13 Tax Psychology

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13.1 Introduction

Taxation is one of the most fundamental and influential institutions in modern societies (Gaisbauer, Schweiger, and Sedmak, 2015). Taxes are an indispensable source of financing public services to secure social welfare, public order, and national defense. A range of public goods, such as education, health, or infrastructure, cannot be appropriately provided without the government and taxation. Citizens are obliged to pay their taxes imposed by the law. They must pay their tax whatever they may think about the tax system. For law-abiding citizens, paying taxes is a spontaneous prosocial act of contributing to the community. The provision of public goods raises a social contribution dilemma (Dawes, 1980), in which the individual's interest contradicts the collective interest. Hence, individuals can be motivated to free-ride, especially when the opportunity to hide the source of their taxes arises.

Noncompliance represents any failure to meet tax obligations, whether it is intentional or inadvertent. For example, the "tax gap" is an aggregate noncompliance measure, which is defined as the difference between actual tax collected and the potential tax collection under full compliance with the tax code (Gemmell and Hasseldine, 2014); it consists of nonfiling of tax returns, underreporting of tax, and underpayment of tax (IRS, 2012). Estimating the tax gap is challenging given that noncompliant citizens engage in hiding their evasion activities. Moreover, different methods are applied to estimate tax evasion, which makes it difficult to compare data between countries. Nevertheless, the European Commission (2015) regularly publishes the estimated size of the "value-added tax (VAT) gap" (see Table 13.1), indicating that tax noncompliance is prevalent in all European Union (EU) countries. The extent of shadow economy (Schneider, 2015; see Table 13.1), which amounts in part from evading taxes, leads to the same conclusion.

Tax evasion or tax avoidance refer to a deliberate act of noncompliance, while tax evasion or tax cheating refers to intentionally and illegally paying less taxes than the law requires by deliberate nondisclosure (Elffers, Weigel, and Hessing, 1987), tax avoidance is considered a legal response to taxation to reduce one's tax liability, which is however usually in contradiction with the spirit of the law, and thus challenged by tax authorities to be noncompliant. The majority of studies on tax behavior address the problem of individuals'

Table 13.1 *Estimates of the VAT gap (European Commission, 2015) and shadow economy (Schneider, 2015) for twenty-six EU countries*

Country	VAT revenue (2013)	VAT gap (2013)	VAT gap in percent (2013)	Shadow economy as percentage of GDP (2013)
Austria	24,953	3,217	11.4	7.5
Belgium	27,226	3,186	10.5	16.4
Bulgaria	3,775	785	17.2	31.2
Czech Republic	11,694	3,375	22.4	15.5
Denmark	24,360	2,489	9.3	13.0
Estonia	1,558	315	16.8	27.6
Finland	18,848	812	4.1	13.0
France	144,414	14,096	8.9	9.9
Germany	197,005	24,873	11.2	12.4
Greece	12,593	6,497	34.0	23.6
Hungary	9,073	2,930	24.4	22.1
Ireland	10,371	1,225	10.6	12.2
Italy	93,921	47,516	33.6	21.1
Latvia	1,693	721	29.9	25.5
Lithuania	2,611	1,580	37.7	28.0
Luxembourg	3,485	187	5.1	8.0
Malta	586	210	26.4	24.3
Netherlands	42,424	1,852	4.2	9.1
Poland	27,780	10,131	26.7	23.8
Portugal	13,710	1,358	9.0	19.0
Romania	11,913	8,296	41.1	28.4
Slovakia	4,696	2,513	34.9	15.0
Slovenia	3,045	186	5.8	23.1
Spain	61,350	12,094	16.5	25.2
Sweden	39,091	1,776	4.3	13.9
United Kingdom	141,668	15,431	9.8	9.7

Note: Revenue and tax gap refer to Euros in millions.

income tax evasion in the form of underreporting taxable income or over claiming unwarranted deductions.

Why do some people not comply with the fiscal authorities? What is the best policy to establish, maintain, or enhance compliance? In order for the government to implement an optimal fiscal policy, it is important to understand

decision processes of taxpayers and the underlying motivations for compliance. Over the last five decades, scholars from various disciplines have investigated behavioral implications of tax compliance that should be considered in the formulation of tax law and policy. Fiscal psychology is concerned with both economic and psychological factors that induce taxpayers' behavioral responses to the tax system. In particular, most studies about tax compliance are centered on individual income tax systems in which taxpayers are given opportunities not to comply, and their tax liabilities are determined by self-declaration and self-assessment of taxable income, while the true income is not observable unless an audit is conducted. Self-employed or workers whose income is not subject to third-party reporting can evade their taxes by understating their true income; or, one can engage in more sophisticated tax sheltering.

This chapter provides a review of research on tax behavior from the perspective of behavioral economics and economic psychology. It is structured into three main sections: rational and irrational decision-making; social representations about taxes; and finally the interaction between tax authorities and taxpayers. The section on decision-making discusses rational choice and tax payments, prospect theory, mental accounting, and framing effects. The section on social representations covers topics such as knowledge and understanding of taxation, attitudes and beliefs, personal and social norms, as well as distributional and procedural justice. The interaction between taxpayers and tax authorities is discussed next with reference to the "slippery slope framework" and empirical investigations regarding the impact of authorities' power and taxpayers' trust in authorities. The chapter concludes with a summary of practical implications of the research surveyed.

