

# Consumer reactions to tax avoidance – Evidence from the United States and Germany

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## Abstract:

This research investigates the impact of corporate tax strategies (i.e., tax avoidance and non-avoidance) on consumers' corporate social responsibility (CSR) perceptions, willingness to pay (WTP) and corporate reputation in two laboratory experiments (n = 409) in the United States and Germany. Using the Becker-DeGroot-Marshak incentive-compatible mechanism, which avoids a social desirability bias found in prior research, our results indicate only a minor indirect effect of corporate tax strategies on WTP by way of the mediator CSR perceptions. However, we find a strong effect on reputation again mostly mediated by CSR perceptions. In contrast to German consumers, U.S. consumers' CSR perceptions of tax avoidance are independent of whether a strategy is likely accepted by the tax authorities. Overall, we conclude that CSR perceptions are highly relevant when it comes to consumer responses to tax avoidance.

**JEL-Classification:** H26, M41

**Keywords:** BDM, corporate reputation, corporate social responsibility, tax avoidance, tax uncertainty, WTP

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# 1 Introduction

Increased consumer awareness of the use and acceptability of corporate tax avoidance has caused concern among some corporate taxpayers. Prior research indicates that reputation effects are relevant in firms' decisions on whether or not to engage in tax avoidance (e.g., Austin and Wilson 2017; Dyreng et al. 2016). Nearly 70% of tax executives surveyed by Graham et al. (2014) rate potential harm to their company's reputation as important or very important in their decisions to avoid a corporate tax strategy (CTS). Indeed, anecdotal evidence indicates that consumers do respond to tax avoidance. Starbucks faced consumer boycotts after reporting zero payment of taxes in the United Kingdom (Graham et al. 2014). Burger King in the United States experienced a similar reaction when it became known that it was working on a corporate inversion.<sup>1</sup> However, existing studies provide mixed evidence of the impact of CTS on consumer behavior. Hanlon and Slemrod (2009) find that engaging in tax shelters can have a negative effect on stock price and this reaction is greater in the retail sector. They posit that this may occur because of a potential consumer backlash. Experimental studies support their assumption (Hardeck and Hertl 2014; Antonetti and Anesa 2017; Asay et al. 2018). By contrast, using archival data, Gallemore et al. (2014) were unable to detect negative effects of tax shelter engagements on sales.

Our study follows a call for research on the perception of tax avoidance from the perspective of consumers (Hanlon and Heitzman 2010) and extends prior experimental research (Hardeck and Hertl 2014; Antonetti and Anesa 2017; Jemiolo 2018) on consumer reactions to CTS by employing an incentive compatible measure of WTP, assessing different forms of CTS, controlling the manipulation of CTS, and examining consumer reactions to CTS across countries. We employ a laboratory experiment to investigate the reactions of consumers to CTS employed

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<sup>1</sup> <http://www.americansfortaxfairness.org/burger-king-inversion-report/>.

by businesses in the United States and Germany. Participants are provided with four scenarios representing cases of non-avoidance, low tax avoidance, and high tax avoidance, along with a control condition. We distinguish low and high tax avoidance by the degree of certainty that tax authorities will accept the tax positions taken by firms. Our primary measures of consumer reaction are willingness to pay (WTP), which we measure using the Becker-DeGroot-Marshak (BDM) (Becker et al. 1964) incentive aligned mechanism, and corporate reputation, which we define as the knowledge and feelings held by individuals about a corporation (Hall 1992; Schwaiger 2004). When analyzing the impact of CTS on these two dependent variables, we simultaneously examine indirect effects, through the mediator consumer perceptions of corporate social responsibility (CSR), and direct effects.

A laboratory experiment addresses several limitations of existing archival studies. Such an approach facilitates drawing causal conclusions of consumer responses to CTS. Moreover, archival research is limited to firms that are publicly reported as engaging in tax avoidance, those that have not been revealed cannot be accounted for. Some firms might even try to avoid negative consumer effects from the beginning and choose not to engage in tax avoidance (Graham et al. 2014). Finally, prior archival research has been unable to assess consumer responses to non-avoidance.

We add to prior research in several ways. First, we contribute to the debate about the nature of the link between CTS and CSR (Davis et al. 2016; Hillenbrand et al. 2017; Dowling 2014; Hoi et al. 2013; Lanis and Richardson 2015; Watson 2015). Prior experimental studies (Hardeck and Hertl 2014; Antonetti and Anesa 2017) detect a link between tax avoidance and consumer CSR perceptions. However, their manipulations of CTS potentially confound the two constructs by using language such as ‘aggressive CTS’ and ‘commended for its responsible CTS’

to describe CTS. Our setting avoids judgmental descriptions of CTS and references to societal consequences of tax avoidance. Our goal was to allow participants to reveal a link, if any, between CTS and CSR perceptions without any experimentally induced influence, thus advancing our understanding of this relationship.

Second, all prior studies focus on a single country. We shed light on consumer responses across different countries. How consumers view the role of firms in society might differ across market economies (Avi-Yonah 2014). The United States is a liberal market economy (Hall and Soskice 2001) and traditionally adheres to the ‘aggregate view’ of firms, which assumes that management has a responsibility to maximize shareholders’ profits and thus should engage in tax avoidance to the extent possible (Avi-Yonah 2014). This aggregate view is reflected in the ongoing debate in the United States about whether tax avoidance really is socially irresponsible (e.g., Davis et al. 2016). Germany, by contrast, is a coordinated market economy (Hall and Soskice 2001) and follows the ‘real entity view’, which perceives a corporation as a person that is separate from its shareholders. Moral expectations regarding the behavior of corporations, including CTS, reflect the expectations that society holds for individual citizens (Avi-Yonah 2014). By assessing consumer reactions in these two countries, which represent opposing market economies, we enrich the literature on consumer responses to CTS. From a managerial point of view, our result can inform cross-national corporate tax planning choices.

Third, we aim to deepen insights into economic consequences of CTS through consumers’ WTP. Prior experimental research on consumer reactions to CTS finds negative direct effects of tax avoidance on WTP, whereas non-avoidance does not impact this measure (Hardeck and Hertl 2014). However, this prior study is hindered by using a hypothetical WTP measure (Miller et al. 2011). A further experimental study does not report consumers’ WTP at all (Antonetti and Anesa

2017). We present participants with a purchase decision that has real economic consequences and measure actual WTP using the BDM incentive aligned mechanism (Becker et al. 1964). The BDM mechanism is appropriate for consumer behavior experiments (Miller et al. 2011) to overcome any social desirability bias and enhance the external validity of the design.

Fourth, prior research does not differentiate between different forms of tax avoidance. However, consumer reactions likely depend on the “aggressiveness” of a particular CTS. We explore two levels of tax avoidance, which are distinguished by the degree of certainty concerning the likely acceptance of tax positions by tax authorities (Dyreng et al. 2018). We define high tax avoidance as tax positions for which the firms are uncertain whether tax authorities will find the positions acceptable and thus could be rejected, and low tax avoidance as tax positions which firms are certain tax authorities will find acceptable.

We employ partial least squares-structural equation modelling (PLS-SEM) to comprehensively test the hypotheses related to our research model. PLS-SEM is able to simultaneously analyze direct effects, mediators, and moderators (Lee et al. 2011). Further, this method is appropriate in our setting where, in the absence of a dominant theory, an exploratory analysis is required. Our results show a negative (positive) effect of tax avoidance (non-avoidance) on CSR perceptions. U.S. consumers’ CSR perceptions of tax avoidance are not influenced by whether a tax avoidance strategy is accepted or might be rejected by the tax authorities. This is different from perceptions of German consumers who react more negatively to tax avoidance strategies that might be rejected. Our findings are consistent with our expectations that the economic system and the associated view of the firm (Avi-Yonah 2014) will have an impact on consumers’ CSR perceptions. Moreover, tax avoidance (non-avoidance) decreases (increases) corporate reputation through the mediator CSR perceptions. Direct reputational losses

and gains are marginal or nonexistent. Finally, CSR perceptions fully mediate the effect of CTS on WTP. The effect, however, is very weak. Thus, consumers only marginally discount WTP for tax avoiders, and barely pay a premium for those choosing not to engage in tax avoidance. Since we use an incentive-compatible measurement of WTP, these results should be highly reliable. Overall, the mediator CSR perception plays a key role when it comes to consumer responses to CTS.

The paper continues as follows: first, we define CTS and derive hypotheses about the impact of CTS on consumers' CSR perceptions, WTP and corporate reputation. Next, we describe the sample selection, the experimental procedure, and our methodological approach. We then present the results. The article concludes with a summary of the findings and their implications.

## **2 Theory and Hypotheses Development**

### **2.1 Corporate Tax Strategies (CTS)**

Hanlon and Heitzman (2010, p.137) define “tax avoidance broadly as the reduction of explicit taxes.” Tax avoidance can be thought of as a continuum extending from perfectly legal tax planning, in both the spirit and letter of the law, to tax evasion where CTS are clearly illegal and noncompliant (Hanlon and Heitzman 2010; Graham et al. 2014; Dyreng et al. 2018). The use of the term tax avoidance, as distinguished from tax evasion, does not itself imply any illegal activity on the part of the firm (Dyreng et al. 2008).

Tax avoidance in its more moderate forms represents a good faith business strategy in which tax positions have a realistic possibility of being sustained, while stronger forms follow the letter of the law but are in bad faith with the spirit of the law (Payne and Raiborn 2018). One way to gauge the potential aggressiveness of tax avoidance is through the level of uncertainty

associated with the CTS. Dyreng et al. (2018) define uncertainty as the possibility the tax benefit attempted would be lost if challenged by the tax authority. We combine the notion of tax avoidance as a continuum and the possibility of uncertainty surrounding CTS to assess tax avoidance at two levels: low (i.e., certain) and high (i.e., uncertain) tax avoidance. Thus, we differentiate between low tax avoidance that is accepted by tax authorities and high tax avoidance that could be rejected. We also evaluate consumer behavior for a firm that does not engage in tax avoidance.

## **2.2 Effect of CTS on CSR Perceptions**

The role of CTS, or tax payments in general, in relation to other CSR activities is an unresolved debate. The link to CSR is important because prior research finds that CSR perceptions affect many consumer behaviors (Wagner et al. 2009), including firm reputation and financial performance (Luo and Bhattacharya 2006). CSR has been traditionally defined as “actions that appear to further some social good, beyond the interests of the firm and that which is required by law” (McWilliams and Siegel 2001, p. 117). Similarly, Vitell (2015, p. 767) states that “[a] CSR focused business is best defined as one that *proactively* offers *social benefits* or *public service*, and *voluntarily* minimizes practices that harm society, regardless of any legal requirements”.

