for numerator and denominator. Therefore, different ETR measures might lead to different inferences (Lietz, 2013). In this light, it is essential to understand what kinds of tax avoidance are reflected by different ETRs (Hanlon and Heitzman, 2010). For instance, two commonly used versions are GAAP-ETR and Cash-ETR (e.g. Guenther et al., 2013; Zehner, 2016).

While both generally rely upon the same measurement for pretax income in the denominator, they apply different estimates for corporate tax liability in the nominator[4]. This has the effect that unlike GAAP-ETRs, Cash-ETRs are not affected by changes in accounting accruals, but do reflect deferral strategies (see Hanlon and Heitzman, 2010, pp. 139-141). However, over long periods GAAP-ETR and CASH-ETR are meant to converge (Blouin, 2014).

Further adaptions of ETRs can include the application of worldwide cash taxes, measuring ETRs in the long run or to deduct special items of pretax income. Some papers even apply ETRs as a component for more complex measurements for tax aggressiveness (e.g. see Atwood et al., 2012).

Apart from this, it is important to note that ETRs only reflect tax avoiding strategies that cause a deviation between book and tax income[5] (Lietz, 2013). In that regard, ETRs do not capture tax avoiding strategies that report lower pretax earnings and lower taxable income (Lietz, 2013). For instance, tax benefits due to changes in leverage or interest deductibility might not be reflected by ETRs (Bernard, 1984; Lietz, 2013).

2. Book-tax difference (BTD) is closely related to ETRs. The total BTD[6] corresponds to the difference between reported pretax book income and taxable income. The reporting of book and taxable income follows different objectives. While book income aims to inform stakeholders such as investors about the financial situation of the firm, taxable income serves as the assessment basis for the tax bill. Companies have an incentive to report higher book profits in order to paint a better financial picture of the firm. Conversely, corporations might follow the appeal of reporting lower taxable income in order to reduce their tax burden.

In this sense, higher BTDs could reflect aggressive tax behaviour in form of downwards managed taxable income. However, BTDs might be flawed as a measurement for tax avoidance if the difference between book and taxable income is mainly driven by upwards manipulated book income (earnings management) (Lietz, 2013). This form

[4]
$$GAAP\ ETR = \frac{income\ tax\ expense}{pretax\ accounting\ income}$$

$$CASH\ ETR = \frac{Cash\ Taxes\ Paid}{Pretax\ Income}$$

(Hanlon and Heitzman, 2010, p.140)

[5]For example, ETRs would capture tax avoiding activity such as shifting profit from higher to lower tax regions (Badertscher et al., 2010; Lietz, 2013).

[6]The total BTD composes of permanent plus temporary BTD (see Lietz, 2013, pp. 39-42).

of measurement is also restricted by the degree to which a country demands book-tax conformity, thus how book and tax statements conform with each other (see section 3.2.3 for an overview of book-tax conformity).

Overall, despite the widespread use of ETRs and BTDs, they do not capture all tax aggressive activities, and lower ETRs or higher BTDs do not necessarily indicate an aggressive tax behaviour.

3. The so-called FIN 48 reserve for unrecognised tax benefit (UTB) is meant to presumably be the best empirical measurement to approximate the extent of tax aggressiveness (Guenther et al., 2013). As presented by Blouin (2014), the FIN 48 reserve 'Accounting for Uncertainty in Income Taxes' is a regulation introduced in 2006 by the Financial Accounting Standards Board (FASB). According to the provision, publicly traded companies are required to determine whether their tax positions are *more likely than not* (MLTN) to withstand legal audit by tax authorities. A major advantage of UTB is said to be its ability to reflect some degree of risk or uncertainty inherent in a tax position. The reflection of tax risk would argue in favour of the UTB as a measurement for tax aggressiveness since many researchers regard tax risk as the distinguishing feature between aggressive tax avoidance and non-aggressive tax avoidance (see section 2.2).

However, corresponding to the remarks from Hanlon and Heitzman (2010) and Lisowsky et al. (2013), it is essential to stress the importance of choosing methods of measurement for tax aggressiveness with respect to the specific research question. For instance, Artavanis et al. (2016) came up with an unconventional approach to estimate tax evasion in Greece on the basis of a new recognition that the formal financial sector in Greece adapts to semiformal income. Greek banks were said to assess clients' creditworthiness not only with regard to officially stated income, but also on the basis of an estimation of hidden income. In this context Artavanis et al. (2016) examined microdata on household credit from a Greek bank and replicated the bank's underwriting model to deduce the bank's estimate for their clients' true income.

2.3 Cost Benefit Trade-Off

This section deals with the questions of why companies pursue tax avoiding strategies and how they determine their degree of tax aggressiveness.

An intuitive answer could derive from the common understanding of companies as rational organisations aiming for after-tax profit maximisation. As the term *after-tax* emphasises, taxes constitute an obstacle in the way to maximum profit. Therefore, companies would attempt to reduce their tax burden to the extent possible. Corporations have various tax strategies at their disposal. These vary in their degree of aggressiveness and reach from legal to clearly illegal activities. Thereby, the respective strategies can differ in the extent of entailed benefits and costs. The main benefit of tax avoidance quite clearly exists in the form of a reduced tax burden and thus a potentially higher net-profit. In contrast, the potential costs are more complex and reach from initial implementation costs over agency costs to sanctions imposed by tax authority and society (Chen et al., 2010). Different levels of tax aggressiveness will induce different levels of costs. For instance, exploiting legal accounting options might only cause costs in the form of reputational damage, whereas illegally evading taxes is likely to entail pecuniary penalties in addition to societal punishment. Therefore, a firm might choose its tax strategy with respect to a trade-off between these benefits and costs. In other terms, the selected degree of tax aggressiveness could be understood as the solution of a maximisation problem, thus the 'optimal tax strategy will equalize marginal costs and benefits of being tax aggressive' (Zehner, 2016, p. 12). In this sense, a company would increase its level of tax aggressiveness as long as the marginal benefits outweigh the marginal costs arising from the tax strategy.

This consideration dates back to Allingham and Sandmo (1972), who formally derived a simplified tax evasion model for individual tax payers. The authors describe the personal tax declaration as 'a decision under uncertainty' (Allingham and Sandmo, 1972, p. 324). While the benefit of tax evasion, reduced tax payments, are quite certain, the potential costs (e.g. pecuniary punishments by tax authorities) are uncertain, thus will occur with an approximate probability. Correspondingly, the expected benefits and costs calculate as the absolute size times the respective probability of occurrence. In that respect, tax payers would decide on the tax behaviour promising the highest net-utility of expected benefits and costs. In this light, expected costs in the form of pecuniary or social sanctions could serve as a deterrence mechanism reducing the incentive for aggressive tax strategies. Overall, the quintessence states that the extent of tax evasion would depend negatively on the probability of detection and the absolute magnitude of punishment. Following this consideration, higher deterrence would result in less tax evasion.

