Tax Professionals' Tax Aggressiveness: Experimental Evidence on the Impact of Personality Traits, Preparer Penalties, and Market Regulation

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Dipl. Ök. Tim Zinowsky

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Referent:	Prof. Dr. Kay Blaufus
Korreferent:	Prof. Dr. Jost Heckemeyer
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Summary

This thesis comprises three papers contributing to the research on tax preparers' tax aggressiveness. Within this context "tax aggressiveness" represents tax preparers' tax risk propensity, i.e., the accepted likelihood that a recommended tax position will not prevail before a tax court in case of giving a positive recommendation for a deduction or structuring under review.

The first paper focuses on the impact of personality traits, professional experience, and the risk of suffering reputational losses on tax preparers' tax aggressiveness. A survey based sample comprising tax preparers and tax students shows direct effects of these factors as well as indirect effects of personality traits.

The second paper investigates the effectiveness of preparer penalty provisions that shall punish exaggerated tax aggressiveness by referring to a reporting standard that defines the maximum risk allowed to be included in a deduction or structuring. The results of a survey experiment among German tax preparers show that the effectiveness of such penalties depends on whether tax preparers have a high or low inclination to provide aggressive tax advice prior to the introduction of these rules.

The third paper explores whether regulation of tax advisory markets has an impact on tax preparers' tax aggressiveness. A survey based sample comprising tax preparers of the same Big Four Firm from the USA and Germany shows a difference in participants' tax aggressiveness that could be the result of regulative differences between these countries.

Zusammenfassung

Diese Dissertation beinhaltet drei Beiträge mit denen die Einflussfaktoren unterschiedlicher steuerlicher Aggressivität im Beratungsverhalten von Steuerberatern untersucht werden. „Steuerliche Aggressivität“ stellt dabei auf die steuerspezifische Risikobereitschaft eines Steuerberaters ab, also auf den Grad zu dem ein Steuerberater bereit ist, legale Positionen zu vertreten, die bei einer Überprüfung durch die Finanzbehörden und einem anschließenden gerichtlichen Verfahren nur mit geringer Wahrscheinlichkeit Bestand haben.

Im Fokus des ersten Beitrags stehen dabei der Einfluss von Persönlichkeitsmerkmalen, beruflicher Erfahrung und der Gefahr etwaiger Reputationsschäden auf das Beratungsverhalten. Für einen befragungsbasierten Datensatz aus Steuerberatern und Steuerstudenten zeigen sich direkte Einflüsse dieser Faktoren sowie indirekte Einflüsse von Persönlichkeitsmerkmalen.

Der zweite Beitrag untersucht die Effektivität von Strafvorschriften, die zu aggressives Steuerberatungsverhalten sanktionieren sollen, indem sie nach amerikanischem Vorbild auf ein objektiviertes Höchstmaß an Risikobereitschaft abstellen. In einem befragungsbasierten Datensatz aus deutschen Steuerberatern zeigt sich, dass die Wirksamkeit von Strafvorschriften abhängig ist von der vor Einführung einer Strafbewehrung bestehenden Neigung für aggressives Beratungsverhalten.

Der dritte Beitrag beleuchtet den Einfluss den die Regulierung eines Steuerberatungsmarkts auf das Beratungsverhalten von Steuerberatern hat, die in diesem Markt tätig sind. Für einen im Wege einer Befragung erhobenen Datensatz aus Steuerberatern ein und derselben Big Four Gesellschaft in den USA und Deutschland zeigt sich ein Unterschied im Beratungsverhalten zwischen den beiden Jurisdiktionen, der auf regulatorische Unterschiede zurück zu führen sein könnte.

Keywords

Tax Aggressiveness · Tax Preparer · Regulation

Schlagwörter

Aggressive Steuerplanung · Steuerberater · Regulierung

Dedicated to my brothers: Jann and Max.

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CHAPTER 1

1 Introduction

1.1 Motivation

The taxation process is a game of cat-and-mouse between taxpayers and the tax authorities. The latter are interested in maximizing tax compliance while taxpayers seek to minimize their tax burden within the latitude that is allowed by their inner obligation to behave as a good citizen and to contribute to the common good. Serving primarily the interest of tax authorities and standard setters there is a vast amount of studies investigating the determinants of individuals' compliance or designing tax avoidance measures that might be useful to identify firms that behave less compliant than others (for a review see, e.g., Kirchler et al. 2008, or Dyreng et al. 2009 respectively). However, referring to public debates in recent years, e.g., with regard to "Luxemburg-Leaks", or "Panama Papers" it seems as if especially big multinational firms and a few super-rich individuals were still a step ahead of the revenue agencies. Consequently, there are various national and international initiatives to counter tax avoidance between countries that are currently discussed.

An important "subgame" (Pickhardt & Prinz 2014) within the bigger picture of the tax game remains predominantly unattended in these discussions and is furthermore insufficiently studied when compared with the number of studies concerned with taxpayer behavior. This subgame comprises the role tax practitioners play within the compliance process. Their role is at least twofold as they should be client advocates representing taxpayers' interests against the tax authorities on the one hand, but are also obliged to obey tax laws or even act as a kind of "longa manus" of the tax authorities (dependent from jurisdiction), on the other hand. Hence, the level of tax aggressiveness included in tax preparers' advice should be subject to different influences which are predetermined by the particular preparer herself, client characteristics, task characteristics and the expected actions and perceived capacity of the tax authorities to detect or punish aggressive tax behavior. In line with these deliberations there are a couple of studies investigating tax professionals' tax aggressiveness which are mainly authored in the nineties or late eighties of the last century. A valuable review of these studies is provided by Roberts (1998). However, as there is conflicting evidence among the studies it still remains unclear whether the overall impact of tax preparers on tax compliance is positive or not and which determinants are decisive for determining tax professionals' tax aggressiveness. While

the first question has to be left for further research this thesis shall shed light on two of the most discussed determinants of tax professionals' tax aggressiveness and shall furthermore extended prior studies by adding supplementary variables impacting tax aggressiveness not discussed in this research stream up to now.

1.2 Contribution and Main Findings

Comprising three separate but related experimental (survey) studies[1] performed among tax professionals from a Big Four Firm this thesis contributes to tax aggressiveness research as described in the following.

1.2.1 The Impact of Personality Traits, Experience, and Reputation Risk

The second chapter of this thesis investigates whether tax preparers' aggressiveness depends on the length of their professional experience, their personality traits, like risk aversion or the "Big Five", and reputation risk. Prior research has either not paid attention to these potential determinants of tax professionals' advice aggressiveness or does only provide conflicting evidence. The results show that personality traits have direct and indirect effects on tax preparers' tax aggressiveness. While the direct influence is limited to a negative effect of extraversion we find several indirect effects via experience and general risk propensity that lead to the conclusion that the Big Five could help predicting the level of experts' tax aggressiveness and should therefore be considered in future compliance research. With respect to professional experience, risk propensity, and the danger of suffering reputation risk, we demonstrate that experts' tax aggressiveness declines with the length of working experience, risk aversion and reputation risk. Moreover, we propose that future research should reconsider the relation between overall risk propensity and advice aggressiveness.

Our findings are of interest for different parties involved in the tax compliance process. First, we find that tax aggressiveness varies largely between tax preparers even if we consider preparers of the same accounting firm. Thus, it may be reasonable for the revenue agency to introduce tax preparer registration programs that enable the revenue service to match tax returns and tax preparers. This would allow the revenue service to identify tax preparers that recurrently recommend very aggressive tax positions. Second, knowledge about the relation between experience and personality traits and preparers' aggressiveness can help clients selecting the tax preparer that best matches their own preferences. Third, our results

[1] The research papers that are the basis for Chapters 2 and 3 were co-authored with Prof. Dr. Kay Blaufus, Leibniz University of Hanover, email: blaufus@steuern.uni-hannover.de.

are useful in preventing accounting firms from reputational losses or claims resulting from advisor's liability or preparer penalties. The firm could monitor the tax aggressiveness of its employees by observing relevant personality traits, or experience which also holds for the staffing of projects.

1.2.2 The Impact of Tax Preparer Penalties

In the United States tax preparers are subject to preparer penalties if a tax preparer's recommendation is considered to be too aggressive when compared to a given reporting standard. Within this context "reporting standard" means a minimum likelihood of sustaining a tax position on its merits that must be established (Hansen & White 2012: 141). Before introducing tax preparer penalties also in other countries, it is worth to study the effectiveness of these penalties, especially as prior research on the effectiveness of these sanctions only provides conflicting evidence. Thus, the study included in the third chapter tests whether the introduction of preparer penalties referring to a certain reporting standard results in the effect intended by the legislator, i.e., a reduction in tax professionals' tax aggressiveness.

Motivated by Doran (2009) and the "theory of expressive law" (e.g., Cooter 1998) we expect that the introduction of preparer penalties will result in two opposing effects. First, in line with deterrence theory we hypothesize that penalty provisions including a certain reporting standard will fulfill their instrumental role by deterring tax preparers having a high inclination to recommend aggressive tax positions from doing so. Hence, the risk of being subject to penalties will reduce tax aggressiveness of these high-risk preparers. Second, at the same time, newly introduced penalties will have a definitional function as they express what activities are accepted to be tax compliant behavior. As a result tax preparers having an inclination to provide aggressive tax advice that is below the threshold defined by the reporting standard will internalize this new boundary of compliant behavior and will therefore increase their level of tax aggressiveness. Our results confirm the expected interaction between preparer penalty and the individual inclination towards aggressive advice. Therefore, legislators of other countries intending to introduce preparer penalties along the lines of the U.S. rules should balance the advantages for tax compliance resulting from the deterrence effect against the disadvantages resulting from the definitional effect. Overall, this study should be a first step into gaining a more detailed understanding of the effects of preparer penalties.

1.2.3 The Impact of Regulation of Tax Advisory Markets

The fourth chapter contributes to prior tax aggressiveness research by providing the first study that investigates cross-country differences in tax preparers' tax aggressiveness. Referring to a sample of tax professionals working at a Big Four firm in the USA and Germany we analyze whether market regulation has an impact on tax preparers' behavior. For this purpose, we first discuss the major differences between the two tax preparation markets flagged as the Full Regulation Model (Germany) and the Partial Regulation Model (USA). The latter are suggested to essentially differ with regard to (1) admission to the profession, (2) maintenance and enforcement of quality standards (e.g., penalties), (3) mandatory early disclosure rules, (4) the freedom to determine advertising, and fees, and (5) differences in the boundaries of multidisciplinary professional practice like provisions governing the possibility to collaborate with providers of other legal services. Hereinafter, given the plurality of differences between the two regulation models we test the hypothesis that market regulation matters, i.e., has an impact on tax preparers' tax aggressiveness. In line with this hypothesis, we find a difference in participants' tax aggressiveness between the countries that cannot be explained by differences in sociodemographic factors, client advocacy, personality traits, attitudes towards and perceptions about the tax system, cultural differences, or tax morale. We furthermore show that tax professionals' tax aggressiveness is determined by different factors in the two countries under review.

As prior studies on tax professionals' tax aggressiveness have almost exclusively been conducted in the USA our result raises the question whether the determinants found in prior research are also valid for tax professionals working in other jurisdictions or regulatory environments respectively. Hence, future research should take a deeper look into the role of regulatory differences when studying tax professionals' tax aggressiveness. This might enable legislators and standard setters interested in the role of tax professionals on the tax revenue to assess the potential effect of specific regulatory actions. Furthermore, governments, professional supervisions as well as the setters of tax standards should be interested in the latitude of tax aggressiveness that is predetermined by the institutional and regulatory framework in their country.

CHAPTER 2

2 Aggressive Tax Planning Advice: The Effects of Personality Traits, Professional Experience, and Reputation Risk[2]

2.1 Introduction

In this study, we investigate whether tax preparers' aggressiveness depends on the length of their professional experience, on their personality traits such as risk aversion or the "Big Five", and on reputation risk. Previous compliance research examines taxpayers' and tax system characteristics to explain differences in taxpayers' compliance behavior. An excellent overview of this research is provided by Pickhardt & Prinz (2014). However, firms usually purchase tax advice. Thus, it is reasonable to assume that their behavior is also driven by tax professionals providing the required advice. These tax professionals support the taxpayer's compliance with all sources of legal authority and assist her in dealing with the Internal Revenue Service (IRS). At the same time, tax professionals are free to minimize the client's tax liability within the latitude allowed by the tax code because they should be client advocates in tax matters (AICPA 2008). Consequently, the OECD identifies tax advisers to be, at least in part, a driver of tax avoidance by designing and offering aggressive tax planning schemes (OECD 2008). Empirical (e.g., Lisowsky 2010, McGuire et al. 2012) and experimental (e.g., Schmidt 2001) research supports this claim. It is, therefore, important to understand the determinants of tax professionals' behavior regarding tax compliance recommendations.

Personality research has shown that individual personality can be described by the five superordinate ("Big Five") dimensions of Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (McCrae and Costa 1990). Although the Big Five traits can successfully predict behavior in many different fields, e.g., occupational choice, wages, job performance, health behavior, teenage pregnancy, and crime (for a review, see Borghans et al. 2008), tax compliance research to date has not focused on the influence of the Big Five personality traits on professionals' actions. One exception is the study of Korndörfer et al. (2014) who find that the Big Five did not affect (self-reported) tax evasion. However, Korndörfer et al. (2014) investigate the effect on illegal behavior of taxpayers, whereas we study the effect on the aggressiveness of legal tax advice. Because legality can

[2] The research paper that is the basis for Chapter 2 was co-authored with Prof. Dr. Kay Blaufus, Leibniz University of Hanover, email: blaufus@steuern.uni-hannover.de.

alter behavioral responses with respect to tax minimization (Blaufus et al. 2016a), it is an open empirical question whether the Big Five help predicting tax planning recommendations of tax experts.

Prior research already indicates that individual personality traits may directly affect the level of tax avoidance. Dyreng et al. (2010) demonstrate that individual executives play a significant role in determining the level of a firm's tax avoidance. Olsen and Stekelberg (2016) find that CEO narcissism increases the likelihood of the CEO's firm engaging in corporate tax shelters. Besides potential direct effects of personality traits, we, however, also expect indirect effects. First, it is well documented that the Big Five personality traits[3] affect subjects' risk propensity (e.g., Nicholson et al. 2005, Soane & Chmiel 2005) and that risk propensity may increase tax aggressiveness (Hansen & White 2012). Thus, we expect that personality traits, which increase (decrease) risk propensity, indirectly increase (decrease) tax aggressiveness. Second, we hypothesize that professional experience in the tax advisory area relates to specific personality traits and that professional experience itself reduces tax aggressiveness. We, therefore, expect additional indirect effects of personality traits on advice aggressiveness, via professional experience.

Our study also contributes to the ongoing discussion about the effect of reputation risk on the level of corporate tax avoidance (e.g., Dyreng et al. 2016, Klassen et al. 2016). In line with Graham et al. (2014), who report that almost half of the surveyed tax executives agree that potential reputational damage to their firm is a very important factor in deciding among different levels of tax aggressiveness, we expect reputation risk to decrease advice aggressiveness.

To study the effects of experience, risk aversion, personality traits and reputation risk on tax preparers' aggressiveness, we conducted an online survey experiment among 123 tax experts comprising 66 German tax professionals of one Big Four accounting firm as well as 57 students studying tax and accounting at different German universities. Subjects were presented a hypothetical client who asks for an opinion regarding a tax planning idea. In line with U.S. preparer penalty provisions (IRC Sec. 6694 (a) (2)), we measure tax aggressiveness as the likelihood that a recommended tax position will not prevail before a tax court, i.e., subjects had to state the highest failure probability which they are willing to accept in case of a positive recommendation regarding the tax planning idea. Subjects were randomly assigned

[3] Being aware of the fact that overall risk propensity is a personality characteristic as well, we only refer to the Big Five by talking about personality traits in the following and to overall risk propensity by talking about risk propensity or risk aversion.

to one of two treatments either including or excluding a risk of reputation damage due to negative press coverage.

Our results show that personality traits have a direct effect on tax aggressiveness. However, the influence is limited to a negative effect of extraversion. With respect to professional experience, risk propensity, and reputation risk, we demonstrate that tax aggressiveness declines with the length of working experience, risk aversion and reputation risk. Furthermore, we find several indirect effects of personality traits on tax aggressiveness. Conscientiousness (neuroticism) is positively (negatively) related to professional experience and thus indirectly decreases (increases) tax aggressiveness. Regarding neuroticism there is an opposing negative indirect effect, via risk propensity, because neuroticism is negatively related to risk propensity which in turn is positively associated with tax aggressiveness. Finally, there is also an indirect positive effect of openness on tax aggressiveness, via risk propensity. Overall, we conclude that despite the limited direct effect, the Big Five could help predicting the level of tax avoidance and should thus be considered in future compliance research. The same holds for general risk propensity as we find a direct effect on tax aggressiveness.

Our findings are of interest for different parties involved in the tax compliance process. First, we find that tax aggressiveness varies largely between tax preparers even if we consider preparers of the same accounting firm. Thus, it may be reasonable for the revenue agency to introduce tax preparer registration programs that enable the revenue service to match tax returns and tax preparers. This would allow the revenue service to identify tax preparers that recurrently recommend very aggressive tax positions. Second, knowledge about the relation between experience and personality traits and preparers' aggressiveness can help clients selecting the tax preparer that best matches their own preferences. Third, our results are useful in preventing accounting firms from reputational losses or claims resulting from advisor's liability or preparer's penalty. The firm could monitor the tax aggressiveness of its employees by observing relevant personality traits, or experience which also holds for the staffing of projects.

The remainder of this paper is structured as follows. First, we describe some institutional details about the German tax advisory business. Second, we provide a review of prior literature and formulate our hypotheses. Third, we describe the sample and survey instrument as well as the estimation strategy employed. Fourth, the results of the empirical analysis are presented and discussed. Fifth, we present conclusions and suggestions for future research.

2.2 Institutional Background

Because we investigate the tax aggressiveness of German tax professionals, it is necessary to understand the framework of their business. The German market for tax advisory services is highly regulated. A complex examination must be passed to be allowed to provide tax advice. In 2015, approximately 80,000 examined tax advisors were registered in Germany. Having successfully passed the exam, tax advisors are subject to professional supervision and are bound by certain professional ethics such as discretion or conscientiousness. The latter also comprises the need for a disclosure of all connected risks when providing advice to clients. At the same time, tax advisors are client advocates who are free to recommend every tax position that can be defended by evidence from law, literature, or case law. Even very aggressive tax positions can be endorsed as long as the tax advisor complies with professional ethics - in particular, unlimited client enlightenment - and does not support the client in tax evasion. Tax evasion is defined as the taxpayer or the advisor providing intentionally inaccurate or incomplete information to the tax authorities to reduce the tax burden. Tax advisors, who assist their clients evading taxes, do not only have to pay penalties but also bear the risk of losing their allowance to provide tax advice. Thus, it should be noted that the current study only covers legal tax avoidance. Preparer penalties, which are prevalent in the US, do not exist in German law. Furthermore, German law does not provide for mandatory early disclosure rules. Hence, in comparison to other countries such as the US, German tax preparers are less regulated when choosing the level of aggressiveness in providing advice to their clients.

2.3 Hypotheses Development

Previous research shows that tax preparation services directly affect taxpayers' tax compliance (Lisowsky 2010, McGuire et al. 2012, Schmidt 2001). Against this backdrop, we aim to study determinants of tax preparers' advice aggressiveness. These determinants have been divided into three broad classifications by Milliron (1988): client-related features, decision-context determinants, and preparer related features. Relevant client-related features include characteristics such as client's preference (Ayres et al. 1989, Helleloid 1989), aggressiveness (Kaplan et al. 1988, Duncan et al. 1989), importance (Reckers at al. 1991), and withholding status (Schisler 1994). Furthermore, the relationship with the client is crucial when predicting the tax aggressiveness of professionals. Differences in their advice aggressiveness depend on the risk of client loss (Newberry et al. 1993) or the reasonableness

and cooperativeness of the client (Kadous & Magro 2001). Decision-context determinants observed to influence tax aggressiveness include features such as preparer penalties (for a review see Hansen & White 2012), planning versus compliance tasks (Spilker et al. 1999), the level of ambiguity (Carnes et al. 1996, Klepper and Nagin 1989, Kaplan et al. 1988), or the order of information presentation (Pei et al. 1990). Relevant preparer-related features include educational level (Carnes et al. 1996), political ideology (Blanthorne et al. 2013), gender (e.g., Roberts & Cargile 1993), firm type (e.g., Carnes et al. 1996), client advocacy (e.g., Johnson 1993), overall risk propensity (e.g., Hansen & White 2012), tax risk propensity (Carnes et al. 1996), ethical judgments (Cruz et al. 2000), and moral reasoning (Blanthorne et al. 2013).

The purpose of this study is to complement the abovementioned research stream by investigating potential direct effects of the Big Five personality traits on tax preparers' aggressiveness as well as indirect effects of the Big Five personality traits via the impact on professional experience and risk propensity. In addition, contributing to the ongoing discussion about the effects of reputational costs on tax avoidance, we study the effect of potential reputation damages on tax advice aggressiveness.

2.3.1 The Direct Effects of Reputation Risk, Professional Experience, and Risk Propensity

2.3.1.1 Reputation Risk

Whether aggressive but legal tax advice could lead to reputation costs for tax advisory firms is an open empirical question. We are not aware of any prior study directly addressing this issue. However, there is an ongoing discussion about reputational effects on corporate tax aggressiveness. The empirical evidence, so far, is mixed. Hanlon and Slemrod (2009) conduct an event study to examine stock price reactions to news concerning corporate tax shelter usage. They find negative stock market reactions, particularly for firms in the retail sector, which suggest a consumer backlash. However, using advertising costs as another proxy for a potential consumer backlash, they find no significant effect. Austin and Wilson (2013) find that firms with exposure to potentially significant reputation costs do not significantly differ in their tax avoidance level. Gallemore et al. (2014) find no evidence for significant reputation costs measured by increased CEO and CFO turnover, auditor turnover, lost sales, increased advertising costs, and decreased media reputation. Blaufus et al. (2016b) even find positive stock market responses to tax avoidance news. However, Graham et al. (2014) surveyed tax executives and nearly half of the participants agree that a potential reputational damage for their firm is a very important factor for deciding on different levels of tax aggressiveness. Moreover, Dyreng et al. (2016) find that new disclosure rules requiring the publication of a

firm's full subsidiary list decreases a firm's tax avoidance. The authors interpret this as evidence of an effect of "public pressure" on corporate tax policy.

The abovementioned studies concern the firm's reputation, which conducts tax avoidance, but not reputational costs of tax advisory firms. In this respect, there is only the indirect evidence. Incardona et al. (2014) demonstrate that the sale of tax shelters by accounting firms leads to a reputational spillover effect on the audit profession. Klassen et al. (2016) find evidence indicating that an external tax preparer gives less aggressive advice if the preparer jointly provides tax and audit work for a firm. They argue that an auditor-preparer's work is more visible to the firm's top management and thus the reputation and litigation risk of an auditor-preparer is higher.

In theory, there could be two opposing effects of reputation risk on advice aggressiveness. As tax advisory firms are clients' advocates, news in the media about a tax advisory firm offering aggressive tax advice could attract new clients. However, very aggressive tax positions also bear the risk that they repeatedly are not sustained upon examination of the revenue agency. This could lead to severe negative media coverage claiming consulting errors. Moreover, tax advisors act as repeated players in a tax compliance game with the revenue agency. Thus, also the firm's reputation to the revenue agency is of importance. For example, the Big Four firms where we conducted the survey require every tax advisor to yearly confirm that she did not pursue any tax constructions or declared information in tax returns that could potentially derogate the firm's good reputation in the German revenue service. Overall, we therefore expect that reputation risk decreases advice aggressiveness and formulate the first hypothesis as follows:

H1: Reputation risk reduces advice aggressiveness.

2.3.1.2 Professional Experience

Previous tax research uses different indicators of experience. On the one hand, preparer related features, such as task familiarity (Duncan et al. 1989, Newberry et al. 1993, Reckers et al. 1991), prior IRS audit experience (Cloyd 1995, Duncan et al. 1989, Kaplan et al. 1988), and having passed the CPA or bar exam (Ayres et al. 1989, Cuccia 1994, Erard 1993) increase tax preparers' tax aggressiveness. On the other hand, other studies using age or years of experience in the field of taxes as a proxy for experience report evidence that the latter may increase (LaRue & Reckers 1989) or decrease (Helleloid 1989, Cloyd 1995) tax aggressiveness or that there is no association at all (Duncan et al. 1989, Schisler 1994).

Despite this conflicting evidence, we expect that experience is negatively related to tax aggressiveness. It should be noted that we aim to measure the willingness to recommend aggressive ("risky") tax positions given an exogenous chance that the position does not prevail in a tax dispute with the Internal Revenue Service (IRS). Thus, the arguments for a positive impact of experience indicators such as IRS audit experience (McGill 1988, Ayres et al. 1989, Pei et al. 1992) or procedural knowledge (O'Donnell et al. 2005) should not be applicable to the setting at hand because they refer to an adjustment of the outcome expectations and not to the willingness to recommend tax positions with a given risk level.

Furthermore, Kohlberg's (1981) theory of moral development suggests that the perceived ethical costs of recommending overly aggressive tax structures rise with increasing experience. According to this theory and related empirical evidence (e.g., Emerson et al. 2007), individuals may experience a moral maturation over the course of their lives. Moreover, previous research shows that tax partners rate their firm's ethical environment as being stronger and report having encountered more "ethical dilemmas" when compared to the rates of non-partners (Bobek et al. 2010). In addition, experienced tax advisors are "repeat players" who should also be interested in maintaining a trustful relationship with the revenue service and should, therefore, avoid overly aggressive tax recommendations. Finally, with increasing experience, tax preparers of large firms should not only be responsible for their own results but also for the success of their firm and the job security of subordinate employees. Responsibility for the wealth of others, however, reduces risk taking as previous experimental studies show (e.g., Charness & Jackson 2009). These aspects should lead experienced tax preparers take lower tax risks. Thus, we test the following hypothesis:

H2: There is a negative relation between professional experience and advice aggressiveness.

2.3.1.3 Risk Propensity

Subjects risk attitude is certainly one of the most important predictors of risky behaviors in economic research (Dohmen et al. 2011). Providing risky tax advice should also be related to a subject's risk attitude. In line with this assumption, Hansen and White (2012) find that the willingness to recommend an uncertain tax position increases with subjects' risk propensity. We, therefore, expect that an increasing risk aversion reduces tax aggressiveness.

H3: Increasing risk aversion decreases advice aggressiveness.

2.3.2 The Direct and Indirect Effects of Personality Traits

Personality research shows that a comprehensive characterization of personality can be achieved by considering five factors – the so-called Big Five personality traits (e.g., Barrick & Mount 1991, McCrae & Costa 1997).