Davis et al. (2016) layout two main lines of argument linking tax payments and other CSR activities: as (1) complements or (2) as either substitutes or as unrelated activities. The role of CTS as a complement to other CSR activities argues that firms must consider a wider range of stakeholders than shareholders alone. Carroll (1979) identifies four domains of social responsibilities of businesses: economic, legal, ethical, and discretionary expectations. Carroll (1991, pp. 40-42) defines ethical responsibilities as “any activities or practices that are expected

by members of society although not codified in law, i.e., the responsibilities which embody those standards, norms, and expectations that reflect a concern for what consumers, employees, shareholders, and the community regards as fair, just, or in keeping with the respect or protection of stakeholders' moral rights." Consequently, consumer stakeholders will view CTS more broadly than simply how firms comply with legal requirements. Proponents of the argument that CTS is a form of CSR point to the reduction of tax base for the provision of public services, such as social services, health care, education and infrastructure, and the shifting of tax burden to individuals or smaller firms as indicators of the social consequences of tax avoidance (Dowling 2014; Hardeck and Hertl 2014). In this regard, Christensen and Murphy (2004) argue that paying taxes is fundamental to societal engagement.

Theories have also been proposed suggesting that CSR and CTS are substitutes or have no relation to each other. One argument is that firms are exclusively responsible to their shareholders, and to act outside the interests of shareholders would be irresponsible (Friedman 1970). Firms may also argue that tax minimization is an issue of financial responsibility, which is separate from any social responsibility of the firm (Dowling 2014). Management's exclusive responsibility to maximize shareholders' profits suggests that firms should engage in tax avoidance as much as possible. Besides arguments that not engaging in tax avoidance is irresponsible towards shareholders, some claim that firms can more efficiently deliver social services than governments, thus justifying stronger forms of tax avoidance (McGee 2010; Porter and Kramer 2006).

The arguments for CTS and CSR as substitutes or as unrelated have the firm and its shareholders as the central focus. Hillenbrand et al. (2017) report how narratives concerning CTS held by business and community groups are very different. Community groups, which are more

aligned with consumers, perceive business groups as being ‘ill-intentioned and too narrowly focused on profits’ (Hillenbrand et al. 2017). Viewing the CTS-CSR relationship from a purely business perspective may be inadequate in explaining consumer responses to CTS. Thus, we posit that consumers will perceive a firm to be socially responsible if it follows a non-avoidance strategy and socially irresponsible if it follows a low or high avoidance strategy.

H1: Corporate tax avoidance (non-avoidance) decreases (increases) CSR perceptions.

### **2.3 Moderating Effect of Market Economy on CSR Perceptions**

We also expect the relationship between CTS and CSR to vary across countries. The *Varieties of Capitalism* framework by Hall and Soskice (2001) identifies two main types of capitalist economies: liberal and coordinated market economies. In liberal market economies, firms primarily use hierarchies and competitive market arrangements to coordinate their business activities. By contrast, in coordinated economies, non-market relationships are more important to coordinate firms’ endeavors with other actors. Thus, coordination relies on collaborative instead of competitive relationships. Hall and Soskice (2001, p. 19) cite the United States and Germany as typical examples for liberal and coordinated market economies, respectively. Institutional differences are posited to be associated with comparative advantages in different types of production and with different patterns of asset investment.<sup>2</sup> Chen and Bouvain (2009) argue that these institutional differences also affect firms’ engagement in CSR. According to Campbell (2006), corporations tend to engage more in CSR as they are increasingly regulated by the state or collective industrial self-regulators.

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<sup>2</sup> Examples of these varying relationships between the German and U.S. systems noted by Hall and Soskice (2001) include the following. The U.S. liberal market model has largely deregulated labor markets while the German model has a stronger industrial-relations system. Standard setting in the U.S. model is conducted via market competition, while the German model allows for standard setting through cooperative intercompany relationships. German firms have more ability to finance though non-publicly available information than those in U.S. markets.

The economic system in a country is also strongly associated with the view society has of a firm, which in turn influences societal expectations towards CTS (Avi-Yonah 2014). The view of the firm is rooted in legal discourse. Distinct theories on the nature of the corporation have been recognized that have varied across time and between countries (e.g., Avi-Yonah 2014; Gindis 2009; Lan and Heracleous 2010; Phillips 1994). In the United States, as a liberal market economy, the ‘aggregate view’ is the dominant theory (Avi-Yonah 2005, 2014). The aggregate view superseded the ‘real entity view’ that became increasingly unpopular after the 1920’s, and today it barely has any advocates (Phillips 1994). The real entity view is more established in coordinated market economies, such as Germany (Avi-Yonah 2005) where it also has its theoretical origin (Harris 2006; Lan and Heracleous 2010). Not only in Germany but also in most continental European countries, the real entity view is clearly the prevailing theory (Petrin 2013).

The aggregate view suggests that the corporation is only an aggregate of its individual shareholders. Consequently, management has a responsibility to maximize shareholders’ profits as much as possible, which supports the view that CSR and CTS are substitutes. Choosing not to engage in tax avoidance without the shareholders’ consent would be illegitimate and constitute a dereliction of management’s duty to maximize shareholder wealth (Avi-Yonah 2014). Shafer and Simmons (2008) suggest that such an understanding is used to rationalize extreme forms of tax avoidance and, following a “slippery slope” effect, could even cross the line of legality.

According to the real entity view (Avi-Yonah 2014), a corporation consists of people such as managers and employees. The real entity view, in contrast to the aggregate view, perceives the firm as separate from its shareholders, with rights and obligations similar to those of an individual citizen. Expectations regarding the corporation’s behavior resemble those that society has for an individual citizen. The real entity view thus considers a wider range of stakeholders

than shareholders alone, which is consistent with the view that CTS and CSR are complements. According to the real entity view, it is legitimate for a corporation to minimize its tax payments as long as it does not intentionally engage in strategic tax behavior with the only purpose to avoid taxes (Avi-Yonah 2014). Like an individual citizen, a corporation should not be legally required to engage in activities unrelated to its operations just because they are beneficial to society at large. Society, however, can reward those firms that support social causes.

Maignan (2001) examines consumer perceptions of CSR across countries. In line with different views of the firm in the United States and Germany, she found that consumers in the United States place a lower priority on philanthropic activities than German consumers.

The different views of the firm are also reflected in sustainability reports by firms from both countries. Davis et al. (2016) provide examples of sustainability reports by U.S. firms. They reveal that some firms criticize tax payments as obstacles to economic growth, job creation, and social welfare. Comparing sustainability reports by U.S. firms to those of German firms, Hardeck and Kirn (2016) show that such critical views of tax payments are restricted to the United States.

Besides different views of the firm, the United States and Germany tend to differ in their attitudes towards the use of national tax receipts for the provision of public services and for the redistribution of wealth, which seem to be more contentious in the United States than in Germany. The World Values Survey<sup>3</sup>, using ten-point Likert-type scales, asked thousands of participants worldwide whether taxing the rich and subsidizing the poor is an essential characteristic of democracy. German participants had more agreement with this statement (mean=6.95) than did U.S. participants (mean=5.04) (V131).

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<sup>3</sup> These results are based on Wave 6 (2010-2014) of the World Value Survey. Official aggregate v.20150418. World Values Survey Association ([www.worldvaluessurvey.org](http://www.worldvaluessurvey.org)). Aggregate File Producer: Asep/JDS, Madrid SPAIN.

Thus, tax avoidance may be more accepted or even expected by U.S. consumers compared to their German counterparts. Notably, German consumers are likely to perceive high tax avoidance more negatively because they adhere less to the rationale of profit maximization. This leads to our second hypothesis in which we expect the predicted relationship between CTS and CSR perceptions to be more pronounced for German than for U.S. consumers.

H2: The effect of corporate tax avoidance (non-avoidance) on CSR perceptions is stronger among German consumers than U.S. consumers.

## **2.4 Effects of CTS on WTP and Reputation**

We further posit that CSR perceptions partially mediate the effect of CTS on the dependent variables WTP and reputation. In the following, we develop our hypotheses of (1) an indirect effect and (2) a direct effect of CTS on these dependent variables. Starting with the mediating effect, consumer behavior theorists argue that the perceived value of products comes from more than just the direct individual values of the products, that is, actual product performance, such as quality. Perceived product value can be derived from other-oriented, or prosocial, motives, which reflect value to the consumer of purchasing a product that has some social or environmental value (van Doorn and Verhoef 2011; Green and Peloza 2011; Peloza and Shang 2011). Consistent with this, Thaler (1985) argues that illegitimate behavior reduces perceived product value. Evidence for consumers being willing to pay more for products from CSR firms, however, is weak at best. WTP premiums for socially responsible firm products are small, or non-existent (Vitell 2015; Öberseder et al. 2011). The limited effect of CSR on WTP may be because consumers mistrust the veracity of corporate CSR activities, or trade-off CSR benefits for price – the direct individual benefit of lower price outweighs the broader societal benefit of CSR (Vitell 2015). Hardeck and Hertl (2014) find partial support for a negative effect of CTS on WTP, whereas their no tax avoidance condition fails to induce a higher WTP.

In contrast to WTP, prior research indicates that CSR activities can often strengthen corporate reputation (Brown and Dacin 1997; Öberseder et al. 2011; Godfrey et al. 2009; Sen and Bhattacharya 2001). For example, Vitell (2015), in defining CSR, discusses an expectation of an exchange: firms expect support and approval from consumers in exchange for good CSR behavior. Godfrey et al. (2009) discuss CSR behavior as being ‘a gift with strings attached’. Firms accrue positive attributions or moral capital, which likely enhances reputation.

Overall, we expect that the prosocial value when purchasing from a firm perceived to be socially responsible (higher CSR perception) may signify added-value, incremental to the product’s functional value, implying a WTP premium. Purchasing a product from a firm perceived to be socially irresponsible (lower CSR perception) may generate a decrement in perceived value by the consumer, implying a WTP discount. Consistent with prior research, we also expect a positive relation between perceived CSR and corporate reputation. This leads to our third set of hypotheses:

H3a: Corporate tax avoidance (non-avoidance) decreases (increases) WTP mediated by CSR perceptions.

H3b: Corporate tax avoidance (non-avoidance) decreases (increases) reputation mediated by CSR perceptions.