13.2 Decision-Making in Tax Compliance

13.2.1 Rational Choice Model

The first economic analysis of tax compliance behavior can be traced back to the pioneering work of Allingham and Sandmo (1972). Their analytic model is a straightforward application of Becker's (1968) economics-of-crime paradigm to individual income tax. Taxpayers are assumed to be motivated *only* to maximize their expected utility from financial outcomes by trading off the potential costs of evasion against the costs of compliance. In this framework, a taxpayer's evasion decision is analogous to portfolio choice between the certain tax position (honest reporting) and the risky prospect of evasion (Sandmo, 2005); the taxpayer is deemed a gambler playing with the tax authority under the risk of being detected. The Allingham and Sandmo (1972) model is often called the standard economic model of tax evasion. In this approach, the key policy parameters affecting tax evasion are the tax rate, the detection probability, and the penalty imposed on evasion. The central point is that an individual pays taxes because of the fear of detection and punishment. Thus, this approach is referred to as the economic deterrence paradigm.

The standard economic model predicts that tax evasion decreases as the economic deterrence factors increase, that is, tax rate, probability of being detected, and penalty rate. These predictions have been extensively examined empirically (Kirchler et al., 2010). First, the size of the relationships between these factors and compliance has proven to be mixed in laboratory experiments. Second, given actual low rates of audits and rather mild penalties in the real world, a taxpayer's rational choice should be to evade most of his or her taxable income, yet it is observed in many countries that the aggregate level of compliance is far higher than would be predicted by the standard economic model (Alm, McClelland, and Schulze, 1992). Lastly, field experiments have revealed that deterrence effects can have mixed results. For instance, in a randomized field experiment manipulating deterrence by threat-of-audit letters, Slemrod, Blumenthal, and Christian (2001) confirmed increased compliance in the group of middle- and low-income taxpayers, but observed adverse responses among high-income taxpayers; high-income taxpayers receiving an audit threat reported lower income than the control group. Kleven et al. (2011) showed that the threat-of-audit letters had significant effects on self-reported income but no effect on third-party reported income.

A model should be evaluated in terms of reasonableness of its assumptions, its predictive power, and its potential usefulness for policy makers. First, the standard economic model assumes that individuals are perfectly rational, selfish, isolated utility maximizers. The underlying assumptions have been criticized by both behavioral economists and psychologists for their lack of reality and humanity (Cullis and Lewis, 1997). Second, neoclassical economists tend to believe that assumptions do not matter as long as the predictions are correct. However, the standard model has failed to explain relatively high levels of actual compliance (Bordignon, 1993). Lastly, the deterrence framework implies enforcement strategy is the only thing that matters to deter the taxpayer from evading. Tax policy based on these assumptions is likely to be inefficient, making it necessary for the tax administration to spend a huge amount of resources monitoring and punishing people.

13.2.2 Behavioral Choice Model

Behavioral choice models deal with the cognitive and contextual aspects in the taxpayer's decision process. It is too burdensome a task for ordinary taxpayers to calculate an optimal concealment of taxable income. Having limited cognitive power, they are susceptible to the ways in which a problem is "framed," and often their judgments and choices are different from those predicted by the standard economic model. For example, whether a tax issue is framed as a bonus for those with children or a penalty for the childless can affect

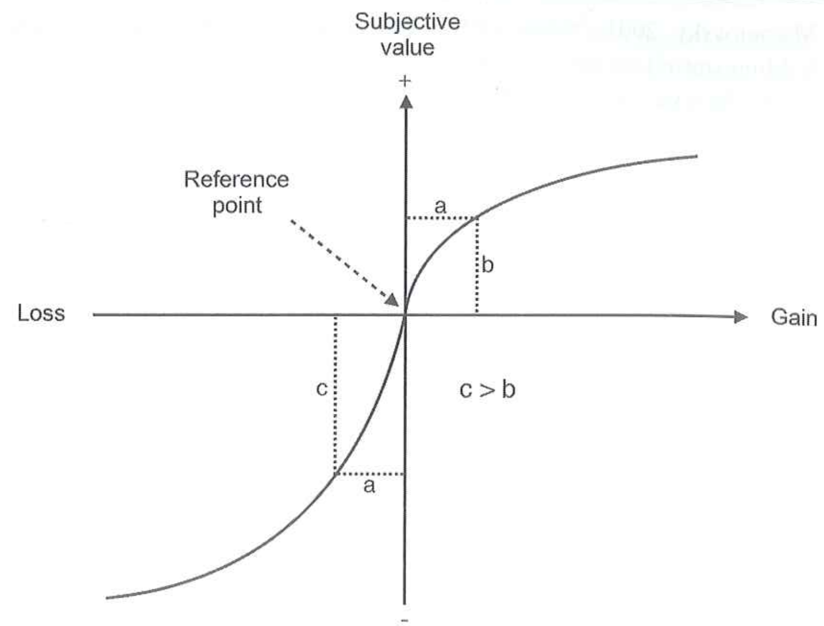

Figure 13.1. *Value function according to prospect theory (Kahneman and Tversky, 1979).*

a taxpayer's attitude toward the tax policy even though the economic consequences are the same (McCaffery and Baron, 2004).

Contrary to the expected utility theory, prospect theory (Kahneman and Tversky, 1979) postulates that an individual's decision outcomes are evaluated by changes in income from some reference point, not by the final state of his or her wealth. The subjective value (Figure 13.1) of gains or losses is determined by a value function that is steeper for losses than for gains, concave for gains, but convex for losses. This implies that the subjective value of a given loss is perceived as more negative than the positive effect of a gain of the same size. As a consequence, people generally try to avoid losses. Depending on whether a potential outcome constitutes a loss or a gain from a person's reference point can thus affect the willingness to take risks; people are risk averse with regards to gains but risk seeking in the domain of losses. Prospect theory provides a framework to understand facets of individual tax behavior that cannot be accounted for by the standard economic model, as for instance framing effects, withholding phenomena, effects of prior audits on subsequent compliance, income nonfungibility, and mental accounting practices.