Despite the strong simplification and the focus on personal tax behaviour, Allingham and Sandmo (1972) contributed significantly to the literature on corporate tax avoidance. Especially the notion of uncertainty constitutes an important factor for the trade-off considerations on a company level. In that respect, costs such as penalties imposed by tax authorities do not merely depend on the absolute magnitude, but foremost on the probability of actually occurring. In more recent literature this factor of 'uncertainty' is often referred to by the term tax risk, which describes the potential that a tax related activity might result in an unexpected 'tax outcome' (see section 2.1) (Neuman et al., 2013, p. 6).

In addition, Lietz (2013) refers to the "Scholes-Wofson-framework" (Scholes et al., 2014) and describes effective corporate tax planning as the maximisation of after-tax profits under consideration of "all parties", "all taxes" and "all costs" (Lietz, 2013, page 7). On the basis of this approach Lietz concludes that an optimal strategy does not merely minimise tax payments, but takes into account various side factors. Later sections will assess how those side factors vary across countries and how they might account for differences in tax aggressiveness.

Prior to this discussion it is essential to obtain an overview of the potential benefits and costs associated with tax aggressive strategies. As stated at the beginning of this section, the major benefit exists in the form of a reduced tax burden and thus potentially increased net-profits. Correspondingly, the incentive to avoid taxes should gain weight with an increasing statutory tax rate, suggesting a positive correlation between the degree of tax avoidance and level of tax rate (Atwood et al., 2012) (for a more detailed discussion see subsection 3.2.2).

In contrast, the potential costs appear to be more complex. While some costs may arise in immediate response to a tax strategy, others might occur via an indirect instance and with higher uncertainty. For example, implementation costs (e.g. expenses for tax consultancy) appear to be quite certain in their probability and extent of occurrence. On the contrary, other cost categories are less foreseeable. A large proportion of the literature sheds light on the decision impact of factors such as pecuniary penalties or societal punishment (e.g. Allingham and Sandmo, 1972; Rachmawati et al., 2020; Atwood et al., 2012). Costs in form of penalties imposed by public institutions will only occur in response to the detection of illegal tax activities. For instance, fraudulent tax reporting constitutes a violation of tax law in many countries. In Germany such an action, if detected, can be punished with high financial penalties or even long-term imprisonment (Abgabenordnung [AO] § 370 Steuerhinterziehung).

Despite the potentially high penalties in absolute terms, the determining factor is the probability of detection, thus the probability of the cost of actually occurring. It is important to note that in reality it might be less the factual probability that matters, but the likelihood as perceived by the tax payer[7] (Slemrod, 2018). As previously outlined, the expected costs compute from the absolute magnitude of the cost times its probability occurrence. Therefore, aggravated punishments alone might not have a significant impact on corporate tax aggressiveness if detection probability is low. Governments aiming to curtail very aggressive tax strategies should draw special attention to the determinants behind the detection probability, e.g. higher audit rates (see section 3.2 for an international overview of potential determinants).

Apart from penalties explicitly mentioned in the law, a further important cost factor could arise in response to violations against societal norms on taxation. Societal norms can be understood as the soft rule of society complementing the hard rules[8] (law), such as fines for tax offences. In other terms, societal norms on taxation reflect the 'justifiability of tax aggressiveness behaviour in society' (Zehner, 2016, p. 9). Similar to hard rules, penalties in the context of tax norms can only be levied if a respective violation against the soft rules is detected. The probability of detection might be driven by transparency factors such as quantity and quality of media or required disclosures. In case of detection, costs arising from societal sanctions can take various channels. Such a channel could be the degradation of a company's reputation. A loss in reputation might be expressed in form of decreasing sales volume, either due to active consumer boycott or structural decline in demand. Another means by which tax norms could impact a company's tax strategy is social pressure unleashed on a country's government. This could impel policymakers to levy stricter tax laws, thus restricting companies' tax options in the long term (Zehner, 2016).

A recent example for the impact of social tax norms on reputation was the public outcry in reaction to the very low effective tax rates of companies such as Facebook, Starbucks or Amazon. In the case of Facebook, the public and political pressure in France eventually led to subsequent payments of more than € 100 million for the period between 2009 to 2018. In order to mitigate further reputational damage, Facebook's CEO, Mark Zuckerberg, himself explicitly underlined the company's willingness to con-

[7]There is extensive literature examining potential factors influencing the individual perception of detection probabilities. However, many of these factors play a role at a microeconomic instance and will therefore not be part of the more detailed discussion in this paper.

[8]Similar to Zehner (2016), I denote hard rules to as the written law and soft rules to as the societal rules not explicitly mentioned in legislative text.

form with the rules of society and its system. The incident showcased the importance of societal tax norms as an essential cost factor to be considered in respective tax strategies. Moreover, unlike penalties stipulated by law, costs related to social tax norms can arise even for tax activities that still comply with the formal phrasing of the law, but violate the actual intent.

Regarding the costs of tax aggressive behaviour, it is essential to consider who will eventually bear the consequences (Hanlon and Heitzman, 2010). Will costs solely affect the actual decision-maker (e.g. the management) or also other stakeholders such as owners or other employees? On a microecnomic level the perceived costs and benefits might vary among stakeholders. Therefore, there might be further relevant stakeholders beyond a company's management who 'co-determine the optimal tax strategy' of a company (Lietz, 2013, p. 7). If management and ownership is separated, this might even induce agency conflicts. Recent research dealt with this issue in the context of agency costs (Crocker and Slemrod, 2005).

Notwithstanding the potential importance of agency costs, the issue will not be discussed in the course of this paper. This paper is especially interested in assessing the determinants for aggressive tax strategies immanent in specific countries and thus evoking different degrees of corporate tax aggressiveness. Therefore, the following chapter will provide an overview about selected factors influencing the balance between costs and benefits and how these might vary across countries.

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3 Determinants in an International Setting

3.1 Introduction

As outlined in the previous chapter, companies are assumed to adjust their tax aggressiveness to a level at which marginal benefits and costs are in balance. There are various external and internal factors influencing this balance and hence the final degree of tax aggressiveness. Prior literature has dealt with factors inherent in specific firms or sectors. However, some other factors might be country-specific and could vary in an international setting. In this regard, this chapter will take a closer look at factors underlying corporate tax aggressiveness and how these might vary in an international context.