Some consumers may respond to tax avoidance for reasons that are unrelated to CSR perceptions. For instance, consumers might see financial gains to tax avoidance for the firm and assume that they should participate in these gains via lower WTP. Moreover, tax avoidance could create an unbalanced consumer-company relationship if consumers perceive their own tax burden as too high compared to firms engaged in such a behavior. Equity theory (Adams 1965; Walster et al. 1978) posits that consumers in unbalanced relationships attempt to restore equity, for

instance, via lower assessments of WTP and corporate reputation. This leads to our final hypotheses:

H4a: Corporate tax avoidance (non-avoidance) decreases (increases) WTP.

H4b: Corporate tax avoidance (non-avoidance) decreases (increases) reputation.

Figure 1 summarizes our four hypotheses in the form of a path diagram.

[Insert Figure 1 about here]

### **3 Research Method**

#### **3.1 Overview**

We organized our study in the form of a laboratory experiment at two universities in the United States and Germany. We systematically varied CTS for one fictitious provider of office and school supplies whose product (pens) participants could buy during the experiment. Wertebroch and Skiera (2002) find pens to be an appropriate product for the demographic group of college students.<sup>4</sup> The use of a fictitious firm enhances the internal validity of the experiment, avoids effects of prior learning (Boush and Loken 1991; Brown and Dacin 1997), and is consistent with current CSR consumer studies (e.g., Chernev and Blair 2015; Wagner et al. 2009). Students are a suitable sample for our research because of their adequate background for the experimental task (Khera and Benson 1970) and their maximal homogeneity which is preferable for theory-testing research (Calder et al. 1981).

To measure our independent variables, CTS and market economy, we applied a 4 x 2 between-subjects design (Figure 2). We made use of a non-avoidance condition (NON\_AVOID)

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<sup>4</sup> Another benefit of using pens is that they are a neutral product. Other fast-moving consumer goods that are relevant to a student sample such as coffee, chocolate, and other food products as well as paper are often associated with social (e.g., fair trade) or environmental (e.g., deforestation) issues that could impact the subjects' CSR perception outside of the CTS manipulation.

and two different avoidance conditions consisting of low (LOW\_AVOID) and high (HIGH\_AVOID) forms of tax avoidance. A fourth condition served as control condition (CONTROL). We tested these conditions in two market economies (COUNTRY), the United States (liberal) and Germany (coordinated).

[Insert Figure 2 about here]

Participants were recruited through introductory courses, either directly (United States), or from lists of volunteer student participants assembled for the purpose (Germany).<sup>5</sup> We offered different time slots and interested students then made appointments via e-mail. Participants received a \$10 (€10) cash payment<sup>6</sup> for their participation, which also served to cover potential pen purchase costs. Overall, 409 students participated in the study, including 207 students from a U.S. university and 202 students from a German university ( $M_{age}=22.66$ , 59.90% female). All U.S. students were undergraduate business students. Of the German participants, 73.76% were undergraduate students and 26.24% were graduate students. 63.35% of the German participants were in business-related programs at different levels, with the remainder enrolled in miscellaneous programs. Gender and age did not differ between the CTS conditions (all  $p$ -values  $> 0.1$ ). Whereas age was similar across both countries ( $M_{GER}=22.95$ ,  $M_{USA}=22.39$ ,  $p > 0.1$ ), the female participation rate was higher in Germany ( $M_{GER}=68.32\%$ ,  $M_{USA}=51.69\%$ ,  $p < 0.01$ ) consistent with the fact that more than 60% of all students at that university are female.<sup>7</sup>

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<sup>5</sup> U.S. participants were recruited from introductory financial and managerial accounting courses. German participants were recruited through a volunteer list assembled from introductory courses, participants from other experiments, or from a notice on the university's homepage seeking volunteers.

<sup>6</sup> U.S. participants received additional course credit for their participation. The German examination regulations did not allow us to offer course credit.

<sup>7</sup> In our later analysis, we control for demographic differences between the countries.

## 3.2 Stimuli

For the four experimental conditions, a newspaper article served as the test stimuli. Our study focuses on media reports on CTS because tax-related information is primarily published by investigative journalists (e.g., the Consortium of Investigative Journalists). Furthermore, the media are the most important information source regarding ethical issues for the public (Dyck et al. 2010; Miller 2006).

The fictitious article consisted of three parts with parts 1 and 2 being identical across the four experimental conditions. The article was characterized by neutral language. In particular, we avoided judgmental descriptions of CTS such as “aggressive tax avoidance”, “tax dodging”, or “responsible tax strategy”. Moreover, we refrained from illustrating societal consequences of tax avoidance or linking tax avoidance to CSR. Our objective was to establish a non-judgmental presentation of each CTS so as not to influence participant responses in terms of CSR.<sup>8</sup> Part 1 of the article outlined general information about the focal firm “Supplies, Inc.”, its industry, and headquarters location (Appendix A1.1). Part two informed participants about potential CTS that firms can use (Appendix A1.2). The purpose of this paragraph was to ensure that participants had an equal understanding of CTS. Specifically, the article defined tax avoidance as “activities designed solely to reduce taxes and they often lack any other economic purpose”. Furthermore, the general legality of tax avoidance was mentioned along with the possibility that the tax authorities may reject a tax avoidance strategy if the strategy is deemed not to have any economic purpose other than the reduction of taxes. Finally, the consequence of back taxes and penalties

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<sup>8</sup> Our use of the term tax avoidance mirrors its use in the popular press to describe activities that corporations use to lower their taxes, but that do not rise to the level of tax evasion. We use the term consistently in all four of our experimental conditions. Both the American and European press use the term as can be seen, for instance, in articles from the BBC and the NY Times (<https://www.bbc.com/news/magazine-20560359> and <https://www.nytimes.com/interactive/2017/11/10/opinion/gabriel-zucman-paradise-papers-tax-evasion.html>). To the extent that the term may carry negative connotations for consumers beyond the underlying tax-reducing activities, it may influence participant responses.

was mentioned. The CTS manipulation was implemented in the third part of the article, while maintaining the same format across conditions (Appendix A1.3). That is, participants received information about the CTS employed, the firm's ETR, and information on the firm's audited financial statement that confirmed its CTS. In the low avoidance condition, participants were informed that the firm engaged in tax avoidance, that its ETR was in the lowest third of rates for firms in this industry, and that its tax avoidance methods were acceptable to the tax authorities (i.e., no uncertain tax positions). Participants in the high avoidance condition received the same information, except that they learned that some tax positions taken by the firm might not be acceptable to the tax authorities (i.e., uncertain tax positions). In the non-avoidance condition participants received the information that the firm does not use tax avoidance and that its ETR equals the rate for firms that do not engage in tax avoidance. Finally, participants in the control group learned that the firm does not follow a particular CTS and that its ETR equals the average ETR in its industry.<sup>9</sup>

German participants received this information in the German language.<sup>10</sup> We only adjusted the firm's name to the German-speaking environment (Office AG) and indicated that the firm had a German headquarters.<sup>11</sup>

### **3.3 BDM**

We measure WTP, the key dependent variable, using the BDM incentive-compatible mechanism (Becker et al. 1964), which is designed to solicit truthful WTP. Miller et al. (2011)

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<sup>9</sup> According to Williams (2007), motives for engaging in CSR can be "good", i.e., altruistic or "selfish", i.e., carried out in expectations of benefits to the firm. Firms may even hold dual motives simultaneously (Lanis and Richardson 2015). For this study, we are interested in assessing CTS as a form of CSR from the consumers' perspective. No indication within the experimental materials indicates the firm's motivation.

<sup>10</sup> Two researchers independently translated the articles. Differences were discussed and agreed on by the two researchers.

<sup>11</sup> The term AG is the German abbreviation for incorporation. For both sets of subjects, the home country is used as the headquarters in order to avoid introducing potential confounds on a subject's perceptions related to foreign ownership and/or corporate inversions.

note its appropriate usage in consumer behavior experiments. The advantage of this method is that it reduces a social desirability bias found in studies that rely on stated intentions rather than actual purchases (Öberseder et al. 2011). The BDM mechanism works as follows. Participants submit their highest WTP for the chosen product, followed by a random draw from an unknown (to the participants) distribution that determines the buying price. If WTP is greater than the buying price, then the participant is obligated to purchase the product at the buying price. If the WTP is below the buying price, then the participant cannot buy the product. The BDM mechanism induces truthful WTPs because if participants understate their true WTP, then they may miss out on the opportunity to purchase the product. If they overstate their true WTP, then they may be obliged to purchase the product at a price higher than their true WTP. Consequently, participant's best strategy is to respond truthfully.

### **3.4 Procedure and Measures**

In the behavioral laboratory facility, we randomly assigned participants to one of the four experimental conditions (NON\_AVOID, LOW\_AVOID, HIGH\_AVOID, and CONTROL). Once seated, participants were presented with three pens, numbered 1 to 3, and a blank sheet of paper. We informed participants that they would receive \$10 (€10) for their participation and they had the option to buy pen 2, a new pen offered by the firm Supplies, Inc., at a yet to be determined price. The prices of pen 1 (\$0.50 or €0.50) and pen 3 (\$7.50 or €7.50) were provided as marketplace comparators and participants were invited to try out the three pens using the sheet of paper (Wertenbroch and Skiera 2002). After collecting pen 1 and pen 3, we informed participants that we have further information about Supplies, Inc., the provider of pen 2 and distributed the newspaper article (test stimuli). After reading through the article, we gave our participants the opportunity to buy pen 2. The BDM procedure was outlined verbally and with a simple, unrelated

example (Appendix 2).<sup>12</sup> Then, participants stated their WTP in the questionnaire<sup>13</sup> and had the opportunity to revise their initial offer.

After gathering the dependent measure WTP<sup>14</sup>, the participants evaluated the second dependent measure corporate reputation (REP) (Homer 1995) and the potential mediator CSR perception (CSR\_PERC) (Wagner et al. 2009). REP and CSR\_PERC were measured using seven-point multi-item Likert-type scales. We then asked several manipulation check questions regarding the content of the test stimuli and the BDM procedure as well as for the attractiveness (ATTRACT) of the pen (Wertebroch and Skiera 2002). At the end of the questionnaire, we assessed demographic information. After completing the experiment, one student drew a price out of a box (a random draw from an unknown distribution) to determine the buying price for the pen. Cash payments and real purchases for cash were then made, depending on the buying price and the WTP stated. Appendix A3 summarizes our measures.