For instance, taxpayers facing a balance due, generally framed as a loss, tend to be risk seeking, making them more likely to evade (Chang, Nichols, and Schultz, 1987; Kirchler and Maciejovsky, 2001). On the other hand, taxpayers claiming a refund, generally framed as a gain, tend to be risk averse, making them more likely to comply (Elffers and Hessing, 1997; Kirchler and

Maciejovsky, 2001; Yaniv, 1999). The effect of advance tax payment (withholding status) on tax compliance is referred to as the "withholding phenomenon" (Schepanski and Shearer, 1995).

Boylan and Sprinkle (2001) have provided insight into the relation between tax rates and taxpayer compliance by distinguishing endowed income from earned income: when income was endowed, participants responded to tax rate increases by reporting less income, whereas they reported more income for earned income. Kirchler et al. (2009) have confirmed the effect of income source by showing that tax evasion was more pronounced in low-effort conditions. They noted that effort changed the aspiration level (reference point) rather than the slope of the value function, and made high-effort income earners more risk averse and more compliant.

Tax audits constitute not only a reaction to past tax noncompliance, but their consequences represent a cause for future behaviors (Maciejovsky, Kirchler, and Schwarzenberger, 2007). As soldiers would take shelter in bomb craters in the belief that it is unlikely for bombs to fall in the same place twice (which Mittone, 2006, refers to as the "bomb crater effect"), taxpayers may believe that it is safer to evade taxes right after a tax audit has taken place. The effect may be attributable to the misperception of chance, or alternatively taxpayers may attempt to repair their "losses" incurred during the previous audit by engaging in evasion in subsequent tax filings (Andreoni, Erard, and Feinstein, 1998). However there is some support for a contrary "echo effect," where audits, experienced in early stages of taxpaying life cycle, may lead to an increase in compliance (Kastlunger et al., 2009). Experimental evidence suggests that increasing the time lag between tax filing and feedback on audits enhances compliance, mainly due to overweighting of subjective audit probabilities (Kogler, Mittone, and Kirchler, 2015). Field data from the United States (Beer et al., 2015) shows that audits do not affect all taxpayers in the same way. An analysis of Internal Revenue Service (IRS) data by Beer et al. (2015) has revealed that audits increase reported income of sole proprietors substantially if they had additional taxes assessed. Those taxpayers, however, whose audits did not result in an additional tax assessment reported less income in subsequent years. Furthermore, Mendoza, Wielhouver, and Kirchler (2015) have investigated the impact of auditing levels on tax evasion in a comparison of forty-seven countries and found a *U*-shaped relationship. This means that audits affect compliance positively until a certain auditing level is reached. Thus, simply increasing audits to increase compliance levels is not necessarily the most optimal policy strategy.

Mental accounting describes the set of individuals' cognitive operations to organize, evaluate, and keep track of financial activities (Thaler, 1999). Generally, people have various mental accounts, for instance to pay for their rent, food, or leisure activities. Drawing on this theory in the context of taxes, taxpayers might designate a separate mental account for taxes due in the future. In this case, tax payments would not be mentally deducted from personal income, but from a designated separate account, making it less likely that paying one's taxes will be perceived as a loss. Muehlbacher, Hartl, and Kirchler (2015) have shown that the mental segregation of taxes due from net income affects a taxpayer's reference point in the compliance decision and results in higher tax compliance. However, the effect seems not only to be driven by a shift in reference point to the net income, but because it prevents taxpayers from overspending funds that are needed to pay taxes due later on in the business year. Thus, mental accounting could be regarded as a technique to improve the representation of tax liability without perceiving them as a loss.

13.3 Social Representations of Taxes

Many researchers have pointed out the importance of sociopsychological factors in tax compliance behavior. Individuals are influenced by the social context in which decisions are made. As the tax system builds upon interactions of actors in the field, including taxpayers, tax practitioners, tax authorities, and the government (Alm, Kirchler, and Muehlbacher, 2012), an individual's tax behavior is embedded in the social structures (Pickhardt and Seibold, 2014). Social representations theory (Moscovici, 1961) describes the shared social construction process (rather than individual cognitive processes) of a concept (e.g., tax) that serve as the sociocognitive mental frame to deal with taxes (Moeschler, 2015). Social representations of taxes comprise tax morale, subjective tax knowledge, personal and social norms, fairness perceptions, trust, and interindividual differences of taxpayers (Kirchler, 2007).

13.3.1 Tax Morale

Introducing fiscal psychology as a new field of public finance, Schmölders (1959) maintained that its main task is to analyze the resistance to direct taxation of individuals according to their general "tax mentality," which rests upon the broader tax mentality of their nation. Today, tax morale is used as an umbrella term in the tax literature that refers to all nonmonetary motivations to comply with the tax law (Luttmer and Singhal, 2014). An established definition relates to tax morale as the intrinsic motivation or moral obligation to pay taxes (Alm and Torgler, 2006; Schmölders, 1959, 1960; Torgler, 2005).