The first two factors are Extraversion (E) and Neuroticism (N, also known as emotional stability with inverse meaning), formerly known as the "Big Two" (Wiggins 1968). People scoring high in E are generally described as being sociable, gregarious, assertive, talkative, and adventuresome, whereas N involves traits such as being depressed, angry, embarrassed, emotional, anxious, and insecure. The third factor has generally been labeled as Agreeableness (A). Traits associated with A include being courteous, flexible, cooperative, forgiving, and tolerant. The fourth factor, Conscientiousness (C), reflects traits such as being hardworking, dutiful, orderly, and organized. The last factor, Openness to Experience (O), involves traits such as curiosity, imaginativeness, or open-mindedness and can often be observed among people who have a preference for art, literature, classical music, or new experiences in general.

This five-factor structure has proven to be stable with respect to a broad range of used instruments and methodologies in measuring personality traits (e.g., Goldberg 1990). In addition, substantial convergence has been observed between an individual's self-reported trait ratings and ratings of others who know the individual well (Soldz & Vaillant 1999). Most importantly, however, the Big Five have shown to be a considerable predictive value for key socioeconomic outcomes.

With respect to the current study, it is important to note that prior research finds risk propensity to be strongly rooted in personality (Nicholson et al. 2005). Researchers find evidence for the fact that A, C, and N are inversely related to risk taking, whereas E and O have been found to increase risk propensity (e.g., Nicholson et al. 2005, Soane & Chmiel 2005). Thus, we expect an indirect effect of personality traits on advice aggressiveness because personality traits affect risk propensity which itself is related to advice aggressiveness according to H3. We test the following two hypotheses:

H4: The Big Five personality traits affect subjects' risk propensity.

H5: The Big Five personality traits indirectly affect advice aggressiveness via the effect on risk propensity.

However, risk research also shows that risk taking behavior is domain-specific (e.g., Soane et al. 2010). There are important differences between risk taking in general and tax risk taking. First, the choice to take on tax risks by professional tax preparers is not a "private" decision such as playing the lottery or investing in shares, but must be defended in an internal revision processes as well as against claims of the fiscal administration. Second, even in the absence of preparer penalties, non-pecuniary costs of recommending tax positions might be perceived that will not be upheld by a court. Although tax advisors are, on the one hand, clients' advocates and therefore aim to minimize clients' taxes, they are, on the other hand, restrained by their ethical obligation to act as "law enforcers". Research shows that personality traits significantly affect the perceived costs of social and ethical risk taking (Soane et al. 2010). In sum, we expect that tax risk taking decisions differ from general risk taking decisions. Thus, we hypothesize that the Big Five personality traits have direct effects on advice aggressiveness, i.e., they have predictive power even if we control for general risk taking propensity. Therefore, we test the following hypothesis:

H6: Advice aggressiveness will be directly affected by the Big Five personality traits.

Finally, no prior study recognizes that high experience in the field of tax advisory might itself be dependent on certain personal characteristics. As in this paper, most previous studies have examined the behavior of professionals working in a Big Four firm. These companies are known for their up-or-out system accompanied by long working hours and demanding professional examinations. Therefore, it is reasonable that employees who remain in such an organization differ with respect to their personality traits from those who leave the firm. However, not only the decision to remain in a specific organization but also the decision to remain working as a tax professional should be affected by individual personality traits. Two basic factors that cause people to stay longer and be promoted to the next employment level are job performance and job satisfaction. Therefore, we are able to draw inferences from the vast literature concerning personality traits and job performance (for a review see Johnson et al. 2011) and job satisfaction (for a review see Tokar et al. 1998). Research shows that conscientiousness is directly (Alessandrini & Vecchione 2012, Johnson et al. 2011, Barrick & Mount 1991) and neuroticism is inversely (Johnson et al. 2011, Tokar et al. 1998 with further references) related to job performance. Because the direction of influence of these traits is equal to their impact found for job satisfaction (Furnham et al. 2002, Tokar et al. 1998 with further references), we assume that conscientiousness and emotional stability have a positive effect on experience (measured as years working as tax professional).

Evidence for the influence of extraversion indicates that extroverts perform better (e.g., Alessandrini & Vecchione 2012) or are more likely to choose managerial career paths (Garden 1997). Studies indicating the contrary (e.g., Hayes et al. 1994) are not concerned with professions comparable to those in the tax field. Again, because the studies examining the impact of extraversion to job satisfaction confirm the results observed for job performance (e.g., Furnham et al. 1999), we expect extraversion to have a positive effect on our experience measures.

Although evidence is underrepresented, agreeableness has also been found to facilitate higher job performance (Rothmann & Coetzer 2003). Because there are no results regarding agreeableness and job satisfaction stating the opposite and we assume that agreeable employees are more adaptive and do not easily tend to criticize the status quo, the overall impact on our experience measures should be positive.

Prior studies only find conflicting evidence with respect to the influence of openness on job performance (Rothmann & Coetzer 2003, Hayes et al. 1994) and no significant impact on job satisfaction. However, concerning the idea that people scoring high in openness have a preference for new experiences, we suggest that such people are more likely change firms or jobs. Hence, we expect an inverse relation between openness and our experience measures.

In sum, we expect that experience is affected by personality traits and therefore anticipate an indirect effect of personality traits on tax aggressiveness, which leads to our final hypotheses:

H7: The Big Five personality traits affect professional experience.

H8: The Big Five personality traits indirectly affect advice aggressiveness via the effect on professional experience.

Our hypotheses are summarized in Figure 2.1.

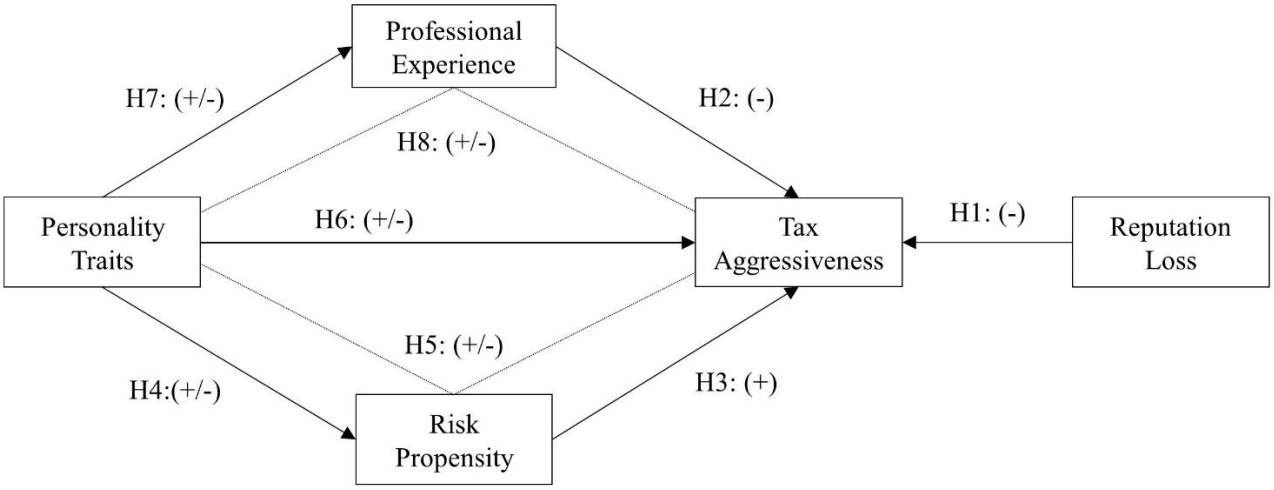

Figure 2.1: Hypotheses Overview.

2.4 Sample and Survey Instrument

2.4.1 Sample

We invited 650 tax employees of a Big Four firm and 250 economics or business administration students, who take tax and accounting classes at four different German universities, to participate in an online survey.[4] We received answers from 69 tax professionals and 71 tax students. We removed three subjects from the professional sample and 14 subjects from the student sample because these subjects did not answer the questions seriously or they are identified as outliers.[5] Therefore, our final sample consists of two peer groups comprising 66 tax professionals as well as 57 tax students.

The tax professionals work in different areas of the service line "Tax" for the same Big Four firm in Germany and have at least a managers' degree[6] (manager: 37, senior manager: 20, partner/director: 8). The professional group consists of 20 females and 46 males, with only two subjects having not passed a professional exam to become a tax advisor, lawyer, or CPA. The tax student group consists of 19 females and 38 males. Thereof, 33

[4] The survey has been designed and performed by using LimeService a service platform of Carsten Schmitz - LimeSurvey.com: http://www.limeservice.com.

[5] The following cases were identified as not having been answered seriously: One tax professional recommending approving a tax-structuring idea that bears a 100% risk of failure, and thirteen students demanded fees below the given costs of the firm. Outliers were detected by applying the method of mean plus or minus three SD to the tax aggressiveness and the sums of the items indicating the particular personality trait of the Big Five. There are no outliers with respect to tax aggressiveness, whereas the scores regarding conscientiousness and agreeableness each showed two outliers. Because one subject was classified as being an outlier with respect to both personality traits, the total number of outliers is three. We furthermore compared the time the particular subject needed to answer the questionnaire to a threshold that we suggest to be the required minimum time. However, no observations have been removed from the sample in course of this plausibility test.

[6] One participant did not indicate her degree.

students are bachelor students and 24 master students with an average absolved length of study of 4 (bachelor students) and 9 semesters (master students).

2.4.2 Survey Instrument

All subjects were asked to perform an online survey whose questions can be found in Appendix A. Subjects did not receive any payments. First, we presented a tax planning setting to the subjects and asked whether they were willing to propose the execution of a specific tax planning idea to a client. The probability that the financial administration challenges the restructuring and wins in the case of litigation (failure probability) was supposed to be approximately 50%.

The second question asked the subjects to indicate the maximum risk that they allow to be inherent in the tax planning task if they were willing to provide a positive recommendation for the implementation. We use the answer to the second question as our measure of tax aggressiveness. This corresponds to U.S. preparer penalty provisions (IRC Sec. 6694 (a) (2)). Moreover, this approach of directly measuring the willingness to take tax risks offers the advantage of being able to isolate the direct effects of experience and personality traits on the willingness to take tax risks. If we had given participants a specific tax case and then asked for their recommendations, experience and personality traits would have also affected the outcome expectation (e.g., subjects' estimated probability to prevail in negotiations with the IRS). Indeed, as noted by O'Donnell et al. (2005), a vast majority of previous studies do not control for the interactions of experience and outcome expectations. Our approach avoids this potential drawback because we ensure that the tax risk objectively included in the task of our study equals the tax risk subjectively recognized by the participants. To control if the subjects seriously answer the questionnaire we added a third question that asks them to quote the fee they would charge to the client for preparing a memo with the indicated failure probability. For this purpose we provided information about the effort necessary for the preparation. In case of the students, we provided the given costs for the memo. Subjects quoting fees below the given costs have been removed from the sample due to a lack of seriousness when answering the questionnaire.

To measure the effect of reputation risk, subjects were randomly assigned to either a treatment including reputation risk or a treatment excluding potential reputation damage. In the latter (former) case, subjects were explicitly told that the firm would not have to fear reputational losses (would have to fear reputational losses due to negative press coverage that claims a consulting error).

The utilized tax planning setting controls for a set of variables that have been observed to influence tax aggressiveness in previous studies, namely reputational losses, the importance of the client, the value of tax savings, client loss, the ambiguity and the kind of prior evidence, the possibility of being liable to client, as well as the effort needed to provide advice to the client. Hence, there should be no differences in perceptions about these variables and therefore no influence on tax aggressiveness.

The second chapter of the questionnaire asked the subjects to provide personal information such as sex, age, work experience, professional examinations, and general risk attitudes. We use the years working as a tax professional and, alternatively, in robustness checks the years working at the accounting firm to measure the subjects' experience. We use an experimentally validated question to measure general risk attitude for which data of a representative sample of the German population exist (Dohmen et al. 2011). Thus, we are able to compare the risk attitude of the sample to the general risk attitude in the population.

In the third chapter of the questionnaire, we used a 15-item design developed by Gerlitz and Schupp (2005) - the so called "BFI-S" - to control for the Big Five personality traits. Within the BFI–S, each of the five personality factors is measured with 3 items on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). The reliability and validity of this short version of the Big Five approach has been approved by the aforementioned authors and is used in different waves of the German Socio-Economic Panel (SOEP) survey (Lang et al. 2011). The German SOEP (Wagner et al. 2007) is a representative household panel study with probability sampling that has been conducted annually since 1984. As with the general risk attitude, we are able to compare sample results with attitudes observed for the population. To obtain a parsimonious representation for the five personality traits, we conducted a principal components factor analysis followed by varimax rotation because this is the most prevalent method in prior research (for a review see Caruso & Cliff 1997). Our results confirm the results of Gerlitz and Schupp (2005) because the same three items mainly represent one of the aggregated five personality factors. The five dummy factors emerged with eigenvalues of OPENNESS = 1.945, CONSCIENTIOUSNESS = 1.650, EXTRAVERSION = 2.281, AGREEABLENESS = 1.690, and NEUROTICISM = 2.161 explaining 65% of the total variance in the data. The respective factor loadings are shown in Appendix B.

2.5 Estimation Strategy

2.5.1 Direct Effects

To test for the proposed direct effects, we estimate the following system of equations using maximum likelihood:

$$\begin{aligned}\text{EXPERIENCE} &= \alpha_{10} + \alpha_{11}\text{OPENNESS} + \alpha_{12}\text{CONSCIENTIOUSNESS} + \alpha_{13}\text{EXTRAVERSION} \\ &+ \alpha_{14}\text{AGREEABLENESS} + \alpha_{15}\text{NEUROTICISM} + \varepsilon_1\end{aligned} \quad (1)$$

$$\begin{aligned}\text{RISK\_PROP} \\ &= \alpha_{20} + \alpha_{21}\text{OPENNESS} + \alpha_{22}\text{CONSCIENTIOUSNESS} + \alpha_{23}\text{EXTRAVERSION} \\ &+ \alpha_{24}\text{AGREEABLENESS} + \alpha_{25}\text{NEUROTICISM} + \varepsilon_2\end{aligned} \quad (2)$$

$$\begin{aligned}\text{TAX\_AGGRESSIVENESS} \\ &= \alpha_{30} + \alpha_{31}\text{REP\_LOSS} + \alpha_{32}\text{EXPERIENCE} + \alpha_{33}\text{RISK\_PROP} \\ &+ \alpha_{34}\text{OPENNESS} + \alpha_{35}\text{CONSCIENTIOUSNESS} + \alpha_{36}\text{EXTRAVERSION} \\ &+ \alpha_{37}\text{AGREEABLENESS} + \alpha_{38}\text{NEUROTICISM} + \varepsilon_3\end{aligned} \quad (3)$$

EXPERIENCE reflects participants' professional experience measured as years working in the field of tax advisory services. As subjects only indicated whether they already work in this sector for less than three years, between three and five, five and ten, ten and fifteen, fifteen and twenty, or more than twenty years, we chose the particular class-middle to design an experience measure that allows for a metric interpretation.[7] OPENNESS, CONSCIENTIOUSNESS, EXTRAVERSION, AGREEABLENESS and NEUROTICISM represent participants' Big Five personality traits as determined by the aforementioned factor analysis. RISK_PROP indicates subjects risk propensity on the given scale from zero ("not at all willing to take risks") to ten ("very willing to take risks"). TAX_AGGRESSIVENESS measures participants' tax aggressiveness as indicated by the maximum risk the participants are ready to accept. The dummy variable REP_LOSS controls for the effect of reputational losses by indicating the treatment to which the particular subject was assigned ("1"= "setting with reputational losses"; "0" = "setting without reputational losses"). There are no significant differences between the two treatment groups regarding age, overall risk propensity, experience or the personality traits (Mann-Whitney-U-Tests) and no significant differences regarding grade, professional exam and main field of working expertise (Chi-squared tests).[8]

[7] The value of EXPERIENCE is 0 for the tax students as we investigate the impact of professional experience, and 1.5, 4, 7.5, 12.5, 17.5, and 25 for participants working less than three years, between three and five, between five and ten years, between ten and fifteen years, between fifteen and twenty years, and more than twenty years in the field of tax advisory.

[8] Chi-squared testing shows significant differences between the treatment groups regarding gender ($p = 0.049$, married vs. not married subjects ($p = 0.084$) and the question whether subjects hold a CPA exam or not ($p = 0.093$). However, we obtain qualitatively the same results to the ones presented in the following if we include these controls in our models.

2.5.2 Indirect Effects

Next, we calculate the hypothesized indirect effects by multiplying the corresponding direct effects (Baron and Kenny 1986). For example, we obtain the indirect effect of openness via risk propensity by multiplying α_{21} and α_{33}. The calculation of asymptotic standard errors of the indirect effect is based on the multivariate delta method (Bishop et al. 1975, Sobel 1982, 1986). Statistical significance is derived through a comparison of the indirect effect divided by the asymptotic standard errors to a standard normal distribution (see MacKinnon et al. 2007 for a review).

2.6 Results

2.6.1 Descriptive Statistics

Table 2.1 presents descriptive results for TAX_AGGRESSIVENESS. On average, subjects are willing to provide a positive recommendation for the tax planning structure up to a failure probability of 35.53%. Panel A of Table 2.1 displays the average tax aggressiveness levels depending on the treatment, i.e., with or without potential reputation risks. The results show that the existence of a potential reputation loss significantly reduces tax aggressiveness ($p = 0.001$, Mann-Whitney-U) which is in line with hypothesis H1. Panel B of Table 2.1 shows tax aggressiveness for different levels of experience. The results indicate that tax aggressiveness decreases with increasing years of experience and thus support hypothesis H2. Tax students are more aggressive than tax professionals ($p = 0.033$, Mann-Whitney-U) and subjects with more than five years of working experience are less aggressive ($p = 0.025$, Mann-Whitney-U). Moreover, in line with H3 the descriptive results indicate that tax aggressiveness is positively related to overall risk propensity as participants, who demonstrate a high risk aversion take lower tax risks than participants with a low risk aversion ($p = 0.003$, Mann-Whitney-U).

Panel D of Table 2.1 displays tax aggressiveness for different levels of personality traits. We find that less extraverted subjects are less tax aggressive ($p = 0.010$, Mann-Whitney-U). The difference in accepted tax risk between high and low extraverted subjects is large and amounts to nine percentage points. However, the direction of this effect is surprising because extraversion is generally associated with higher risk taking and sometimes also aggression. An explanation might be that extraverts have a preference to receive attention or to be in the spotlight. This tendency might be connected with a high preference for face-saving. Hence, actions resulting in potential losses of personal reputation could be unpopular

for people scoring high in extraversion. Regarding the other personality traits we do not observe any significant differences. Overall, these results provide limited evidence for hypothesis H6.

Panel A of Table 2.2 compares risk aversion and personality traits between our sample and the German population. Subjects in our sample are significantly less conscious ($p = 0.000$, Mann-Whitney-U) and less neurotic ($p = 0.068$, Mann-Whitney-U). Regarding the other personality traits and risk aversion, we find no significant differences between our sample and the German population. Panel B of Table 2.2 presents the values of risk propensity and personality traits for different levels of experience. The data indicate that personality traits affect professional experience (H7). In particular, neuroticism has a negative effect ($p = 0.039$, Mann-Whitney-U) on years of experience, whereas conscientiousness positively influences years of experience ($p = 0.016$, Mann-Whitney-U). Panel C of Table 2.2 presents personality traits for different levels of risk aversion. In line with H4, the data indicate that personality traits affect general risk aversion. Subjects, who are more open to experience ($p = 0.030$, Mann-Whitney-U) and are less neurotic ($p = 0.000$, Mann-Whitney-U), display lower levels of risk aversion.

		TAX_AGGRESSIVENESS				
		Obs.	Mean	S.D.	Median	Sign.
Total		123	35.53	20.06	30.00	
Panel A: Reputation Loss						
Potential reputation loss		66	29.88	18.61	28.50	0.001
No Potential reputation loss		57	42.07	19.84	50.00	
Panel B: Experience						
Tax Students		57	39.46	19.97	40.00	0.033
Tax Professionals		66	32.14	19.66	27.50	
Working experience ≤ 5 years		67	39.00	19.38	35.00	0.025
Working experience > 5 years		56	31.37	20.25	27.50	
Panel C: Risk Propensity						
High risk aversion		52	29.65	19.66	20.00	0.003
Low risk aversion		71	39.83	19.37	50.00	
Panel D: Personality Traits						
OPENNESS	*high*	62	35.03	19.54	30.00	0.831
	low	61	36.03	20.73	33.00	
CONSCIENTIOUSNESS	*high*	61	34.87	20.81	30.00	0.581
	low	62	36.18	19.45	33.00	
EXTRAVERSION	*high*	62	31.03	20.01	26.00	0.010
	low	61	40.10	19.22	35.00	
AGREEABLENESS	*high*	62	36.63	19.88	34.00	0.468
	low	61	34.41	20.35	30.00	
NEUROTICISM	*high*	62	33.44	21.05	27.50	0.188
	low	61	37.66	18.94	35.00	

The table presents the descriptive results regarding subjects' tax aggressiveness (measured as the maximum tax risk subjects are willing to accept in percent). Panel A displays tax aggressiveness for the two treatment groups, i.e., with and without potential reputation losses. Panel B shows tax aggressiveness for different levels of working experience. Panel C displays tax aggressiveness for different levels of risk propensity. Subjects must indicate their general risk propensity on a scale ranging from zero ("not at all willing to take risks") to ten ("very willing to take risks"). Subjects with values ≤ 3 (>3) are classified as having high (low) risk aversion. Panel D shows tax aggressiveness for different levels of the Big Five personality traits. The personality traits are dichotomized at the median. *High* (*low*) denotes values above (below) the median. Statistical significance refers to the p-values for the Mann-Whitney-U-Test.

Table 2.1: Descriptive results of subjects' tax aggressiveness.

	Risk Propensity		Personality Traits									
	Mean	Sign.	Open-ness	Sign.	Conscien-tiousness	Sign.	Extra-version	Sign.	Agree-ableness	Sign.	Neuro-ticism	Sign.
Panel A: Sample versus population												
Sample	4.14 (1.95)	0.372	4.33 (1.23)	0.620	5.51 (0.84)	0.000	4.82 (1.21)	0.509	5.24 (0.81)	0.220	3.59 (1.32)	0.068
German Population	4.31 (2.31)		4.35 (1.29)		5.79 (1.00)		4.76 (1.17)		5.33 (1.01)		3.82 (1.23)	
Panel B: Experience												
Tax Students	4.11 (1.94)	0.886	4.47 (1.22)	0.373	5.40 (0.89)	0.258	4.98 (1.23)	0.116	5.29 (0.87)	0.461	3.70 (1.46)	0.459
Tax Professionals	4.17 (1.97)		4.21 (1.23)		5.61 (0.79)		4.68 (1.18)		5.20 (0.77)		3.49 (1.19)	
Years working as a tax professional ≤ 5	4.04 (1.89)	0.598	4.46 (1.17)	0.272	5.33 (0.87)	0.016	4.85 (1.23)	0.674	5.30 (0.82)	0.356	3.82 (1.44)	0.039
Years working as a tax professional > 5	4.25 (2.03)		4.17 (1.27)		5.73 (0.75)		4.78 (1.19)		5.17 (0.81)		3.30 (1.10)	
Panel C: Risk Propensity												
High risk aversion			4.04 (1.26)	0.030	5.56 (0.75)	0.484	4.62 (1.18)	0.131	5.29 (0.76)	0.603	4.10 (1.13)	0.000
Low risk aversion			4.54 (1.16)		5.47 (0.91)		4.97 (1.22)		5.21 (0.86)		3.21 (1.32)	

The table shows the mean of subjects' risk propensity and Big Five personality traits. Each of the five personality factors is measured with three items on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). The table displays the mean of the three items indicating the particular trait. Standard deviations are presented in brackets. Panel A compares risk aversion (according to the German SOEP year 2010) and personality traits (according to the German SOEP year 2009) between the population and our sample. Panel B shows risk aversion and personality traits for different measures of experience. Panel C presents personality traits for different levels of risk propensity. The dichotomization of RISK_PROP made for this purpose is the same as explained for Table 2.1. Statistical significance refers to the p-values for the Mann-Whitney-U-Test.

Table 2.2: Descriptive results of subjects' Big Five personality traits and risk aversion.

2.6.2 Multivariate Analysis

2.6.2.1 Direct Effects

VARIABLES	(1) EXPERIENCE	(2) RISK_PROP	(3) TAX_AGGRESSIVENESS
EXPERIENCE			-0.721***
			(0.242)
RISK_PROP			3.214***
			(0.936)
REP_LOSS			-9.662***
			(3.245)
OPENNESS	-1.255**	0.491***	-1.967
	(0.616)	(0.177)	(1.592)
CONSCIENTIOUSNESS	1.074**	-0.0777	1.534
	(0.498)	(0.157)	(1.354)
EXTRAVERSION	0.0224	0.188	-3.683**
	(0.501)	(0.151)	(1.628)
AGREEABLENESS	-0.319	-0.192	2.318
	(0.579)	(0.161)	(1.425)
NEUROTICISM	-1.488***	-0.808***	0.876
	(0.497)	(0.146)	(1.639)
Constant	5.427***	4.138***	31.33***
	(0.545)	(0.152)	(5.002)
R-squared	0.121	0.255	0.223
Wald Chi2	17.85**	47.47***	53.90***

The first two models of the table display the direct effects of the personality traits represented by OPENNESS, CONSCIENTIOUSNESS, EXTRAVERSION, AGREEABLENESS and NEUROTICISM on participants' experience (EXPERIENCE) and risk aversion (RISK_PROP). The third model in turn reflects the direct impact of all the aforementioned variables and potential reputational losses (REP_LOSS) on subjects' tax aggressiveness (TAX_AGGRESSIVENESS). The number of observations amounts to 123 for all regression results depicted. Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, $p < 0.1$

Table 2.3: Regression results for direct effects.

Table 2.3 displays the regression results for the direct effects hypothesized by H1-H4, H6 and H7. The results confirm the previous bivariate analysis. Personality traits affect professional experience (H7). In addition to the negative (positive) effect of neuroticism (conscientiousness) the regression results indicate that openness for experiences negatively influences years of experience ($p = 0.042$). In line with H4 and prior research (e.g., Nicholson et al. 2005, Soane & Chmiel 2005), risk propensity is affected by the Big Five. Neuroticism decreases ($p = 0.000$) and openness increases ($p = 0.005$) risk propensity. Finally, consistent with H1, H2, H3, tax experts' tax aggressiveness is reduced by reputation risk ($p = 0.003$), increasing professional experience ($p = 0.003$), higher levels of risk aversion ($p = 0.001$).

Regarding the hypothesized direct effect of the Big Five personality traits (H6), we find limited evidence. Only extraversion (negatively) affects advice aggressiveness ($p = 0.024$).

2.6.2.2 Indirect effects

Table 2.4 displays the indirect effects of the personality traits via experience and general risk propensity on tax aggressiveness. First, regarding the indirect effects mediated by professional experience (H8), the results reveal a negative indirect effect of conscientiousness and a positive indirect effect of neuroticism on tax aggressiveness. Second, regarding the indirect effects mediated by risk propensity (H5), we observe significant indirect effects of openness and neuroticism.