### **3.5 Methodological Approach: PLS-SEM**

In contrast to traditional regression that requires separate equations to examine each hypothesized relationship, structural equation modelling (SEM) enables researchers to analyze a system of equations simultaneously (Lee et al. 2011). SEM thus allows us to comprehensively test the hypotheses related to our research model and it has the ability to analyze mediating variables as part of a comprehensive model (MacKinnon 2008). Moreover, SEM can handle both directly measured variables and latent variables.

We apply partial least squares SEM (PLS-SEM), which maximizes the explained variance of the endogenous latent variables by estimating partial model relationships in an iterative

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<sup>12</sup> Pilot testing indicated that using an unrelated example deepened the subject's understanding of the BDM mechanism.

<sup>13</sup> Due to the different laboratory facilities available, we used paper questionnaires in the United States and computerized questionnaires in Germany. All procedural steps were identical.

<sup>14</sup> To correct for exchange rate differentials and unequal variance, we divide WTP by the control condition's mean WTP for both countries, separately.

sequence of OLS regressions (Hair et al. 2012). PLS-SEM has several advantages over covariance-based SEM for our study (e.g., Hair et al. 2012; Lee et al. 2011). PLS-SEM is appropriate for exploratory research and theory development in research contexts with less developed theory. Given conflicting theories on public perceptions of CTS (Davis et al. 2016) and only a few empirical studies on consumer reactions to this issue (e.g., Gallemore et al. 2014; Hardeck and Hertl 2014), this method is an appropriate choice. Moreover, PLS-SEM is less sensitive to sample size and non-normal data. Our sample size meets the popular rule of thumb that the minimum sample size should be ten times the maximum number of paths aiming at any construct (Barclay et al. 1995). Finally, PLS-SEM copes with exogenous categorical variables such as the CTS variables. One major advantage of PLS-SEM is its capacity to evaluate formative constructs. Our model, however, is fully reflective, that is, indicators are supposed to reflect the variation in the underlying construct. A consistent PLS algorithm is able to account for correlation among reflective factors (Dijkstra and Henseler 2015).

## **4 Results**

### **4.1 Manipulation and Data Checks**

From 462 initial participants, we excluded two observations with a WTP above the cash payment of \$10 (€10). We chose trimming over winsorizing because a WTP above the cash payment suggests a misunderstanding of the procedure. Furthermore, 36 observations were

deemed unusable because of missing values and failed manipulation checks<sup>15</sup>. Finally, we deleted 15 observations in the U.S. conditions to approximately equalize the cells.<sup>16</sup>

[Insert Table 1 about here]

Manipulation check questions revealed a solid understanding of the BDM method in our final sample. Using seven-point Likert-type scales, which ranged from 1 (“not at all”) to 7 (“very much so”), the average response to the question “Has this procedure been confusing for you?” was 2.643 ( $SD=1.550$ ). The average response to the question “Is it clear why it is in your best interest to state exactly the price you are willing to pay?” was 5.535 ( $SD=1.543$ ). There are no significant differences between the four CTS conditions ( $p > 0.1$ ).

Furthermore, we employed two tax manipulation check items using seven-point Likert-type scales, which ranged from 1 (“disagree completely”) to 7 (“agree completely”). We stated that Supplies, Inc. pursues activities solely to reduce taxes (MC\_TAX1) and that Supplies, Inc. uses tax avoidance strategies that could be rejected by tax authorities (MC\_TAX2). As a third manipulation check (MC\_TAX3), we asked how Supplies, Inc.’s ETR compares to other firms in its industry using a seven-point Likert-type scale, which ranged from 1 (“lower”) to 7 (“higher”). Since we varied (1) the level of avoidance, (2) the ETR, and (3) the acceptability of the CTS to the tax authorities across the four conditions, three manipulation checks were necessary. The aim was to ensure the participants were attentive to the type of CTS present in their scenario and thus guarantee the internal validity of our experimental design. Table 1 shows that participants perceived all test stimuli as intended. Since the only difference between LOW\_AVOID and

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<sup>15</sup> Specifically, we excluded all observations that showed a serious misunderstanding of the tax manipulation check questions. A misunderstanding was assumed if participants chose the opposite side of the correct answer on the Likert scales or if the participant chose the second most opposite answer on two check measures. We also deleted observations that simultaneously found the BDM procedure confusing and did not understand why it is in their best interest to state exactly the price they are willing to pay.

<sup>16</sup> Specifically, we eliminated the first observations collected for the respective conditions. As a robustness test, we estimated our model with the sample before that exclusion of 15 observations ( $n = 424$ ) and find similar results (Appendix A4).

HIGH\_AVOID was the acceptability of the CTS to the tax authorities, planned contrasts reveal significant differences between the two conditions only for MC\_TAX2 (Panel B), whereas MC\_TAX1 and MC\_TAX3 were not significantly different. Finally, we find an acceptable average attractiveness of the pen ( $M=3.985$ ,  $SD=1.502$ ) with no significant differences between the four conditions ( $p > 0.1$ ).

## 4.2 Descriptive Evidence and Univariate Statistics

Figure 3 graphically illustrates the means and Table 2 (Panels A – C) presents descriptive statistics of all endogenous constructs over the four CTS and the two countries. Regarding WTP, we do not detect a consistent trend. In the U.S. sample, WTP is fairly similar across the conditions with a small peak in the low avoidance condition. In the German sample, WTP increases in the non-avoidance condition and decreases in the two avoidance conditions. Analyses of variance (ANOVA) confirm nonsignificant differences between the groups for U.S. ( $F(3, 203) = 0.38$ ,  $p > 0.1$ ) and German participants ( $F(3, 198) = 1.86$ ,  $p > 0.1$ ).

[Insert Table 2 about here]

[Insert Figure 3 about here]

By contrast, distributions of REP and CSR\_PERC are consistent across the two samples. Both variables are higher in the non-avoidance condition compared to the control condition, whereas the two variables are lower in the two avoidance conditions. Whereas mean differences are very small for REP (USA:  $F(3, 203) = 8.43$ ,  $p < 0.01$ ; GER:  $F(3, 198) = 15.95$ ,  $p < 0.01$ ), CSR\_PERC differs more strongly among the CTS (USA:  $F(3, 203) = 14.96$ ,  $p < 0.01$ ; GER:  $F(3, 198) = 28.39$ ,  $p < 0.01$ ).

Next, we calculate planned contrasts for REP and CSR\_PERC that both have significant  $F$ -tests (Panel D and Panel E of Table 2). We find comparable results for REP for both countries. Turning to CSR\_PERC, U.S. consumers do not seem to distinguish between tax avoidance that is

accepted or potentially rejected by tax authorities. Among German consumers, mean CSR\_PERC is lower in the high avoidance condition than in the low avoidance condition. Pairwise comparisons between LOW\_AVOID and HIGH\_AVOID show that this difference is only significant among German consumers (USA:  $t(102) = -0.551, p > 0.1$ ; GER:  $t(99) = 2.155, p < 0.05$ ). All further CSR\_PERC pairwise comparisons between the four conditions are significant for both U.S. and German consumers. Apparently, the crucial difference between the countries is that tax avoidance that can be rejected by tax authorities is perceived as less socially responsible in Germany than in the United States.

### **4.3 Construct Reliability and Validity**

We follow guidance in Hair et al. (2012) to evaluate the reliability and validity of the reflective outer model, that is, the relationship between the latent variables and their indicators. Looking at indicator reliability, Panel A of Table 3 shows that all indicator loadings are highly significant and exceed the level of 0.700 as recommended by Hulland (1999). Bagozzi and Yi (1988) deem a composite reliability of at least 0.700 as acceptable, and in this study, values range between 0.901 and 0.936. Turning to convergent validity, the average variance extracted (AVE) is higher than 0.500 and thus is also in line with Bagozzi and Yi (1988). Discriminant validity can be assessed via the Fornell-Larcker criterion (Fornell and Larcker 1981) and cross loadings. Panel B of Table 3 shows that each construct's AVE is higher than the squared correlation with the other construct. This indicates an acceptable discriminant validity. In addition, cross loadings (Panel C) confirm that each indicator loads highest on the intended construct measure (Chin 1998).

[Insert Table 3 about here]

## 4.4 Hypotheses Testing

We estimate the structural model and the significance of the paths using Smart PLS 3.2.7<sup>17</sup> with consistent bootstrapping as a resampling technique with 5,000 random samples (Hair et al. 2011). Smart PLS is one of two versions of PLS software commonly used in academia (Lee et al. 2011). Figure 4 and Table 4 present the PLS analysis results. Following recommendations in Hair et al. (2012), we use path coefficients, effect sizes,  $R^2$ , and the predictive relevance  $Q^2$  to evaluate the inner or structural model. Path coefficients and  $p$ -values based on two-tailed tests are reported in parentheses. In the case of mediations, we report specific indirect effects instead of path coefficients.

[Insert Table 4 about here]

[Insert Figure 4 about here]

### 4.4.1 Effects of CTS on CSR perceptions

Initially, we evaluate the effect of CTS on the mediating construct CSR perceptions. In line with Hypothesis 1, our results indicate that non-avoidance enhances CSR perceptions (0.282,  $p < 0.01$ ), whereas low ( $-0.209$ ,  $p < 0.01$ ) and high tax avoidance lower this construct ( $-0.265$ ,  $p < 0.01$ ). As expected, the path coefficients for the tax avoidance conditions are negative, relative to the control condition. Further, the path coefficient is more negative for high tax avoidance compared to low tax avoidance. All three path coefficients are highly significant. With  $f^2$  ranging between 0.042 and 0.075, effect sizes exceed the necessary threshold of 0.020 for a weak effect (Cohen 1988). Explained variance ( $R^2 = 0.307$ ) and predictive relevance for the

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<sup>17</sup> Ringle, C. M., Wende, S., and Becker, J.-M. 2015. "SmartPLS 3." Boenningstedt: SmartPLS GmbH, <http://www.smartpls.com>.

model ( $Q^2 = 0.212$ ) are both appropriate. We conclude that CTS clearly affect CSR perceptions among consumers.

#### 4.4.2 *Moderating effect of market economy on CSR perceptions*

Next, we examine the moderating effect of market economy on the effect of CTS on CSR perceptions (Hypothesis 2). The results shown in Table 3 and Figure 4 partially support the predicted relationship. Though non-avoidance and low tax avoidance evoke similar CSR perceptions among U.S. and German consumers, high tax avoidance, that is, a CTS that could be rejected by tax authorities, leads to a lower level of CSR perceptions among German consumers ( $-0.106, p < 0.1$ ). The small effect size ( $f^2 = 0.011$ ) needs to be assessed in the context of common effect sizes of moderation effects. Aguinis et al. (2005) conducted a meta study on moderation effects over 30 years and found that the median effect size in tests of moderation for categorical variables is only 0.002. Therefore, Kenny (2015) suggests that a more realistic but still optimistic standard for effect sizes for moderators might be 0.005, 0.010, and 0.025 for small, medium, and large effects, respectively. This would imply a medium effect for our moderating variable. Whereas U.S. consumers appear unaffected by whether or not a tax avoidance strategy is acceptable to tax authorities, German consumers tend to attach importance to acceptance by the tax authorities. Our findings are consistent with institutional differences and related differing views of the firm as outlined by Avi-Yonah (2014).