Cross-national key findings suggest that tax morale is positively related to direct democracy (Torgler, 2005), institutional quality (Frey and Torgler, 2007), and a progressive tax schedule, while this last effect declines in strength with increasing income (Doerrenberg and Peichl, 2013). Hence, tax morale was found to be especially high among lower-income taxpayers in progressive tax schedules. Moreover, tax morale is negatively associated with perceived tax evasion (Frey and Torgler, 2007) and the shadow economy (Alm and Torgler, 2006; Torgler and Schneider, 2009). Furthermore, regarding the individual

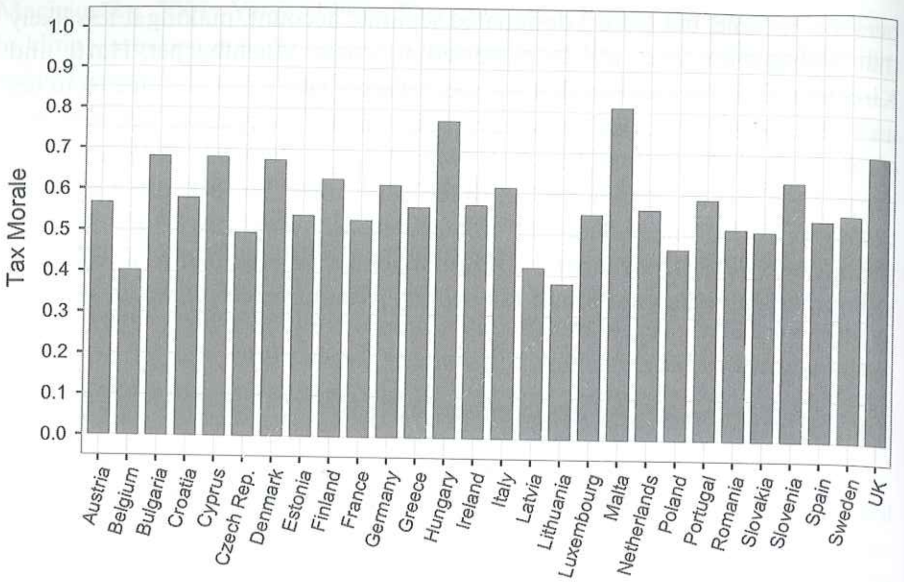

Figure 13.2. *Tax morale in all EU member countries.*
Note: The values indicate the percentage of participants replying with "never justified" to the question whether cheating on tax is justified. Data was retrieved from the EVS 2008–2010 wave.

level, in a number of studies, tax morale was observed to be higher among older taxpayers, more religious people, female taxpayers, people with greater financial experience, taxpayers who trust politicians, and employed taxpayers (Alm and Torgler, 2006; Lago-Peñas and Lago-Peñas, 2010; Torgler, 2004a, Torgler, 2005, Torgler, 2006).

Tax morale is commonly estimated by large-scale surveys such as the World Value Survey (WVS) or the European Value Survey (EVS). The measurement uses a single item, namely: "Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between: … Cheating on tax if you have the chance." The scale ranges from "1 = *never justified*" to "10 = *always justified*," and the observed distribution of answers is usually skewed with a large proportion of participants replying with "1 = *never justified*." A simple measure of tax morale can be obtained by assessing the proportion of participants in a country who believe that cheating on tax is never justified. Torgler and Schneider (2009) have acknowledged that the measurement is not free of bias, as socially desirable answers are likely and it neglects the fact that tax morale is likely to be a multidimensional concept. However, the advantage is an internationally standardized measurement with a wide reach through large-scale surveys and the possibility of cross-national comparisons of intrinsic motivation to comply. Figure 13.2 displays tax morale for all EU member countries using this method with most recent data from the EVS.

The following subsections present specific sociopsychological factors, which all contribute to individuals' social representations of taxes. As all of these factors are nonmonetary and shape intrinsic motives, we regard tax morale as a conglomerate of social representations.

13.3.2 Tax Law Complexity, Tax Knowledge, and Tax Professionals

In most developed countries, tax law is complex and requires a very high reading age to be correctly understood (Lewis, 1982). Commerce Clearing House regularly releases the number of pages contained in their published *Standard Federal Tax Reporter*, a volume covering all aspects of US federal income tax law (Wolters Kluwer CCH, 2015). Figure 13.3 displays the increase in pages over the years, reaching over seventy thousand pages by 2014. Today's income tax code influences a vast range of social and economic domains, which is accompanied by an increase of tax law complexity. In practice, taxpayers facing this complexity are often confronted with uncertainty about their tax liabilities. Complexity may reduce their perceived fairness of the tax system (Cuccia and Carnes, 2001) and result in unintentional noncompliance if they have failed to adequately resolve the uncertainty (McKerchar, 2001). In an experimental study manipulating tax knowledge of student participants, Eriksen and Fallan (1996) found that those who acquired additional knowledge on tax rules evaded less income. Alm et al. (2010) reported experimental evidence indicating that uncertainty reduces compliance, but that the impact is mitigated when the tax agency provides information at low cost to the taxpayer. The results imply that the willingness to pay taxes increases with a greater awareness of tax laws and an improving clarity about the rules.

If tax laws and rules are vague and ambiguous, it may be difficult to fully comply even with no intention to evade. However, there are many tax situations in which their proper treatment is uncertain and the interpretation of facts leads to different tax liabilities. Taxpayers seek practitioners to reduce uncertainty surrounding true tax liability and to save time and effort from understanding complex tax law and preparing their tax returns. They rely upon the guidance of tax experts to cope with the complex compliance procedures or take advantage of legal ambiguities. The role of tax practitioners, therefore, is important in that they can encourage clients to comply with or instigate them to avoid the law: tax practitioners may facilitate taxpayer compliance by reducing their clients' uncertainties about tax liabilities; on the other hand, they can assist their clients with a sophisticated strategy to exploit loopholes in the law. Kaplan et al. (1988) have highlighted the role of tax practitioners in tax compliance by demonstrating that if a tax practitioner provides aggressive tax advice, the taxpayer is likely to take the aggressive tax position that might not be upheld in a tax audit.

Being advocates for their clients as well as intermediaries in the tax system, tax practitioners deal with the interests of both taxpayers and tax authorities.