VARIABLES	TAX_AGGRESSIVENESS
Panel A: Indirect effects via professional experience	
EXPERIENCE × OPENNESS	0.9044
	(0.572)
EXPERIENCE × CONSCIENTIOUSNESS	-0.7743*
	(0.450)
EXPERIENCE × EXTRAVERSION	-0.0162
	(0.361)
EXPERIENCE × AGREEABLENESS	0.2299
	(0.399)
EXPERIENCE × NEUROTICISM	1.0724**
	(0.489)
Panel B: Indirect effects via risk propensity	
RISK_PROP × OPENNESS	1.5795**
	(0.688)
RISK_PROP × CONSCIENTIOUSNESS	-0.2498
	(0.516)
RISK_PROP × EXTRAVERSION	0.6035
	(0.488)
RISK_PROP × AGREEABLENESS	-0.6165
	(0.559)
RISK_PROP × NEUROTICISM	-2.597***
	(0.821)
Observations	123

The table shows the indirect effect of the personality traits represented by OPENNESS, CONSCIENTIOUSNESS, EXTRAVERSION, AGREEABLENESS and NEUROTICISM on participants' tax aggressiveness. Panel A presents the indirect effects via professional experience (EXPERIENCE), while Panel B presents the indirect effects via participants' general risk propensity (REP_LOSS). Asymptotic standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, $p < 0.1$

Table 2.4: Indirect effects on tax aggressiveness.

Openness indirectly increases tax aggressiveness by increasing subject's risk propensity. By contrast, neuroticism lowers risk propensity such that we observe a negative indirect effect on tax aggressiveness. With respect to neuroticism we thus find two opposing indirect effects. On the one hand, neuroticism negatively affects the experience measure and thus (indirectly) increases tax aggressiveness. On the other hand, subjects' neuroticism lowers their risk propensity which in turn reduces their advice aggressiveness.

2.6.3 Robustness Checks

In this subsection we present the results of two robustness checks. The first test demonstrates that the presented results are robust with respect to another measure of experience; the second test shows that our main results also hold if we consider the tax professionals' sample only.

2.6.3.1 Different Measure of Professional Experience

As described above our experience measure is designed by referring to the years the particular subject works in the field of tax advisory services. In this section, we use a second indicator for experience, referring to the years of firm affiliation. The use of this alternative experience measure ensures that there are no distortions resulting from the difference between pure professional experience and organizational socialization. The corresponding variable is labeled FIRM_AFFILIATION. As subjects only indicated whether they already worked less than three years, between three and five, five and ten, ten and fifteen, fifteen and twenty, or more than twenty years in the firm, we chose the particular class-middle to design an experience measure that allows for a metric interpretation.[9] Hence, we adjust equation (1) to calculate the direct effects of the Big Five personality traits on experience as follows:

$$\begin{aligned}\text{FIRM\_AFFILIATION} = {} & \alpha_{10} + \alpha_{11}\text{OPENNESS} + \alpha_{12}\text{CONSCIENTIOUSNESS} \\ & + \alpha_{13}\text{EXTRAVERSION} + \alpha_{14}\text{AGREEABLENESS} + \alpha_{15}\text{NEUROTICISM} + \varepsilon_1\end{aligned} \tag{4}$$

The results for this robustness check are displayed in Appendix C and confirm our main results regarding the direct effects discussed before. Reputation risk, experience, and

[9] The value of FIRM_AFFILIATION is 0 for the tax students, and 1.5, 4, 7.5, 12.5, 17.5, and 25 for participants working less than three years, between three and five, between five and ten years, between ten and fifteen years, between fifteen and twenty years, and more than twenty years in the field of tax advisory.

extraversion reduce tax aggressiveness, whereas risk propensity increases tax aggressiveness. In contrast to our previously presented results, we find an additional direct effect of one Big Five personality trait: Agreeableness positively affects tax aggressiveness ($p = 0.069$).

However, regarding the indirect effects mediated by experience we find a (weakly) significant positive effect of openness on tax aggressiveness while we find no significant indirect effects of conscientiousness and neuroticism using FIRM_AFFILIATION as experience measure. Thus, we obtain slight differences between both experience measures. The indirect effects regarding the impact of personality traits on tax aggressiveness via risk propensity are consistent with the findings discussed above.

2.6.3.2 Robustness of results for tax professionals' sample

Although using tax students as substitutes for junior tax staff having comprehensive tax knowledge but only minor working experience should be appropriate from our point of view, this approach might lead to distortions. To test the robustness of our results concerning this issue, we conduct additional analyses for the tax professionals' sample only. The results are presented in Appendix D.

First, the robustness test confirms our main results regarding the direct effects of personality traits on general risk aversion and professional experience irrespective of whether we use pure professional experience (EXPERIENCE) or organizational socialization (FIRM_AFFILIATION) as experience measure. However, conscientiousness is not found to influence experience in both variations anymore.

The results of the robustness check also show negative significant effects for extraversion and reputation risk on tax aggressiveness, confirming our results above. However, experience is only found to affect tax aggressiveness directly if firm affiliation is used as experience indicator. Further research should investigate whether there is a kind of "organizational bias", i.e., whether it is relevant for tax experts' tax aggressiveness if working experience was gained in a certain company (type).

Furthermore, irrespective of the experience measure used, we do not find any significant direct impact of general risk aversion on tax aggressiveness in the tax professionals' sample. Hence, further research would be necessary to investigate whether there is a robust relationship between general risk propensity and experts' tax risk taking or if the

results found in our main analysis are induced by the tax students who might use other inner landmarks to determine their level of tax aggressiveness than more experienced tax professionals.

2.7 Conclusions

This study analyzes how the Big Five personality traits, professional experience, overall risk propensity and reputation risk affect the aggressiveness of tax experts' tax planning recommendations. We conduct an online survey among tax professionals working at a Big Four accounting firm as well as among tax students. As a measure of tax aggressiveness, we use the maximal chance of failure a professional is willing to accept for providing a positive recommendation.

Our results indicate that reputation risk, professional experience, and risk aversion significantly decrease tax experts' advice aggressiveness. Moreover, we find direct and indirect effects of the Big Five personality traits on tax aggressiveness. Regarding the direct effects of the Big Five, we only find extraversion to have a robust direct (negative) effect on tax aggressiveness. However, we find additional indirect effects of the personality traits via professional experience and risk attitude. Our results indicate that conscientiousness (neuroticism) is positively (negatively) related to professional experience and thus indirectly decreases (increases) tax aggressiveness. Regarding neuroticism there is an opposing negative indirect effect, via risk propensity, because neuroticism is negatively related to risk propensity which in turn is positively associated with tax aggressiveness. Finally, there is also an indirect positive effect of openness on tax aggressiveness, via risk propensity. Overall, we thus conclude that the Big Five personality traits should be considered in future tax compliance research. Moreover, we propose that future research should reconsider the relation between overall risk propensity and advice aggressiveness. While we obtain the expected positive relation in the total sample, we, surprisingly, do not find a significant effect of overall risk propensity in the sample using only experienced tax professionals.

Of course, we are aware of the fact that our study is subject to limitations as especially the sample of tax professionals is relatively small, and we use a hypothetical scenario. Hence, it might be that subjects' responses in real-life settings providing real monetary incentives are

different from the effects shown in our study. However, we use a randomized between-subject design and there is no theoretical reason why the observed direct and indirect effects should not extend to actual behavior in real-world settings.

2.8 APPENDIX A – Questionnaire (translated extract, original: German)

2.8.1 Section I

Setting I [II]

Please imagine the following situation:

An important client asks you for a cost estimate for the preparation of a tax opinion regarding a tax planning idea you proposed to her on the phone. The solely national restructuring should result in tax savings of € 1,400,000.

Because your tax planning idea is based on jurisprudence that is not yet affirmed by the Federal Fiscal Court, the likelihood that the financial administration will challenge the restructuring and will win in case of litigation is supposed to be ~50%. If this were the case, you would not have to fear a loss of the client; however, the client would reclaim the fees paid to you. Your liability insurance would not bear this amount due to the lack of a consulting error.

Your company would not have to fear reputational losses. [Notwithstanding, your company would have to fear reputational losses due to negative press coverage that claims a consulting error.]

For the preparation of the opinion, you assess 80 hours of work to be performed by a second-year assistant and an additional 20 hours for the review by a senior manager. [The preparation of the opinion should require 100 working hours that imply full costs of € 12,000.]

Question 1:

With a view to the risk mentioned above, would you prepare the requested memo advising the client to execute the restructuring?

I advise the client to execute the restructuring: □ *yes* □ *no*

Question 2:

According to your first answer, you would [not] advise the client to execute the restructuring if the failure probability amounts to approx. 50%. Please indicate the marginal failure probability that was allowed to be inherent to the tax planning task if you give a positive recommendation for the implementation.

[Answers must be indicated via a scrollbar comprising the values from 0% to 100%.]

Question 3:

With a view to the failure probability of [X]%, how high are the fees you would approx. quote to the client for the preparation of the memo? *Please see below for a repetition of the setting.*

2.8.2 Section II

1) How many years of experience do you have as a tax accountant?

a) less than 3 years b) 3-5 years c) 5-10 years

d) 10-15 years e) 15-20 years f) more than 20 years

2) How many years have you already worked in your company?

a) less than 3 years b) 3-5 years c) 5-10 years

d) 10-15 years e) 15-20 years f) more than 20 years

3) What position do you hold in your firm?

a) Manager b) Senior Manager

c) Director d) Partner e) Other

6) Which professional examinations did you pass?

a) Tax Advisor b) German CPA

c) CPA d) Other

(…)[10]

20) How do you see yourself: are you generally a person who is fully prepared to take risks or do you try to avoid taking risks? Please tick a box on the scale, where the value 0 means "not at all willing to take risks" and the value 10 means "very willing to take risks".

	0	1	2	3	4	5	6	7	8	9	10
Risk propensity											

[10] The complete set of questions is accessible upon request at blaufus@steuern.uni-hannover.de.

2.8.3 Section III

Now, let us turn to something completely different. Our everyday actions are influenced by our fundamental convictions. Today's research indicates that little is known about these convictions. Below, you will find some characteristics that a person can have. Some characteristics may apply to your personality fully or not at all. Regarding other characteristics, you might not be sure. Please tick a box on the scale, where the value 1 means "not applicable at all" and the value 7 means "fully applicable". With the values between 1 and 7, you can adjust your assessment.

I am someone who …	1	2	3	4	5	6	7
… works thoroughly							
… is communicative, talkative							
… is sometimes a little bit rough to others							
… is original, brings in new ideas							
… often worries about things							
… is able to forgive							
… is rather lazy							
… is able to come out of her shell, is sociable							
… likes artistic experiences							
… gets nervous easily							
… fulfills tasks in an effective and efficient manner							
… is reserved							
… is considerate and friendly							
… has a vivid phantasy/imagination							
… is relaxed, can easily handle stress							

2.9 APPENDIX B: Personality Traits (results of the factor analysis)

Item I am someone who	Factor				
	1 OPENNESS	2 CONSCIEN- TIOUSNESS	3 EXTRA- VERSION	4 AGREE- ABLENESS	5 NEURO- TICISM
…					
works thoroughly	-.071	.781	-.023	.140	-.017
is communicative, talkative	.150	.132	.820	.021	-.103
is sometimes a little bit rough to others (reverse coded)	-.035	.027	-.074	.752	.014
is original, brings in new ideas	.754	.115	.267	-.111	-.141
often worries about things	.230	.035	-.182	.112	.817
is able to forgive	.000	.025	.522	.307	-.122
is rather lazy (reverse coded)	-.147	.667	.064	-.222	-.010
is able to come out of her shell, is sociable	.212	-.055	.835	-.028	-.052
likes artistic experiences	.663	-.072	.152	.193	.059
gets nervous easily	.001	-.091	-.013	.088	.852
fulfills tasks in an effective and efficient manner	.203	.709	.041	.231	-.238
is reserved (reverse coded)	.260	-.028	.695	-.395	.078
is considerate and friendly	.093	.059	.085	.777	-.005
has a vivid phantasy/imagination	.812	-.097	.088	-.040	.149
is relaxed, can easily handle stress (reverse coded)	-.111	-.171	-.032	-.276	.794
	-.071	.781	-.023	.140	-.017

The table presents the rotated component matrix for the results of factor analysis (Method: principal component analysis). The rotation converged in 5 iterations (Rotation Method: Varimax with Kaiser Normalization).

Table 2.5: Factor analysis for personality items.

2.10 APPENDIX C: Different Measure of Professional Experience

VARIABLES	(1) FIRM_AFFILIATION	(2) RISK_PROP	(3) TAX_AGGRESSIVENESS
FIRM_AFFILIATION			-0.878***
			(0.280)
RISK_PROP			3.074***
			(0.931)
REP_LOSS			-9.624***
			(3.230)
OPENNESS	-1.316**	0.491***	-2.152
	(0.583)	(0.177)	(1.594)
CONSCIENTIOUSNESS	0.587	-0.0777	1.264
	(0.474)	(0.157)	(1.313)
EXTRAVERSION	-0.160	0.188	-3.816**
	(0.476)	(0.151)	(1.622)
AGREEABLENESS	0.0341	-0.192	2.552*
	(0.550)	(0.161)	(1.403)
NEUROTICISM	-0.752*	-0.808***	1.173
	(0.455)	(0.146)	(1.611)
Constant	4.411***	4.138***	31.84***
	(0.515)	(0.152)	(5.032)
R-squared	0.075	0.255	0.240
Wald Chi2	8.97	47.47***	65.88***

The first two models of the table display the direct effects of the personality traits represented by OPENNESS, CONSCIENTIOUSNESS, EXTRAVERSION, AGREEABLENESS and NEUROTICISM on participants' experience made in the Big Four firm at hand (FIRM_AFFILIATION) and risk aversion (RISK_PROP). The third column in turn reflects the direct impact of the all the aforementioned variables and potential reputational losses (REP_LOSS) on subjects' tax aggressiveness (TAX_AGGRESSIVENESS). The number of observations amounts to 123 for all results depicted. Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, $p < 0.1$

Table 2.6: Robustness check for firm affiliation as indicator for experience.

VARIABLES	TAX_AGGRESSIVENESS
Panel A: Indirect effects via alternative experience measure	
FIRM_AFFILIATION × OPENNESS	1.1552*
	(0.668)
FIRM_AFFILIATION × CONSCIENTIOUSNESS	-0.5549
	(0.456)
FIRM_AFFILIATION × EXTRAVERSION	0.1403
	(0.419)
FIRM_AFFILIATION × AGREEABLENESS	-0.2993
	(0.486)
FIRM_AFFILIATION × NEUROTICISM	0.6599
	(0.433)
Panel B: Indirect effects via risk propensity	
RISK_PROP × OPENNESS	1.5109**
	(0.676)
RISK_PROP × CONSCIENTIOUSNESS	-0.2389
	(0.493)
RISK_PROP × EXTRAVERSION	0.5773
	(0.469)
RISK_PROP × AGREEABLENESS	-0.5898
	(0.539)
RISK_PROP × NEUROTICISM	-2.484***
	(0.805)
Observations	123

The table presents the indirect effect of the personality traits represented by OPENNESS, CONSCIENTIOUSNESS, EXTRAVERSION, AGREEABLENESS and NEUROTICISM on participants' tax aggressiveness. Panel A presents the indirect effects via professional experience measured by years working at the Big Four firm in question (FIRM_AFFILIATION), while Panel B presents the indirect effects via participants' general risk propensity (REP_LOSS). Asymptotic standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, $p < 0.1$

Table 2.7: Indirect effects on tax aggressiveness for firm affiliation as indicator for experience.

2.11 APPENDIX D: Robustness of Results for Tax Professionals' Sample

VARIABLES	(1) EXPERIENCE	(2) RISK_PROP	(3) TAX_AGGRESSIVENESS
EXPERIENCE			-0.414
			(0.433)
RISK_PROP			2.120
			(1.444)
REP_LOSS			-7.887*
			(4.626)
OPENNESS	-1.518**	0.673***	-1.801
	(0.770)	(0.211)	(2.418)
CONSCIENTIOUSNESS	0.422	-0.283	-0.804
	(0.612)	(0.229)	(2.415)
EXTRAVERSION	0.777	0.169	-4.401*
	(0.484)	(0.204)	(2.384)
AGREEABLENESS	-0.0434	-0.145	1.252
	(0.633)	(0.241)	(2.274)
NEUROTICISM	-2.583***	-0.747***	0.812
	(0.569)	(0.246)	(3.214)
Constant	9.789***	4.227***	31.40***
	(0.537)	(0.213)	(8.770)
R-squared	0.280	0.269	0.148
Wald Chi2	25.18***	24.99**	15.52**

The first two models of the table display the direct effects of the personality traits represented by OPENNESS, CONSCIENTIOUSNESS, EXTRAVERSION, AGREEABLENESS and NEUROTICISM on participants' experience (EXPERIENCE) and risk aversion (RISK_PROP). The third column in turn reflects the direct impact of the all the aforementioned variables and potential reputational losses (REP_LOSS) on subjects' tax aggressiveness (TAX_AGGRESSIVENESS). The number of observations amounts to 66 for all results depicted. Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, $p < 0.1$

Table 2.8: Robustness check for tax professionals' sample.

VARIABLES	(1) FIRM_AFFILIATION	(2) RISK_PROP	(3) TAX_AGGRESSIVENESS
FIRM_AFFILIATION			-0.780*
			(0.401)
RISK_PROP			1.825
			(1.430)
REP_LOSS			-7.829*
			(4.551)
OPENNESS	-1.616*	0.673***	-2.238
	(0.850)	(0.211)	(2.348)
CONSCIENTIOUSNESS	0.00791	-0.283	-1.054
	(0.702)	(0.229)	(2.230)
EXTRAVERSION	0.469	0.169	-4.308*
	(0.576)	(0.204)	(2.267)
AGREEABLENESS	0.424	-0.145	1.561
	(0.748)	(0.241)	(2.196)
NEUROTICISM	-1.227*	-0.747***	0.702
	(0.714)	(0.246)	(2.837)
Constant	8.015***	4.227***	34.81***
	(0.653)	(0.213)	(8.398)
R-squared	0.113	0.269	0.179
Wald Chi2	6.46	24.99***	21.37***

The first two columns of the table display the direct effects of the personality traits represented by OPENNESS, CONSCIENTIOUSNESS, EXTRAVERSION, AGREEABLENESS and NEUROTICISM on participants' professional experience measured by years working at the Big Four firm in question (FIRM_AFFILIATION) and risk aversion (RISK_PROP). The third column in turn reflects the direct impact of the all the aforementioned variables and potential reputational losses (REP_LOSS) on subjects' tax aggressiveness (TAX_AGGRESSIVENESS). The number of observations amounts to 66 for all results depicted. Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, $p < 0.1$.

Table 2.9: Robustness check for tax professionals' sample with firm affiliation as indicator for experience.

CHAPTER 3

3 Do Tax Preparer Penalties Matter? An Experimental Investigation[11]

3.1 Introduction

Tax preparers play a crucial role in most countries' tax system. In particular, in self-assessment systems such as Canada, the United Kingdom, or the United States of America the majority of tax returns are prepared by professional tax preparers (estimates range up to 70%[12]). But also in other countries such as Germany where the revenue service assesses tax liabilities the percentage of taxpayers who are seeking advice in preparing their tax return is significant at least if one looks at taxpayers with more complex returns, e.g., self-employed individuals (Blaufus et al. 2014). Against this background, tax preparers can play a very significant role in achieving high levels of compliance (OECD 2013: 254) and it seems to be an obvious approach to increase tax compliance by monitoring and regulating tax preparers' behavior. Their presumed impact on clients' compliance, which can be exploiting or enforcing tax law (e.g., Kaplan et al. 1988, Klepper & Nagin 1989, Kittl 2015), can be more easily monitored than taxpayers as tax professionals are a much smaller group. In this vein, some countries (e.g., Canada[13]) started discussing the introduction of tax preparer registration programs that enable the revenue service to match tax returns and tax preparers and therefore allow the revenue service to identify tax preparers that recurrently file erroneous or very aggressive tax returns. Other countries such as the United States introduced tax preparer penalties that apply if a tax preparer's recommendation is considered to be too aggressive when compared to a given reporting standard. "Reporting standard" means a minimum likelihood of sustaining a tax position on its merits that must be established (Hansen & White 2012: 141). Before introducing tax preparer penalties in other countries, it is worth to study the effectiveness of these penalties. This is the purpose of the current paper.

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[11] The research paper that is the basis for Chapter 3 was co-authored with Prof. Dr. Kay Blaufus, Leibniz University of Hanover, email: blaufus@steuern.uni-hannover.de.

[12] In the USA more than 125 million individual tax returns were filed electronically in 2014, and 62% were prepared with the help of a paid return preparer (TAS 2014: xvi). In the UK 63% of self-assessed income tax returns have been prepared by paid tax intermediaries in 2010 (NAO 2010: 11). The Canada Revenue Agency (CRA) even states that approximately 70% of individual and business tax returns are usually prepared by using tax preparers (CRA 2014: 5).

[13] See CRA 2014.

Despite the above-mentioned institutional facts, prior tax compliance research with regard to penalties mainly focuses on individual taxpayer compliance (e.g., Allingham & Sandmo 1972, Yitzhaki 1974, Friedland et al. 1978). Nevertheless, there are also a number of studies examining the effect of tax preparer penalties. In sum, prior studies provide mixed results. While some researchers do not find evidence for the general effectiveness of preparer sanctions (Kaplan 1988, Duncan et al. 1989, LaRue & Reckers 1989), some find the expected negative effect (Reckers 1991, Newberry 1993, Anderson & Cuccia 2000, Hansen 2012), and others even demonstrate that penalties might increase tax preparers' tax aggressiveness (explained with reactance theory by Cuccia 1994). One potential reason for the mixed results found in prior studies may be that preparer penalties have two different effects. On the one hand, imposing penalties acts as deterrence to recommending "aggressive" tax positions. Consistent with the deterrent function, one expects that tax preparers reduce their aggressiveness (as predicted by theoretical models, e.g., Reinganum & Wilde 1991, Klepper & Nagin 1989, Scholz 1997). On the other hand, penalties also have a definitional function: they define the borderline between compliance with the tax law and non-compliance (Doran 2009). In particular the required reporting standard may cause different individual responses to the introduction of preparer penalties depending on the preparer's inclination to recommend aggressive positions. Suppose, in the absence of any penalties a preparer would choose not to recommend a tax position with a chance of winning below 75% and now the lawmaker introduces a preparer penalty with a likelihood threshold of 51% ("more likely than not"). By introducing this threshold, the lawmaker signals that a probability of success amounting to 51% is sufficient to be compliant with current law. As the law does not only set prices for being non-compliant (the size of the penalty), but also expresses social values (Cooter 1998) the preparer might follow this new norm by reducing her "internal" threshold to the newly expressed norm, i.e., the preparer increases the aggressiveness of her advice. In contrast, a preparer with an internal probability threshold below 51%, has an incentive to decrease aggressiveness to reduce expected penalty costs. Therefore, we hypothesize that the effect of preparer penalties depends on the preparer's ex ante inclination to recommend aggressive tax positions.

To test this hypothesis, we conduct a between-subject (survey) experiment with 62 German tax professionals of a Big Four accounting firm. Participants are presented a hypothetical scenario with a client for whom they prepare the tax return. The client wishes to make a tax deduction. However, the legal facts are unclear and so we ask the preparer to indicate the minimum likelihood of client's success in case of litigation which she feels necessary before taking the tax deduction in client's tax return. Participants are randomly assigned to one of two treatment groups that differ solely with respect to the preparer penalty (with/without penalties being applicable).

Our results confirm the expected interaction between preparer penalty and the individual inclination towards aggressive advice. Only tax preparers having a high inclination to provide aggressive tax advice decrease their level of tax aggressiveness if preparer penalties are introduced. Tax professionals with a low inclination to recommend aggressive tax positions increase their level of tax aggressiveness. Thus, the overall effectiveness of preparer penalties depends on the percentage of low-risk and high-risk preparers in a population. In our sample, the two opposing effects make preparer penalties on average an ineffective instrument. This challenges the general appropriateness of preparer penalty rules using likelihood thresholds to combat aggressive tax advice. Of course, our study is subject to some severe limitations. First, the sample size is relatively small. This is due to the difficulties to achieve high response rates of professional subjects. Second, we use a hypothetical scenario. It might be that subjects' responses to real monetary incentives and penalties are more pronounced. We are keenly aware of these limitations, but we use a randomized between-subject design and there is no theoretical reason why the observed opposing effects should not extend to actual behavior in real-world settings. We thus believe that our study provides a useful first step regarding the investigation of the complex effects of tax preparer penalties. Moreover, while we restrict our study to a tax setting, our results may be of interest for the general discussion regarding the impact of legal limits. Also, in other areas such as setting blood alcohol limits for driving or speed limits on highways the legal thresholds could trigger opposing behavioral effects.

The remainder of this paper is structured as follows. In the next section, we outline the basic institutional framework of tax preparers' profession in Germany and derive our

hypotheses. In the third section, we describe the survey instrument and the sample. Section four describes the estimation strategy, and section five presents the results. Section six concludes.

3.2 Hypotheses Development

3.2.1 Institutional Framework for German Tax Professionals

The German market for tax advisory services is uniformly and highly regulated since 1972. Only lawyers, CPAs, or tax advisors, who have passed the required examination are allowed to provide advisory services in the field of taxes. Tax preparers in Germany are subject to professional supervision and are bound by professional ethics such as discretion or conscientiousness. The latter also comprises the need for a disclosure of all connected risks when providing advice to clients. At the same time, tax advisors are client advocates[14] who are free to recommend every tax position that can be defended by evidence from law, literature, or case law. Tax avoidance as such is neither prohibited nor punishable as long as the taxpayer does not provide any inaccurate or incomplete information to the revenue service (Brown 2011:165). There are especially no specific reporting standards like in U.S. law that must be fulfilled. Thus, even very aggressive tax positions can be endorsed as long as the tax advisor complies with professional ethics - in particular, unlimited client enlightenment - and does not support the client in tax evasion. If the latter is ensured tax preparers do not run the risk of being subject to penalties. In contrast to prior studies which all use U.S. professionals who are confronted with actual preparer penalties in their real working life, using a German sample has the advantage that German preparers could not mix the experimental penalty setting with a real-world penalty setting. This makes German preparers particularly appropriate to study the effect of an introduction of preparer penalties.