3.2 Tax System Characteristics

3.2.1 Overview

When examining factors for corporate tax aggressiveness in an international context, differences in countries' tax systems appear to be a striking determinant. Slemrod (2018) defines a tax system as a country's collection of 'rules, regulations and procedures' on taxation (Slemrod, 2018, p. 3). For certain, the tax system surrounding a company has some effect on its tax strategy decision. According to Atwood et al. (2012), tax systems are a crucial factor for the availability of tax strategies and have a substantial effect on the expected costs and benefits associated with a tax strategy. While some tax system characteristics may not differ across certain countries, other factors do vary substantially. Therefore, an efficient design of a tax system demands that governments understand the impact of tax system characteristics on tax avoidance. Apparently, the tax rate is one of the most distinctive characteristics and is considered to be a major determinant for the actual incentive of aggressive tax strategies. In addition, further important tax system characteristics are book-tax conformity, worldwide versus territorial approach and tax law enforcement (Atwood et al., 2012).

3.2.2 Statutory Tax Rate

The first tax system characteristic this section examines is the statutory corporate tax rate. Certainly, a country's corporate tax rate is one of the most distinctive attributes of its tax system. As mentioned in the previous chapter, the tax rate is considered to account for the actual incentive of tax avoidance and therefore constitutes a crucial factor in the context of the cost-benefit trade-off.

Atwood et al. (2012) assume the benefits of tax avoidance to be higher if the statutory tax rate is higher, and thus suggest a positive association between tax rate and tax avoidance. Congruent with this consideration, Crane and Nourzad (1990) examined data from the Californian Tax Amnesty Program and found tax evasive activities to increase in response to higher tax rates. Similarly, Affes (2020) finds a positive and significant relationship between tax rate and tax evasion in emerging countries. Despite these supportive findings, Atwood et al. (2012) as well as Richardson (2006) stress the diverse empirical findings on this matter, of which some even indicate opposing results. For example, Kamdar (1997) or Richardson (2006) found no significant proof for such an inverse relationship between tax rate and tax avoidance.

Despite these previous inconclusive findings, Atwood et al. (2012) analysed the impact, inter alia, of statutory tax rates on companies' tax avoidance. They used a modified measure of cash effective tax rates[9] to measure the degree of tax avoidance across countries. Among the observed countries, the highest statutory corporate tax rates were found in countries such as Canada, Japan, U.S., Belgium, Italy and Germany, whereas the lowest tax rates of the sample were reported for Hong Kong, Singapore, Switzerland and Taiwan. Their overall findings indeed show a higher degree of tax avoidance in countries with higher statutory tax rates, thus indicating a positive association between tax rate and tax aggressiveness. More precisely, on average of the full sample the results suggest that an increase in corporate tax rate of roughly 10 percentage points[10] translates into an increase in tax avoidance of 6,58%. Nonetheless, Atwood et al. advise interpreting their findings with caution as potential mechanical relations between the tax avoidance measurement and statutory tax rates could not be excluded.

[9] Atwood et al. (2012) calculate their measure for tax avoidance (TaxAvoid) for firm i in year t as follows:

$$TaxAvoid_{i,t} = \frac{\sum_{t-2}^{t}(PTEBX * T)_{i,t} - \sum_{t-2}^{t} CPT_{i,t}}{\sum_{t-2}^{t} PTEBX_{i,t}}$$

PTEBX resembles the pre-tax earnings before exceptional items ; T corresponds to the statutory tax rate; CTP expresses the current taxes paid (Atwood et al., 2012, p. 1837).

[10] The increase in tax rate from the 25th percentile to 75th percentile (from 31% to 40,7%) (Atwood et al., 2012, p. 1844).

Furthermore, a cross-country study conducted by Affes (2020) researched the effect of tax rates on tax evasion. The overall findings indicate a positive and significant relationship between increasing tax rates and the level of tax evasion. However, specifically for developed countries this association was found to be no longer significant. Meanwhile, emerging countries still exhibited a significant positive relationship. These differences in significance between developed and emerging countries hint towards additional factors that come into effect. In the sense of a trade-off between benefits and costs, emerging countries might be associated with lower costs relative to the benefits of aggressive tax avoidance. A factor that might explain lower costs in emerging countries could be less effective tax law enforcement (for a more detailed consideration see subsection 2.4.5).

Apart from these findings, Tang (2015) observed high levels of tax avoidance in countries such as Canada, Germany, Philippines and Indonesia and assume this to be an effect of high domestic income tax rates. Conversely, countries such as Chile, Hong Kong and Singapore, with on average lower statutory tax rates, exhibited lower levels of tax avoidance.

In addition, considerations by Dyreng and Markle (2016) indicate that not only the domestic, but also foreign countries' corporate tax rates might play a role for corporate tax decisions. The authors analysed the effect of financial constraints on tax-motivated income shifting by U.S. multinational companies. One of their suggestions emphasises the potential effect of international tax rates on the incentive to shift income. They note that during their sample period the average statutory tax rate of OECD countries was lower than in the U.S. Some countries, referred to as *tax havens*, had corporate tax rate even close to zero. Therefore corporations with subsidiaries in such a tax haven were said to have an incentive to shift income out of the U.S. and into low-tax foreign jurisdictions.

Further notable findings were made in the context of corporate tax (semi-)elasticity. It measures the percentage change of taxable income in response to a 1 percentage point change in the corporate tax rate (Mooij and Ederveen, 2008). A basic interpretation is that at high tax rates the semi-elasticity might undershoot -1, implying an over-proportional reduction in taxable income. This might be less the result of diminished corporate business activities, but more likely the effect of increased tax avoidance. Corresponding to this interpretation, Mooij and Ederveen (2008) analysed potential factors accounting for the corporate tax elasticity.

Their calculations yield a semi-elasticity of -1,2 on average in Europe[11]. Accordingly, even marginal increases in corporate tax rate lead to a substantial reduction in tax base, assumingly due to more aggressive tax avoidance.

Clausing (2007) researched variations in corporate tax revenues in OECD countries within the period from 1979 to 2002. In relation to the concept of the Laffer curve, the findings suggest that on average a corporate income tax rate of 33% yields a maximum tax revenue. The revenue-maximising tax rates were meant to be lower in smaller and more open economies than larger or more closed economies. In light of the findings by Mooij and Ederveen (2008), this could hint towards increasing tax avoiding activities in OECD countries with corporate tax rates exceeding 33%.