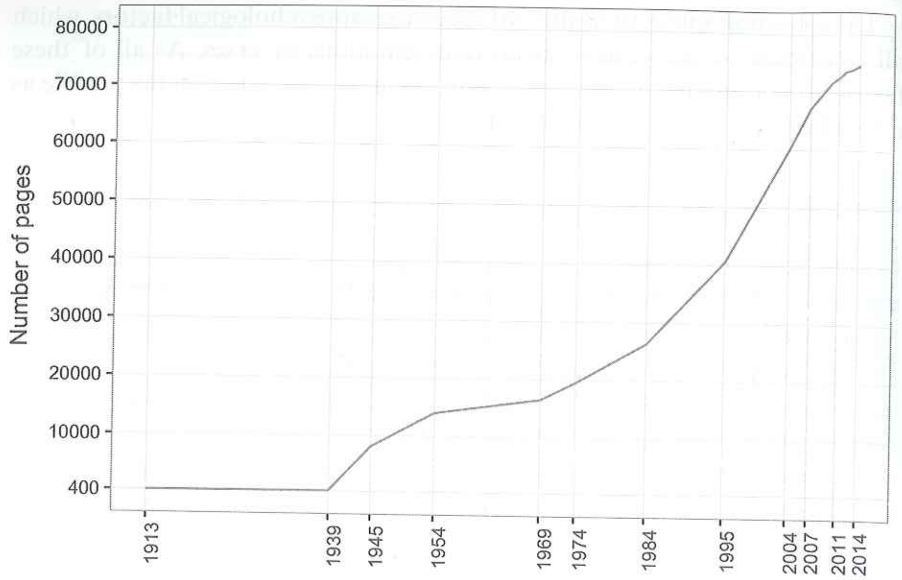

Figure 13.3. *Number of pages in the CCH* Standard Federal Tax Reporter *by selected years (Wolters Kluwer CCH, 2015).*

The dual role of tax practitioners generates a dilemma where interests of the client to minimize the tax burden by straining the law can contradict the obligation to adhere to the tax law. In this situation, an aggressive tax advisor interprets ambiguous tax situations in the taxpayer's favor, whereas a tax auditor, on the other side, is more likely to interpret tax ambiguities to the benefit of the tax authority. In this respect, Frecknall-Hughes and Kirchler (2015) claim negotiation theory to be a conceptual framework for understanding the nature of tax practice and its impact on taxpayer compliance. They argue that the tax advisor and the tax inspector are negotiators who act on behalf of a client and the tax authority, respectively. The negotiation framework has the strength that it not only reconciles the conflict in tax practitioners' work, but fits the different types of work undertaken by tax practitioners encompassing tax inspectors as public sector practitioners. It explains the interaction among taxpayers, tax advisors, tax auditors, and tax authorities at different levels of tax practice.

13.3.3 Personal and Social Norms

Individuals are not only motivated by financial outcomes as they will comply with tax laws if they believe it is the right thing to do. For instance, personal norms significantly moderate the effects of penalty rate and audit probability, indicating that deterrence is only effective when taxpayers' ethics are weak (Wenzel, 2004b). This is especially the case because people with strong personal norms show low tendencies to evade taxes in the first place, and a positive effect

of deterrence measures in groups of compliant taxpayers is questionable. Alm and Torgler (2011) have emphasized the impact of tax ethics on compliance decisions as a result of psychological loss that would be incurred by breaking moral standards. Furthermore, individuals are easily influenced by peer behavior. If taxpayers learn that evasion is prevalent among a reference group with which they identify, they would feel less guilty about noncompliance; symmetrically strong social norms against evasion may enhance compliance once taxpayers perceive a threat of social stigma. Wartick and Rupert (2010) reported that student participants who viewed the decision of a noncompliant peer were more likely to cheat than those who viewed the decision of a compliant peer.

Since personal and social norms are interdependent, it could be problematic to completely distinguish the two effects (Onu and Oats, 2015). Nevertheless, Wenzel (2004a) has suggested that the effect of social norms on tax compliance is mediated by personal norms. He holds that personal norms are internalized social norms when the individual identifies strongly with a reference group. In a similar vein, Bobek, Hageman, and Kelliher (2013) investigated the influences of social norms using a hypothetical compliance scenario. In this scenario, participants were asked to imagine preparing an income tax return and to make a hypothetical decision whether to falsely claim a tax deduction that would increase tax savings. Drawing on Cialdini and Trost's (1998) taxonomy of social norms, individuals were asked to respond to a set of questions measuring four specific types of social norms: personal norms (self-based standards), subjective norms (perception of what one's peers think one should do), injunctive norms (perception of what most people think others should do), and descriptive norms (perception of what other people actually do). The results of the study revealed that descriptive norms positively influence injunctive norms. Moreover, these injunctive norms shape subjective norms, meaning that perceived social standards become relevant in taxpayers' perception of his or her closer social environment. Ultimately, these subjective norms become personal norms, thus, behavioral standards for a single taxpayer. The authors reported that both subjective norms and personal norms directly influence tax compliance intentions.