3.2.2 Effectiveness of Introducing Preparer Penalty Provisions

The question whether penalties are effective tools to increase compliance with legal rules has been extensively discussed in prior research. However, up to now studies

[14] In Germany tax professionals are "independent bodies of the administration of justice". Even though the younger literature emphasizes that the client advocacy role should be predominant when interpreting this term, there are still substantial voices in the literature and the jurisprudence highlighting that tax professionals are also a kind of longa manus (extended arm) of the financial administration.

investigating the effect of sanctions do only pay attention to the instrumental role of penalties, i.e., promoting tax compliance, and come to partly contradictory conclusions. On the one hand, the "economics of crime" based deterrence model assumes that taxpayers maximize their expected utility given a tax rate, detection probability, and fine (Allingham & Sandmo 1972, Becker 1968, Andreoni et al. 1998). Because the expected fine reduces the return of non-compliance, an increasing penalty increases compliance. On the other hand, based on social psychology the "norms model" interprets the relationship between the government and the taxpayer as "psychological contract" (e.g., Feld & Frey 2007). As with normal contracts, behavior of the contracting parties is primarily affected by perceived exchange equity, i.e., fairness regarding the balance between taxes paid and benefits derived from public goods (e.g., Kirchler et al. 2008) as well as procedural equity, i.e., fairness regarding the procedural rules of the tax system and the interaction between taxpayers and tax administration (e.g., van Dijke & Verboon 2010, Verboon & van Dijke 2011). Within this context, expected penalties are considered only additionally and in interaction with subjects' intrinsic motivation to pay taxes. In particular, it is argued that penalties can crowd out the intrinsic motivation to comply because they could be seen as a sign of distrust, which in turn reduces trust in authorities by honest taxpayers as suggested by the "slippery slope" model of Kirchler (2007) and Kirchler et al. (2008). Similarly, Wahl et al. (2010) and Kastlunger et al. (2013) find evidence for reactance to penalties based on the respective tax climate. With the exception of Doran (2009) prior research investigating the economic impact of penalties on tax compliance generally ignores the definitional function of penalties. The definition of reporting standards "marks off the boundaries of tax compliance" and establishes the standards of conduct that determine whether taxpayers comply with their tax obligations or not (Doran 2009: 139).

Particularly, previous preparer penalty studies focus on the deterrent effect. The first studies investigating the effect of preparer penalties stimulated by deterrence theory do not find evidence for the effectiveness of sanctions (Kaplan et al. 1988, Duncan et al. 1989, LaRue & Reckers 1989). However, this might be due to the mere indirect introduction of penalties where the applicability of sanctions is varied by manipulating audit rates and, therefore, expected penalties. Studies varying the applicability of preparer penalty provisions in a direct way tend to confirm the basic effectiveness of these sanctions. Newberry et al. (1993)

conclude that there is a significantly lower likelihood that a tax practitioner would sign a tax return containing a large deduction associated with an ambiguous tax issue if tax preparer penalties are communicated with high enforcement. In their experiment, penalty itself is not varied across subjects, but one of the groups was told that the IRS district director intended to vigorously apply existing penalties. Using the same type of variation in the applicability of sanctions, Reckers et al. (1991) find that the threat of sanctions causes CPAs to be more conservative, at least with regard to signing decisions. Although moderated by locus of control, McGill's (1988) results support the effectiveness of preparer penalty provisions, too. A more differentiated analysis of the effects of preparer penalties is provided by Anderson & Cuccia (2000). They show that increasing penalties provide incentives for practitioners to increase their fees as well as to reduce the aggressiveness of their advice. Both incentives were found to be moderated by the levels of competition and moral hazard in the environment. Besides the latter study only Cuccia (1994) pays attention to further potential responses of introducing or increasing penalty levels. His results suggest that increased sanctions may affect the effort invested by paid preparers in identifying legitimate ways of reducing their client's tax liability while having little effect on how aggressively they interpret ambiguous issues. Although all aforementioned studies have been conducted in the USA none of them communicates the potential applicability of preparer penalties in a way that is comparable to the penalty provisions included in U.S. professional law.

In the USA, tax preparers are subject to the Circular 230 rules which impose specific penalties on the tax preparer if her work does not meet certain reporting standards. As mentioned above "reporting standard" means a minimum likelihood of sustaining a tax position on its merits that must be established (Hansen & White 2012: 141). The required level of support depends on the nature of the item in question (Rothman 2011: 77). For items related to a tax shelter or a reportable transaction it must be reasonable to believe that a position would be more likely than not to be sustained. Items not related to tax shelters or reportable transactions that are (not) specifically disclosed on the return must be based on reasonable basis (substantial authority) which should be represented by a likelihood of 20%-30% (40%). If the required reporting standard is not met the penalty is equal to the greater of $1,000 or 50% of the income derived by the preparer with respect to the questionable return.

The only studies testing the impact of preparer penalty provisions referring to a certain reporting standard are Hansen & White (2012) and Cuccia et al. (1995). The latter authors do not investigate the effect of introducing preparer penalties per se but examine whether replacing a reporting standard that employs a vague, verbal disclosure threshold with a standard that employs a more stringent, numerical threshold mitigates the aggressiveness of reporting decisions. The results indicate that tax preparers use either the latitude inherent in a verbal standard or the latitude available in assessing evidential support to justify aggressive reporting decisions. Hansen & White (2012) find that higher reporting standards significantly reduce both, tax preparers' willingness to recommend an aggressive position and to sign a tax return containing an aggressive position. However, their study only investigates the effect of replacing a real-life reporting standard requiring at least a one in three chance of being sustained on its merits by a new reporting standard referring to a "more likely than not" possibility. Under the one in three chance reporting standard tax professionals might have shifted their inner willingness to provide aggressive tax advice to the new threshold resulting in an average ex ante tax risk taking level of 66.66%. Hence, introducing a stricter reporting standard would only allow for a decrease in the ex-ante tax aggressiveness no matter if referring to the ideas of deterrence theory or the definitional function of law. Therefore, the results of Hansen & White (2012) might not be suitable to predict the effects of the introduction of a preparer penalties referring to a reporting standard into a market where no such penalties exist before. In sum, prior evidence on the effectiveness of preparer penalties is mixed and no previous study has investigated a potential interaction between penalty and subjects' ex ante inclination to recommend risky tax advice.

We suggest that the effect of introducing preparer penalties including a reporting standard as a point of reference will be twofold. First, in line with the deterrence literature we assume that those preparers providing advice with a higher level of tax aggressiveness than allowed by the reporting standard prior to its introduction (in the following referred to as *"high-risk preparers"*) will reduce the aggressiveness of their recommendations as the expected return of providing aggressive advice will decrease.

H1: Preparer penalties reduce the tax aggressiveness of preparers having a high inclination to recommend aggressive tax positions *(high-risk preparers).*

Second, with regard to tax preparers who have a low inclination to recommend aggressive tax positions (in the following referred to as *"low-risk preparers"*) penalty provisions comprising a reporting standard that is less strict than their internal norms cannot promote further tax compliance. However, these tax preparers might generally be affected by the definitional role penalties play within the compliance process. Tax preparer penalties including a certain reporting standard define the boundaries of advice aggressiveness that is suggested to be compliant behavior within the view of the legislator or the professional supervision. Thus, low-risk preparers might be motivated to shift their habitual standard of tax aggressiveness to a higher level. Suppose, in the absence of any penalties a preparer would choose not to recommend a tax position with a chance of winning below 75% and now the lawmaker introduces a preparer penalty with a reporting standard of 51% ("more likely than not"). By introducing this threshold, the lawmaker signals that a probability of 51% is sufficient to be compliant with current law. Hence, the tax preparer in question has an incentive to provide more aggressive advice to the clients at least if this change in behavior conveys an advantage to the preparer. As higher tax savings are expected to increase clients' satisfaction and in turn their willingness to pay higher fees the proposed shift in tax aggressiveness seems to be reasonable. This suggestion is in line with the "theory of expressive law" (e.g., Cooter 1998). Pursuant to this concept, legal provisions express social values that can tip a system of social norms (here: the question what is accepted to be compliant behavior) into a new equilibrium and thereby destroy former social norms (here: preparers' ex ante beliefs about what is compliant behavior) with or without changing individual values. Rational individuals will internalize a new norm when commitment conveys an advantage relative to the former standard. Therefore, we hypothesize the following:

H2: Preparer penalties increase the tax aggressiveness of preparers having a low inclination to recommend aggressive tax positions *(low-risk preparers)*.

3.3 Survey Instrument and Description of the Sample

3.3.1 Survey Instrument

We invited tax employees of a Big Four firm in Germany to participate in an online survey.[15] The invitation email with the link has been sent to approximately 100 employees of different grades with the request to forward the included link within the service line "Tax" of their firm and city. The questions of the survey can be found in Appendix E. Subjects did not receive any payments. However, as an incentive the subjects were told that they will take part in a short (debriefing) quiz at the end of the survey. The instructions state that for every participant who successfully answers all questions, we donate €3 for charity. Thanking all the other participants who fail to answer all five debriefing questions correctly but completely absolve the survey, we promised to give €1 to a good cause. Subjects answering all questions correctly can (voluntarily) also take part in a lottery whose winner may determine the charity that will receive the amount of money which is earned by all participants of the study.[16]

Having started the survey, every subject had to choose from several tasks presented, which best describes her everyday work (marking of multiple answers has been allowed). Moreover, the probands had to indicate how often they are concerned with tax planning or tax optimization tasks in their daily work on a five-item scale. Then, we presented a setting to the subjects that describes an important client who wants to take a certain deduction for tax purposes that is based on ambiguous/conflicting legal authority.

Subjects were randomly assigned to either a PENALTY or a NO-PENALTY treatment. Subjects in the PENALTY treatment read: "Please suppose the legislator introduced a new provision punishing aggressive tax preparers. Pursuant to this new provision, your firm has to expect a penalty amounting to 50% of the client's tax savings resulting from an issue that is classified as being too aggressive. The provision would not be applicable if third-party experts conclude that client's success in case of litigation was more likely than not."

We asked the subjects to indicate the minimum likelihood of client's success in case of litigation that should be inherent before she would feel comfortable to prepare the tax return

[15] The survey has been designed and performed by using LimeService a service platform of Carsten Schmitz - LimeSurvey.com: http://www.limeservice.com.

[16] Pursuant to the will of the winner of our lottery we donated the amount of €89 to the Burgverein Kronberg e.V., an association that is committed to maintain the substance (especially a "green classroom" outdoors used for visiting school classes) of a castle from the High Middle Ages near Frankfurt/Main, Germany.

including the deduction in question. We transformed the minimum likelihood the subjects indicated into our dependent variable TAX_AGGRESSIVENESS representing our measure of tax aggressiveness by referring to the remaining risk allowed (100% minus indicated percentage). This approach of directly measuring the willingness to take tax risks has the advantage that we are able to isolate the direct effects of the different factors on the willingness to take tax risks. If we had given the participants a specific tax case and then asked for their recommendations, the independent variables would have also affected the outcome expectations (e.g., subjects' estimated probability to prevail in negotiations with the IRS). Indeed, as noticed by O'Donnell et al. (2005) the vast majority of previous studies does not control for the interactions of the independent variables and outcome expectations. Our approach avoids this potential drawback as we make sure that the tax risk objectively included in the task of our study equals the tax risk subjectively recognized by the participants.

The described setting controls for a set of variables found to influence tax aggressiveness in prior literature, namely reputational losses, the importance of the client, the value of tax savings, client's payment status and risk propensity, the presence and value of preparer penalty provisions and the height of potential penalties, client loss, the ambiguity and kind of prior evidence, the risk of being audited, the possibility of being liable to client, the relationship with the client as well as the client's relationship with the IRS. Hence, there should be no differences in perceptions about these variables among the participants and therefore no influence on tax aggressiveness.

In the second chapter we used a set of nine items with a seven-point scale to measure client advocacy as proposed by Mason & Levy (2001). This is the most prevalent instrument to identify differences in the client- vs. revenue agency-disposition of tax professionals (Bobek et al. 2010). The third chapter asked the subjects to state some personal information such as gender, age, working experience, professional examinations, religiousness and general risk attitudes. The fourth chapter comprises among others questions investigating different attitudes of the tax professionals including patriotism, perceived fairness of the tax system and tax morale. In the last chapter of the questionnaire we used a 15-item design as developed by Gerlitz and Schupp (2005) - the so called "BFI-S" - to control for the influence of the Big Five personality traits on tax aggressiveness as suggested by Blaufus & Zinowsky (2013).

Having finished all survey-chapters, subjects were forwarded to the quiz announced at the beginning of the survey. The quiz consists of five voluntary debriefing questions, which control whether subjects understood and remembered some details of the task's setting including risk of reputational loss, relationship of the client with the IRS, payment status of the client, applicability of penalty provisions and the exact amount of tax savings reachable.[17]

3.3.2 Description of the Final Sample

We received 116 answers with only 68 tax professionals having answered at least the full set of mandatory questions. However, six subjects have been removed from the sample as they were suggested having not answered the questions seriously. To identify these cases we used the reverse scored items of the client advocacy questions and the questions measuring the personality traits for plausibility check in the middle and at the end of the survey. The personality dimensions of conscientiousness, extraversion, agreeableness and neuroticism were each measured by three items where one item is always reverse scored. If a proband just pointlessly clicks from page to page, large differences between the positive and negative items can accrue. To check this, we compared the value on the seven-point scale for the reverse scored item with the mean of the positive scored items. If the difference between these values (implausibility score) was 4 or bigger we excluded the subject from the sample due to the lack of plausibility.[18] As a result, six subjects have been removed from the sample.[19] Therefore, the final sample comprises 62 observations.

All tax professionals in our sample work in different areas of the service line "Tax" for the same Big Four firm in Germany. The average participant is 35 years old and has professional experience between 5-10 years, 29 participants work as consultant or senior consultant, 19 as manager, and 14 as senior manager or partner. The final sample consists of 24 females and 38 males. 30 (32) participants are randomly assigned to the NO-PENALTY (PENALTY) treatment. There are no significant differences between the two treatment groups

[17] To test whether our results are affected by a misunderstanding of the setting, we conducted additional regressions including control variables for the manipulation checks. The results reported in this paper remain qualitatively unchanged. The debriefing questions can be found in Appendix E, Section VII.

[18] The same procedure has been applied to the client advocacy questions. Here, eight items are positively scored and one item is reverse scored.

[19] In detail we excluded the following observations: Three subjects scoring 4 or higher in the implausibility score regarding client advocacy, and each one subject scoring 4 or higher in the implausibility scores regarding conscientiousness and extraversion. We furthermore compared the time the particular subject needed to answer the questionnaire to a threshold that we suggest to be the required minimum time. However, no observations have been removed from the sample in course of this plausibility test.

regarding age, overall risk propensity, client advocacy or the personality traits (Mann-Whitney-U-Tests) and no significant differences regarding gender, grade, professional exam and main field of working expertise[20] (Chi-squared tests).

3.4 Estimation Strategy

3.4.1 Identification of Low-Risk and High-Risk Preparers

In order to identify the probability to be a low-risk preparer Pr(LOW_RISK_PREPARER=1), we conduct a binary logit regression using the participants in the NO-PENALTY treatment (see equation (1)). For these participants, the dependent variable LOW_RISK_PREPARER takes on the value of 1 if TAX_AGGRESSIVENESS ≤ 40.00%, and 0 otherwise. Note that the penalty provisions in the PENALTY treatment use a reporting standard of 51% ("more likely than not"). Hence, the threshold used to identify low-risk prepares should be substantially lower than 51%.[21]

$$\Pr(\text{LOW\_RISK\_PREPARER} = 1) = \frac{1}{1+e^{-z}}, \quad (1)$$

with $z = \beta_0 + \sum_{j=1}^{J} \beta_j \times x_j + u$, and x_j representing the independent variables tested for the question whether they are suitable to predict the probability to be a low-risk preparer, e.g., gender, age, etc. (see below).

Next, we use the results of (1) to conduct an out-of-sample prediction for subjects in the PENALTY treatment group. The value of LOW_RISK_PREPARER in the penalty treatment group is assigned as follows:

$$\text{LOW\_RISK\_PREPARER} = \begin{cases} 1, \text{ if } \Pr(\text{LOW\_RISK\_PREPARER}^* = 1) \geq 0.5 \\ 0, \text{ otherwise,} \end{cases} \quad (2)$$

with Pr(LOW_RISK_PREPARER* = 1) denoting the estimated probability for subjects in the PENALTY treatment according to the results obtained from (1).

[20] We use the main field of working expertise to describe the task familiarity, represented by the variable COMPLIANCE in the following.

[21] We also conducted our analysis by using a dichotomization at the 30%-level of tax aggressiveness. However, this does not change the results presented in the following.

We conducted several logistic regression models with LOW_RISK_PREPARER being the dependent variable controlling for various combinations of independent variables that have been found to influence tax aggressiveness in prior research. This includes participants' sex (GENDER, 1 = female, 0 = male) as males have been found to take more aggressive tax-reporting positions than females (e.g., Koski & Ehlen 2011), participants' age, grade, professional exam and task familiarity (COMPLIANCE[22]). The last three measures indicate differences in experience which has been found to influence tax aggressiveness in prior research (for a review see O'Donnell et al. 2005). Using the nine item score created by Bobek et al. (2010) we furthermore reviewed the impact of participants' client advocacy as it has been found to influence tax professionals' judgments (for a review see, e.g., Hansen & White 2012). Finally, we tested whether there is a potential impact of personality traits on tax aggressiveness as suggested by Blaufus & Zinowsky (2013), a potential effect of overall risk propensity as suggested by Hansen & White (2012) and of attitudes and perceptions of the tax system as the latter has been found to influence at least taxpayers' compliance (e.g., Cowell 1992, Kirchler et al. 2008).

Logistic regression, dependent variable: LOW_RISK_PREPARER						
Predictors	B(SE)	Sig.	Wald χ^2	Odds Ratio	95% CI for OR	
					Lower	Upper
Constant	2.63 (3.02)	0.38	0.76	13.85		
GENDER	2.76 (1.48)	0.06	3.47	15.73	0.86	286.26
COMPLIANCE	2.80 (1.57)	0.07	3.2	16.46	0.77	353.99
PROF_EXAM	-2.22 (1.43)	0.12	2.4	0.11	0.01	1.80
RISK_PROP	-0.84 (0.44)	0.06	3.6	0.43	0.18	1.03

N = 30, Nagelkerkes R^2 = 0.534, p = 0.007.

The table shows the results of a logit regression with LOW_RISK_PREPARER being the dependent variable. GENDER represents participants sex (1 = female, 0 = male), COMPLIANCE is an indicator for task familiarity referring to subjects main field of working expertise (1 = mainly compliance expertise, 0 = mainly other expertise, like, e.g., tax planning), PROF_EXAM indicates whether participants are a lawyer, CPA or professional tax advisor (value = 1) or not (value = 0). RISK_PROP reflects subjects' overall risk propensity comprising values from 0 (not at all willing to take risks) to 10 (very willing to take risks). The percentage of correct predictions performed by the above model is 83.33%.

Table 3.1: Logistic regression for having a low inclination to provide aggressive tax advice.

The model providing the highest percentage of correct predictions while showing an acceptable model fit (83.33%, Nagelkerkes R^2 = 0.534, p = 0.007) is displayed in Table 3.1.

[22] As our task is not a planning but rather a compliance task we recognize the dummy variable COMPLIANCE as a measure of task familiarity with value 1 for subjects who primarily work in the field of compliance and 0 otherwise.

Thus, the probability to be a low-risk preparer is higher for females (B = 2.76, p = 0.06 for GENDER) and for employees working primarily in the field of compliance rather than in tax planning or other technical subgroups (B = 2.80, p = 0.07 for COMPLIANCE). At the same time the probability to be a low-risk preparer decreases with higher levels of overall risk propensity (B = -0.839, p = 0.06), whereas there is no significant effect of a professional examination (PROF_EXAM)[23].

3.4.2 Bivariate and Regression Analysis of Penalties' Effect on Tax Aggressiveness

Using the dichotomization made by LOW_RISK_PREPARER we conduct Mann-Whitney-U-Tests as well as linear regression analysis to test whether the impact of preparer penalties differs between the subgroups. We estimate the following model:

$$TAX\_AGGRESSIVENESS = \beta_0 + \beta_1 \times PENALTY + \beta_2 \times LOW\_RISK\_PREPARER + \beta_3 \times (PENALTY \times LOW\_RISK\_PREPARER) + \varepsilon, \quad (3)$$

where PENALTY is a dummy variable with value = 1 if preparer penalties are applicable in the setting, and 0 otherwise. LOW_RISK_PREPARER indicates whether the particular participant is a high-risk preparer (value = 0) or a low-risk preparer (value = 1). The independent variable whose impact is measured by β_3 is an interaction term between PENALTY and LOW_RISK_PREPARER. Thus, β_3 measures whether low-risk preparers respond differently to the introduction of sanctions than high-risk preparers.

Finally, we conduct subsample regressions separately for low-risk and high-risk preparers using the control variables already used for the identification of low-risk preparers: gender, age, grade, professional examination, task familiarity, risk propensity, client advocacy and the Big Five personality traits.

3.5 Results

3.5.1 Bivariate Analysis

Table 3.2, Panel A reveals that participants are on average ready to accept a failure probability of 45.50%. Thus, the average subject is slightly less aggressive than a more-likely-

[23] The value of PROF_EXAM is zero if the participant under review does not hold an exam as being professional tax advisor, CPA or lawyer, value =1 otherwise.

than not standard would allow (one-sample t-test, two-sided p = 0.065). Table 3.2, Panel B demonstrates that on average, penalties do not affect the tax aggressiveness of preparers in our sample (p = 0.252, Mann-Whitney-U). However, if we split the sample into high- and low-risk preparers (Table 3.2, Panel C and D), the results are in line with both, H1 and H2, as tax aggressiveness decreases with the introduction of sanctions in the high aggressiveness group (p = 0.009, Mann-Whitney-U) and increases with penalties being applicable for low-risk preparers (p = 0.043, Mann-Whitney-U).

	Tax Aggressiveness				
	Observations	Mean	Std. dev.	Median	Significance
Panel A: Total	62	45.50	18.89	49.00	
Panel B: Treatment					
Penalty	32	42.44	21.67	49.00	0.252
No Penalty	30	48.77	15.07	49.00	
Panel C: High-risk preparers					
No Penalty	21	55.90	11.87	50.00	0.009
Penalty	22	40.41	19.71	49.00	
Panel D: Low-risk preparers					
No Penalty	9	32.11	5.01	30.00	0.043
Penalty	10	46.90	26.06	46.00	

The table shows descriptive results of subjects' tax aggressiveness (measured as the maximum tax risk subjects are ready to accept). Panel A shows tax aggressiveness for the whole sample while Panel B reflects tax aggressiveness for the two treatment groups (with or without penalty provisions being applicable). Panel C (D) shows tax aggressiveness with or without penalties being applicable for those participants having a high (low) inclination to provide aggressive tax advice referring to the dichotomization made by LOW_RISK_PREPARER. Statistical significance refers to the p-values for the Mann-Whitney-U-Test.

Table 3.2: Descriptive results of subjects' tax aggressiveness depending on the setting.

3.5.2 Regression Analysis of Penalties' Effect on Tax Aggressiveness

The multivariate analysis (see Table 3.3) shows a significant negative impact of LOW_RISK_PREPARER and PENALTY on tax aggressiveness. The negative main effect of penalty indicates that there is a deterrence effect of preparer sanctions. However, the interaction effect between PENALTY and LOW_RISK_PREPARER confirms both of our hypotheses, H1 and H2, as the coefficient is negative and significant. In Figure 3.1 we depict the interaction effect as given by the coefficients. Thus, the deterrence effect of penalties as indicated by β_1 is even crowded out by the definitional effect the included reporting standard has for low-risk preparers as suggested by H2 in our sample. These results hold when including several or all of the control variables. Table 3.3, column (2), shows the regression

results while controlling for the impact of gender, age, grade, professional examination, task familiarity, risk propensity, client advocacy and the Big Five personality traits.

Table 3.3, columns (3) and (4), display the results for the high-risk and low-risk preparers' group while controlling for the impact of gender, age, grade, professional examination, task familiarity, risk propensity, client advocacy and the Big Five personality traits. These results again suggest a deterrence effect of penalties for high-risk preparers ($p = 0.010$) as hypothesized by H1. In the low-risk preparer group we find the regression coefficient of PENALTY to be positive, however, this effect is not significant. This is probably due to the small sample size of only 19 subjects in the low-risk preparer group.[24]

	(1)	(2)	(3)	(4)
			Sample	
OLS regression	Total	Total	High-Risk Preparers	Low-Risk Preparers
Dependent variable: TAX_AGGRESSIVENESS				
PENALTY	-15.496***	-16.922***	-15.834***	5.640
	(5.267)	(5.540)	(5.786)	(8.226)
LOW_RISK_PREPARER	-23.794***	-20.851**		
	(6.879)	(8.067)		
PENALTY×LOW_RISK_PREPARER	30.285***	23.696**		
	(9.522)	(9.500)		
Controls	No	Yes	Yes	Yes
Constant	55.905***	14.461	30.658	-159.742
	(3.767)	(34.780)	(40.268)	(114.353)
Observations	62	60	43	19
R-squared	0.206	0.427	0.414	0.855
Adj. R-squared	0.165	0.240	0.152	0.564

The table shows the regression results for subjects' tax aggressiveness in the combined sample with and without controlling for subjects' gender, age, grade, professional examination, task familiarity, overall risk propensity, client advocacy and the Big Five personality traits (column (1) and column (2)). Column (3) shows the corresponding results for the high-risk preparer sample while column (4) reflects the results for the group of low-risk preparers. PENALTY reflects whether penalty provisions have been applicable in participants' task (value = 1) or not (value = 0). LOW_RISK_PREPARER indicates whether the particular participant is a high-risk preparer (value = 0) or a low-risk preparer (value = 1). Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, $p < 0.1$

Table 3.3: Linear regressions testing the effectiveness of preparer penalties.

[24] If we control only for gender the penalty effect remains significant also in the low-risk preparer subsample.

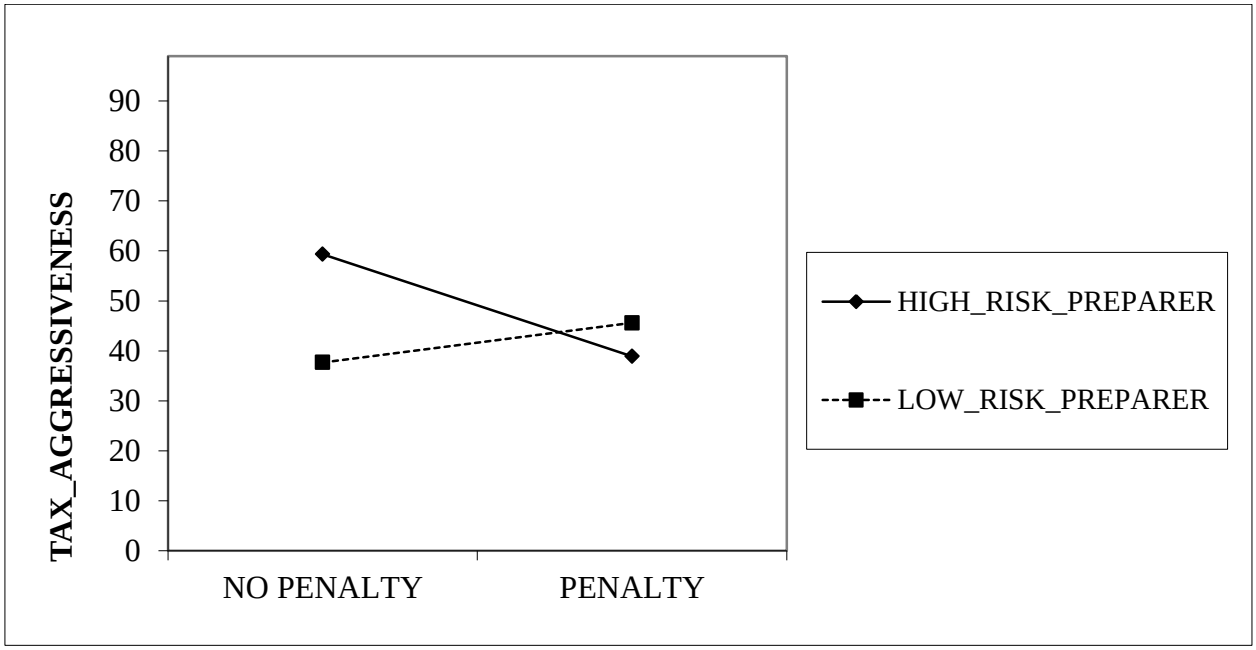

Figure 3.1: The interaction between the introduction of preparer penalties and tax preparers' inclination (high vs. low) to provide aggressive tax advice.