In addition, a recent study conducted by Duţulescu and Nişulescu-Asfrahzadeh (2019) analysed tax evasion across EU countries. Their findings show that the three countries (Italy, Greece and Romania) with the highest levels of tax evasion had tax rates above the EU average. Conversely, the three countries (Ireland, Luxembourg, Netherlands) with the overall lowest extent of tax evasion had tax rates underneath the EU average. Similar to previous findings, the relationship between tax rate and tax evasion did not hold for every country. For instance, Germany is attributed with relatively high tax rates, but only moderate levels of tax evasion could be measured. This might indicate the involvement of further factors.

Overall, the presented findings indeed suggest that statutory corporate tax rates can partially explain international differences in corporate tax aggressiveness. However, there might be additional side factors mitigating the assumed positive relationship. Additional factors could help to explain the partially mixed results. Therefore, the effect of the corporate tax rate has to be considered in a broader context, including further country-specific factors.

3.2.3 Book-Tax Conformity

Presumably, the most commonly pursued strategy to avoid taxes, in a legal sense, is to reduce taxable income by effectively applying accounting options. Those accounting options often exist to allow companies a more *customised* reporting. With regard to the different objectives of financial reporting and tax reporting, this accounting flexibility might invite misuse. Tax reporting serves as the assessment basis for the tax bill, hence companies clearly have an incentive to state taxable income as low as possible. Conversely, financial reporting fulfils the purpose to inform stakeholders such

[11] The semi-elasticity was measured on the basis of a 33% income tax rate. The tax rate was suggested by Clausing (2007) as the tax rate maximising tax revenue on average in Europe.

as investors about the financial status of the firm. Therefore, companies might have an interest in stating income as high as possible, especially if managers' salaries are attached to the financial figures stated in the financial reporting. Regarding these opposing incentives, countries allowing for different income statements in tax and financial reporting (book-tax differences) might enable aggressive tax avoidance within a legal frame (Desai, 2005; Yin, 2001; Tang, 2015). Some corporations may still generate their reports with no other intent than foreseen by the legislator. However, other companies potentially exploit accounting rules to the extent possible, hence fully disobeying the legal intent. In this light, it is hard to say where legitimate tax avoidance ends and tax aggressiveness begins. Therefore, some voices demand that their country introduce so-called book-tax conformity.

Book-tax conformity refers to the coverage rate of the requirements for financial reporting and tax reporting. Expressed differently, it refers to the degree to which disclosures such as corporate profit are allowed to vary between tax and financial reporting. In countries with a higher required book-tax conformity firms are considered to have fewer opportunities to aggressively avoid taxes and concurrently stay under the guise of lawfulness (Atwood et al., 2012). Hence, companies still aiming to decrease their tax burden beyond this restriction would have to turn to potentially illegal measures such as understating income. However, shifting towards clearly illegal tax activities would entail the risk of being detected and punished and thus increases the costs of tax aggressiveness. Overall, higher book-tax conformity is considered to disentangle what is legitimate and what is aggressive tax behaviour. By pushing aggressive tax avoidance out of the legal zone, such activities could become less attractive. In this sense, companies embedded in a tax system with higher required book-tax conformity should exhibit lower levels of tax aggressiveness.

Atwood et al. (2012) shed light on this consideration. They conducted an empirical analysis examining the effect of higher book-tax conformity on the degree of tax avoidance. The research was based on corporate data from 1993 to 2007 stemming from 22 nations such as Germany, U.S., South Africa, Mexico, India or Switzerland[12]. Thereby, the level of book-tax conformity varied substantially among the 22 countries. Their overall findings indicate a significant negative association between firms' degree of tax avoidance and book-tax conformity. The authors suggest that companies whose home country requires higher book-tax conformity pursue tax strategies that are significantly less tax aggressive.

In light of these findings, the required level of book-tax conformity has been an

[12]Compustat Global Industrial/ Commercial database from 1993 through 2007.

intensely debated topic. Opponents argue that it reduces the quality of information reported. Financial statements could no longer serve the specific information needs of different stakeholders such as investors and tax authorities. In contrast, proponents for higher required book-tax conformity argue that it would curtail tax aggressive strategies which result from book-tax differences. Managers would have to trade-off the 'tax costs of overstating earnings to investors and the non-tax costs of understating taxable income to tax authorities' (Tang, 2015, p. 444). According to this argument, both investors and tax authorities are meant to benefit from more realistic information.

Considering the partially converse findings, it could be assumed that additional side-factors have an influence on the relation between book-tax conformity and corporate tax aggressiveness. Therefore, further literature could examine potential interdependencies with other parameters.

3.2.4 Worldwide versus Territorial Approach

The third tax system characteristic in this section deals with the implications of worldwide and territorial tax systems on a company's tax strategy. These tax system features refer to the different fiscal treatment of repatriated income from subsidiaries to the parent firm. For instance, the U.S. is considered to follow a worldwide approach. Therefore parent firms located in the U.S. are obliged to include income payments such as dividends received from subsidiaries in foreign countries into their own taxable income. In order to avoid double taxation, income taxes paid in foreign countries can either be deducted or claimed as a credit. Conversely, in territorial tax systems the income passed on by subsidiaries located in foreign countries (e.g. dividend payments) are partially or completely excluded from the taxable income of the parent firm (Atwood et al., 2012).

Proponents for a territorial approach argue that in presence of a worldwide tax system, domestic multinational firms would be opposed to a more comprehensive taxation than corporations located in other countries, and thus face a decisive competitive disadvantage. On the contrary, it is claimed that even under a worldwide approach, multinational companies would have a wide range of tax avoiding options at their disposal which could offset the competitive disadvantage. For example, in the U.S. firms can defer tax payments by delaying income transfers from subsidiaries. This strategy can eventually lead to an indefinite deferral, for instance if income flows into permanent investments abroad (Atwood et al., 2012).

While some assume tax aggressive activities such as profit shifting to be more applicable in territorial tax systems, others voice their doubts. Exemption clauses in worldwide tax systems might exceed the required adjustments for potential competitive disadvantages and double taxation. According to Lokken (2006), this could eventually lead to companies paying less overall tax under a worldwide approach than in a territorial tax system. On the contrary, Dyreng and Markle (2016) point out that shifting profits from a worldwide tax system to foreign jurisdictions entails significant costs. A major cost was said to be the fact that shifted income cannot be returned without paying substantial deferred taxes. Such trapped cash would incur frictions in the internal capital market. For instance, Apple Inc. followed a plan to return $ 100 billion to shareholders by 2015. Despite a massive cash stockpile, in 2013 the company decided to issue the largest corporate bond deal ever up to that point in time. The reason was that a large proportion of the cash reserves were located overseas and transferring it would have induced substantial tax bills (Burne and Cherney, 2013).