We conducted two robustness checks to account for demographic differences. Given a significantly higher female participation in Germany, we included gender as an additional moderator to rule out the possibility that differences between the United States and Germany were due to latent gender differences. We find that being a coordinated economy still moderates the effect of high tax avoidance on CSR perceptions, whereas the moderating effect of gender is

nonsignificant. To account for differences in educational background between the countries, we controlled for being enrolled in a non-business program and being a graduate student. We included a dummy variable, coded 1 if the participants studied a business-related (graduate) program and 0 otherwise in these checks. In both robustness tests, the moderating effect of being a coordinated economy continues to hold.

#### 4.4.3 *Effects of CTS on WTP and reputation*

Finally, we assess both indirect and direct effects of CTS on WTP and reputation. Starting with the mediating effect on WTP, we find that non-avoidance increases WTP compared to the control group (0.039,  $p < 0.05$ ) through CSR perceptions, whereas low tax avoidance ( $-0.029$ ,  $p < 0.1$ ) and high tax avoidance ( $-0.036$ ,  $p < 0.05$ ) decrease WTP (Hypothesis 3a) through CSR perceptions.<sup>18</sup> Although the effect of CTS on WTP is significant, criteria for inner model evaluations show that the effect is of limited economic relevance. Effect sizes are only available for single paths. However, looking at the effect of CSR perceptions on WTP only, we find a  $f^2$  of 0.015, which falls slightly short of the necessary threshold of 0.02 for a weak effect (Cohen 1988). Moreover, none of the CTS tested has a direct significant impact on WTP compared to the control condition (all  $p$ -values  $> 0.1$ ) (Hypothesis 4a). Taken together, only about 2% of the variance of WTP can be explained by the CTS ( $R^2 = 0.019$ ) and WTP's predictive relevance for the model ( $Q^2$ ) is 0.003, only slightly higher than 0 (Stone 1974; Geisser 1974). Thus, consumers only marginally react to tax avoidance through a lower WTP and barely pay a premium for firms that do not engage in tax avoidance.<sup>19</sup>

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<sup>18</sup> The mediating effect holds when we include the exogenous variable attractiveness of the pen (attractiveness  $\rightarrow$  WTP) to control for potential differences in perceived attractiveness.

<sup>19</sup> Five out of 409 participants recorded a WTP of zero, which could be interpreted as a zero interest to buy the product. To ensure a lack of product interest by some participants does not bias our results, we estimate our model with only those observations that have a positive WTP and find similar results.

The picture changes when assessing the impact of CTS on reputation. Results support the predicted mediating effect of CSR perceptions on reputation (Hypothesis 3b). Non-avoidance enhances reputation via CSR perceptions (0.191,  $p < 0.01$ ), whereas low tax avoidance (−0.141,  $p < 0.01$ ) and high tax avoidance (−0.179,  $p < 0.01$ ) lower reputation via the mediator. The effect size for the path CSR perceptions on reputation is  $f^2 = 0.692$ , which means a strong effect. Our Hypothesis 4b, which predicts that CTS directly affect reputation, can be partially supported. We do not find a direct effect of non-avoidance on reputation ( $p > 0.1$ ). Both low tax avoidance (−0.087,  $p < 0.1$ ) and high tax avoidance (−0.090,  $p < 0.1$ ) do decrease reputation compared to the control group. Again, however, direct effects are not very meaningful with  $f^2$ s ranging between 0.002 and 0.010. Taking indirect and direct effects of CTS on reputation together, the construct's explained variance ( $R^2 = 0.503$ ) and its predictive relevance for the model ( $Q^2 = 0.339$ ) are both very high. Thus, reputation is strongly affected by CTS, primarily driven by the mediator CSR perceptions.

## **5 Conclusion**

### **5.1 Summary**

Our study uses an experimental setting to examine the impact of CTS on CSR perceptions, WTP and corporate reputation in the United States and Germany. These two countries are representative of liberal and coordinated market economies. Our experimental design includes improved method choices in the form of non-judgmental descriptions of CTS and an incentive-compatible WTP measurement that has real economic consequences for participants. These improved methods allow us to gain a deeper understanding of consumer responses to CTS. We find that CSR perceptions are highly relevant when it comes to consumer reactions to tax avoidance. Overall, consumers respond positively to non-tax avoidance strategies, and negatively

to tax avoidance strategies, relative to our control group. This finding is consistent with prior research (e.g., Hardeck and Hertl 2014) even in the context of our enhanced method choices. We find an important difference between our country samples. In contrast to U.S. consumers, German consumers' perceptions of CSR are impacted by whether a tax avoidance position is likely to be accepted by tax authorities. Our results also indicate a minor indirect effect of CTS on WTP and a strong indirect effect on reputation, both by way of CSR perceptions. By contrast, direct effects of CTS on WTP and reputation are marginal or non-existent.

## **5.2 Implications and Directions for Future Research**

The debate over the relationship between CTS and CSR is multifaceted (Davis et al. 2016). Our results show clearly that from a consumer perspective CTS is perceived as a form of CSR. Our findings reinforce prior experimental research (Hardeck and Hertl 2014) and confirm assumptions in empirical research (Hanlon and Slemrod 2009) and the survey work of Graham et al. (2014) where executives have expressed reputational concerns for their CTS. Further, as discussed by Hillenbrand et al. (2017) there is a gap in understanding between corporations and other stakeholders concerning expectations for CSR. Our study suggests that CTS and CSR are complements rather than substitutes (Davis et al. 2016), which supports the proposition that consumers have a different narrative than business groups. This study also supports archival research (Gallemore et al. 2014) that was unable to find effects on firms' sales after tax shelter revelations.

We show a distinct difference in consumer CSR perceptions from higher levels of tax avoidance between the US and Germany. This supports Avi-Yonah (2014) who argues that different market economies (Hall and Soskice 2001) induce differences in how firms are viewed in society.

From a managerial point of view, we show that consumers react to CTS. It is worth noting that we captured two types of consumer response: WTP that carries explicit economic consequences for participants and CSR and reputation perceptions that do not carry those consequences. Mediation effects of CTS on WTP and reputation were substantially different in terms of effect size. Weaker effects of CTS on WTP are not surprising given prior empirical findings in CSR research (e.g., Bhattacharya and Sen 2004; Green and Peloza 2011). The direct economic consequences, positive or negative, to firms of implementing CTS appear minor, at least in the short term given our finding that WTP is only marginally impacted by the use of CTS. However, CTS strongly affect corporate reputation, which may have longer-run implications for firm performance (Chernev and Blair 2015). Given the direction of the response, management should be aware and cautious about the potential costs of negative consumer reaction to CTS (Graham et al. 2014). In our experimental setting, we cannot determine how reputation affects WTP over time; however, this could be a promising avenue for future research.

Vitell (2015) suggests consumers are likely more responsive to CSR if the consumer is predisposed to the particular CSR activity. Our study does not manipulate the use that firms make of tax savings from their CTS. An avenue for future research would be to manipulate the use of CTS savings (for example, for product innovations, employment growth, price reductions passed onto consumers, cost savings passed onto shareholders) and gauge consumer reactions to the specified use. In addition, motives for engaging in CSR can be “good”, (i.e., altruistic) or “selfish” according to Williams (2007). For this study, we are interested in CTS as a form of CSR from the consumers’ perspective, regardless of the firms’ motivation for pursuing the strategy. Motivations for CSR can vary by firm – both self-interested and genuine societal good (Lanis and Richardson 2015). A further avenue for future research would be to manipulate the underlying motivation by firms.

We show that German participants were less tolerant of CTS that ‘push the envelope of tax law’ (Hanlon and Heitzman 2010) than their U.S. counterparts. The implication for management from this finding is that decisions by firms regarding use of CTS need to be tempered based on the respective market economy and related view of the firm.

From a public policy point of view, our findings suggest that consumer behaviors are linked to the tax strategies employed by firms. Consumer awareness of CTS and thus salience of CTS is obviously a precondition for any consumer response to CTS (Servaes and Tamayo 2013). If society is interested in limiting corporate tax avoidance, then policies to ensure more transparent disclosure of CTS could generate consumer pressure on firms to align their tax strategy with societal expectations.

### **5.3 Limitations**

Our research is subject to the common limitations of laboratory experiments. We cannot rule out that consumer reactions differ among other demographic groups and countries, for different product categories, or over a longer timeframe. Future research might determine whether our results hold among more diverse groups of consumers in terms of age, country of origin, educational background, and available income. Specifically, we use a student sample that may limit our ability to generalize results to the larger population of consumers. Students are certainly consumers, but they may have less experience as taxpayers than the average citizen. Further, our student sample was drawn largely from business majors. Business students may feel stronger alignment with corporate profit maximizing goals than students in general. However, we place our participant-students in a setting where they make a personal consumer decision that directly affects their economic situation. It is unclear how much their experience as business majors might affect their personal consumer decisions. We note that this effect, to the extent it

applies, would bias against finding results. In addition, our product is a relatively low-cost product for which many competing products exist. Reactions may differ for products at different price levels and for which fewer alternative products are available. Finally, we recognize that firms can engage in multiple CSR activities simultaneously and that the mix of CSR activities varies by firm (Reimer et al. 2018). Interactions and trade-offs (Godfrey et al. 2009) among different CSR activities could occur in more complex settings that combine CTS with other CSR activities.

Consumers are vital stakeholders for the long-term sustainability of organizations. Our study establishes legitimate links between CTS, CSR perceptions, WTP and reputation, and forms a base to inspire future research in this area. We anticipate a growing momentum of studies at the intersection of CTS, CSR and consumer behavior.