These results suggest that normative appeals to comply should improve tax compliance. However, looking at the effectiveness of normative appeals on the part of tax administrations, results are mixed. In their pioneering field experiment, Schwartz and Orleans (1967) showed that normative appeals may be more effective than legal sanctions in inducing compliance. Bott et al. (2014) observed that including a moral appeal in a letter almost doubled the average foreign income reported compared to a base letter without such an appeal in Norway. Another field experiment by Hasseldine et al. (2007) in the United Kingdom tested the effect of normative appeals and sanction appeals on actual sole proprietors' tax report, and showed evidence of a significant effect for both normative and sanction groups. However, moral suasion had hardly any effect on taxpayers' compliance behavior in a controlled field experiment in Switzerland (Torgler, 2004b), which could be explained by ceiling effects as compliance is assumed to be high already. A similar result was obtained in Israel (Ariel, 2012). Interestingly, in a field experiment conducted in Minnesota, Blumenthal, Christian, and Slemrod (2001) have observed a reversed effect on the highest-income taxpayers, while middle- and upper-income taxpayers were more compliant following the normative appeal. Thus, the effect of normative appeals by tax authorities seems inconclusive. Onu and Oats (2015) have argued that normative appeals must be adjusted to the prevailing norms within a social group. If for instance a person who is late on filing the tax return receives a letter stating that 10 percent of taxpayers do not file a return on time, this person may feel relieved that others are in a similar situation, which could be used as a justification to delay filing the tax return even further. Overall, the importance of norms should not be underestimated in the light of inconclusive field experiment results. Instead, they highlight the subtleties that influence the perception of normative appeals and should encourage policy makers to carefully adjust these (see Onu and Oats, 2015).

13.3.4 Perceived Fairness and Trust

If taxpayers are asked what they think about the tax system, they most frequently mention concerns about fairness (e.g., Braithwaite, 2003; Taylor, 2003). According to Wenzel (2003), the concept of fairness has three main constructs: distributive, procedural, and retributive fairness. Distributive fairness refers to fair exchange of benefits and costs with the government, and the fair distribution of tax burden among taxpayers; procedural fairness involves fair processes of tax collection, such as respectful treatment of taxpayers by tax authorities; and retributive fairness concerns the appropriateness of reward and punishment. There are also concerns about justice where taxpayers weigh up their contributions with any benefits both for themselves and compared with other taxpayers. Wenzel (2002) has argued that taxpayers are more concerned with procedural and distributive justice than purely financial outcomes, given the premise that they strongly identify with the nation.

Justice promotes the legitimacy of political processes that can strengthen trust in the authority (Tyler, 2006). Increasing justice can be achieved by reducing the social distance between taxpayers and tax authorities. One recent attempt by the IRS (2014) was to promote personal taxpayer receipts, containing a detailed overview of which proportion of tax dollars was spent on which public program or service, depending on the size of paid income tax, social security, and Medicare tax. Going one step further from a mere tax contribution feedback system, experimental studies have examined whether tax morale and tax compliance increase when taxpayers can choose what their tax money is being spent on – a concept called "voice." A study by Casal et al. (2016) differentiated between "voice" on contribution, that is, making multiple separate compliance decision for different categories – e.g., defense, pensions, education – and

"voice" on distribution, that is, the ability to change the relative amount of tax money spend on each category. Participants assigned to conditions with either high "voice" on contribution or high "voice" on distribution showed higher levels of tax compliance. Thus, individuals were willing to contribute more to public expenditures if they could influence what the money was going to be used for. With regard to majority voting on tax system characteristics, Jun, Cho, and Park (2015) have demonstrated that participants report more income when majority voting determined a tax rate structure compared to when a dictatorship was responsible. In a similar manner, Wahl, Muehlbacher, and Kirchler (2010) confirmed a positive effect of voting on perceived procedural fairness, which increased trust in the government, ultimately leading to higher tax compliance. Moreover, sanctions or punishments can undermine the regulators' legitimacy when perceived as being procedurally unfair. Murphy (2004) has shown that trust in a tax authority and in its procedures plays a key role in determining taxpayers' willingness to comply with the authority's rules and decisions.

Individuals are endowed with civic virtue, which can be crowded out if the government violates norms of fairness (Frey, 1997). Feld and Frey (2007) have claimed that the relationship between taxpayers and the government can be modeled as an implicit contract. Thus, frequent audits or severe penalties that lack legitimacy and credibility may breed distrust and undermine the willingness to cooperate with the authorities. Likewise, tax amnesties devoid of retributive fairness considerations may have a negative impact on subsequent tax compliance by breaching the psychological tax contract. Rechberger et al. (2010) found that the fairer the tax amnesty was perceived to be, the more honestly people reported their income in the filing periods following an amnesty. However, Kastlunger et al. (2011) examined the effect of positive incentives (monetary rewards) on tax compliance and found no evidence of its influence on overall compliance, although they noted that audited compliant taxpayers who were rewarded evaded less in the following period compared with those who experienced no rewards.

Other studies have paid attention to the role of emotions in tax compliance decisions. Relating to the dual system theory of automatic (affective) and reflective (cognitive) processes, Maciejovsky, Schwarzenberger, and Kirchler (2012) investigated how emotional priming affects tax ethics in a series of experimental studies, and showed that information regarding audit probabilities and tax fines are only effective when people are in a state of rational information processing. With regard to general emotional arousal, Coricelli et al. (2010) have reported that higher emotional arousal is associated with lower compliance levels. These presented studies have investigated the effect imposed by emotions on a more general level, while some authors have argued that it is important to study specific emotions as they are linked to distinct motivational system and that emotions of the same valence (e.g., regret and disappointment) can still lead to differences in behavior (Zeelenberg and Pieters, 2006).

Barkworth and Murphy (2015) conducted a series of studies on the effect of procedural justice on experienced emotions and subsequent compliance behavior. They found that low procedural justice leads to anger, which in turn increases tax evasion. Another line of emotion research has focused on shame (Coricelli, Rusconi, and Villeval, 2014), more specifically, whether tax evaders' compliance decreases or increases after public shaming. In the group experiment, which lasted over multiple rounds of paying taxes, shaming was implemented by displaying a tax evader's picture on all screens if the person was audited and caught. However, there were two conditions. In the first condition, the evader's picture was only displayed for a single round. Thus, they were given the opportunity to restore their reputation by not being caught evading taxes again in consecutive rounds. This was not possible in the second condition, where an evader's picture was displayed for multiple rounds. The results indicated that public shaming only increases tax compliance if cheaters are given the opportunity of reintegration immediately, while this is not the case when tax offenders do not get the chance to be socially reintegrated. Another study found that shaming increases compliance effectively when audit procedures are targeted, meaning that taxpayers are not selected for audits randomly, but strategically (i.e., those taxpayers with lowest reported income) (Casagrande, Cagno, and Pandimiglio, 2015).