Previous literature dealt with these considerations and found mixed results. Markle (2016) conducted a study on the effect of worldwide and territorial approaches on income shifting. They examined data from multinational companies located in 34 countries, mainly Europe, and their respective subsidiaries. Their findings show that on average multinational firms engaged more intensely in profit shift if the parent company was domiciled in a territorial tax system. However, focusing on the affiliates, this difference diminished. While income shifting was substantially higher for parent firms under a territorial approach, for foreign affiliates the authors could not find a significant disparity. Similar to Markle (2016), Atwood et al. (2012) analysed companies from countries in various regions of the world and found that those domiciled in worldwide tax systems engage in 13,1% less tax avoidance than firms located in countries with a territorial approach.

In light of these findings, it is important to note that different authors applied different thresholds to distinguish both tax systems. Some associate specific countries with territorial tax systems while others claim that the same countries follow a worldwide approach. For example, Atwood et al. (2012) denote countries as territorial systems if the percentage of dividends (from foreign subsidiaries) that are subject to tax exceeds 75%. Accordingly, Atwood et al. (2012) label countries such as Italy or the U.K. as worldwide tax systems. Other sources claim that among the 27 European OECD countries, including Italy and the U.K., none engage in a worldwide tax system (Asen, 2020). In detail, 19 countries are said to follow a complete territorial approach and the remaining eight countries are considered as partial territorial tax systems. Following this classification, worldwide or territorial tax systems would drop out as a potential explanation for differences in corporate tax aggressiveness among European countries, though it might contribute to explanations on a global scale.

3.2.5 Tax Law Enforcement

The last, but certainly not the least important tax system feature discussed in this section is the effectiveness of a country's tax law enforcement. This characteristic refers to a government's ability to detect violations against tax law and to impose penalties. The basic deterrence model by Allingham and Sandmo (1972) (presented in section 2.3) considers tax enforcement as one of the main cost drivers of tax evasion. In this sense, tax law enforcement could play an essential role, especially in the context of illegal forms of tax avoidance. As Atwood et al. (2012) argue, stronger perceived tax enforcement could increase the expected costs of illegal tax avoidance and thus might discourage managers to pursue aggressive tax strategies. Reversely, a weaker tax enforcement could pave the way for more tax aggressiveness.

It is important to note that it is not the actual, but the perceived strength of tax enforcement that matters. The main channel by which the perceived strength of tax law enforcement can be improved is through audit rates. However, as mentioned before, high audit rates alone will not constitute a substantial deterrence factor in the sense of the model by Allingham and Sandmo (1972). It is the interaction between audit rate and the extent of penalty that account for the expected cost and thus might influence the trade-off considerations of a firm.

Furthermore, Artavanis et al. (2016) relate weak tax enforcement to a low state capacity. The term state capacity serves as an umbrella term to describe the fiscal and legal capacity of a state (Besley and Persson, 2010). While fiscal capacity describes the ability of a state to raise revenue, legal capacity refers to the power to enforce contracts. Following this consideration, countries with higher perceived law enforcement, thus higher state capacity, should show a lower level of tax aggressiveness. Artavanis et al. (2016) researched personal tax evasion across industries in Greece. Due to their findings in different sectors, the authors suggest that the extent of tax evasion in Greece can partially be explained by a weak state capacity in both categories. Although, their research focused on personal tax behaviour, the described mechanisms could be similar for corporate tax payers.

In addition, Hoopes et al. (2012) found evidence that U.S. public companies pursue less aggressive tax strategies if tax law enforcement is more effective. In detail, their findings suggest that an increase of audit probability from 19% to 37% entails an increase of cash effective tax rates of overall 7%. Similarly, Hanlon et al. (2014) examined

U.S. firms and found that financial reporting quality[13] is higher if the probability of governmental tax audit is higher and thus might indicate lower tax aggressiveness.

Atwood et al. (2012) used the tax evasion index from the 1996 World Competitiveness Report to analyse the effects of tax law enforcement among 22 countries. Their findings suggest a negative association between tax avoidance and managers' perception of the effectiveness of tax enforcement. According to the underlying data, the (median) perceived level of tax enforcement was the highest in Asian countries such as Singapore, Japan and Hong Kong[14] as well as in other highly developed countries such as the U.S., U.K., Switzerland and Australia. Meanwhile, the lowest (median) levels of perceived tax enforcement were measured in Italy and Spain, followed by Brazil, Belgium, South Africa and Mexico.

These findings might provide an explanation for the partially mixed findings on the effect of corporate tax rates on tax aggressiveness (see subsection 3.2.2). Recall, while empirical evidence indicated a significant relationship between corporate tax rate and degree of tax aggressiveness in emerging countries, the relation was found to be insignificant in developed countries. Paired with the findings of this section, it could be assumed that in developed countries the stronger tax law enforcement increases the expected costs to such an extent that offsets the incentive to avoid taxes in response to a higher tax rate. Reversely, the significant relation between tax rate and tax aggressiveness in emerging countries might hint towards a less effective tax law enforcement, which may not outweigh the benefits of aggressive tax avoidance. To verify this train of thought, it would be necessary to conduct further research on the interaction between these factors.

[13]Hanlon et al. (2014) define financial reporting quality as the 'accuracy with which financial statements capture the performance of a company, and "managerial diversion" encompasses any action benefiting managers that is not in the interest of shareholders or the government'(Hanlon et al., 2014, page 2).

[14]Hong Kong is considered as a Special Administrative Region of China.

3.3 Tax Morale

3.3.1 Overview

The recently emerging literature on tax morale has arisen in response to the partially unsatisfying findings on personal tax compliance. Despite a wide range of profound literature dealing with the effect of hard determinants[15] on tax avoidance, the observed levels of tax aggressiveness can only be partially explained. Frey and Feld (2002) point out that the standard tax evasion model by Allingham and Sandmo (1972) fails to predict the extent of tax evasion observed in reality and that the derived economic parameter estimates are often found to be insignificant, partly even inconsistent with the theory. As discussed in previous subsections, the standard model assumes the degree of tax evasion to be co-determined by the level of deterrence (the probability and extent of potential penalties). Considering the low levels of deterrence applied in most countries, tax evasion should be higher than observed in reality. The degree of risk aversion required to explain this extent of compliance deviates strongly from risk aversion empirically measured (Alm et al., 1992). Regarding this contradiction, Alm et al. formulate 'the puzzle of tax compliance' and ask 'why do people pay taxes?' (Alm et al., 1992, p. 21). To answer this question, more recent has research shed light on potential soft determinants[16], such as tax morale, accounting for tax aggressiveness.