3.6 Conclusion

We investigate whether the introduction of preparer penalties referring to a certain reporting standard results in the effect intended by the legislator, i.e., a reduction in tax professionals' tax aggressiveness. Motivated by Doran (2009) and the "theory of expressive law" (e.g., Cooter 1998) we expect that the introduction of preparer penalties will result in two opposing effects. First, in line with the deterrence theory we hypothesize that penalty provisions including a certain reporting standard will fulfill their instrumental role by deterring tax preparers having a high inclination to recommend aggressive tax positions from doing so. Hence, the risk of being subject to penalties will reduce tax aggressiveness of these high-risk preparers. Second, at the same time, newly introduced penalties will have a definitional function as they express what activities are accepted to be tax compliant behavior. As a result, tax preparers having an inclination to provide aggressive tax advice that is below the threshold defined by the reporting standard included in preparer sanctions will internalize this new boundary of compliant behavior and will therefore increase their level of tax aggressiveness.

The results we find when testing these two hypotheses for a sample of 62 tax professionals from a Big Four firm in Germany confirm the proposed interaction effect between the penalty and the individual inclination towards aggressive advice. Hence, if legislators or professional supervisions intend to introduce preparer penalties referring to a certain reporting standard into a market where no such provisions are applicable before, it is very important to define a threshold for the reporting standard that is sufficiently high to not provide an incentive for low-risk preparers to increase the level of tax aggressiveness included in their advice. Based on the observations we make for our sample this reporting standard should at least require a should-level (~75%) to avoid notable adverse effects of preparer sanctions. However, such rather strict penalties are assumed to increase the perceived power of the revenue agency, i.e., the perceived authorities' capacity to detect and punish aggressive tax avoidance. This might undermine trust in the tax system and therefore voluntary compliance (Wahl et al. 2010 and Kastlunger et al. 2013). Moreover, if tax professionals perceive the introduction of penalties as a threat or loss of their freedom to act as a client advocate this might result in reactance, meaning an increase in tax aggressiveness as well, as proposed by Cuccia (1994). Finally, penalty rules using specific likelihood thresholds introduce much uncertainty for tax preparers because the likelihood that a tax position is sustainable in a future tax dispute is almost unpredictable (Blaufus et al. 2015).

If the introduction of preparer penalties along the lines of the U.S. preparer penalties was intended by other countries, the legislators should balance the advantages for tax compliance resulting from the deterrence effect against the disadvantages resulting from the suggested crowding-out effect in any case. Overall, this study should be a first step into gaining a more detailed understanding of the effects of preparer penalties. Further research should extend this study by enlarging the tests for, first, the impact of the norms model on the effectiveness of sanctions for tax intermediaries and, second, for the definitional role of sanctions as discussed in this study.

3.7 APPENDIX E – Survey materials

3.7.1 Introduction

Welcome to our survey among tax professionals!

At first, we would like to thank you for your willingness to take part in this scientific survey!

All the information that you enter in the following, will only anonymously be available for our evaluation purposes. We treat all information with the utmost care and will not forward any data to third parties.

Please note that navigating back is not possible during the survey. However, you can save your results temporarily under a pseudonym and a password, so you are able to complete the survey in several steps.

For technical questions or other problems please do not hesitate to contact us under steuerforschung@tax.uni-hannover.de at any time.

We would ask you to answer all the questions alone and as conscientiously as possible.

At the end of the survey we ask you to take part in a very short quiz that we use for plausibility purposes. For every participant who successfully answers the five questions, we donate € 3 for charity. Thanking all the other participants who fail to answer the quiz correctly but completely absolve the survey, we give € 1 to a good cause.

Determine the charitable organization!

If you answered all the questions in the quiz correctly, you will take part in a lottery (provided this corresponds to your desire). The winner of this lottery may determine the charity that will receive the amount of money which is earned by all participants in this study.

Now, we hope you will enjoy the interview!

3.7.2 Section I

1) Which of the following tasks best describes your everyday work?

a) Preparation of tax returns/compliance
b) Preparation of tax opinions
c) Advocacy
d) Advisory
e) Mediation
f) Development (e.g., of tax optimized restructurings)

2) How often are you concerned with tax planning or tax optimization tasks in your everyday work?

a) Never
b) Seldom
c) From time to time
d) Often
e) (Almost) solely

3.7.3 Section II

(Subjects are randomly assigned to either the NO-PENALTY [PENALTY] treatment)

[Please suppose the legislator introduced a new provision punishing aggressive tax preparers. Pursuant to this new provision, your firm has to expect a penalty in the amount of 50% of the client's tax savings resulting from an issue that is classified as being too aggressive. The provision would not be applicable if third-party experts conclude that client's success in case of litigation was more likely than not.

Now,] one of your important clients contacts you due to a question about a deduction she would like to take for tax purposes. The resulting tax savings would amount to $1.4M. Anyhow the client has underpaid estimated taxes and withholdings and faces further payments at year end.

The sources of legal authority and the view of the IRS regarding this issue are ambiguous and the specialist literature only provides conflicting evidence. The client asks whether you would recommend to take the deduction when filing the tax return.

You have a very good relationship with the client and the latter is quite willing to take greater risks, depending on your recommendation. Regardless of whether the deduction of the item in question is successful, you would neither lose the client, nor would you have to worry about the assertion of liability claims. Furthermore, your firm would not have to fear reputational losses.

The client had no major disputes with the tax authority in recent years. However, you have to expect that the deduction in question will be audited by the IRS.

Please specify the minimum likelihood of client's success in case of litigation which you would feel comfortable before signing the client's tax return including the deduction in question (probability of success).

Question:

Please specify the minimum likelihood of client's success in case of litigation which you would feel comfortable before signing the client's tax return including the deduction in question (probability of success).

I sign the tax return including the uncertain position if the probability of success is at least…

[Answers must be indicated via a scrollbar comprising the values from 0% to 100%.]

3.7.4 Section III

Please indicate your agreement or disagreement with the following nine statements from 1 (strongly disagree) to 7 (strongly agree).

	1	2	3	4	5	6	7
a) In an instance where no judicial authority exists with respect to an issue and where the Code and Regulations are ambiguous, I feel the taxpayer is entitled to take the most favorable tax treatment.							
b) Generally speaking, my loyalties are first to the tax system, then to the taxpayer.							
c) I feel I should apply ambiguous tax law to the taxpayer's benefit.							
d) When examining negotiations of the taxpayer with the financial administration, I tend to point out to taxpayers reasonable positions they could have taken which would have contributed to minimizing their tax liability.							
e) I believe it is important that I encourage taxpayers to pay the least amount of taxes possible.							
f) I always interpret unclear/ambiguous laws in favor of the taxpayers.							
g) It is important to use trends in the law by trying to establish a pattern of more favorable treatment for the taxpayer and then extending this pattern to the taxpayer's position.							
h) Where no judicial authority exists with respect to an issue, I feel that the taxpayer is entitled to take the most favorable treatment.							

3.7.5 Section IV

A few questions regarding your person...

1) How many years of experience do you have as a tax preparer/tax accountant?

a) less than one year b) 1-3 years c) 3-5 years
d) 5-10 years e) 10-15 years f) 15-20 years
g) more than 20 years

2) What position do you hold in your firm?

a) Trainee b) Consultant or Senior Consultant
c) Manager d) Senior Manager, Director or Partner

3) Do you work at a Big4-firm?

a) Yes b) No

4) Which professional examinations did you pass?

a) None b) Registered Tax Return Preparer c) CPA
d) Enrolled Agent e) (Tax) Lawyer f) Other:

5) Are you currently on secondment in the USA [Germany]?

a) Yes b) No

6) How old are you? *(Answer must be entered in a cell)*

7) What is your gender? a) female b) male

8) How do you see yourself: are you generally a person who is fully prepared to take risks or do you try to avoid taking risks? Please tick a box on the scale, where the value 0 means "not at all willing to take risks" and the value 10 means "very willing to take risks".

	0	1	2	3	4	5	6	7	8	9	10
Risk propensity											

9) About how often do you pray?

a) No answer b) Never c) Less than once a year
d) About once or twice a year e) Several times a year f) About once a month
g) 2-3 times a month h) Nearly every week i) Every week
j) Several times a week k) Once a day l) Several times a day

3.7.6 Section V

1) Please indicate your agreement or disagreement with the following statements from 1 (strongly disagree) to 7 (strongly agree).

a) Being a member of the German community is important to me.
b) The government predominantly uses the tax revenues for things that are useful for the citizens
c) I feel a sense of pride in being a member of the German community.
d) Field audits performed by the Revenue Agency are generally very effective.
e) All things considered, I feel that the amount of income tax I am asked to pay is about right.
f) Generally, I get a reasonable level of service from the government for the amount of taxes I pay.

2) Please respond to the following four questions by circling the number that most closely represents your observations about your society.

	1	2	3	4	5	6	7
a) In this society, people are generally:	aggressive						not aggressive
b) The economic system in this society is designed to maximize:	individual interests						collective interests
c) In this society, people are generally:	not at all concerned about others						very concerned about others
d) In this society, people are rewarded for excellent performance.	strongly disagree						strongly agree
e) There are different opinions as to what it takes to be a good citizen. As far as you are concerned personally how important is it that a good citizen never tries to evade taxes?	not at all important						very important

3.7.7 Section VI

Finally, let us turn to something completely different. Our everyday actions are influenced by our fundamental convictions. Today's research indicates that little is known about these convictions. Below, you will find some characteristics that a person can have. Some characteristics may apply to your personality fully or not at all. Regarding other characteristics, you might not be sure. Please tick a box on the scale, where the value 1 means "not applicable at all" and the value 7 means "fully applicable". With the values between 1 and 7, you can adjust your assessment.

I am someone who …	1	2	3	4	5	6	7
… works thoroughly							
… is communicative, talkative							
… is sometimes a little bit rough to others							
… is original, brings in new ideas							
… often worries about things							
… is able to forgive							
… is rather lazy							
… is able to come out of her shell, is sociable							
… likes artistic experiences							
… gets nervous easily							
… fulfills tasks in an effective and efficient manner							
… is reserved							
… is considerate and friendly							
… has a vivid phantasy/imagination							
… is relaxed, can easily handle stress							

3.7.8 Section VII

Quiz

If you answer the following five questions correctly, the jackpot for charity will raise by 3€. Then, you can take part in our lottery - and get the chance to determine the charitable organization that will receive the whole jackpot.

If you do not participate in the quiz or do not answer all questions correctly we will donate 1€ for your participation in our survey!

1. The setting described an average client of you.

□ Correct. □ Incorrect.

2. Your company had to fear reputational losses, depending on your recommendation.

□ Correct. □ Incorrect.

3. The amount of potential tax savings was $ 2.4M.

□ Correct. □ Incorrect.

4. The client had underpaid taxes.

□ Correct. □ Incorrect.

[For treatment group:]

5. Facing a probability of success of 50% the tax preparer penalties introduced in the setting would have been applicable.

□ Correct. □ Incorrect.

[For control group:]

5. The client had a tense relationship with the IRS.

□ Correct. □ Incorrect.

CHAPTER 4

4 Regulation of Tax Advisory Markets: The Impact on Tax Preparer Aggressiveness – A Comparison between the USA and Germany

4.1 Introduction

Tax professionals support the taxpayer in being compliant with all sources of legal authority and assist her in dealing with the IRS. At the same time, tax professionals are free to minimize client's tax liability within the latitude allowed by the IRC as they should be client advocates in tax matters (AICPA 2008). Consequently, it is not surprising that the OECD identifies tax advisers to be, at least in part, a driver of tax avoidance by designing and offering aggressive tax planning schemes to their clients (OECD 2008). The concept used to describe tax professionals' behavior in ambiguous situations measuring their willingness to exploit loopholes and blurs in tax law or to make use of legal base erosion and profit shifting activities is labeled "tax aggressiveness". Serving the interest of the OECD as well as of standard-setters, governments, tax authorities and employers all over the world, a vast number of studies has investigated the determinants of tax professionals' tax aggressiveness in the last decades (for a review see Roberts 1998, Blaufus & Zinowsky 2013). However, to enable the stakeholders of this research stream to utilize the results found for certain determinants in prior studies it is necessary that the particular impact suggested is universally valid and not limited to a certain country, market or jurisdiction.

When looking at the results of a study performed by Anderson & Cuccia (2000) the generalizability of almost all prior studies seems to be at least questionable. The aforementioned authors find different levels of competition having direct impact on tax professionals' tax aggressiveness as well as an indirect effect on other drivers of tax aggressiveness. Up to now, studies investigating tax professionals' tax aggressiveness have almost exclusively been conducted in the USA. Thus, against the background of the results found by Anderson & Cuccia (2000) the transferability of the corresponding results to other tax preparation markets outside the USA is not evident.

The addressed doubts become even more visible when looking at cross-country studies concerned with taxpayers' compliance that show significant differences in tax morale between countries (e.g., Bame-Aldred et al. 2011, Richardson 2006, Alm & Torgler 2006). A substantial part of tax returns is prepared by or with the collaboration of professional tax preparers. Consequently, a considerable fraction of tax compliance decisions is not made by taxpayers themselves but is at least significantly influenced by tax preparers who – depending on their level of tax aggressiveness – can be either enforcers or exploiters of tax law (e. g. Kaplan, Reckers et al. 1988; Klepper, & Nagin, 1989). If there were no differences in tax professionals' tax aggressiveness among countries, the explanatory power of studies investigating cross-country differences in tax morale should be partially negligible for the public tax revenue as hiring a tax intermediary would moderate country-specific differences in tax morale. As this should not be the case when looking at tax compliance between countries (see, e.g., Richardson 2006, Alm & Torgler 2006), the idea that there should be cross-country differences in tax professionals' tax aggressiveness as well is further nourished. This inkling is finally underlined by massive differences in the regulation of tax preparation markets between countries (see, e.g., Thuronyi & Vanistendael 1996), where providing tax advice is a highly regulated task reserved for state-certified professionals on the one end and everyone being allowed to provide tax consultancy services even as an annex activity to running a grocery store or a massage parlor on the other end.

This study fills the resulting gap in tax aggressiveness research by conducting a cross-country study among tax professionals in the USA and Germany as we suggest that these countries are characterized by quite different regulatory environments comprising among others differences in (1) admission to the profession, (2) maintenance and enforcement of quality standards (e.g., penalties), (3) mandatory early disclosure rules, (4) the freedom to determine advertising and fees, and (5) differences in the boundaries of multidisciplinary professional practice like provisions governing the possibility to collaborate with providers of other legal services. Using a sample of 100 tax professionals comprising 44 (45) employees of the same Big Four firm working in the USA (Germany) we study whether market regulation has an impact on tax preparers' tax aggressiveness.

Performing linear regression modeling we disentangle the effect of market regulation from the effect of other factors that have been in the focus of tax aggressiveness research up to now as well as from other cross-country differences, e.g., differences in culture traits.

By doing this, we are the first to provide a comprehensive review of the regulatory differences between the tax advisory markets in the USA and Germany. We further contribute to the existing literature by replicating the test for universally accepted factors of tax professionals' tax aggressiveness in a multinational context. In this way, the present study should help the OECD, legislators and standard setters to better understand cross-national differences in tax aggressiveness.

Furthermore, we show how aggressive tax professionals act when providing advice to their clients in the two countries examined. If the *absolute* value of tax aggressiveness found in our results does not match the conception the governments or the professional supervisions have about tax preparer's aggressiveness, they are free to introduce new codes of behavior, new countering strategies or other guidance into professional law. In turn, both legislators could overthink the organization or regulation of tax preparers' profession in their country if tax aggressiveness is found to be *relatively* too high when compared to the respective other country according to their conception.

Finally, depending on the magnitude of cross-national differences in tax preparers' tax aggressiveness, globally operating accounting firms like the Big Four are able to understand differences in the risk of the advice provided by their employees. If desired, these firms could provide country-specific stimuli in their internal guidelines to reach a harmonized behavior that matches the firm's culture.

Our results show that tax preparers' tax aggressiveness is affected by differences in market regulation at least when looking at that segment of the tax preparation market that is dominated by the Big Four firms as represented by our data. Pursuant to the direction of our results tax professionals working under the "Full Regulation Model" (Germany) for the Big Four firm in question are less tax aggressive than tax professionals working for the same firm under the less regulated "Partial Regulation Model" (USA). Hence, future research should take a deeper look into the role of regulatory differences when studying tax professionals' tax

aggressiveness to highlight the effect of specific regulatory actions for legislators and standard setters interested in the role of tax professionals on the tax revenue.

The remainder of this paper is structured as follows. First, we outline the basic institutional and regulatory framework of tax preparers' profession in the USA and Germany resulting in the open hypothesis formulated in the third section. Next, we describe the survey instrument and the resulting sample. The fifth section defines the estimation strategy employed as well as the control variables used to disentangle the effect of market regulation from other effects. In the sixth section we present and discuss the results of our analysis. Finally, we present conclusions and suggestions for future research.

4.2 Market Regulation in the Field of Tax Advisory Services

The current study refers to survey data from tax professionals working in the USA or Germany. In both countries, the law distinguishes between legal tax avoidance and illegal tax evasion, which share in common taxpayers' attempts to reduce their tax liabilities. It should be noted that tax aggressiveness being the object of investigation of the current study only covers legal tax avoidance. In line with U.S. preparer penalty provisions (IRC Sec. 6694 (a) (2)), we measure tax aggressiveness as the likelihood that a recommended tax position will not prevail before a tax court, i.e., subjects had to state the highest failure probability which they are willing to accept in case of a positive recommendation regarding the tax planning idea.

To be able to evaluate whether differences in market regulation impact tax preparers' tax aggressiveness it is essential to understand the institutional framework of tax professionals' business in both countries. While Germany has a long-established legal organization of the tax consultancy profession that provides a monopoly for tax advice with extensive conditions for professional services, flagged as Full Regulation Model by Thuronyi & Vanistendael (1996), the USA provide for a Partial Regulation Model (Thuronyi & Vanistendael 1996) that regulates tax practice much less extensively than in Germany. In the following, we briefly describe the main differences between the two regulatory models and make deliberations whether or not these differences might be suitable to impact the level of tax preparers' tax aggressiveness between the two countries in general, or between the two samples under review specifically.

4.2.1 Admission to the Profession - Monopolistic versus Competitive Practice

The most important reasons for regulating the tax advisory market should be to protect the taxpayer from unscrupulous or incompetent tax advisors and to balance tax professionals' loyalty to the system against their loyalty to the client (Thuronyi & Vanistendael 1996). These aspects are typically handled by imposing conditions for the admission to the tax preparers' profession and by defining certain minimum standards of experience and education.

4.2.1.1 USA

In the U.S. there are some licensed and professionally-trained specialists that are predestinated to prepare tax returns, including basically CPAs, (tax) attorneys and enrolled tax agents (Leviner 2012). However, the IRS did not provide oversight or set national standards for tax preparers prior to August 2011. Thus, anyone, regardless of training, experience, skill, or knowledge, was allowed to prepare federal income tax returns for others for compensation (TIGTA 2011: 2). This lack of regulation results in car dealers, appliance stores, travel agents, contractors, furniture stores, and massage parlors in most states having as much right to prepare tax returns as those trained to prepare it (Cords 2008-2009: 352).

In January 2010, the IRS published its "Return Preparer Review" analyzing the status quo of the tax preparation industry and recommending extensive increases in oversight, institute testing, and continuing education requirements (IRS 2009). As a consequence of these recommendations, effective August 2011, all tax return preparers who charge a fee for their services are required to register and obtain a unique Preparer Tax Identification Number (PTIN). Moreover, certain tax preparers were required to pass (1) a competency examination, (2) a suitability check, (3) to complete 15 hours of continuing education credits annually, and (4) pay the amount required in the PTIN User Fee regulations (31 C.F.R. § 10.4(d) 2011). The "Tax Return Preparer Test" was an exam timed at 2.5 hours that comprises a combination of 120 questions in multiple choice and true or false format. There was no limit on the number of times the test could be taken but each try required the payment of a fixed fee ($116). Professionals already enrolled to practice before the IRS, including especially CPAs, tax attorneys, and enrolled agents, are not obliged to pass the examination. Nevertheless, this exemption did not eliminate the need to obtain a PTIN. At the time we performed our survey the increased requirements triggered by the Return Preparer Review have been suspended due

to a ruling of the United States District Court for the District of Columbia. However, as we limit our analysis to the group of licensed tax preparers, the suspension of the new requirements for untrained tax preparers should not have an impact on the behavior of the probands in our study.

4.2.1.2 Germany

The German market for tax advisory services is uniformly and highly regulated since 1972. The law provides for a monopoly for tax advice and prohibits unauthorized persons from providing tax services against remuneration (Thuronyi & Vanistendael 1996: 25). Today, only lawyers, CPAs, or tax advisors, who have passed the required examination are allowed to provide advisory services in the field of taxes. Our samples consists of tax professionals working in the service line "Tax" of a Big Four Firm. There, the tax advisors' exam is typically the most relevant and prevalent examination. To get access to the tax advisors' exam, people must generally have tertiary education in business, law, or economics and must have worked in the field of taxes for two or three years (depending on the years of study) afterwards[25]. The state examination consists of three written exams lasting six hours each and an oral examination lasting between four and six hours. The preparatory courses for this examination cover a period of up to 18 months and require a considerable high and constant workload for the candidates. Due to these efforts, more than 10% of the registered examinees abandon the preparation even before the exam is taken, every year. Another 10% of the enrolled candidates quits the exam during the three days of testing. In the last ten years, the portion of registered aspirants that successfully passed the examinations ranged from 28% to 48%. The test is offered only once a year and can be repeated only twice. Every attempt requires a test fee payment of ~$1,600. Overall, a candidate for the German tax preparer examination typically faces costs between $7k and $25k even if she is successful at the first attempt.[26]

[25] There are also other ways to get access to the exam, however, the necessary duration of practical experience increases to up to ten years as the level of education decreases.

[26] These cost estimates do not comprise for the opportunity costs reflected by the wage lost during the four or five month prior to the exam which are typically taken off for preparatory courses or rehearsals. However, for the first attempt the Big Four firms typically bear part of these costs for their employees.

4.2.1.3 Impact of Differences on Tax Professionals' Tax Aggressiveness

The provisions governing the access to the U.S. and German tax preparation markets have two basic features which might have an impact on tax professionals' tax aggressiveness.

First, as portrayed above, the entrance to the German tax preparation market is limited in an extraordinary strict manner while the access to the U.S. tax preparation market is comparatively less regulated. This difference could generally immediately influence the competitive pressure in the respective tax advisory market as suggested by Thuronyi & Vanistendael (1996: 2). By limiting the access to a tax preparation market the number of actors allowed to offer tax preparation services is reduced. As a result, the market competition would be relaxed and tax preparers should have less incentive to stand out from the competitors by offering very attractive tax services, meaning mostly very offensive tax declaration or tax planning services. However, as already found by Anderson & Cuccia (2000), this mechanism should not create a distinction in tax professionals' tax aggressiveness between the countries in our sample as we only investigate the behavior of tax professionals' working at a Big Four firm. The "Big Four" are supposed to create an own submarket in which they are not expected to compete with unregistered preparers. The latter is already suggested by Thuronyi & Vanistendael (1996: 8, 26), who claim a "kind of factual division of labor whereby ordinary tax returns are prepared by enrolled agents or by unregistered preparers, while more complicated cases are handled by lawyers or accountants". Hence, the fact that there is a real monopoly in Germany and only a less regulated access to the tax preparers' profession in the USA should not inevitably result in differences in the tax aggressiveness of employees working for the same Big Four firm in the two countries under review.

Second, regardless of the question whether or not there is a monopoly for tax advisory services, the regulatory models described above provide for different minimum standards in professional education. These differences include, among others, different accentuation of tax ethics[27], differences in the workload during the preparation for an exam, differences in the difficulty of professional examinations, and also the monetary and non-monetary costs of the

[27] In the U.S. the professional examination does not necessarily provide an ethics-exam. Only some U.S.-states have a mandatory exam covering ethical responsibilities of tax professionals. In Germany, usually every candidate has to absolve a special section during the oral examinations covering professional law/professional ethics.

particular professional education. Differences in professional education might have various effects on the subjects acting in a tax advisory market:

(a) Differences in the costs or difficulty levels of professional education might, e.g., result in a selection process that prefers or discriminates certain personality traits like conscientiousness or neuroticism. However, the impact of certain personality traits on tax professionals' aggressiveness is rather insufficiently studied up to now (see Blaufus & Zinowsky 2013).

(b) The extent or accentuation of tax ethics in the professional education process might affect tax professionals' commitment to the tax system and might therefore result in different levels of client advocacy. Mason and Levy (2001) who designed the most common measure of client advocacy define this construct as being "a state of mind in which one feels one's primary loyalty belong to the taxpayer." Thus, professionals scoring high in client advocacy can be characterized as having an increased "desire to represent the taxpayer zealously within in the bounds of the law" and by "having a desire to be a fighter on behalf of the taxpayer" (Mason and Levy 2001: 127). In fact, this tendency has been found in several prior studies investigating the relationship of client advocacy and tax professionals' judgments (for a review see Roberts 1998, Bobek et al. 2010) such as the likelihood assessments of favorable IRS outcomes or the weighting of evidence items. However, professional education should not be the only driver of client advocacy as the latter is suggested to be a function of client and context specifics (Bobek et al. 2010). Thus, although there might be an indirect impact of professional education on tax professionals' tax aggressiveness via its direct influence on general client advocacy the overall impact might be moderated by other drivers of client specific advocacy or even by the effect of other regulatory aspects.

(c) Besides these indirect effects of professional education, the latter might also have a direct effect on tax aggressiveness by influencing the professional knowledge of tax professionals. If the professional education in one market leads to a situation where the average tax professional is typically better trained than the corresponding IRS staff this might result in higher tax aggressiveness when compared to a market where the IRS employees are on average better educated than the client representatives as this edge in knowledge should improve tax preparers' bargaining position.

To sum up the deliberations above, it is not evident that the differences regarding admission to the profession between the USA and Germany must impact tax preparers' tax aggressiveness.