13.3.5 Motivational Postures

People exhibit great diversity in their behavior. It is assumed that these difference are bound to variations in underlying motives (Ajzen, 1991). In the context of tax behavior, Braithwaite's (2003) defined theses motives as motivational postures, which are interconnected beliefs, evaluations, expectations, and attitudes consciously held by taxpayers. As a consequence, motivational postures reflect the social distance between a taxpayer and the tax authorities and define how taxpayers engage with the authorities. Five motivational postures can be distinguished (see Figure 13.4): commitment; capitulation; resistance; disengagement; and game playing. A committed taxpayer believes in the benefits of the tax system and views taxpaying as morally right; a capitulated taxpayer defers to the tax office when it has legitimate authority; a resistant taxpayer doubts the tax office's intentions and challenges it; a disengaged taxpayer is completely detached from the tax office; and a game-playing taxpayer seeks to take advantage of particular laws and loopholes. While commitment and capitulation represent deferential (positive) attitudes toward tax authorities, resistance, disengagement, and game playing reflect defiant (negative) attitudes toward tax authorities. Since individuals are motivated either by deference motives or by defiance motives, Braithwaite (2009) has claimed that tax authorities should opt for a differential approach where enforcement and regulatory strategies are adjusted in accordance to taxpayers' motivational postures. For instance, it is not necessary to deter a committed taxpayer, who

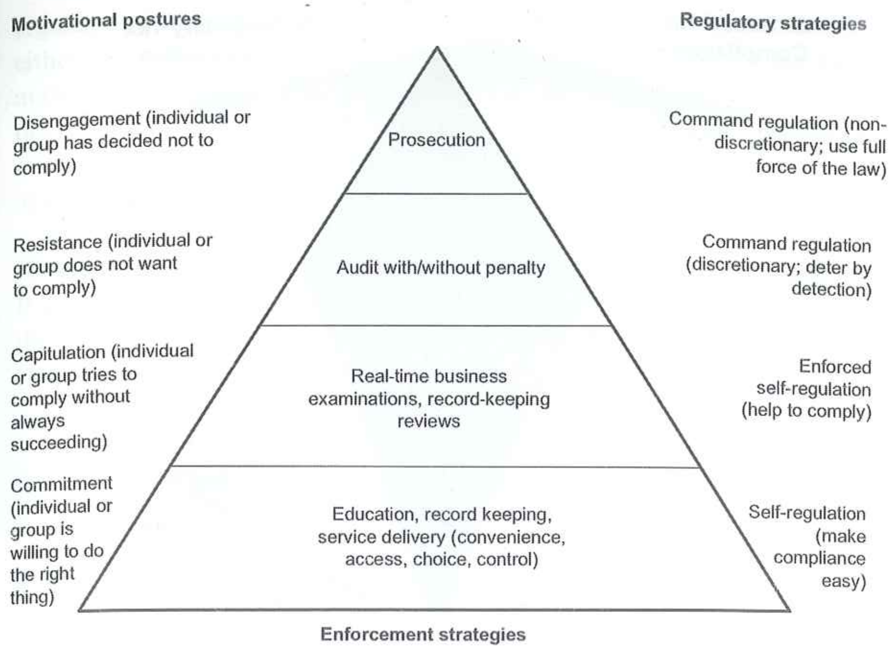

Figure 13.4. *Australian Taxation Office compliance model.*
Source: Adapted from Braithwaite (2003).

is already compliant. Instead, revenue bodies should make compliance easy by offering services and a transparent filing system. With increasing social distance between tax authorities and taxpayers, the task becomes increasingly difficult. If authorities face a group of disengaged taxpayers, who are not willing to comply, officials must use deterrence measures to enforce compliance.

13.4 The Interaction Between Taxpayers and Tax Authorities

Kirchler, Hoelzl, and Wahl (2008) integrated economic and socio-psychological factors into one comprehensive framework with two dimensions: trust in authorities and power of authorities. The slippery slope framework (SSF), depicted in Figure 13.5, postulates that power and trust determine tax compliance. Power is defined as the capacity of tax authorities to apply deterrence measures. Trust, on the other hand, stems from fairness perceptions, prevalent norms, attitudes, and provided services for taxpayers. On the aggregate level, these two dimensions define the climate between tax authorities and taxpayers. When tax authorities are primarily perceived as powerful, the SSF postulates an antagonistic climate between taxpayers and authorities. If, however, tax authorities are experienced as trustworthy, a synergistic climate is prevalent, where tax authorities are perceived as benevolent. On the individual taxpayer level, these interaction climates lead to different