Most papers deal with tax morale in the context of personal income tax avoidance. Alm and Torgler (2006) refer to tax morale as the intrinsic motivation of an individual to pay taxes. According to the definition by Luttmer and Singhal (2014), tax morale covers all sorts of motives for tax compliance that are of a non-financial nature. Furthermore, the authors identify several channels through which tax morale is said to influence an individual's willingness to pay taxes[17]. In a broader sense, tax morale is believed to reflect the interplay of a variety of environmental factors such as a country's culture or the perceived relationship between tax authorities and tax payer. In this light, country-specific factors might provide an explanation for different levels of tax morale across countries and thus different international tax compliance.

Notwithstanding extensive findings on the impact of tax morale on individuals' tax behaviour, it remains questionable whether this effect still holds for corporations (De-

[15]This paper refers to hard determinants as cost factors that are written text (e.g. costs mentioned in the contract with the tax consultant or costs in form of penalties as stated by law).

[16]Following the definition of Zehner (2016), soft determinants denote factors not explicitly mentioned in legislative text.

[17]Besides intrinsic motivation they refer to reciprocity, peer effects, cultural factors and information imperfections on an individual level as factors influencing tax morale (Luttmer and Singhal, 2014, p. 155 et seq.).

Backer et al., 2015). On the one hand, companies are generally considered as rational organisations aiming for profit maximisation, hence to exploit every chance possible to seize benefits. In this sense, firms would hardly pay any taxes for an entirely altruistic purpose. On the other hand, a corporation is not simply an empty shell, it is led by a human management. Therefore, the person exercising control over the firm might be subject to personal tax morale and thus manage the company accordingly (DeBacker et al., 2015). Following this consideration, management with weaker tax morale would pursue more aggressive tax strategies, while those with stronger tax morale could be assumed to enact in less tax aggressive behaviour. Consistent with this notion, Joulfaian (2000) found companies to be less tax compliant if the respective managers understated their own personal taxes, though risk preference as the actual cause could not be excluded. Consistently, Alm and McClellan (2012) claim that corporate tax morale considerations are very similar to tax morale considerations for individuals. The author argues that the same as for individuals, companies exhibiting stronger tax morale would pay taxes by conviction and thus pursue less aggressive tax strategies than firms with weaker tax morale.

If tax morale indeed plays a role for corporate tax decisions, then according to whose tax morale are these decisions made? Does corporate tax behaviour solely reflect the managements' intrinsic motivations or also the moral beliefs of other stakeholders? Clearly, the final tax decisions are made by management, but their decision could also be affected by the aggregated intrinsic motivation of owners and other employees. If this is the case, it will be considerably more difficult to determine country specific factors for corporate tax morale. Management and owners often do not originate from the country where the company is domiciled and therefore might not reflect the local tax morale. In addition to this consideration, there might be several other factors on a micro-economic level such as risk preference or behavioural economic aspects. Notwithstanding the potential importance of microeconomic factors for the degree of corporate tax morale and tax aggressiveness, they will not be subject to this discussion.

This section will cover tax morale in relation to corporate tax behaviour. The aim is to provide an insight into underlying country-specific factors and how they might vary internationally.

At a first glance, tax morale seems to be a concept that can hardly be captured in a precise measure. The scientific research frequently derives approximate measures for tax morale on the basis of household survey data from the World Value Survey (WVS), the European Value Study (EVS) or the International Social Survey Programme (ISSP) (e.g. Zehner (2016), Torgler (2003) or Alm and Torgler (2006)). These surveys typically attempt to assess indirectly the respondents' level of tax morale. For instance, the WVS and EVS asked participants to rate the statement, 'Cheating on taxes if you have a chance', on a scale from 1 ('Never Justifiable') to 10 ('Always Justifiable').

A study exploiting the mentioned data from the WVS was conducted by Alm and Torgler (2006). The authors analysed the effect of tax morale on personal tax compliance across 15 European countries and the U.S. during 1990, 1995 and 1999 2000 . Even though the paper does not cover implications for corporate tax behaviour, it provides an aggregated impression about different levels of tax morale across the U.S. and selected European countries. Consistent with earlier findings by Weck-Hannemann (2018), Alm and Torgler (2006) suggest the degree of tax morale to be higher in northern European countries (e.g. Sweden, Norway, Great Britain, Netherlands or Germany) than in romanic countries (e.g. Italy, France, Portugal and Spain). The overall highest tax morale was measured in the U.S. followed by Switzerland.

Focusing on the tax behaviour of multinational companies, Zehner (2016) analysed the effect of tax morale in various specifications across several countries. The author applied three country measures for tax morale based upon the data from the WVS and EVS. Overall, the findings suggest tax morale to be an important factor for a firm's tax strategy. The effect of tax morale on profit shifting appears to hold for parent companies as well as for subsidiaries domiciled in foreign countries, whereas the measured effect was stronger for parent firms. Zehner assumes the tax morale in the main domicile to be the central determinant. Spillover effects from inter-country differences in tax morale were found to be less relevant. However, tax morale in the country of the parent firm was measured to have a positive effect on the taxable profits of its affiliates if both bear the same name. This was interpreted as an indicator for reputational concerns. A company might fear social sanctions in the home-country if tax activities violate societal tax norms (see section 2.3).

The following subsections broach the issue of potential country-specific factors influencing tax morale and how it may vary across countries. While there is emerging literature on tax morale factors for private tax payers, the research on tax morale of corporate tax payers is still scarce and even partly non-existent. For this reason, the following subsections will mainly present findings for private tax payers, but reflect these findings in the light of transferability to corporations.

3.3.2 Culture

When discussing tax morale in an international context a country's culture seems to be a crucial factor.

Luttmer and Singhal define culture as 'social norms that persist over long periods of time and across generations' (Luttmer and Singhal, 2014, p. 160). The authors denote culture as a potential factor influencing tax morale. Likewise, Halla (2010) considers tax morale to be 'partly inherited over generations' (Halla, 2010, p. 6). In addition, Zehner (2016) identifies two channels by which social norms might influence corporate tax decisions. Firstly, the 'belief system in society' could influence the moral compass of managers (Zehner, 2016, p. 33). In other terms, managers could adopt the societal perception on tax avoidance and align the corporate tax strategy accordingly. The second means by which cultural norms could affect a company's tax behaviour is described as a 'social sanction mechanism' (Zehner, 2016, p. 33). This consideration relates to social deterrence in form of reputational concerns as described in section 2.3.

Despite empirical difficulties to isolate culture as a variable, several studies found indications for the impact of culture on individuals' tax compliance (Alm et al., 1995; Alm and Torgler, 2006). If such a relationship between culture and tax morale proves true for corporations, it could contribute to explaining differences in the degree of tax aggressiveness across countries with distinctively different cultures.