4.2.2 Maintenance and Enforcement of Quality Standards

The way in which quality standards are maintained or enforced typically differs between countries. This also holds for the countries under review.

4.2.2.1 USA

In the U.S. the quality control of tax professionals' work is mostly maintained by tax preparers' signature on the return, which subjects preparers to liability for any fraud or error in the returns they prepare and obligates them to defend their clients before the IRS or in the event of an audit (Berube et al. 2002). Being "any person who prepares […] for compensation […] all or a substantial portion of any return" tax professionals fulfill the statutory definition of a "tax return preparer" (Reg. § 301.7701-15(a)). As such, tax preparers are subject to the Circular 230 rules which impose specific penalties on the tax preparer if her work does not meet certain reporting standards or, in other words, is found to be too tax aggressive. Within this context "reporting standard" means a minimum likelihood of sustaining a tax position on its merits that must be established (Hansen & White 2012: 141). The required level of support depends on the nature of the item in question (Rothman 2011: 77). However, regardless of how a transaction is reported, a penalty could be imposed if the claimed position is ultimately determined not to be correct (Rothman 2011: 25, 31).

4.2.2.2 Germany

By having successfully passed the exam, tax advisors are subject to professional supervision and are bound by certain professional ethics such as discretion or conscientiousness. The latter also comprises the need for a disclosure of all connected risks when providing advice to clients. At the same time, tax advisors are client advocates[28] who are free to recommend every tax position that can be defended by evidence from law, literature, or case law. Tax avoidance as such is neither prohibited nor punishable as long as the taxpayer

[28] In Germany tax professionals are "independent bodies of the administration of justice". Even though the younger literature emphasizes that the client advocacy role should be predominant when interpreting this term, there are still substantial voices in the literature and the jurisprudence highlighting that tax professionals are also a kind of longa manus (extended arm) of the financial administration.

does not provide any inaccurate or incomplete information to the revenue service (Brown 2011:165). In the tax returns that are always only signed by the client in Germany[29], even very aggressive tax positions can be endorsed as long as the tax advisor complies with professional ethics - in particular, unlimited client enlightenment - and does not support the client in tax evasion. The latter would be the case if taxpayers provide intentionally inaccurate or incomplete information to the tax authorities to reduce their tax burden. As a result the tax advisor runs the risk of being liable to pay the whole profit she gained from a certain activity or a fine if she is found guilty of having participated in client's tax evasion. Pursuant to case law of the German Federal Supreme Court the taxpayer or her tax advisor has to disclose all relevant facts "particularly in questionable" circumstances to circumvent an accusation for a participation in tax evasion. Besides this rather uncommon case, preparer penalties, which are prevalent in the USA, do not exist in German law.

4.2.2.3 Impact of Differences on Tax Professionals' Tax Aggressiveness

The differences regarding the maintenance and enforcement of quality standards between Germany and the USA might impact tax preparers' tax aggressiveness. The most intuitive impact could be due to the presence/absence of preparer penalty provisions in the two countries. However, the evidence for the effectiveness of preparer sanctions has been conflicting up to now (for a review see Hansen & White 2012). In fact, the introduction of penalty provisions might even encourage tax preparers to increase advice aggressiveness (explained with reactance theory by Cuccia 1994). Furthermore, a more differentiated analysis of the effects of preparer penalties performed by Anderson & Cuccia (2000) shows that increasing penalties provides incentives for other evasive maneuvers like increasing fees instead of tax aggressiveness. Hence, a difference in tax preparers' tax aggressiveness between the two countries resulting from preparer penalties should not be a compulsory effect. We vary between two different treatments to avoid that our results are distorted by the fact that U.S. law provides for preparer penalties while there are no corresponding rules in Germany.

4.2.3 Mandatory Early Disclosure Rules

In the U.S. tax preparers' tax aggressiveness is curtailed by early mandatory disclosure rules. These provisions require certain tax shelter or tax avoidance schemes to be disclosed to

[29] However, the tax preparer is typically announced to the tax authorities as being client's representative.

the tax administration in advance of the tax return filing process. German law does not provide for such rules. We are not aware of any study investigating the impact of early disclosure rules on tax aggressiveness. Nevertheless, we assume that it is possible to draw some inferences from studies targeting the impact of audit probabilities as the early disclosure of a specific setting to the tax authorities should result in an audit probability of 100%. However, audit probability was not found to impact tax professionals' aggressiveness in prior research (Cloyd & Spilker 1999, Duncan et al. 1989, LaRue & Reckers 1989) or just under certain conditions (Kaplan et al. 1988, McGill 1990). Hence, a cross-country difference in tax aggressiveness as a result of differences regarding the early disclosure rules should not be compulsory. Finally, a potential impact of early disclosure rules should be eliminated in the present study as the setting of our study reads that the deduction in question will definitely be audited by the tax authorities to exclude an effect of this rather specific counteraction from the effect of more general differences in market regulation as discussed before.

4.2.4 Advertising and Fees

German tax preparers and tax preparation firms are also regulated regarding their daily business operations. So the German Rules of Professional Practice for Tax Preparers provide for narrow bounds regarding advertising of tax preparers in general and the enticement of customers in particular. Moreover, preventing price wars (and a potentially connected loss of quality) in the tax preparation industry, the German Official Fee Schedule for Certified Tax Advisers defines bottom prices that are mandatory for the provision of particular activities. Furthermore, with regard to the activities allowing an agreement of contingent fees, German law is more rigorous than U.S. law. While the latter enables tax lawyers and accountants to do work on a contingent fee basis relating to IRS audits or challenges of original tax returns for example, German law does not provide for an activity-based exemption from the general prohibition of contingent fees. A potential effect of this difference on tax preparers' tax aggressiveness should be excluded in our study as the task in question deals with a rather simple compliance task than with an engagement that would allow for the agreement of contingent fees, like a complex tax planning task.

4.2.5 Multidisciplinary Practice

One issue that is less regulated in Germany when compared to the U.S. but again enhances monopolistic tendencies is multidisciplinary practice. While lawyers and nonlawyers are prohibited from forming joint partnerships as well as from agreeing on fee splitting arrangements, in the U.S., German law explicitly allows joint practice of these parties. Hence, there is a more distinct tendency for the development of firms offering the full spectrum of advisory services in legal and accounting purposes creating higher market power of single players in Germany. As lawyers are allowed to provide tax advisory services while nonlawyers are not allowed to provide legal services other than tax advice in the U.S., the competitive pressure for the Big Four firms should be higher than in Germany. Thus, in the USA the Big Four firms compete with the big law firms with regard to clients that prefer to receive tax advice and legal advice from one firm instead of engaging different parties for the legal and tax work streams.

Pursuant to our knowledge, there is only one prior study recognizing the potential effect of differences in the level of competition on tax preparers' aggressiveness (Anderson & Cuccia 2000). The authors suggest, among others, that the level of competition directly affects tax aggressiveness. Furthermore, it should be able to draw some inferences from studies investigating client importance, as an increased level of competition should make every client relatively more important for the particular tax preparer. Evidence from prior studies (for a review see Roberts 1998) suggests that clients of high importance make tax professionals being more willing to provide aggressive advice when compared to clients of lower importance (e.g., Reckers et al. 1991, McGill 1988). Hence, considered in isolation, the higher competitive pressure in the U.S. tax preparation market with regard to this feature might make tax professionals more tax aggressive when compared to German tax preparers.

4.3 Derivation of Hypothesis

Summing up the institutional differences discussed above, only the different competition levels induced by multidisciplinary practice rules in the U.S. might allow for a directional hypothesis. At the same time, it was questionable whether this effect would not be moderated by the differences regarding the other institutional features. However, facing the

plurality of differences between the two regulation models it would be at least astonishing if their particular impact on tax aggressiveness was exactly balanced in a way that makes both, the Full- and the Partial Regulation Model, result in the same level of tax aggressiveness among professional tax preparers. Given the variety of direct and indirect effects of regulative features, we formulate the following open hypothesis.

H1: Regulation matters, i.e., tax professionals' tax aggressiveness will be influenced by differences between the Full Regulation Model (Germany) and the Partial Regulation Model (USA).

4.4 Survey Instrument and Description of the Final Sample

4.4.1 Survey Instrument

Standard setters, tax authorities and other institutions like the OECD are working on the development of strategies to counter exaggerated tax aggressiveness. In the spotlight of these efforts are base erosion and profit shifting activities of big multinational firms (see, e.g., OECD 2015). In the field of taxes the largest of these firms are typically advised by the Big Four companies. Thus, we focus our study onto this subsegment of the tax advisory market. Therefore, we invited tax employees of a Big Four firm from the USA and Germany to participate in an online survey.[30] In the USA the invitation email with the link has been sent to 181 partners all over the U.S. with the request to participate and to forward the link to employees at lower grades. In Germany the email was sent to approximately 100 employees of different grades with the request to forward the included link within the service line "Tax" of their firm and city. The questions of the survey can be found in Appendix F. Subjects did not receive any payments. However, as an incentive, the subjects were told that they will take part in a short (debriefing) quiz at the end of the survey. The instructions read that for every participant who successfully answers all questions, we donate € 3 for charity. Thanking all the other participants who fail to answer all five questions correctly but completely absolve the survey, we promised to give € 1 to a good cause. Subjects answering all questions correctly

[30] The survey has been designed and performed by using LimeService a service platform of Carsten Schmitz - LimeSurvey.com: http://www.limeservice.com.

can (voluntary) also take part in a lottery whose winner may determine the charity that will receive the amount of money which is earned by all participants of the study.[31]

Having started the survey, every subject had to choose from several tasks presented, which one best describes her everyday work (marking of multiple answers has been allowed) in a first step. Moreover, the probands had to indicate how often they are concerned with tax planning or tax optimization tasks in their daily work on a five-item scale. Then, we presented a setting to the subjects that describes an important client who wants to take a certain deduction for tax purposes that is based on ambiguous/conflicting legal authority. To test whether or not there are differences in participants' tax aggressiveness that result from differences in market regulation but do not only reflect the fact that preparer penalties are applicable in U.S. law while the German law does not provide for corresponding rules this setting has been modified at random and either excludes or introduces preparer penalty regulations (replacing all existent rules). The applicability of penalty provisions in the penalty setting was introduced as follows for the U.S. participants: "Please imagine all existing preparer penalties have been abolished[32] and replaced by a new provision punishing aggressive tax preparers. Pursuant to this new provision, your firm has to expect a penalty in the amount of 50% of the client's tax savings resulting from an issue that is classified as being too aggressive. The provision would not be applicable if third-party experts conclude that client's success in case of litigation was more likely than not." The instructions for the German participants read: "Please imagine the legislator introduced provisions punishing exaggerated tax aggressiveness of tax professionals. Pursuant to this new provision, […]."

We asked the subjects to indicate the minimum likelihood of client's success in case of litigation that should be inherent before she would feel comfortable to prepare the tax return including the deduction in question.

The described setting controls for a set of variables found to influence tax aggressiveness in prior literature, namely reputational losses, the importance of the client, the value of tax savings, client's payment status and risk propensity, the presence and value of

[31] Pursuant to the will of the winner of our lottery we donated the amount of €165 to the Burgverein Kronberg e.V., an association that is committed to maintain the substance (especially a "green classroom" outdoors used for visiting school classes) of a castle from the High Middle Ages near Frankfurt/Main, Germany.

[32] The introduction of the no-penalty setting for the participants from the U.S. ends here. Thus, it just reads: "Please imagine all existing preparer penalties have been abolished".

preparer penalties, client loss, the ambiguity and kind of prior evidence, the risk of being audited, the possibility of being liable to client, the relationship with the client as well as the client's relationship with the IRS. Hence, we expect no differences in participants' perceptions about these variables and therefore no influence on tax aggressiveness.

We transformed the minimum likelihood the subjects indicated into our measure of tax aggressiveness by referring to the remaining risk allowed (equals 100% minus indicated percentage). This approach of directly measuring the willingness to take tax risks has the advantage that we are able to isolate the direct effects of the different factors under review on the willingness to take tax risks. If we would have given the participants a specific tax case and then asked for their recommendations, the independent variables would have also affected the outcome expectation (e.g., subjects' estimated probability to prevail in negotiations with the IRS). Indeed, as noticed by O'Donnell et al. (2005) the vast majority of previous studies does not control for the interactions of the independent variables and outcome expectations. Our approach avoids this potential drawback as we make sure that the tax risk objectively included in the task of our study equals the tax risk subjectively recognized by the participants.

In the second chapter we used a set of nine items with a seven-point scale to measure client advocacy as proposed by Mason & Levy (2001). This is the most prevalent instrument to identify differences in the client- vs. IRS-disposition of tax professionals (Bobek et al. 2010, Hansen & White 2012).

The third chapter asked the subjects to state some personal information like sex, age, working experience, professional examinations, religiousness and general risk attitudes. Hereinafter, the fourth chapter comprises questions investigating different attitudes of the tax professionals including patriotism, perceived fairness of the tax system and tax morale. Furthermore, this chapter included four questions used to measure four culture traits suggested to influence tax aggressiveness when referring to institutional anomie theory (IAT). We come back to this point when describing the independent variables.

In the last chapter of the questionnaire we used a 15-item design as developed by Gerlitz and Schupp (2005) - the so called "BFI-S" - to control for the influence of the Big Five personality traits on tax aggressiveness as suggested by Blaufus & Zinowsky (2013).

After having finished all survey-chapters, subjects were forwarded to the quiz announced at the beginning of the survey. The quiz consists of five voluntary debriefing questions, which control whether subjects understood/or remembered some details of the task's setting including risk of reputational loss, relationship of the client with the IRS, payment status of the client, applicability of penalty provisions and the exact amount of tax savings reachable.[33]

4.4.2 Final Sample

We received 96 (116) answers from the USA (Germany) with only 51 (68) tax professionals having answered at least the full set of mandatory questions. As we are interested in the impact of regulatory differences on tax professional's tax aggressiveness we limit our sample to tax professionals who already passed a professional exam. So we removed all subjects from the sample who are neither CPA, nor lawyer or certified tax professional resulting in a preliminary sample of 50 (50) tax professionals from the USA (Germany).[34]

Furthermore, we removed fourteen subjects from the sample because these subjects did not answer the questions seriously. To identify these cases we reviewed the seriousness of answers at three stages of the survey. First, we reviewed the indications for tax aggressiveness at the beginning of the questionnaire. Pursuant to this, three tax professionals from the U.S. stated to approve a tax structuring that bears a risk of 100%, which is an expression of rejection from our point of view. Next, we used the reverse scored items of the client advocacy questions and the questions measuring the personality traits for a second and third plausibility check in the middle and at the end of the survey. The personality dimensions of conscientiousness, extraversion, agreeableness and neuroticism are each measured by three items where one item is always reverse scored. If a proband just pointlessly clicks from page to page big differences between the positive and negative items can accrue. To check this, we compared the value on the seven-point scale for the reverse scored item with the mean of the positive scored items. If the difference between these values (implausibility score) was 4 or bigger we excluded the subject from the sample due to a lack of

[33] The debriefing questions can be found in Appendix F, Section VII.

[34] In the U.S.-sample only one subject does not have passed a professional exam as being certified tax advisor, lawyer or CPA, whereas the German sample comprises 18 subject with no professional examination at all. As a robust check we calculated all following descriptive statistics and regression models also for the sample including the tax professionals having no professional examination. All main results also hold for this (extended) sample.

plausibility/conscientiousness.[35] As a result, six subjects from the U.S. and six subjects from Germany have been removed from the sample.[36] Therefore, the final sample consists of two peer groups comprising 44 tax professionals from the USA and 45 tax professionals from Germany. We refer to the isolated groups of examined tax professionals from the U.S. or Germany by talking about the "split samples" or the "country samples" (together the "combined sample").

All tax professionals in the combined sample work in different areas of the service line "Tax" for the same Big Four firm in the USA/Germany. The subjects' grades in the U.S.-sample (German sample) are as follows: 6 (13) consultants or senior consultants, 10 (18) managers, 25 (14) senior managers, directors or partners. The U.S.-sample consists of 10 females and 34 males while the German sample consists of 18 females and 27 males.

4.5 Estimation Strategy

To test our hypothesis we use linear regression modeling. Inspired by Alm & Torgler (2006) we perform our analysis in several steps. Alm & Torgler (2006) examine whether there are differences in the tax morale between the U.S. and European countries at the individual level. For this purpose they create a dummy-variable indicating the country of origin. To investigate whether the cross-country differences are driven by other socio-demographic, socio-economic or cultural factors like religiosity they include several control variables together with the country dummy in the same equation. They present different models starting with a model including only the country dummy-variable and the socio-demographics and extend this model stepwise by including different control variables.

As we want to investigate whether or not there is an impact of market regulation on tax preparers' tax aggressiveness, it is also important to disentangle this effect from the potential impact of further socio-demographic, cultural or other factors. Like Richardson (2006) does to

[35] The same procedure has been applied to the client advocacy questions. Here, eight items are positively scored and one item was reverse scored.

[36] In detail we excluded the following observations: Three subjects from Germany scoring 4 or higher in the implausibility score regarding client advocacy, each one subject from the U.S. and Germany scoring 4 or higher in the implausibility score regarding conscientiousness, one subject from Germany scoring 4 or higher in the implausibility score regarding extraversion, five subjects from the U.S. scoring 4 or higher in the implausibility score regarding agreeableness. We furthermore compared the time the particular subject needed to answer the questionnaire to a threshold that we suggest to be the required minimum time. However, no observations have been removed from the sample in course of this plausibility test.

investigate cross-country differences in tax evasion, we start with a basic model that is supplemented by further variables in the following. Our base regression model only includes our variables representing market regulation. In the next step, we add several control variables that have been found to influence tax preparers' tax aggressiveness in prior research or that might have an impact based on tax compliance research. For a parsimonious presentation of the results we present the inclusion of control variables block by block.[37]

4.5.1 Base Regression Model

As explained above, we start with a basic model comprising only variables suggested to indicate differences in market regulation:

$$TAX\_AGGRESSIVENESS = \beta_0 + \beta_1 \times USA + \beta_2 \times PENALTY + \varepsilon, \quad (1)$$

with TAX_AGGRESSIVENESS representing the remaining risk that is connected with the minimum likelihood of client's success in case of litigation which should be inherent in the case under review before the particular tax professional would feel comfortable to sign the tax return including the deduction. Consequently, this variable is calculated by subtracting the indicated minimum likelihood from 100% and should take on values between 0% and 99%[38]. USA is the independent variable (1 = tax professional from the U.S., 0 = tax professional from Germany) that is indispensable for the testing of our hypothesis and indicates the differences in market regulation between the Full Regulation Model (Germany) and the Partial Regulation Model (USA). Hence, the sub-groups that are the result of the dichotomization made by USA refer to the "split-" or "country samples". PENALTY represents the treatment the particular participant faces (1 = preparer penalties are applicable in the task, 0 = all preparer penalties are abolished) and shall ensure that the coefficient of USA is not distorted by the fact that U.S. law provides for preparer penalties while there are no corresponding rules in Germany. There are no significant differences between the two treatment groups and the other independent variables pursuant to Mann-Whitney-U-/Chi-squared testing.

[37] However, we did ensure that neither the definition of blocks nor the order of including them into the regression has an impact on our results.

[38] Using a scrollbar, only integer indications could be made. Since the value of 100% for TAX_AGGRESSIVENESS would mean that the subject under review would sign a return with a 0% chance of being sustained on its merits or – in other words – a 100% risk of failure, we excluded these observations from the sample as not being answered seriously.

4.5.2 Extended Models

The control variables we recognize to disentangle the effect of market regulation from other influences take into account the potential effect of sociodemographic factors, client advocacy, the Big Five personality traits, attitudes towards and perceptions of the tax system, cultural differences and tax morale. Including all control variables the extended model is finally estimated as follows:

$$
\begin{aligned}
TAX\_AGGRESSIVENESS = {} & \beta_0 + \beta_1 \times USA + \beta_2 \times PENALTY \\
& + \beta_3 \times GENDER + \beta_4 \times AGE \\
& + \beta_5 \times ABOVE\_MANAGER + \beta_6 \times COMPLIANCE \\
& + \beta_7 \times CLIENT\_ADVOCACY \\
& + \beta_8 \times OPENNESS \\
& + \beta_9 \times CONSCIENTIOUSNESS \\
& + \beta_{10} \times EXTRAVERSION + \beta_{11} \times AGREEABLENESS \\
& + \beta_{12} \times NEUROTICISM + \beta_{13} \times RISK\_PROP \\
& + \beta_{14} \times PERCEIVED\_INJUSTICE \\
& + \beta_{15} \times AUDITS\_EFFECTIVE \\
& + \beta_{16} \times ASSERTIVENESS + \beta_{17} \times INDIVIDUALISM \\
& + \beta_{18} \times HUMANE\_ORIENT \\
& + \beta_{19} \times ACHIEVEMENT\_ORIENT \\
& + \beta_{20} \times IDENTIFICATION \\
& + \beta_{21} \times TAX\_MORALE + \varepsilon
\end{aligned}
\qquad (2)
$$

4.5.2.1 Sociodemographic Factors

The first block of control variables includes a set of sociodemographic characteristics that has been found to influence tax preparers' tax aggressiveness in prior research. These comprise first subjects' sex (GENDER, 1 = female, 0 = male) as males have been found to take more aggressive tax-reporting positions than females (e.g., Koski & Ehlen 2011). Second, we recognize participants' age (AGE), grade (ABOVE_MANAGER), and task familiarity (COMPLIANCE) as they could indicate differences in experience which have been found to influence tax aggressiveness in prior research (for a review see Blaufus & Zinowsky, 2013). ABOVE_MANAGER is a dummy indicating highly experienced subjects as its value is 1 for subjects being at least senior manager and 0 otherwise. As our task is not a planning but rather

a compliance task we recognize the dummy variable COMPLIANCE as a measure of task familiarity with value 1 for subjects who primarily work in the field of compliance and 0 otherwise.

4.5.2.2 Client Advocacy

In the second extension of the basic regression model we include our measure of participants' client advocacy (CLIENT_ADVOCACY) as this predisposition has been found to influence tax professionals' judgments in several prior studies (for a review see Roberts 1998, Bobek et al. 2010, Hansen & White 2012).

4.5.2.3 Personality Traits

The third type of controls comprises variables representing the personality factors of the Big Five (OPENNESS, CONSCIENTIOUSNESS, EXTRAVERSION, AGREEABLENESS, and NEUROTICISM), as they might influence tax professionals' tax aggressiveness (Blaufus & Zinowsky 2013), as well as a measure of overall risk propensity since the latter was suggested to influence tax aggressiveness in prior literature (Hansen & White 2012). For the generation of the Big Five factors we simply summed up the three items supposed to represent one particular factor. Participants' overall risk propensity was measured by using an experimentally validated question (Dohmen et al. 2011) where subjects had to indicate their general risk propensity on a scale ranging from zero ("not at all willing to take risks") to ten ("very willing to take risks"). The corresponding variable is labeled RISK_PROP.

4.5.2.4 Attitudes Towards and Perceptions of the Tax System

The fourth category of controls comprises two variables that shall reflect subjects' perceptions of the conception of the tax system and its enforcement effectiveness.

As many authors highlight the role of perceptions of justice and fairness when trying to explain taxpayers' compliance (e.g., Alm et al. 1993, Cowell 1992, Falkinger 1995) this relationship could also hold for tax professionals. Therefore, subjects' perceptions about the concept of the tax system are measured by three questions each requiring a statement regarding the level of agreement on a seven-point scale (1 = strongly disagree, 7 = strongly agree): "The government predominantly uses the tax revenues for things that are useful for the citizens", "All things considered, I feel that the amount of income tax I am asked to pay is

about right", "Generally, I get a reasonable level of service from the government for the amount of taxes I pay". We borrowed these questions from Scott & Grasmick (1981) who used them (among others) to design a measure of "perceived injustice in the exchange". We conducted a principal components factor analysis to obtain a parsimonious representation of our measure of perceived injustice of the tax system. The analysis resulted in a one-factor solution that emerged with eigenvalues of 2.122, 0.452, and 0.337 for the above questions, explaining 73.71% of the total variance in the data. All items have factor loadings of 0.830 or higher. We labeled the resulting variable PERCEIVED_INJUSTICE.

The functioning of the tax system is measured by referring to the perceived enforcement effectiveness since differences in enforcement power are generally suitable to influence tax compliance, although the evidence in prior research is conflicting (for a review see Kirchler et al. 2008). Thus, it cannot be excluded that enforcement effectiveness also has an impact on tax preparers' tax aggressiveness. We fixed the audit risk in our setting so that all subjects face an audit probability of 100%. However, different levels of tax aggressiveness could arise if the tax professionals differently evaluated the effectiveness of IRS-audits. Indeed, different levels of recent audit success have been found to impact tax professionals' tax aggressiveness (Kaplan et al. 1988, Duncan et al. 1989). It should be intuitive that differences in recent audit success influence practitioners' perceived audit effectiveness. Therefore, we asked the subjects to indicate their agreement to the statement "Field audits performed by the IRS are generally very effective" on a seven-point scale (1 = strongly disagree, 7 = strongly agree). The resulting measure is labeled AUDITS_EFFECTIVE.

4.5.2.5 Cultural Differences

The fifth block of control variables considers the possibility that differences in tax aggressiveness are induced by the cultural background of the probands. This is suggested by prior research investigating the relationship of cultural background and tax compliance (for a review see Richardson 2006). For the purpose of measuring cultural influences we refer to the Global Leadership and Organizational Behavior Effectiveness (GLOBE) study dimensions (House et al. 2004). The GLOBE study investigates how culture is related to societal, organizational, and leader effectiveness by incorporating Hofstede's (1980) cultural dimensions. As Bame-Aldred et al. (2011) do not use all dimensions included in the GLOBE

study but identify the relevant traits by referring to institutional anomie theory (IAT) as developed by Messner and Rosenfeld (2001; Rosenfeld & Messner 1997) we use this approach as well. Bame-Aldred et al. (2011) only examine four specific culture dimensions that are suggested to likely promote or suppress illegal tax evasion pursuant to IAT. These dimensions include individualism, achievement orientation, assertiveness, and humane orientation and are also used in the present analysis. In the GLOBE study all of these culture traits are measured by several questions that are presented to the proband in two variants. The first variant of each question investigates the way the society *is*, whereas the second variant targeting the same content investigates the beliefs of the probands about what the norms, values, and practices *should be* in the society. To design a parsimonious questionnaire we measure every dimension by using only one question instead of referring to the full set of questions provided by the GLOBE study. Furthermore, we only presented the first variant of the questions looking at the way the tax professionals describe the status quo of their society. The resulting variables are labeled INDIVIDUALISM, ACHIEVEMENT_ORIENT, ASSERTIVENESS, and HUMANE_ORIENT.[39]

However, as a kind of substitute for the "should-be-questions" we measure subjects' degree of national identification as we expect this dimension to reflect the level of satisfaction with the way the society is described. For this purpose we borrow two items from Haslam (2001): "Being a member of the U.S. [German] community is important to me" and "I feel a sense of pride in being a member of the U.S. [German] community" (1 = strongly disagree, 7 = strongly agree). Since Wenzel (2002) – using the same two items – suggests that national identification impacts taxpayers' compliance it cannot be excluded that national identification also has an influence on the advice aggressiveness of professional preparers. The corresponding variable (labeled IDENTIFICATION) was generated by conducting a principal components factor analysis for the two items above. The analysis resulted in a one-factor

[39] Each of the cultural dimensions is measured by one question. The answers are given by circling the number that most closely represents the subjects' observations about the society on a seven-point scale. Assertiveness is measured by the statement "In this society, people are generally…", with answers ranging from "aggressive" (value = 1) to "non-aggressive" (value = 7). We reverse coded this question to transform it into ASSERTIVENESS. INDIVIDUALISM was measured by reverse coding the answers to the statement "The economic system in this society is designed to maximize...", with answers ranging from "individual interests" (value = 1) to "collective interests" (value = 7). The statement for HUMANE_ORIENT has been "In this society, people are generally", with answers ranging from "not at all concerned about others" (value = 1) to "very concerned about others" (value = 7). The level of agreement (strongly disagree = 1, strongly agree = 7) to the statement "In this society, people are rewarded for excellent performance" was used to measure ACHIEV_ORIENT.

solution that emerged with eigenvalues of 1.827, 0.173 explaining 91.35% of the total variance in the data. Both factor loadings are 0.954.