**Ethical approval:** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

**Informed consent:** Informed consent was obtained from all individual participants included in the study.

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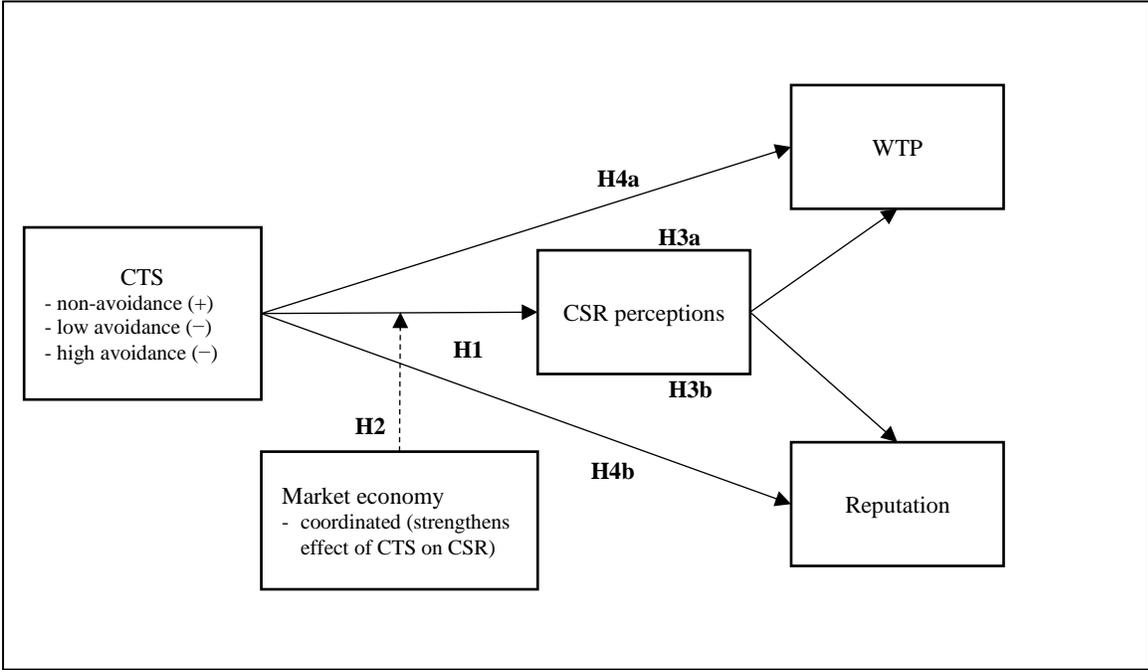
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**Figure 1: Hypotheses**

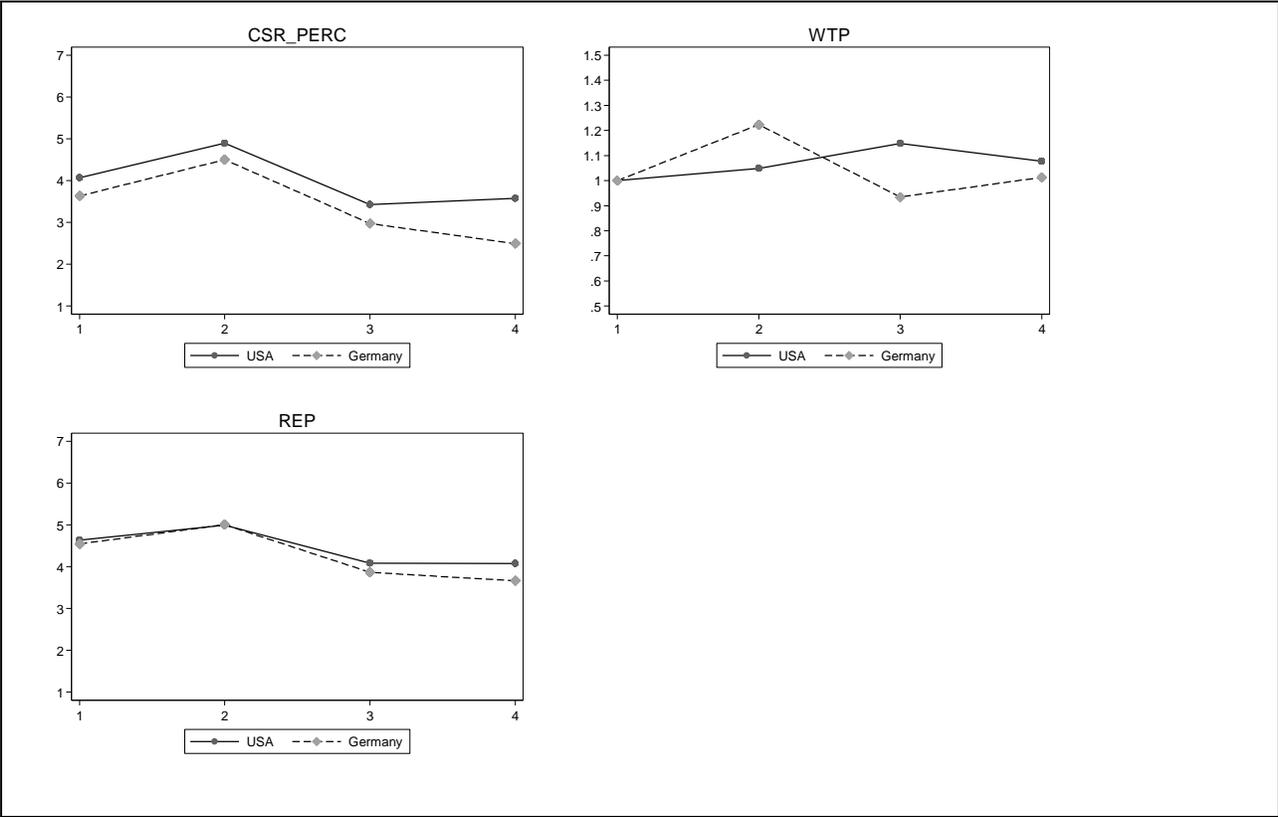


Notes: Expected directions of effects in parentheses. The reference group for the effects of CTS is a control group with a firm that does not follow a specific tax strategy. The reference group for the coordinated market economy (Germany) is a liberal market economy (United States).

**Figure 2: 4 x 2 Between-subjects design**

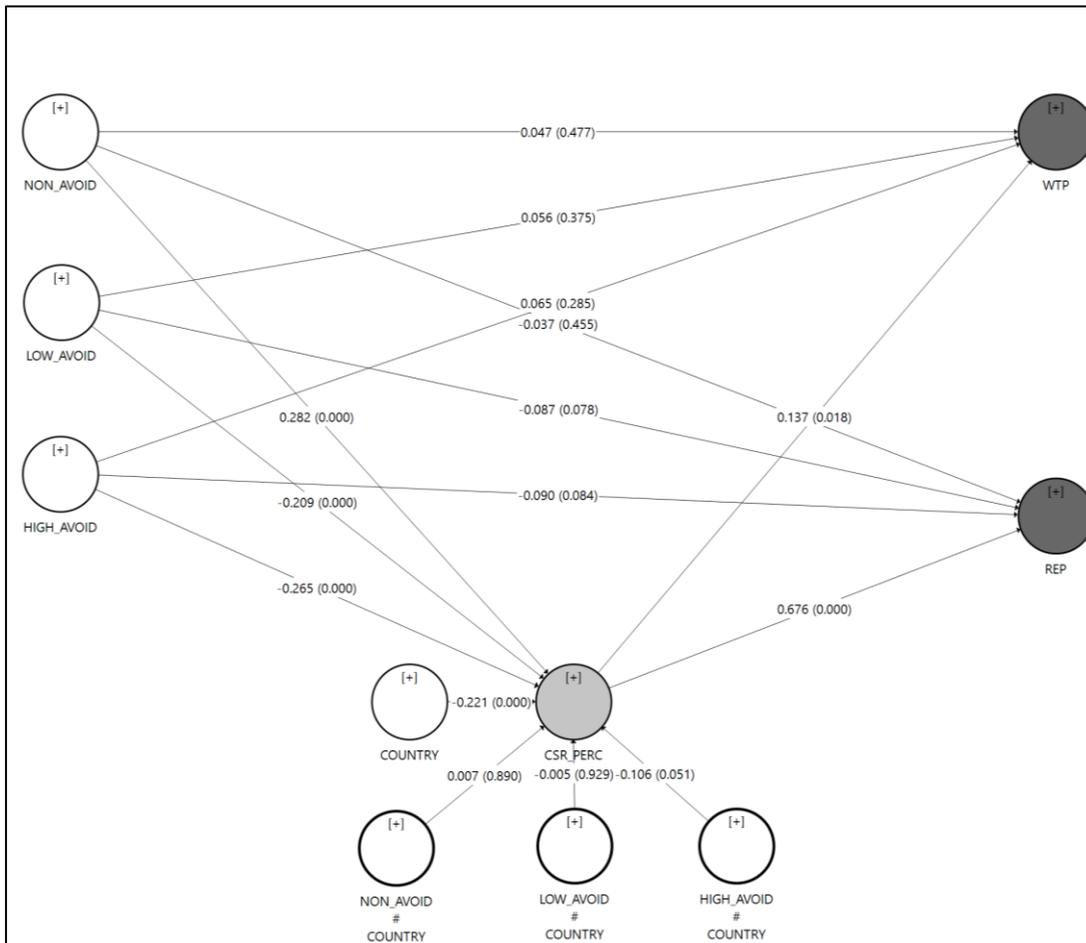
<b>CONTROL</b> <b>United States</b> n=51	<b>NON_AVOID</b> <b>United States</b> n=52	<b>LOW_AVOID</b> <b>United States</b> n=52	<b>HIGH_AVOID</b> <b>United States</b> n=52
<b>CONTROL</b> <b>Germany</b> n=49	<b>NON_AVOID</b> <b>Germany</b> n=52	<b>LOW_AVOID</b> <b>Germany</b> n=50	<b>HIGH_AVOID</b> <b>Germany</b> n=51

**Figure 3: Endogenous constructs over CTS and COUNTRY**



Notes: The figures plot the mean values for the endogenous constructs CSR\_PERC, WTP, and REP for U.S. (USA) and German (Germany) consumers. The y-axis denotes the endogenous constructs. The x-axis denotes the CTS with 1 being CONTROL, 2 being NON\_AVOID, 3 being LOW\_AVOID, and 4 being HIGH\_AVOID.

**Figure 4: Hypotheses testing**



Notes: This figure shows path coefficients and *p*-values for the inner model. We applied consistent bootstrapping with 5,000 replications. Significance levels are based on two-tailed *t*-tests. \*, \*\*, \*\*\* indicate statistical significance at the 0.1, 0.05, and 0.01 levels, respectively. The control condition (CONTROL) serves as reference group for the low tax avoidance (LOW\_AVOID), the high tax avoidance (HIGH\_AVOID) as well as the non-avoidance (NON\_AVOID) condition. COUNTRY is coded 0 for the United States and 1 for Germany.