Halla (2010) further fueled the presumption that different cultures could assist in explaining different degrees of tax morale across countries. The author examined potential effects of tax morale on the shadow economy (underground production[18]) in the U.S. The findings indicate a negative correlation between the degree of tax morale and size of underground production. Apart from these results, the paper estimated the tax morale of U.S.-born citizens with respect to their ancestors' country of origin. This is of special interest to this subsection as it might reflect the impact of different cultures on tax morale. According to the findings, the highest levels of tax morale were exhibited by Americans whose ancestors originated from China, Japan or Netherlands, whereas the lowest levels of tax morale were measured for citizens whose roots trace back to Belgium, Poland, Greece or Italy. Notwithstanding the importance of these findings for personal compliance, the implications for corporate tax aggressiveness might be limited.

Therefore, further research could follow this methodology and apply it to a corporate

[18]'Underground production consists of activities that are productive in an economic sense and quite legal [...], but which are deliberately concealed from public authorities' for several potential purposes (e.g. to avoid tax payments) (OECD, 2021).

level. An approach could be to analyse corporate tax aggressiveness in relation to the management's nationality[19]. This might serve as a vague indicator as to whether a manager's nationality and the respective culture has an effect on the company's degree of tax aggressiveness.

3.3.3 Reciprocity

If tax morale is influenced by social norms, it raises some questions: 'Do social norms relate to the level of enforcement? Can social norms be triggered and/or leveraged by policy?' (Carpio, 2013, p. 2).

To answer these questions, this section covers the aspect of reciprocity in the context of tax morale. The literature on tax morale refers to the term reciprocity to describe the presumed dependence of tax morale on the relationship between tax authority and tax payer (Luttmer and Singhal, 2014).

The notion of reciprocity implies that individuals consider tax compliance as their mandatory part of a social contract between citizen and state. Citizens pay taxes and in exchange receive public goods and services provided by the state (Luttmer and Singhal, 2014). Tax compliance relying upon such an exchange relationship between citizen and state might be affected by the degree of perceived fairness of the transaction and legitimacy of state (Levi, 1989; Feld and Frey, 2002; Hofmann et al., 2008; Jackson and Milliron, 1986). Citizens might regard their amount of taxes paid as too high in comparison to the quality and quantity of public goods received in return. Thus, tax payers could perceive their tax burden as unfair and might reestablish fairness by reducing their tax payment. Some papers show that the aspect of perceived fairness plays an essential role for individual tax compliance. Spicer (1974) as well as Song and Yarbrough (1978) found evidence of a negative and significant association between perceived fairness and the extent of tax evasion on a personal level. Thereby individuals were said to relate the perceived fairness to their ability to cope with the tax burden rather than to the amount of benefits received in return.

In addition, tax payers could also have doubts about the moral legitimacy of the state and the intended purposes of the tax revenue. Torgler (2003) mentioned the hypothetical example of a country in which tax earnings serve the purposes of dictatorship. In such a case it could be a 'moral duty' not to pay taxes (Torgler, 2003, p.

[19] Under the assumption that corporate tax morale is mainly influenced by the moral beliefs of management.

12). Other studies have shown patterns of higher personal tax compliance in countries characterised by more direct democracy (Alm and Torgler, 2006; Pommerehne and Weck-Hannemann, 1996). This might indicate an association between stronger tax morale and higher perceived legitimacy of state. Other studies found that citizens with higher trust in their government paid higher taxes (Slemrod, 2002).

Apart from these considerations, most of the literature on reciprocity focuses on the way tax authorities treat their tax payers. Tax authorities might trust tax payers and treat them with respect or they could distrust them and treat them as potential suspects of tax crime. The previous section presented findings for a correspondence of harsher tax law enforcement (e.g. higher audit rates and more severe punishments) with lower levels of tax aggressiveness. In contrast, some authors argue that stronger law enforcement might also have a negative impact on tax compliance. Such an extrinsic motivation to pay taxes could potentially crowd-out existing intrinsic motivation, thus diminishing personal tax morale (Luttmer and Singhal, 2014; Slemrod, 2004; Torgler, 2003).

However, the question remains as to what extent these findings for individual tax payers hold true for corporate tax payers. The relationship between individual citizens and state certainly differs from the relationship between state and corporations. Nonetheless, firms understood as corporate citizens might too show a pattern of reciprocity. Similar to individual tax payers, corporate tax morale could be affected by what is perceived as the fair share of corporate tax contributions to society. Therefore, tax demands overshooting this fair share might also crowd-out potential intrinsic motivation of companies. Further literature could examine to what extent corporate tax behaviour is influenced by reciprocal considerations.

3.3.4 Firm Ownership Structures

Throughout this section a central question was to what extent corporate tax behaviour is determined by managers' tax morale only, or also by the moral beliefs of other stakeholders.

This subsection will present answers to this question by focusing on different ownership structures. As highlighted in the introduction to this section, corporate tax morale might not only correspond to the intrinsic motivation of managers, but may also reflect the moral beliefs of company owners. Therefore, specific types of owners might differently affect the corporate tax morale, thus the company's tax aggressiveness.

Zehner (2016) examined whether corporate tax aggressiveness varies with tax morale for different types of ownership. In detail, the author analysed the effect of tax morale in several countries on effective tax rates for companies owned by a family, a financial company, a public institution and an industrial company (as a control variable).

Family firms especially are often characterised by a high ownership concentration on the side of the founding family. Therefore, they might show different patterns of tax avoidance than companies subject to free float. Owners with a high proportion of company shares may have a more direct influence on the respective management. In this sense, corporate tax decisions might pay more attention to the moral beliefs of these owners. In many family firms, the management often consists of family members, thus the representation of owners' tax morale is likely to be higher in such a company than in firms not owned/led by family. According to this consideration, the degree of tax aggressiveness of family firms should give a partial insight into the strength of the family's tax morale.

On average, Zehner (2016) found that family firms pay not more, but less tax than companies with other types of ownership. More precisely, the findings suggest a negative base effect of family ownership. The author interprets this as potential evidence for certain tax avoiding strategies being especially attractive for family firms. For instance, in the case understated income, the degree of secrecy might be higher among family firms. This could reduce the probability of detection and thus the potential cost of tax aggressiveness. In contrast, family firms were found to pay more taxes in countries in which the overall level of tax morale was higher. This might indicate that firms owned by families are more sensitive to social norms on taxation in society.