4.5.2.6 Tax Morale

The last control variable that is presented in our regression results reflects participants' tax morale as the latter was found to have at least an impact on tax compliance (for a review see Torgler 2011), so an impact on tax professionals' advice aggressiveness cannot be excluded. To develop our measure for tax morale we refer to the International Social Survey Program (ISSP). The ISSP is a continuing annual program of cross-national collaboration on surveys covering topics important for social science research, whereas the waves are concerned with different repeating topics each year.[40] Pursuant to the self-conception of the ISSP, its researchers concentrate on developing questions that are meaningful and relevant to all countries, and can be expressed in an equivalent manner in all relevant languages. The question we borrowed from the wave concerned with "citizenship" (as performed in 2004) asks: "There are different opinions as to what it takes to be a good citizen. As far as you are concerned personally how important is it that a good citizen never tries to evade taxes?" (1 = not at all important, 7 = very important). We labeled the corresponding variable TAX_MORALE.

4.5.3 Additional Regressions for Split Samples

We want to provide a supplementary contribution to the existing literature by replicating the test for universally accepted factors of tax professionals' tax aggressiveness in a multinational context. Thus, we perform additional ordinary least square regressions for the split samples including independent variables that have been found to influence tax professionals' aggressiveness in prior U.S. studies. Thus, we test whether tax professionals working under the Full Regulation Model (Germany) determine their level of advice aggressiveness by referring to other (inner) landmarks than tax professionals working under the Partial Regulation Model in the USA. In this way, the present study should help the OECD, legislators and standard setters to better understand cross-national differences in tax aggressiveness.

[40] See http://www.issp.org/ for more details.

We include PENALTY to control for the treatment the particular participant faces, and sociodemographic factors suggested to impact tax aggressiveness (for a review see Robert 1998). The latter comprise subjects' sex (GENDER), overall experience (AGE), and task familiarity (COMPLIANCE). We furthermore add our indicators of client advocacy (CLIENT_ADVOCACY), and general risk propensity (RISK_PROP) as suggested by Hansen & White (2012). Finally, we include participants' perceptions about the effectiveness of IRS audits (AUDITS_EFFECTIVE) as different levels of recent audit success have been found to impact tax professionals' tax aggressiveness (Kaplan et al. 1988, Duncan et al. 1989).

4.6 Results

4.6.1 Descriptive Statistics

Tables 4.1 to 4.3 present descriptive results for tax aggressiveness. Apart from the variables of the basic model we only present dichotomizations of those control variables that show significant differences in tax aggressiveness between the Full- and the Partial Regulation Model or the countries respectively. On average, subjects are willing to give a positive recommendation for the ambiguous deduction up to a failure probability of 48.97%. Investigating tax aggressiveness in the split samples in a first step, we find tax aggressiveness to be greater for tax professionals from the U.S. when compared to their German colleagues (see Table 4.1, Panel A). However, this difference does not reach significance when looking at the univariate results.

When separating the regulative effect of preparer penalties on tax aggressiveness the descriptive statistics show lower tax aggressiveness if preparer penalty provisions are applicable in the combined sample (see Table 4.1, Panel B) as well as in the split samples (see Table 4.1, Panel C). However, only the difference in the combined sample ($p = 0.061$)[41] reaches significance.

Table 4.2, Panel A, shows tax aggressiveness for different levels of client advocacy. For this purpose CLIENT_ADVOCACY has been dichotomized at the split samples' median since the impact of client advocacy on tax aggressiveness should be disentangled from a potential effect of the differences in the regulatory environments of the USA and Germany. As

[41] All p-values in this subsection (4.6.1) refer to the Mann-Whitney-U-Test.

intuitional, higher levels of client advocacy enhance tax aggressiveness (p = 0.083). However, if this analysis is split to the two country-samples (Table 4.2, Panel B), a (weakly significant) difference in tax aggressiveness for different levels of client advocacy is only found for the German sample (p = 0.051). Hence, the tax preparers from the USA in our sample are not influenced by their client- versus IRS-dispositions when choosing their level of tax aggressiveness - at least when providing advice to their clients that is comparable to the rather simple judgment of the task in our setting.

		Tax Aggressiveness				
		Observations	Mean	Std. dev.	Median	Sign.
Total		89	48.97	16.55	49.00	
Panel A: Country	*USA*	44	51.50	14.79	49.00	0.210
	Germany	45	46.49	17.93	49.00	
Panel B: Setting	*Penalty*	40	44.93	17.45	49.00	0.061
	No Penalty	49	52.27	15.18	49.00	
Panel C: Country and Setting						
Penalty	*USA*	18	48.67	14.82	49.00	0.427
	Germany	22	41.86	19.12	49.00	
No Penalty	*USA*	26	53.46	14.73	49.50	0.484
	Germany	23	50.91	15.89	49.00	

The table shows descriptive results of subjects' tax aggressiveness (measured as the maximum tax risk subjects are ready to accept) for the independent variables reflecting differences between the Full Regulation Model (Germany) and the Partial Regulation Model (USA). Panel A shows tax aggressiveness for the split country-samples while Panel B reflects tax aggressiveness for the two treatment groups (with or without penalty provisions being applicable). Panel C shows tax aggressiveness at the particular country level for the two treatment groups (with and without penalty provisions). Statistical significance shows p-values for the Mann-Whitney-U-Test.

Table 4.1: Descriptive results of subjects' tax aggressiveness depending on country and setting.

When looking at the two groups resulting from our split in client advocacy (high vs. low) we find a significant (p = 0.047) difference in tax aggressiveness between the Full Regulation Model (Germany) and the Partial Regulation Model (USA) indicating higher tax aggressiveness in the U.S.-sample for those participants who score low in client advocacy. Thus, it is important to control for different levels of client advocacy to correctly estimate the effect of market regulation on tax preparers' tax aggressiveness in our sample as already suggested when determining the control variables for the regression equation.

Pursuant to the univariate results presented in Table 4.3, Panel A, tax preparers in our sample who are more extraverted (more neurotic) than their peers are more (less) tax aggressive (p = 0.079 for extraversion; p = 0.088 for neuroticism). However, when looking at

the split samples (Table 4.3, Panel B), a corresponding (significant) difference in tax aggressiveness for different levels of extraversion can only be found for the German sample ($p = 0.01$) and a corresponding (significant) difference in tax aggressiveness for different levels of neuroticism can only be found for the U.S. sample ($p = 0.007$). Furthermore, tax preparers in the U.S. sample scoring high in openness acted significantly less tax aggressive than their U.S.-counterparts scoring low in openness ($p = 0.023$).

			Tax Aggressiveness				
			Observations	Mean	Std. dev.	Median	Sign.
Total			89	48.97	16.55	49.00	
Panel A: Client Advocacy		*High*	43	50.98	17.41	49.00	0.083
		Low	46	47.09	15.66	49.00	
Panel B: Impact of Client Advocacy in the respective country							
USA	*Client Advocacy =*	*High*	22	51.50	16.75	49.00	0.742
		Low	22	51.50	12.93	49.00	
Germany	*Client Advocacy =*	*High*	21	50.43	18.48	49.00	0.051
		Low	24	43.04	17.08	42.50	
Panel C: Impact of country of origin dependent from level of Client Advocacy							
Client Advocacy =	High	*USA*	22	51.50	16.75	49.00	0.980
		Germany	21	50.43	18.48	49.00	
	Low	*USA*	22	51.50	12.93	49.00	0.047
		Germany	24	43.04	17.08	42.50	

The table shows descriptive results of subjects' tax aggressiveness (measured as the maximum tax risk subjects are ready to accept). Panel A shows tax aggressiveness for different levels of client advocacy. High (low) denotes values above (below) the split samples' median. Panel B and C show tax aggressiveness in the particular country-sample for the two levels of client advocacy and vice versa: While Panel B shows statistical significance for the difference in tax aggressiveness between the two levels of client advocacy for the respective country-sample, Panel C shows statistical significance for the difference in tax aggressiveness between the Full Regulation Model (Germany) and the Partial Regulation Model (USA) dependent from the level of subjects' client advocacy. Statistical significance refers to the p-values for the Mann-Whitney-U-Test.

Table 4.2: Descriptive results of subjects' tax aggressiveness depending on country and client advocacy.

These results imply that tax preparers in the U.S. are guided by different personality traits when making judgments in the field of taxes than their German counterparts. As already suggested by Blaufus & Zinowsky (2013), further research should be spent on the impact of personality traits on tax professionals' judgment and decision making to clarify whether this impact is embanked by the regulatory framework surrounding tax professionals' work and whether it is advisable consider personality traits in future studies.

When looking at the two groups resulting from our split in openness, extraversion, neuroticism (high vs. low) we consistently find significant differences in tax aggressiveness

			Tax Aggressiveness				
			Observations	Mean	Std.	Median	Sign.
Total			89	48.97	16.55	49.00	
Panel A: Impact of Personality Traits							
Openness		*High*	37	46.95	15.32	49.00	0.268
		Low	52	50.40	17.38	49.00	
Extraversion		*High*	39	52.51	15.46	49.00	0.079
		Low	50	46.20	17.00	49.00	
Neuroticism		*High*	39	46.26	14.39	49.00	0.088
		Low	50	51.08	17.92	49.00	
Panel B: Impact of Personality traits in the respective country							
USA	*Openness* =	*High*	20	46.30	15.80	49.00	0.023
		Low	24	55.83	12.63	50.00	
Germany	*Openness* =	*High*	17	47.71	15.19	49.00	0.628
		Low	28	45.75	19.65	49.00	
USA	*Extraversion* =	*High*	21	50.29	14.72	49.00	0.715
		Low	23	52.61	15.09	49.00	
Germany	*Extraversion* =	*High*	18	55.11	16.31	49.50	0.010
		Low	27	40.74	16.87	45.00	
USA	*Neuroticism* =	*High*	22	45.59	13.31	49.00	0.007
		Low	22	57.41	14.02	52.50	
Germany	*Neuroticism* =	*High*	17	47.12	16.03	49.00	0.991
		Low	28	46.11	19.27	49.00	
Panel C: Impact of country of origin dependent from personality traits							
Openness =	High	*USA*	20	46.30	15.80	49.00	0.557
		Germany	17	47.71	15.19	49.00	
	Low	*USA*	24	55.83	12.63	50.00	0.046
		Germany	28	45.75	19.65	49.00	
Extraversion =	High	*USA*	21	50.29	14.72	49.00	0.335
		Germany	18	55.11	16.31	49.50	
	Low	*USA*	23	52.61	15.09	49.00	0.020
		Germany	27	40.74	16.87	45.00	
Neuroticism =	High	*USA*	22	45.59	13.31	49.00	0.900
		Germany	17	47.12	16.03	49.00	
	Low	*USA*	22	57.41	14.02	52.50	0.048
		Germany	28	46.11	19.27	49.00	

The table shows descriptive results of subjects' tax aggressiveness (measured as the maximum tax risk subjects are ready to accept). Panel A shows tax aggressiveness for different levels of openness, extraversion and neuroticism. High denotes values above the split samples' median. Panel B and C show tax aggressiveness in the particular country-sample for the two manifestations of the respective personality trait and vice versa: While Panel B shows statistical significance for the difference in tax aggressiveness between the two levels of openness, extraversion, neuroticism for the respective country-sample, Panel C shows statistical significance for the difference in tax aggressiveness between the Full Regulation Model (Germany) and the Partial Regulation Model (USA) dependent from the level of subjects' openness, extraversion, and neuroticism. Statistical significance refers to the p-values for the Mann-Whitney-U-Test.

Table 4.3: Descriptive results of subjects' tax aggressiveness depending on country and selected personality traits.

between the Full Regulation Model (Germany) and the Partial Regulation Model (USA) for those participants who score low in these personality traits (p-values are 0.046, 0.020, and 0.048 for the split in OPENNESS, EXTRAVERSION, and NEUROTICISM). Therefore, the idea that participants who work under the Full Regulation Model (Germany) act less tax aggressive than participants who stem from the USA and are subject to less regulation is further nourished.

Again, it is important to control for these variables to correctly estimate the effect of market regulation on tax preparers' tax aggressiveness as suggested when determining the control variables for the regression equation.

All other control variables not depicted in Tables 4.2 and 4.3 have not been found to produce a significant difference in tax aggressiveness dependent from the regulative environment the particular participant stems from when looking at the univariate results.

4.6.2 Correlations

Table 4.4 summarizes the Pearson pairwise correlation coefficients for this study's dependent and independent variables. First, there is no significant correlation between TAX_AGGRESSIVENESS and USA as suggested by our hypothesis. Second, we find that there are a number of at least weak significant correlations between tax aggressiveness and the independent variables. Besides the effect already indicated in Table 4.1 for the variable representing penalty provisions, PENALTY ($r = -0.22$, $p = 0.037$)[42], there are fairly high correlations of TAX_AGGRESSIVENESS with ABOVE_MANAGER ($r = 0.24$, $p = 0.021$) and COMPLIANCE ($r = -0.26$, $p = 0.013$). Furthermore, there are weak significant correlations of TAX_AGGRESSIVENESS with AGE ($r = 0.21$, $p = 0.052$) and the sum of personality items representing NEUROTICISM ($r = -0.9$, $p = 0.068$).

However, there are some significant correlations of USA with the other independent variables indicating among others that the tax professionals from the U.S. show significantly higher IDENTIFICATION ($r = 0.335$, $p = 0.001$) with their country and describe people in their society as being significantly more concerned about others when compared to the opinion of the German participants ($p = 0.040$ for HUMANE_ORIENT, $r = 0.22$). Another culture trait, ASSERTIVENESS, is significantly ($r = 0.211$, $p = 0.047$) correlated with USA, too,

[42] All p-values in this subsection (4.6.2) refer to a two-tailed t-test.

reflecting that tax professionals in the U.S.-sample describe people in their society as being significantly more aggressive when compared to the perceptions of the German tax professionals. Hence, USA also measures at least part of the variation included in IDENTIFICATION, ASSERTIVENESS and HUMANE_ORIENT. Therefore, including these variables into the regression model is essential to test whether the residual information reflected by USA, i.e. the differences between the Full- and the Partial Regulation Model, has an impact on participants' tax aggressiveness.

The correlations of USA with GENDER ($p = 0.081$, $r = -0.19$) and ABOVE_MANAGER ($p = 0.014$, $r = 0.26$) show that the ratio of men and women is higher in the U.S.-sample (34:10; 27:18 in the German sample) and that there are more subjects above the manager's grade than below (25:19) while it is the other way round in the German sample (14:31).

The results also show a significant correlation of USA with CLIENT_ADVOCACY. In this context it seems to be conflicting that USA is significantly negative correlated with TAX_MORALE ($r = -0.25$, $p = 0.019$) and CLIENT_ADVOCACY ($r = -0.34$, $p = 0.001$) at the same time, suggesting that tax professionals from the U.S. are less client advocates than their German colleagues but have a less strict tax morale. The concepts of tax morale and client advocacy are different in terms of lawfulness. While the question used to measure tax morale refers to the impact of an illegal behavior (cheating on taxes) of a third party (a "good" citizen), client advocacy measures the degree of being willing to exploit the latitude of legal tax saving options for their clients on their own. Normally, one would expect that a subject scoring high in tax morale does correspondingly score low in client advocacy. However, the correlations show a more strict rejection for cheating on taxes of others with regard to the German sample but a tendency to more excessively use ambiguous situations to take sides with their clients. We come back to this point when analyzing the regression results.

Finally, Table 4.4 expresses that some of the determinants impacting tax aggressiveness also have an influence on subjects' level of CLIENT_ADVOCACY as the latter variable shows noteworthy correlations with AGE ($r = 0.27$, $p = 0.011$), ABOVE_MANAGER ($r = 0.24$, $p = 0.021$) and NEUROTICISM ($r = -0.21$, $p = 0.005$).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
1) TAX_AGGRESSIVENESS	1.00																				
2) USA	0.15	1.00																			
3) PENALTY	-0.22**	-0.08	1.00																		
4) GENDER	-0.03	-0.19*	0.17	1.00																	
5) AGE	0.21*	0.05	-0.07	-0.29***	1.00																
6) ABOVE_MANAGER	0.24**	0.26**	-0.12	-0.26**	0.62***	1.00															
7) COMPLIANCE	-0.26**	-0.13	0.09	0.07	-0.12	-0.34***	1.00														
8) CLIENT_ADVOCACY	0.13	-0.34***	0.07	-0.13	0.27**	0.24**	-0.04	1.00													
9) OPENNESS	-0.09	0.06	0.16	-0.08	-0.01	-0.07	-0.15	0.09	1.00												
10) CONSCIENTIOUSNESS	0.04	0.05	0.15	0.14	-0.11	0.04	-0.04	0.00	0.32***	1.00											
11) EXTRAVERSION	0.12	0.02	0.10	0.17	-0.04	0.18*	-0.20*	0.08	0.34***	0.53***	1.00										
12) AGREEABLENESS	-0.03	0.04	0.01	0.03	0.02	-0.04	-0.01	0.00	-0.07	0.10	0.06	1.00									
13) NEUROTICISM	-0.19*	0.09	0.12	0.22**	-0.15	-0.17	0.25**	-0.30***	-0.15	-0.21*	-0.09	-0.04	1.00								
14) RISK_PROP	0.01	0.05	-0.09	-0.29***	0.35***	0.29***	-0.17	0.34***	0.25**	0.09	0.03	0.03	-0.23**	1.00							
15) PERCEIVED_INJUSTICE	0.05	-0.03	-0.12	0.03	0.00	-0.04	0.13	-0.12	-0.16	-0.13	-0.14	0.31***	0.09	-0.09	1.00						
16) AUDITS_EFFECTIVE	0.17	-0.14	0.06	0.09	0.06	-0.18*	0.15	-0.05	0.03	-0.16	-0.16	-0.01	0.06	0.00	0.30***	1.00					
17) ASSERTIVENESS	-0.17	0.21**	-0.07	-0.08	-0.17	0.00	-0.03	-0.10	-0.03	-0.04	0.10	-0.13	0.06	-0.03	-0.05	-0.25**	1.00				
18) INDIVIDUALISM	0.11	0.11	0.00	0.21*	0.24**	0.12	0.07	-0.09	0.11	0.19*	0.13	-0.18*	0.11	0.15	-0.14	0.14	-0.30***	1.00			
19) HUMANE_ORIENT	0.08	0.22**	-0.03	-0.02	0.23**	0.10	0.03	-0.06	0.20*	0.12	0.08	0.12	0.08	0.04	0.17	0.03	-0.23**	0.29***	1.00		
20) ACHIEVEMENT_ORIENT	0.14	0.11	-0.10	-0.08	0.03	0.12	-0.03	-0.02	-0.12	0.07	0.00	0.24**	-0.08	-0.14	0.28***	-0.12	-0.15	-0.06	0.36***	1.00	
21) IDENTIFICATION	0.15	0.34***	0.16	-0.02	0.23**	0.28***	-0.06	-0.06	0.07	0.21**	0.20*	-0.07	0.08	0.15	0.19*	-0.01	0.04	0.30***	0.25**	0.20*	1.00
22) TAX_MORALE	0.07	-0.25**	-0.07	0.12	0.03	0.00	0.05	0.08	-0.10	0.20*	0.17	0.13	0.06	-0.09	0.28***	-0.02	-0.10	-0.01	0.18*	0.30***	0.19*

The table summarizes the Pearson pairwise correlation coefficients for this study's dependent and independent variables.
The number of observations amounts to 89.
*** p < 0.01, ** p < 0.05, * p < 0.1

Table 4.4: Bivariate correlations of main variables.

However, the correlations underpin the idea of the concept of client advocacy as defining a robust and more general client- vs. authority-disposition that is not influenced by context specifics (e.g., no significant correlation with PENALTY) but is dependent from tax professionals experience (here: AGE, ABOVE_MANAGER) and overall risk propensity (here: significant correlation with RISK_PROP ($r = 0.34$, $p = 0.001$). As client advocacy is suggested to be the more stable phenomenon when compared to the context-specific concept of tax aggressiveness further research should spend more effort on investigating the drivers of client advocacy.

4.6.3 Regressions Results for Combined Sample

Table 4.5 summarizes the results of the ordinary least square regression analysis for the basic regression model (1) as well as for the extended models which include the control variables we recognize to disentangle the effect of differences between the Full Regulation Model (Germany) and the Partial Regulation Model (USA) from other potential influences (models 2-7).

The variable USA indicating differences in the regulation of the tax preparation markets in the USA and Germany does not reach significance in the basic regression model. However, when looking at the other models which provide higher explanatory power than the basic model as they include the variables found to be essential for the testing of our hypothesis when looking at the descriptive results and the correlations we find at least weak significant evidence for a positive influence of USA on tax aggressiveness. Thus, market regulation is found to be relevant for tax professionals' behavior at least when looking at the differences between the Full- (Germany) and the Partial Regulation Model (USA) and referring to the submarket created by the Big Four firms. Pursuant to the regression coefficient of USA, tax professionals working under the Partial Regulation Model in the USA are ceteris paribus more tax aggressive than their German colleagues working under the Full Regulation Model.[43]

Furthermore, model 1 shows at least weak significance for the control variable indicating regulatory differences with regard to the (non-)applicability of preparer penalty provisions. As the coefficient of PENALTY is negative, the introduction of penalty provisions

[43] As some voices in the literature suggest a relationship between religiosity and tax compliance we performed additional analysis to be sure that our results are not due to differences in religiosity. To measure religiosity we again used a question from ISSP-waves concerned with "religion" last performed in 2008: "About how often do you pray?". Answers could be given on a scale from 1 to 11 (1 = never, 2 = less than once a year, 3 = about once or twice a year, 4 = several times a year, 5 = about once a month, 6 = 2-3 times a month, 7 = nearly every week, 8 = every week, 9 = several times a week, 10 = once a day, 11 = several times a day). Answering this question has been voluntary as we suppose this question to be very intimate. As a consequence we have only a limited sample of 74 subjects (38 from the USA, 36 from Germany) when testing the influence of this variable. However, our results remain unaffected by controlling for religiosity.

made the tax professionals in our sample being less tax aggressive when compared to a setting without preparer penalties. This result is confirmed by all regression models we calculated.

Having a look at the other independent variables we controlled for, the results for the sociodemographic factors show that neither GENDER, nor AGE or ABOVE_MANAGER have a significant effect on tax aggressiveness. However, we find evidence for an at least weak significant negative impact of COMPLIANCE on TAX_AGGRESSIVENESS in all models performed. Consequently, tax professionals being more familiar with compliance tasks like the one in question took less aggressive tax-reporting decisions than those with less experience regarding this kind of task. This finding is contrary to the results of prior research (Duncan et al. 1989, Newberry et al. 1993, Reckers et al. 1991). An explanation for this phenomenon might be that tax professionals whose main field of work is compliance normally do the preparation and filing of tax returns in the first step and are obliged to defend potentially aggressive filing positions in course of a tax audit in the second step. This is generally not the case in teams mainly concerned with project-related business like, e.g., tax planning where tax optimization opportunities for particular client are developed and implemented while the corresponding filing work is done by another preparer. It should be obvious that tax professionals who learned from their experience that aggressive filing positions might result in extensive discussions with the tax authorities and other adverse consequences like clients' dissatisfaction act more conservative than others.

CLIENT_ADVOCACY is found to significantly increase TAX_AGGRESSIVENESS in our data. Hence, tax preparers scoring high in client advocacy showed higher tax aggressiveness when providing tax advice than others. Within this context, it is noteworthy that tax professionals from Germany are more client advocates than the U.S. tax professionals in our sample when referring to the correlations, whereas the coefficient for USA in the regression results hint at U.S.-tax professionals being more tax aggressive than their German colleagues. This seems to be contradictory and would imply a disentanglement of the concepts of client advocacy and tax aggressiveness with regard to the impact of differences in market regulation.

The same contradictory result was already mentioned for the relationship between USA, CLIENT_ADCOCACY and TAX_MORALE depicted in Table 4.4 before. A possible explanation for the suggestion that German tax preparers are more client advocates but less tax aggressive than their U.S. counterparts might be the fact that audit rates in Germany are higher. Consequently, German tax professionals more easily run the risk of becoming a "repeat player" in the tax audit process than their U.S. colleagues. Likewise, it might be

possible that Germans perceive the tax compliance process to a fewer extent as a game than the U.S. tax professionals do and therefore are less prone to "gambling" behavior. In this context it is also conceivable that the negotiation tactics differ significantly between the German and U.S. tax preparers, whereas the latter might have a disposition to start with "an aggressive bid" while the Germans might rather prefer more cooperative tactics. Moreover, U.S. tax professionals could be subject to an anchoring phenomenon as they could have get used to large latitudes of tax aggressiveness that are allowed by the present penalty provisions in their country while the Germans face no corresponding provisions. This would be in line with the results of Cuccia et al. (1995) who show that tax practitioners use the latitude inherent in penalty provisions to support aggressive reporting decisions. The coefficient for PENALTY contradicts this idea, however, whether this could be a possible explanation must be clarified by a split-sample analysis. Similarly, differences regarding other aspects as the importance of face saving or reputation might hamper the German tax professionals to transform their high client advocacy to corresponding high levels of tax aggressiveness in the case at hand. Finally, choosing a level of tax aggressiveness should always be a procedure which comprises an ethical judgment. Pursuant to a study of Burns & Kiecker (1995) tax professionals' ethical judgments are dependent on both deontological and teleological considerations while individuals have either a basically deontological or a basically teleological orientation toward assessing ethical situations. This basic orientation is likely to influence their predominant use of either deontological or teleological factors, respectively, when responding to ethical questions. Deontological evaluations judge ethical behavior by using rather general beliefs regarding whether essential characteristics of a certain behavior lead individuals to view it as being right or wrong (Burns & Kiecker, 1995: 22). Teleological evaluations judge ethical behavior by determining whether the consequences of a certain behavior are viewed as favorable or unfavorable to the involved parties (Burns & Kiecker, 1995: 22). We suggest that client advocacy should be a reflection of tax professionals' general evaluations regarding ambiguous situations involving ethical questions, i.e., of their deontological norms. While this norms seem to be stronger in the U.S. sample the final response to the ethical question at hand, here: the level of tax aggressiveness accepted, seems to be less ethical than in the German sample. Referring to the results of Burns & Kiecker (1995) this occurrence might be due the fact that tax professionals in the USA have a basically teleological orientation when making decisions in the field of tax advisory while the Germans tax professionals have a rather deontological orientation. However, as we do not measure the orientation regarding the aforementioned dispositions it must be left for further

research whether this assumption is accurate to explain the contradictory results found between the variables in question.