**Table 1: Tax manipulation checks**

Panel A: Means, standard deviations, and F-values										
Variable	(1) CONTROL		(2) NON_AVOID		(3) LOW_AVOID		(4) HIGH_AVOID		F	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
MC_TAX1	3.410	1.621	2.250	1.385	4.598	1.562	4.767	1.457	62.387***	
MC_TAX2	3.680	1.517	2.048	1.389	4.127	1.384	5.427	1.531	94.945***	
MC_TAX3	4.050	0.657	5.298	1.427	2.676	1.415	2.427	1.453	110.552***	

Panel B: Planned contrasts									
	MC_TAX1			MC_TAX2			MC_TAX3		
	Contrast	Std. error	t	Contrast	Std. error	t	Contrast	Std. error	t
(2) vs. (1)	-1.160	0.211	-5.490***	-1.632	0.204	-8.000***	1.248	0.180	6.930***
(3) vs. (1)	1.188	0.212	5.600***	0.447	0.205	2.180**	-1.374	0.181	-7.590***
(4) vs. (1)	1.357	0.212	6.410***	1.747	0.204	8.550***	-1.623	0.181	-8.990***
(3) vs. (2)	2.348	0.210	11.180***	2.079	0.203	10.250***	-2.622	0.179	-14.630***
(4) vs. (2)	2.517	0.210	12.010***	3.379	0.202	16.690***	-2.871	0.179	-16.060***
(4) vs. (3)	0.169	0.211	0.800	1.300	0.203	6.390***	-0.249	0.180	-1.390

**Table 2: Descriptive statistics**

Panel A: Whole sample																
	(1) CONTROL				(2) NON_AVOID				(3) LOW_AVOID				(4) HIGH_AVOID			
	<i>n</i>	<i>M</i>	<i>P50</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>P50</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>P50</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>P50</i>	<i>SD</i>
CSR_PERC <sup>A</sup>	100	3.853	4.000	1.147	104	4.699	4.667	1.181	102	3.206	3.000	1.245	103	3.039	2.667	1.382
WTP	100	1.000	0.840	0.699	104	1.136	1.064	0.749	102	1.044	0.889	0.696	103	1.046	0.978	0.612
REP <sup>A</sup>	100	4.593	4.500	1.042	104	5.000	5.000	1.104	102	3.978	4.000	1.119	103	3.869	4.000	1.184

Panel B: U.S. sample																
	(1) CONTROL				(2) NON_AVOID				(3) LOW_AVOID				(4) HIGH_AVOID			
	<i>n</i>	<i>M</i>	<i>P50</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>P50</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>P50</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>P50</i>	<i>SD</i>
CSR_PERC <sup>A</sup>	51	4.065	4.000	0.957	52	4.897	5.000	1.198	52	3.429	3.667	1.241	52	3.577	3.500	1.479
WTP	51	1.000	0.712	0.742	52	1.049	0.889	0.749	52	1.148	1.041	0.764	52	1.078	1.021	0.621
REP <sup>A</sup>	51	4.637	4.500	0.862	52	4.995	5.000	1.201	52	4.087	4.000	1.073	52	4.072	4.000	1.281

Panel C: German sample																
	(1) CONTROL				(2) NON_AVOID				(3) LOW_AVOID				(4) HIGH_AVOID			
	<i>n</i>	<i>M</i>	<i>P50</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>P50</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>P50</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>P50</i>	<i>SD</i>
CSR_PERC <sup>A</sup>	49	3.633	4.000	1.290	52	4.500	4.667	1.140	50	2.973	2.667	1.219	51	2.490	2.333	1.027
WTP	49	1.000	0.840	0.658	52	1.223	1.106	0.747	50	0.935	0.753	0.606	51	1.013	0.840	0.608
REP <sup>A</sup>	49	4.546	4.500	1.208	52	5.005	5.125	1.009	50	3.865	4.000	1.165	51	3.662	4.000	1.050

Panel D: Planned contrasts for CSR_PERC and REP for the U.S. sample						
	CSR_PERC			REP		
	Contrast	Std. error	<i>t</i>	Contrast	Std. error	<i>t</i>
(2) vs. (1)	0.832	0.243	3.420***	0.358	0.220	1.630
(3) vs. (1)	-0.636	0.243	-2.610**	-0.551	0.220	-2.500**
(4) vs. (1)	-0.488	0.243	-2.010**	-0.565	0.220	-2.570**
(3) vs. (2)	-1.468	0.242	-6.070***	-0.909	0.219	-4.150***
(4) vs. (2)	-1.321	0.242	-5.460***	-0.923	0.219	-4.220***
(4) vs. (3)	0.147	0.242	0.610	-0.014	0.219	-0.070

Panel E: Planned contrasts for CSR_PERC and REP for the German sample						
	CSR_PERC			REP		
	Contrast	Std. error	<i>t</i>	Contrast	Std. error	<i>t</i>
(2) vs. (1)	0.867	0.233	3.720***	0.459	0.221	2.080**
(3) vs. (1)	-0.659	0.236	-2.800***	-0.681	0.223	-3.050***
(4) vs. (1)	-1.142	0.234	-4.870***	-0.884	0.222	-3.980***
(3) vs. (2)	-1.527	0.232	-6.580***	-1.140	0.220	-5.190***
(4) vs. (2)	-2.010	0.231	-8.700***	-1.343	0.219	-6.140***
(4) vs. (3)	-0.483	0.233	-2.070**	-0.203	0.221	-0.920

Notes: Variables with significant *F*-tests are marked with an A ( $p < 0.1$ ). Planned contrasts are only reported at country-level for variables with significant *F*-tests. The planned contrast between (2) and (1) for REP in the US sample is marginally significant ( $p = 0.105$ ).

**Table 3: Assessment of reflective outer models**

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Panel A: Item loadings, composite reliability, AVE statistics

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CSR\_PERC (Composite reliability 0.901, AVE 0.754)

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	<u>Loading</u>	<u>SD</u>	<u>t-statistics</u>
CSR_PERC1	0.913	0.022	40.620***
CSR_PERC2	0.760	0.032	23.558***
CSR_PERC3	0.923	0.021	43.732***

---

REP (Composite reliability 0.936, AVE 0.785)

---

	<u>Loading</u>	<u>SD</u>	<u>t-statistics</u>
REP1	0.843	0.034	24.466***
REP2	0.889	0.022	39.761***
REP3	0.856	0.028	30.495***
REP4	0.953	0.022	42.651***

---

Panel B: Inter-construct correlations (Fornell and Larcker 1981)

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	CSR_PERC	REP
CSR_PERC	0.869	
REP	0.704	0.886

---

Panel C: Cross-loadings

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	CSR_PERC	REP
CSR_PERC1	0.913	0.651
CSR_PERC2	0.760	0.548
CSR_PERC3	0.923	0.632
REP1	0.598	0.843
REP2	0.628	0.889
REP3	0.598	0.856
REP4	0.670	0.953

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**Table 4: Results**

Hypothesis and path	Path coefficient/ specific indirect effect	<i>t</i> -statistics
<b>H1</b>		
NON_AVOID → CSR_PERC	0.282	5.503***
LOW_AVOID → CSR_PERC	-0.209	3.913***
HIGH_AVOID → CSR_PERC	-0.265	4.902***
<b>H2</b>		
NON_AVOID # COUNTRY → CSR_PERC	0.007	0.137
LOW_AVOID # COUNTRY → CSR_PERC	-0.005	0.088
HIGH_AVOID # COUNTRY → CSR_PERC	-0.106	1.915*
<b>H3a</b>		
NON_AVOID → CSR_PERC → WTP	0.039	2.177**
LOW_AVOID → CSR_PERC → WTP	-0.029	1.947*
HIGH_AVOID → CSR_PERC → WTP	-0.036	2.066**
<b>H3b</b>		
NON_AVOID → CSR_PERC → REP	0.191	5.054***
LOW_AVOID → CSR_PERC → REP	-0.141	3.851***
HIGH_AVOID → CSR_PERC → REP	-0.179	4.639***
<b>H4a</b>		
NON_AVOID → WTP	0.047	0.718
LOW_AVOID → WTP	0.056	0.894
HIGH_AVOID → WTP	0.065	1.082
<b>H4b</b>		
NON_AVOID → REP	-0.037	0.755
LOW_AVOID → REP	-0.087	1.729*
HIGH_AVOID → REP	-0.090	1.746*

Notes: In the case of mediations, we report specific indirect effects instead of path coefficients. *T*-values are calculated based on consistent bootstrapping with 5,000 replications. We employed two-tailed *t*-tests. \*, \*\*, \*\*\* indicate statistical significance at the 0.1, 0.05, and 0.01 levels, respectively. The control condition (CONTROL) serves as reference group for the low tax avoidance (LOW\_AVOID), the high tax avoidance (HIGH\_AVOID) as well as the non-avoidance (NON\_AVOID) condition. COUNTRY is coded 0 for the United States and 1 for Germany.

## Appendix A1: Stimuli

### A1.1: General company information

Supplies, Inc., is one of the industry's leading providers of office and school supplies. The US<sup>20</sup>-headquartered company designs, manufactures and distributes multiple lines of writing instruments, binders, notebooks, calendars, desktop containers and countless other school and office products.

### A1.2: Information about tax strategies

Some companies use tax avoidance strategies to lower their tax payments. Tax avoidance strategies are activities designed solely to reduce taxes and they often lack any other economic purpose. Although these strategies are designed to be strictly legal, they may contradict the intent of the law. For example, one strategy would be to shift profits from one corporation to a related business unit that is taxed at a lower rate, which reduces total tax payments of the group.

While some forms of tax avoidance are acceptable to tax authorities, uncertainty surrounds the use of other forms of tax avoidance. In some cases, tax authorities can reject tax avoidance strategies that they deem to be 'abusive' strategies. For example, tax authorities may reject a tax avoidance strategy if the strategy is deemed not to have any economic purpose other than the reduction of taxes and the reduction of taxes was unintended by the law. If the tax authorities reject a tax avoidance strategy, then any avoided taxes and potential penalties will be imposed on the taxpayer.