Similar to family firms, the findings on ownership of industrial firms show a negative base effect on effective tax rates. This negative effect was observed to diminish in high tax morale countries, though this tendency was less strong than for family firms. Similar to the previous considerations in the case of family firms, it is questionable whether companies largely owned by another industrial firm act according to their own intrinsic motivations or are rather driven by external reputational concerns.

The ownership effect of financial companies was found to be not significantly different than for industrial firms. Only, state-owned firms showed a positive and significant base effect on effective tax rates, thus companies owned by public institutions show the lowest levels of tax aggressiveness. While these findings for government-owned firms appear to be coherent with what is generally expected of public institutions, the results for family firms raise further questions. Do family firms indeed advocate higher tax morale standards or are there other factors explaining the decreased tax aggressiveness in countries with an average higher tax morale?

According to Zehner, a potential answer could be that family firms face higher social deterrence in countries with stricter social norms on taxation. In other terms, families who are associated with a specific company (e.g. due to name similarity or high proportionate ownership) might be affected by reputational concerns, not solely on a corporate level, but also on a personal one. In this sense, Zehner assumes the tax behaviour of family firms to be related to the patterns shown by individual tax payers.

Prior to Zehner (2016), Chen et al. (2010) conducted a study on U.S. firm data from S&P 1500 for the period from 1996 to 2000. Their results show higher effective rates and lower book-tax differences for family firms[20] in comparison to non-family firms, thus indicating lower tax aggressiveness for companies considered to be family firms. However, the author assumes these findings to be less the result of a higher tax morale among families, but rather the adjustment to higher non-tax costs that might arise for the respective families. Such non-tax cost could exist in form of reputational concerns or transferred agency costs (Chen et al., 2010, p. 45).

These findings on family firms are especially interesting as this type of ownership represents a substantial part of the economy in many countries. For instance in the U.S., among the S&P 1500 firms roughly 32% to 46% fall into the category of family firms, depending on the definition applied (Chen et al., 2010). In this sense, governments aiming to diminish tax aggressiveness should pay special attention to the proportion of specific firm ownership structures in their countries. Awareness of such country-specific company characteristics could assist in designing effective tax systems which take more than hard determinants into account.

[20] Chen et al. (2010) define family firms as companies in which members of the founding family still hold a stake and / or are actively involved in the company via certain positions such as a board seat or engagement in management.

4 Summary and Conclusion

To recall, in the introduction the initial question of what determines international differences in corporate tax aggressiveness was raised.

The overall answer is that international differences in corporate tax aggressiveness cannot be traced back to just a single determinant, but to the interaction of multiple factors. As discussed in section 2.3, companies are assumed to decide on their degree of tax aggressiveness under consideration of the expected benefits and costs entailed by the respective tax strategy. The availability of certain tax strategies as well as the associated cost and benefits are co-determined by country-specific factors such as the respective tax system.

The main benefit of tax avoidance exists in form of a reduced tax burden, thus potentially higher net-profits. In this sense, countries with higher corporate tax rates are assumed to exhibit higher levels of corporate tax aggressiveness. The findings presented in section 3.2.2 support this consideration, though partially mixed findings suggest that this relation is influenced by additional factors. In the sense of a trade-off, these additional factors might be cost factors outweighing the potential benefits. The presumably most distinctive cost associated with an aggressive tax position is a potential penalty imposed by the tax authority. Harsh penalties in combination with an effective law enforcement can increase the extent and probability of such a cost and thus might scale down tax aggressive behaviour. The empirical observations exhibited in section 3.2.4 indeed show that companies in countries with weaker tax law enforcement are associated with a higher degree of tax aggressiveness.

In addition to tax system characteristics directly affecting the costs and benefits, this paper presented some features that are believed to restrict the actual availability of certain tax avoidance practices. Higher book-tax conformity is assumed to curtail tax practices exploiting flexible accounting rules. Meanwhile, under a worldwide tax system profit shifting activities are impeded. Both of these tax system characteristics might not prevent aggressive tax avoidance, but push some of these practices out of the legal zone and thus increase the respective costs of tax avoidance. This may reduce tax aggressive behaviour indirectly.

Apart from this, the paper applied the consideration of tax morale to corporate tax payers. While tax morale refers to the intrinsic motivation of individuals to pay taxes, it was argued that corporate tax decisions could be subject to tax morale too, via the moral beliefs of its management and/or owners. However, it remained questionable whether observed effects indeed account for an intrinsic motivation to pay corporate taxes or if there are not other motives involved such as the fear of reputational damage. Either way, it was shown that social norms on taxation indeed play a role for corporate tax decisions. In section 3.3 light was shed on country-specific factors that might influence the extent of societal tax norms and thus could contribute to a higher tax compliance. Despite scarce literature on corporate tax morale, some indications have been found that a country's culture might have also some effect on corporate tax behaviour. Though culture comprises a variety of sub-factors and can hardly be isolated as a variable, awareness about a country's culture could allow for a better understanding of the effectiveness of other measures. Furthermore, it was shown that the relationship between state and individual tax payer plays an essential role on a personal level. Although empirical literature on reciprocal corporate tax behaviour is still sparse, concepts such as corporate citizenship or a company's fair share could hint at some parallels to the findings on private tax payers. Throughout section 3.3 a central question was that if tax morale plays a role for corporate tax decisions, then whose moral beliefs are reflected in this decision? Certainly the beliefs of the manager as the final decision maker matters to some extent, but how about other stakeholders such as owners? To answer this question the last section laid focus on the effect of different types of ownership and how they might influence corporate tax decisions. While the presented findings drew no clear picture, they gave rise to the previous supposition that companies might not act according to an intrinsic motivation, but in response to social deterrence. These concerns could be more relevant for specific types of ownership. In the case of family firms, a stronger public association between owner and company could have the effect that corporate tax misbehaviour is punished with reputational damage, not only on corporate level, but also on a private one. This consideration could assist in explaining differences in corporate tax aggressiveness between countries with distinctively different corporate ownership structures. For instance, some countries such as the U.S. exhibit a high proportion of family ownership while in other countries companies might be mainly owned by free-float. However, it remains to be seen whether this consideration holds true in reality.

To conclude, corporate tax aggressiveness is not just a random occurrence, but the result of an interplay between a variety of factors. Governments aiming to increase tax revenue should take the firms' perspectives into consideration. Simply increasing the corporate tax rate, ceteris paribus, might lead to different effects than expected. As findings show this could drive up the incentive to avoid taxes, thus resulting in overall less tax revenue. Therefore, it is essential for legislators to design tax systems in a way that outweigh incentives for aggressive tax avoidance with coequal costs. In this sense, the international differences in corporate tax aggressiveness can be related to some extent to different equilibrium states of benefits and costs of tax aggressiveness.

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