OLS regressions	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dependent variable: *TAX_AGGRESSIVENESS*							
USA	4.454	3.587	6.036	7.668*	8.673**	8.676**	8.964*
	(3.439)	(3.545)	(3.906)	(3.992)	(3.861)	(4.299)	(4.532)
PENALTY	-6.981**	-6.386*	-6.902**	-6.492*	-6.840*	-7.546**	-7.423*
	(3.457)	(3.424)	(3.420)	(3.549)	(3.447)	(3.670)	(3.740)
GENDER		3.439	4.239	2.651	1.322	0.902	0.869
		(3.860)	(3.874)	(4.128)	(3.995)	(4.261)	(4.294)
AGE		0.302	0.276	0.430	0.312	0.229	0.225
		(0.253)	(0.252)	(0.264)	(0.258)	(0.283)	(0.285)
ABOVE_MANAGER		1.646	0.015	-3.238	-1.523	-1.996	-1.945
		(4.758)	(4.858)	(5.249)	(5.130)	(5.225)	(5.267)
COMPLIANCE		-6.709*	-6.799*	-7.163*	-8.195**	-7.894**	-7.886**
		(3.613)	(3.589)	(3.830)	(3.713)	(3.802)	(3.829)
CLIENT_ADVOCACY			0.373	0.449	0.532*	0.518*	0.515*
			(0.257)	(0.278)	(0.269)	(0.276)	(0.278)
OPENNESS				-0.867	-1.027	-1.010	-0.993
				(0.645)	(0.623)	(0.653)	(0.662)
CONSCIENTIOUSNESS				0.473	0.832	0.452	0.409
				(0.994)	(0.964)	(1.011)	(1.037)
EXTRAVERSION				0.521	0.629	0.747	0.733
				(0.634)	(0.611)	(0.638)	(0.646)
AGREEABLENESS				-0.472	-0.536	-0.610	-0.610
				(0.681)	(0.700)	(0.767)	(0.772)
NEUROTICISM				-0.574	-0.523	-0.527	-0.544
				(0.596)	(0.574)	(0.594)	(0.603)
RISK_PROP				-1.381	-1.555	-1.469	-1.455
				(1.157)	(1.116)	(1.184)	(1.194)
PERCEIVED_INJUSTICE					0.377	-0.187	-0.255
					(1.865)	(2.135)	(2.173)
AUDITS_EFFECTIVE					3.993***	3.649**	3.662**
					(1.501)	(1.595)	(1.607)
ASSERTIVENESS						-2.475	-2.467
						(1.801)	(1.815)
INDIVIDUALISM						-0.006	0.021
						(1.423)	(1.439)
HUMANE_ORIENT						-0.318	-0.360
						(1.757)	(1.780)
ACHIEVEMENT_ORIENT						0.675	0.624
						(1.410)	(1.439)
IDENTIFICATION						1.505	1.416
						(2.161)	(2.215)
TAX_MORALE							0.287
							(1.330)
Constant	49.902***	39.932***	24.126*	34.132	16.317	36.066	35.584
	(2.944)	(9.458)	(14.389)	(25.420)	(25.351)	(30.359)	(30.656)
R-squared	0.067	0.155	0.177	0.235	0.312	0.345	0.345
Adj. R-squared	0.046	0.093	0.105	0.1025	0.171	0.152	0.139

The table shows the regression results for subjects' tax aggressiveness for the combined sample with (models 2-7) and without (model 1) controlling for subjects' sociodemographic characteristics, client advocacy, personality traits, attitudes towards and perceptions about the tax system, cultural differences and tax morale. Standard errors in parentheses. The number of observations amounts to 89 in all seven models. Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 4.5: Regression results for the combined sample.

Looking at the variables that should reflect participants' perceptions of the tax system, we find robust evidence for a significant influence of AUDITS_EFFECTIVE on tax

aggressiveness. To our surprise, the regression coefficient indicates that subjects perceiving IRS-audits as being efficient show higher tax aggressiveness than subjects degrading the effectiveness of IRS work. This would deny a deterrence effect of IRS-audits at least with regard to tax professionals. Normally, we would expect that tax professionals choose their level of tax aggressiveness at least basically in accordance with the expected utility theory. Thus, higher audit effectiveness should lower the expected profit of tax aggressiveness by increasing the expected costs due to additional tax payments or preparer penalties. However, there are prior studies that yield results similar to this, as Strümpel (1969) found tax morale to be lower in Germany than in England although he suggested the German government to make use of more coercive tax enforcement techniques than the English system. Furthermore, there are some studies that report a negative correlation between perceived audit probabilities and tax evasion (Spicer & Lundstedt 1976, Mason & Calvin 1978, Spicer & Thomas 1982) what should be comparable to the study at hand since the perceived audit effectiveness should reflect a kind of subjective detection probability. Both risks, perceived audit probability as well as subjective detection probability, should increase the expected costs of tax aggressiveness. Blumenthal et al. (1998) find a similar result. In a controlled experiment where taxpayers were informed by the IRS in advance that their income tax returns will certainly be closely examined, high-income taxpayers' reported income fell sharply relative to a control group. This effect was not induced by the hiring of tax preparers and is explained by the authors in different ways. One argument that could also be applicable to the tax preparers in this study is that subjects see the compliance process as a costly negotiation process under imperfect and asymmetric information where it may make sense to begin with "a low bid".

Another possible guess could be that the payment status of the client is responsible for the contra-intuitive result at hand as the client has underpaid taxes in our setting. Chang et al. (1987) show that taxpayers do not react on higher audit risks in the way intuitively expected if the tax payment is perceived as being a loss rather than decreased income. However, this result, highlighting the validity of prospect theory also in the field of tax compliance was not found for tax professionals up to date as they do not tend to internalize the client's payment status and thus have no psychological commitment to the decision outcome (Koski & Ehlen 2002).

A further possible explanation might be derived from Kirchler et al. (2008) who design a framework for tax compliance emphasizing the interaction of power (defined as taxpayers' perception of enforcement effectiveness) and trust in the tax authorities. Pursuant to the "slippery slope" they describe in their study low trust in the tax systems might explain

why higher enforcement effectiveness does not necessarily lead to higher tax compliance. In an empirical investigation of this framework Wahl et al. (2010) actually find a kind of taxpayers' reactance for cases with low trust and high power, designated to be a "cops-and-robbers"-setting. Hence, the increase in tax aggressiveness of the tax professionals perceiving the audits effectiveness to be higher than in the control group might also be due to differences in trust in the present study.

We do not find a robust direct effect of the Big Five personality traits, culture traits, general risk propensity, or tax morale on participants' tax aggressiveness.

4.6.4 Regressions Results for the Split Samples

As the regression results for the combined sample show a difference in tax experts' tax aggressiveness between the country samples it is interesting whether tax professionals working under the Full Regulation Model (Germany) determine their level of advice aggressiveness by referring to other (inner) landmarks than tax professionals working under the Partial Regulation Model in the USA. Indeed, the regressions performed for the split samples to answer this question result in differences in the determinants of participants' tax aggressiveness between countries.

Pursuant to the results in Table 4.6 there is a remarkable differences between the U.S. tax professionals and their German colleagues: The introduction of penalty provisions did not result in a reduction of tax aggressiveness in the U.S. sample but only in the German sample. While this result might be due to the small sample size, it was also thinkable that the U.S. tax professionals have already got used to the penalty provisions applicable in the USA, e.g., because they have never been subject to them or against the background of the rather low audit rates in the USA. However, it might also be the case that subjects did not internalize the instructions we provided for the fictitious penalty provision in our setting but referred to their real-world penalties they got used to and which allow for a larger latitude of tax aggressiveness than the penalty introduced in our study. This could help to explain why the tax professionals from the USA are less client advocates than the German tax professionals but show higher tax aggressiveness in our study. However, client advocacy is furthermore found to increase tax aggressiveness only in the German sample. Thus, also the deliberations we made with regard to the findings of Burns & Kiecker (1995) seem to be underlined as the response to the ethical question of our task (defining the level of tax aggressiveness) is influenced by rather deontological norms in the German sample (i.e., subject' client advocacy) while this does not apply for the U.S. tax professionals.

The split samples' analyses both confirm the surprising result found for AUDITS_EFFECTIVE indicating higher tax aggressiveness at higher levels of perceived audit effectiveness so further research on the impact of power and trust on tax professionals' tax aggressiveness should be performed. Finally, we find at least weak significant results for a positive impact of experience represent by subjects age (AGE) on tax aggressiveness in the U.S. sample, while neither age (AGE) nor task familiarity (COMPLIANCE) is found to impact advice aggressiveness of the German tax preparers in our data. These split sample results also hold if we control for other variables, like, e.g., participants personality traits.

OLS regression results

Dependent variable: *TAX_AGGRESSIVENESS*

	U.S. sample					German sample				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
PENALTY	-4.795	-2.896	-2.902	-2.945	-4.191	-10.507**	-10.927**	-10.464**	-9.793*	-9.049*
	(4.528)	(4.552)	(4.623)	(4.673)	(4.519)	(4.861)	(4.996)	(5.073)	(5.195)	(5.231)
GENDER		2.379	2.381	0.958	-0.934	6.835	7.147	6.433	4.205	
		(5.531)	(5.604)	(6.481)	(6.277)	(5.247)	(5.396)	(5.468)	(5.467)	
AGE		0.493**	0.492*	0.495*	0.433*	0.150	0.237	0.039	0.192	
		(0.234)	(0.251)	(0.253)	(0.245)	(0.368)	(0.376)	(0.359)	(0.358)	
COMPLIANCE		-4.432	-4.438	-5.128	-7.805	-8.406*	-8.367	-8.465	-9.972*	
		(4.556)	(4.628)	(4.920)	(4.889)	(4.878)	(5.019)	(5.105)	(5.170)	
CLIENT_ADVOCACY			0.006	0.050	0.039	1.085***	0.889**	0.650*		
			(0.352)	(0.369)	(0.354)	(0.395)	(0.390)	(0.364)		
RISK_PROP				-0.768	-1.318	-2.717	-2.535			
				(1.700)	(1.651)	(1.610)*	(1.653)			
AUDITS_EFFECTIVE					4.252**	3.555*				
					(2.052)	(1.980)				
Constant	53.462***	35.144***	34.949**	38.354	32.134*	0.498	18.483	21.833	47.564***	50.913***
	(2.896)	(10.217)	(15.243)	(17.151)	(16.707)	(21.827)	(19.953)	(20.174)	(14.500)	(3.658)
R-squared	0.026	0.162	0.162	0.166	0.255	0.324	0.265	0.219	0.156	0.065
Adj. R-squared	0.003	0.076	0.051	0.031	0.110	0.196	0.149	0.119	0.071	0.043

The table shows the regression results for subjects' tax aggressiveness in the split samples. While models 1 to 5 refer to the U.S. sample, models 6 to 10 refer to the German sample. The independent variables control for the treatment the participant faces (with or without reputational losses, represented by PENALTY), subject sex (GENDER), age (AGE), main field or working experience (COMPLIANCE), client advocacy (CLIENT_ADVOCACY), overall risk propensity (RISK_PROP), and perceptions about the effectiveness of tax audits performed by the IRS (AUDITS_EFFECTIVE). The number of observations amounts to 44 in the U.S. sample and 45 in the German sample. Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 4.6: Regression results for the split samples.

Overall, our split sample analysis is only suggested to be a first step into gaining a more detailed understanding of cross-national differences in tax preparers' tax aggressiveness. Further research comprising larger datasets is necessary to shed further light on potential differences between the determinants of professional decision-making.

4.7 Conclusions

This study analyzes whether market regulation has an impact on tax preparers' tax aggressiveness. Conducting an online survey experiment among tax professionals of a Big Four firm in the USA and Germany, we discuss the major differences between the two tax

preparation markets flagged as the Full Regulation Model (Germany) and the Partial Regulation Model (USA). The latter are suggested to essentially differ with regard to (1) admission to the profession, (2) maintenance and enforcement of quality standards (e.g., penalties), (3) mandatory early disclosure rules, (4) the freedom to determine advertising and fees, and (5) differences in the boundaries of multidisciplinary professional practice like provisions governing the possibility to collaborate with providers of other legal services. Given the plurality of differences between the two regulation models we hypothesize that market regulation matters, i.e., has an impact on tax preparers' tax aggressiveness. We use ordinary least square regression modeling including a wide set of control variables to test this hypothesis.

By doing this, we contribute to prior tax aggressiveness research by providing the first study that investigates cross-country differences in tax preparers' tax aggressiveness. Furthermore, by using one of the major culture models we are the first to examine the influence of culture traits on experts' tax aggressiveness.

In line with our hypothesis, we find a difference in participants' tax aggressiveness between the countries that cannot be explained by differences in sociodemographic factors, client advocacy, personality traits, attitudes towards and perceptions about the tax system, cultural differences or tax morale. Pursuant to the direction of this result, tax professionals working under the Full Regulation Model (Germany) for the Big Four firm in our sample are less tax aggressive than tax professionals working for the same firm under the less regulated Partial Regulation Model in the USA. As prior studies on tax professionals' tax aggressiveness have almost exclusively been conducted in the USA our result raises the question whether the determinants found in prior research are valid also for tax professionals working in other jurisdictions or regulatory environments respectively. This question becomes even more pressing when looking at the results of our split sample regressions which show that participants' tax aggressiveness is influenced by different determinants between the countries in our data.

Hence, future research should take a deeper look into the role of regulatory differences when studying tax professionals' tax aggressiveness to highlight main differences between countries that might enable governments, professional supervisions as well as the setters of tax standards interested in the role of tax professionals on the tax revenue to assess the potential effect of specific regulatory actions. These stakeholders should especially be interested in the latitude of tax aggressiveness that is predetermined by the institutional and regulatory framework in their country. Furthermore, to provide more robust evidence for the

validity or non-validity of the results found in prior (mainly U.S.) research on tax professionals behavior future studies comprising larger datasets will be required to shed further light on potential cross-country differences between the determinants of professional decision-making.

Finally, further research might also help to better understand cross-national differences in taxpayers' aggressiveness as tax professionals are suggested to play a very significant role in the compliance process. Thus, cross-national differences in tax preparers' advice aggressiveness are expected to impact the level of taxpayers' compliance in a market.

4.8 Limitations and suggestions for further research

Although the main results, are supposed to be unaffected, our study is subject to some limitations. Besides the small sample sizes and the common points of criticism regarding the use of surveys among experts that are not conducted in a laboratory[44], there a five further points. First, our results suggest that there is a between-country difference in experts' tax aggressiveness. We suggest that this difference is driven by dissimilarities in the institutional and regulatory framework between the Full- and Partial Regulation Model as the between-country difference cannot be explained by differences in sociodemographic factors, client advocacy, personality traits, attitudes towards and perceptions about the tax system, cultural differences or tax morale. However, we cannot exclude that there is a kind of omitted-variable-bias, being responsible for the difference found.

Second, we measure the culture traits by using single questions from the GLOBE questionnaire. We do not use the full questionnaire and the guidelines for the use of GLOBE read that "The GLOBE scales were designed to be psychometrically sound at the organizational and societal levels of analysis. This means that the scales were designed to explain 'between-organization' differences or 'between-society' differences. The scales were not designed to explain 'between-individual' differences." Hence, there might be distortions from that point.

Third, we were not successful in trying to confirm the results of Gerlitz & Schupp (2005) when performing a factor analysis to extract the Big Five personality traits from the single items of the questionnaire. So we simply added the single items found to reflect one

[44] Of course, we are aware of the fact as we use a hypothetical scenario. Hence, it might be that subjects' responses in real-life settings providing real monetary incentives are different from the effects shown in our data. However, we use a randomized between-subject design and there is no theoretical reason why our results should not extend to actual behavior in real-world settings.

personality dimension in prior research. Thus, there might be distortions from this leakage as well.

Fourth, the rather simple setting in our study should not have allowed for an applicability of early disclosure rules in the U.S. and should also not allow for a large latitude in setting the fees for the task in question. Therefore, we suggest that both aspects should not have influenced the results found. However, it cannot be excluded that recognizing the impact of both issues would result in a levelling of the difference found for the two regulatory models.

Fifth, our data only represents one subsegment of the tax advisory market, i.e., the submarket created by the Big Four firms, and only examines the differences between the Full- und Partial Regulation Model as represented by German and U.S. law. Hence, our results might not be valid for the particular tax advisory markets under review as a whole and might not be applicable for other regulatory models. Our results should especially not allow for compulsory inferences regarding the impact of differences between the "Model of No Regulation" as classified by Thuronyi & Vanistendael (1996) and the other regulatory models on tax preparers' tax aggressiveness. Further research should therefore extend the present study by using data from countries where the provision of tax advice and return preparation is generally unrestricted like Belgium, Italy, Portugal, Spain, or the United Kingdom.

A final point that we leave for further research is connected with the findings in our data: Tax aggressiveness was higher for tax professionals considering IRS-audits as being more effective when compared to the statement of other colleagues. As this is at least astonishing further research should investigate whether tax professionals' reactions to high enforcement power is dependent from their perceptions of trust in the tax system as suggested for taxpayers by the "slippery slope" framework of Kirchler et al. (2008).

4.9 APPENDIX F – Survey materials

4.9.1 Introduction

Welcome to our survey among tax professionals!

At first, we would like to thank you for your willingness to take part in this scientific survey!

All the information that you enter in the following, will only anonymously be available for our evaluation purposes. We treat all information with the utmost care and will not forward any data to third parties.

Please note that navigating back is not possible during the survey. However, you can save your results temporarily under a pseudonym and a password, so you are able to complete the survey in several steps.

For technical questions or other problems please do not hesitate to contact us under steuerforschung@tax.uni-hannover.de at any time.

We would ask you to answer all the questions alone and as conscientiously as possible.

At the end of the survey we ask you to take part in a very short quiz that we use for plausibility purposes. For every participant who successfully answers the five questions, we donate € 3 for charity. Thanking all the other participants who fail to answer the quiz correctly but completely absolve the survey, we give € 1 to a good cause.

Determine the charitable organization!

If you answered all the questions in the quiz correctly, you will take part in a lottery (provided this corresponds to your desire). The winner of this lottery may determine the charity that will receive the amount of money which is earned by all participants in this study.

Now, we hope you will enjoy the interview!

4.9.2 Section I

1) Which of the following tasks best describes your everyday work?

a) Preparation of tax returns/compliance
b) Preparation of tax opinions
c) Advocacy
d) Advisory
e) Mediation
f) Development (e.g., of tax optimized restructurings)

2) How often are you concerned with tax planning or tax optimization tasks in your everyday work?

a) Never
b) Seldom
c) From time to time
d) Often
e) (Almost) solely

4.9.3 Section II

(Subjects have randomly been faced with Setting I or Setting II)

Setting I

For the purpose of your answer, please imagine all preparer penalties have been abolished by the legislature and your only obligation is to declare all existing risks to the client and not to support the client in tax evasion.

One of your important clients contacts you due to a question about a deduction she would like to take for tax purposes. The resulting tax savings would amount to $1.4M. Anyhow the client has underpaid estimated taxes and withholdings and faces further payments at year end.

The sources of legal authority and the view of the IRS regarding this issue are ambiguous and the specialist literature only provides conflicting evidence. The client asks whether you would recommend to take the deduction when filing the tax return.

You have a very good relationship with the client and the latter is quite willing to take greater risks, depending on your recommendation. Regardless of whether the deduction of the item in question is successful, you would neither lose the client, nor would you have to worry about the assertion of liability claims. Furthermore, your firm would not have to fear reputational losses.

The client had no major disputes with the tax authority in recent years. However, you have to expect that the deduction in question will be audited by the IRS.

Please specify the minimum likelihood of client's success in case of litigation which you would feel comfortable before signing the client's tax return including the deduction in question (probability of success).

Setting II

Please imagine all existing preparer penalties have been abolished and replaced by a new provision punishing aggressive tax preparers. Pursuant to this new provision, your firm has to expect a penalty in the amount of 50% of the client's tax savings resulting from an issue that is classified as being too aggressive. The provision would not be applicable if third-party experts conclude that client's success in case of litigation was more likely than not.

Now, one of your important clients contacts you due to a question about a deduction she would like to take for tax purposes. The resulting tax savings would amount to $1.4M. Anyhow the client has underpaid estimated taxes and withholdings and faces further payments at year end.

The sources of legal authority and the view of the IRS regarding this issue are ambiguous and the specialist literature only provides conflicting evidence. The client asks whether you would recommend to take the deduction when filing the tax return.

You have a very good relationship with the client and the latter is quite willing to take greater risks, depending on your recommendation. Regardless of whether the deduction of the item in question is successful, you would neither lose the client, nor would you have to worry about the assertion of liability claims. Furthermore, your firm would not have to fear reputational losses.

The client had no major disputes with the tax authority in recent years. However, you have to expect that the deduction in question will be audited by the IRS.

Please specify the minimum likelihood of client's success in case of litigation which you would feel comfortable before signing the client's tax return including the deduction in question (probability of success).

Question:

Please specify the minimum likelihood of client's success in case of litigation which you would feel comfortable before signing the client's tax return including the deduction in question (probability of success).

I sign the tax return including the uncertain position if the probability of success is at least…

[Answers must be indicated via a scrollbar comprising the values from 0% to 100%.]

4.9.4 Section III

Please indicate your agreement or disagreement with the following nine statements from 1 (strongly disagree) to 7 (strongly agree).

	1	2	3	4	5	6	7
a) In an instance where no judicial authority exists with respect to an issue and where the Code and Regulations are ambiguous, I feel the taxpayer is entitled to take the most favorable tax treatment.							
b) Generally speaking, my loyalties are first to the tax system, then to the taxpayer.							
c) I feel I should apply ambiguous tax law to the taxpayer's benefit.							
d) When examining negotiations of the taxpayer with the financial administration, I tend to point out to taxpayers reasonable positions they could have taken which would have contributed to minimizing their tax liability.							
e) I believe it is important that I encourage taxpayers to pay the least amount of taxes possible.							
f) I always interpret unclear/ambiguous laws in favor of the taxpayers.							
g) It is important to use trends in the law by trying to establish a pattern of more favorable treatment for the taxpayer and then extending this pattern to the taxpayer's position.							
h) Where no judicial authority exists with respect to an issue, I feel that the taxpayer is entitled to take the most favorable treatment.							

4.9.5 Section IV

A few questions regarding your person...

1) How many years of experience do you have as a tax preparer/tax accountant?

a) less than one year b) 1-3 years c) 3-5 years
d) 5-10 years e) 10-15 years f) 15-20 years
g) more than 20 years

2) What position do you hold in your firm?

a) Trainee
b) Consultant or Senior Consultant
c) Manager
d) Senior Manager, Director or Partner

3) Do you work at a Big4-firm?

a) Yes
b) No

4) Which professional examinations did you pass?

a) None
b) Registered Tax Return Preparer
c) CPA
d) Enrolled Agent
e) (Tax) Lawyer
f) Other:

5) Are you currently on secondment in the USA [Germany]?

a) Yes
b) No

6) How old are you? *(Answer must be entered in a cell)*

7) What is your gender?
a) female
b) male

8) How do you see yourself: are you generally a person who is fully prepared to take risks or do you try to avoid taking risks? Please tick a box on the scale, where the value 0 means "not at all willing to take risks" and the value 10 means "very willing to take risks".

	0	1	2	3	4	5	6	7	8	9	10
Risk propensity											

9) About how often do you pray?

a) No answer
b) Never
c) Less than once a year
d) About once or twice a year
e) Several times a year
f) About once a month
g) 2-3 times a month
h) Nearly every week
i) Every week
j) Several times a week
k) Once a day
l) Several times a day

4.9.6 Section V

1) Please indicate your agreement or disagreement with the following statements from 1 (strongly disagree) to 7 (strongly agree).

g) Being a member of the German community is important to me.
h) The government predominantly uses the tax revenues for things that are useful for the citizens
i) I feel a sense of pride in being a member of the German community.
j) Field audits performed by the Revenue Agency are generally very effective.
k) All things considered, I feel that the amount of income tax I am asked to pay is about right.
l) Generally, I get a reasonable level of service from the government for the amount of taxes I pay.

2) Please respond to the following four questions by circling the number that most closely represents your observations about your society.

	1	2	3	4	5	6	7
a) In this society, people are generally:	aggressive						not aggressive
b) The economic system in this society is designed to maximize:	individual interests						collective interests
c) In this society, people are generally:	not at all concerned about others						very concerned about others
d) In this society, people are rewarded for excellent performance.	strongly disagree						strongly agree
e) There are different opinions as to what it takes to be a good citizen. As far as you are concerned personally how important is it that a good citizen never tries to evade taxes?	not at all important						very important

4.9.7 Section VI

Finally, let us turn to something completely different. Our everyday actions are influenced by our fundamental convictions. Today's research indicates that little is known about these convictions. Below, you will find some characteristics that a person can have. Some characteristics may apply to your personality fully or not at all. Regarding other characteristics, you might not be sure. Please tick a box on the scale, where the value 1 means "not applicable at all" and the value 7 means "fully applicable". With the values between 1 and 7, you can adjust your assessment.

I am someone who …	1	2	3	4	5	6	7
… works thoroughly							
… is communicative, talkative							
… is sometimes a little bit rough to others							
… is original, brings in new ideas							
… often worries about things							
… is able to forgive							
… is rather lazy							
… is able to come out of her shell, is sociable							
… likes artistic experiences							
… gets nervous easily							
… fulfills tasks in an effective and efficient manner							
… is reserved							
… is considerate and friendly							
… has a vivid phantasy/imagination							
… is relaxed, can easily handle stress							

4.9.8 Section VII

Quiz

If you answer the following five questions correctly, the jackpot for charity will raise by 3€. Then, you can take part in our lottery - and get the chance to determine the charitable organization that will receive the whole jackpot.

If you do not participate in the quiz or do not answer all questions correctly we will donate 1€ for your participation in our survey!

1. The setting described an average client of you.

   □ Correct. □ Incorrect.

2. Your company had to fear reputational losses, depending on your recommendation.

   □ Correct. □ Incorrect.

3. The amount of potential tax savings was $ 2.4M.

   □ Correct. □ Incorrect.

4. The client had underpaid taxes.

   □ Correct. □ Incorrect.

[For treatment group:]

5. Facing a probability of success of 50% the tax preparer penalties introduced in the setting would have been applicable.

   □ Correct. □ Incorrect.

[For control group:]

5. The client had a tense relationship with the IRS.

   □ Correct. □ Incorrect.

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