### A1.3: Company specific information about tax strategies

CONTROL	NON_AVOID	LOW_AVOID	HIGH_AVOID
Supplies, Inc., claims all the usual deductions for a firm in its industry, beyond that, it does not follow a specific tax strategy.	Supplies, Inc., claims all the usual deductions for a firm in its industry, but it does not use tax avoidance strategies to further lower its tax payments.	Supplies, Inc., claims all the usual deductions for a firm in its industry, and, in addition, it also uses tax avoidance strategies to further lower its tax payments.	Supplies, Inc., claims all the usual deductions for a firm in its industry, and, in addition, it also uses tax avoidance strategies to further lower its tax payments.
Supplies, Inc., pays taxes at the median effective tax rate for firms in this industry. This means that about 50% of the firms in the industry pay more and 50% pay less taxes than Supplies, Inc. The effective tax rate is taxes paid as a percentage of total income.	Supplies, Inc., pays taxes at the average effective tax rate for firms in this industry that do not engage in tax avoidance strategies. This means Supplies, Inc., pays higher taxes than other firms in the industry that do engage in tax avoidance strategies. The effective tax rate is taxes paid as a percentage of total income.	Supplies, Inc., pays taxes at an effective tax rate that is in the lowest third of rates for firms in this industry. This means Supplies, Inc., pays lower taxes than other firms in the industry that do not engage in tax avoidance strategies. The effective tax rate is taxes paid as a percentage of total income.	Supplies, Inc., pays taxes at an effective tax rate that is in the lowest third of rates for firms in this industry. This means Supplies, Inc., pays lower taxes than other firms in the industry that do not engage in tax avoidance strategies. The effective tax rate is taxes paid as a percentage of total income.
Supplies, Inc., provides no additional description of its tax strategies in its audited financial statements.	Supplies, Inc., states in its audited financial statements that it does not use any tax avoidance strategies.	Supplies, Inc., gives assurance in its audited financial statements that all tax avoidance strategies it uses are acceptable to the tax authorities. Therefore, Supplies, Inc., is certain that its tax avoidance strategies will be allowed.	Supplies, Inc., cautions in its audited financial statements that some tax avoidance strategies it uses may be rejected by the tax authorities. Therefore, Supplies, Inc., is uncertain if all its tax avoidance strategies will be allowed.

<sup>20</sup> Note: German participants were informed that the firm had a German headquarters.

## Appendix A2: BDM explanation

You now have the opportunity to buy the pen labeled '2'. You will not have to spend any more for the pen than you really want to. I'd like to know how much money you are willing to spend for this pen today. Think about the highest price you would be willing to pay for the pen labelled '2'.

Near the end of the session today one of you will draw a ball from this bin. The balls are labeled with different prices.

If the price on the ball drawn from the bin is less than or equal to the price you write down, then you will have to buy the pen for the price drawn from the bin. If the price drawn is greater than the price you write down, then you will not be able to buy the pen.

Example to illustrate the decision

Your price: \$102	Draw: \$100	Sale, at \$100
Your price: \$98	Draw: \$100	No Sale

This procedure ensures that it is best for you to truthfully reveal the maximum price you are willing to pay. If you tell me a price that is higher, then you may actually have to pay that higher price. If you tell me a price that is lower, then you may be disappointed if you can't buy the product. This would happen if we draw a price that is higher than the price you tell me but lower than your "true" price.

Note that you cannot influence the purchase price with the price you tell me. Because the purchase price is drawn from the bin, it is completely random and independent of whatever you tell me. Do you have any questions?

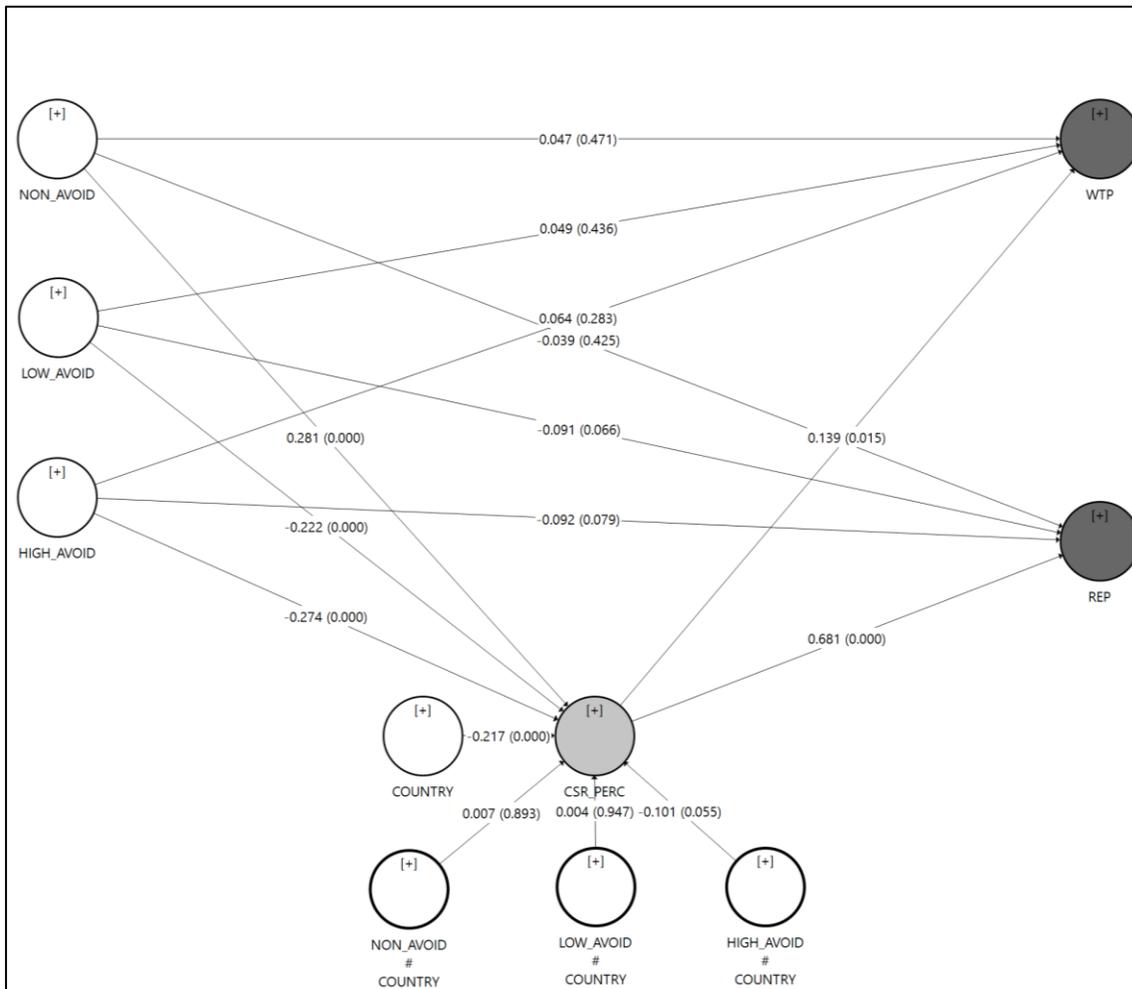
Now, decide on the maximum amount you are willing to pay for this pen. If we draw a price from the bin that is less than or equal to the price you just recorded, then we will sell you the pen at the price we draw from the bin. However, if we draw a price that exceeds the one you just stated, then we will not sell you the pen.

## Appendix A3: Measures

Variables	Items	Source
<i>Exogenous constructs:</i>		
LOW_AVOID	Dummy variable, coded one if participants were part of the low avoidance condition, and zero otherwise.	-
HIGH_AVOID	Dummy variable, coded one if participants were part of the high avoidance condition, and zero otherwise.	-
NON_AVOID	Dummy variable, coded one if participants were part of the non-avoidance condition, and zero otherwise.	-
CONTROL	Dummy variable, coded one if participants were part of the control condition, and zero otherwise. The control condition serves as reference group for LOW_AVOID, HIGH_AVOID, and NON_AVOID.	-
COUNTRY	Dummy variable, coded one for German participants and zero for U.S. participants.	-
<i>Endogenous constructs:</i>		
CSR_PERC	In my opinion, <i>company</i> ... <sup>a</sup> <ul style="list-style-type: none"> <li>• is a socially responsible company</li> <li>• is concerned with improving the wellbeing of society</li> <li>• follows high ethical standards</li> </ul>	Wagner et al. (2009)
REP	In general, my feelings toward <i>company</i> are ... <sup>b</sup> <ul style="list-style-type: none"> <li>• unfavorable/favorable</li> <li>• bad/good</li> <li>• unpleasant/pleasant</li> <li>• positive/negative</li> </ul>	Homer (1995)
WTP	Which amount would you be willing to pay in order to receive the pen?	Wertebroch and Skiera (2002)
<i>Manipulation check and control variables:</i>		
MC_BDM1	Has this procedure been confusing for you? <sup>c</sup>	Wertebroch and Skiera (2002)
MC_BDM2	Is it clear why it is in your best interest to state exactly the price you are willing to pay? <sup>c</sup>	Wertebroch and Skiera (2002)
MC_TAX1	Supplies, Inc. pursues activities solely to reduce taxes. <sup>a</sup>	-
MC_TAX2	Supplies, Inc. uses tax avoidance strategies that could be rejected by tax authorities. <sup>a</sup>	-
MC_TAX3	How is Supplies, Inc.' effective tax rate compared to other firms in the industry? <sup>d</sup>	-
ATTRACT	How attractive was the new pen? <sup>e</sup>	Wertebroch and Skiera (2002)

<sup>a</sup>We obtained responses using seven-point Likert-type scales, which ranged from 1 ("disagree completely") to 7 ("agree completely"). <sup>b</sup>We obtained responses using seven-point bipolar scales that consisted of 1 (i.e., the first statement) and 7 (i.e., the second statement). <sup>c</sup>We obtained responses using seven-point Likert-type scales, which ranged from 1 ("not at all") to 7 ("very much so"). <sup>d</sup>We obtained responses using seven-point Likert-type scales, which ranged from 1 ("lower") to 7 ("higher"). <sup>e</sup>We obtained responses using seven-point Likert-type scales, which ranged from 1 ("very unattractive") to 7 ("very attractive").

## Appendix A4: Hypotheses testing with 424 observations



Notes: This figure shows path coefficients and  $p$ -values for the inner model. We applied consistent bootstrapping with 5,000 replications. Significance levels are based on two-tailed  $t$ -tests. \*, \*\*, \*\*\* indicate statistical significance at the 0.1, 0.05, and 0.01 levels, respectively. The control condition (CONTROL) serves as reference group for the low tax avoidance (LOW\_AVOID), the high tax avoidance (HIGH\_AVOID) as well as the non-avoidance (NON\_AVOID) condition. COUNTRY is coded 0 for the United States and 1 for Germany.