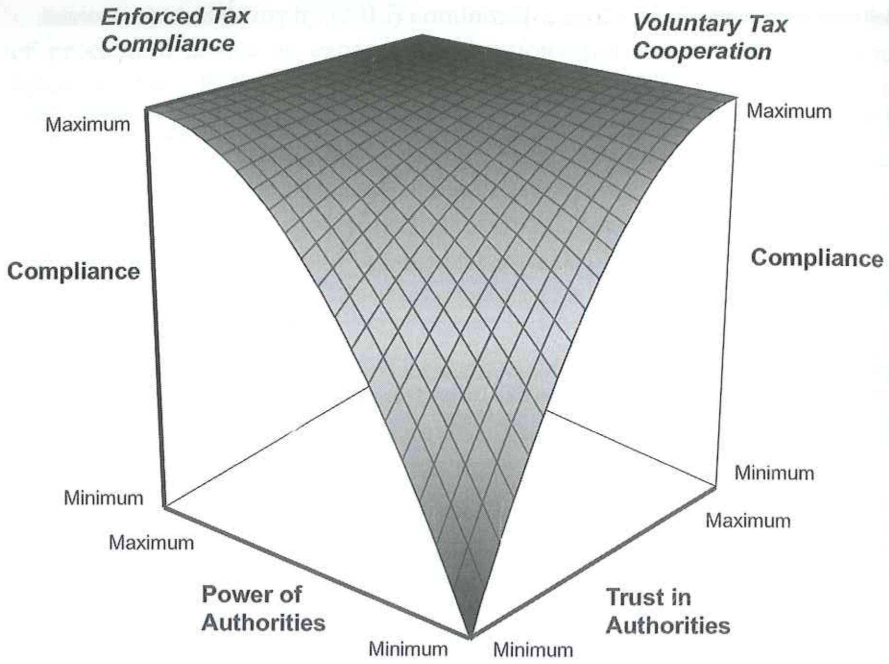

Figure 13.5. *The slippery slope framework of tax compliance (Kirchler et al., 2008).*

motivations to comply with tax law: in an antagonistic climate, taxpayers are presumably compliant with the law because of the fear of detection and fines (enforced compliance); while in a synergistic climate compliance derives from the mindset to contribute to the community (voluntary cooperation).

In the case of enforced compliance, legal coercion may be effective, whereas in the case of voluntary cooperation, social representations of taxes, including subjective tax knowledge, attitudes, norms, and fairness, come into play. The underlying assumptions of the SSF have been confirmed empirically in a number of countries with differing cultural and economic settings (Kastlunger et al., 2013; Kogler et al., 2013; Muehlbacher, Kirchler, and Schwarzenberger, 2011). The largest study was conducted in a total of forty-four countries from five continents (Kogler et al., 2014). Participants were randomly assigned to one of four different scenarios describing a fictitious country with either high or low trust and power. Tax compliance intentions were highest in scenarios where authorities were described as trustworthy and powerful, while intended compliance was lowest in the condition characterized by low trust and low power. On a country level, the results confirmed that trust positively influenced tax compliance intentions in all investigated countries. The effect of power was found for forty-three out of forty-four countries.

The SFF does not only provide a conceptual framework to understand tax compliance research, but also serves as an operational policy tool to devise

regulatory strategies. According to the SSF, tax compliance can be achieved either by increasing power or by building trustworthy relationships. Tax authorities' orientation toward taxpayers and their interaction style create a tax climate: a "cops and robbers" approach stimulates an antagonistic climate in which and taxpayers seek their self-interest, whereas a "service and client" approach stimulates a climate of trust and cooperation.

By implementing measures that increase trust in authorities, tax authorities should be perceived as transparent and capable of handling taxpayers' needs. If deterrence is not used arbitrarily but targeted at high-risk groups, power of the authorities should be perceived as justified and as a protection mechanism against free riders.

13.5 Conclusion

The deterrence model relies heavily on audit probability and penalties as motivators of compliance and neglects the psychological and social aspects of taxation and the interaction dynamics of actors in the field. Taxpayers would feel that they are not trusted as moral agents and refuse to act in moral ways if the tax authority regards all taxpayers as potential criminals. As Cullis and Lewis (1997, p. 310) noted, "If we believe taxpayers are selfish utility maximizers, taxpayers will behave like selfish utility maximizers. If we believe taxpayers have a moral nature, a sense of obligation or civic duty, taxpayers will reveal this side of their nature." Moreover, control and punishment may elicit unintended side effects that crowd out taxpayers' willingness to paying taxes if it is not justly practiced (Feld and Frey, 2002). In short, deterrence may be a necessary condition, but not the sufficient condition for all taxpayer compliance.

While the standard economic approaches stress the relevance of external variables such as tax rate, income, probability of audits, and severity of fines, fiscal psychology has shown the importance of sociopsychological variables that shape higher tax morale and lead to voluntary cooperation. In the tax compliance literature, there was a significant two-step paradigm shift from the exclusive focus on economic factors toward individual psychological and sociopsychological factors (Alm et al., 2012). The SSF reconciles different research paradigms by assigning economic as well as psychological factors to two dimensions: power of authority and trust in authority. In the SSF, the dynamic of power and trust, the tax climate, determines different paths to compliance: enforced or voluntary compliance. The SSF provides an insightful way to apprehend puzzling empirical findings from economic psychological studies of tax behavior.

Concerning practical applications, behavioral nudges may help to construct more efficient tax policies that reduce enforcement costs. For example, Shu et al. (2012) have reported that signing honor codes and tax self-reports before filing taxes triggered more compliant behavior. Or governments could change taxpayers' perceptions of exchange equity simply via information campaigns (Holler et al., 2008). In practice, the Behavioural Insights Team in the United Kingdom and the "I Nudge You" Team in Denmark incorporated the findings of behavioral economics and economic psychology into policies that aim to improve tax compliance. Furthermore, acknowledging the importance of collaborating with tax scholars, tax administrations can provide opportunities for conducting large-scale field experiments in order to develop cost-effective strategies to foster tax compliance with reference to scientific knowledge (e.g., Hallsworth et al., 2014).

The last decade has witnessed the change of research paradigms on tax behavior and regulatory practice in line with the propositions of the SSF (Kirchler, Kogler, and Muehlbacher, 2014). Many countries recognize cooperative compliance as an effective means of achieving tax compliance and establish close relationships between tax authorities and taxpayers that encourage mutual trust in tax matters (OECD, 2013). In 2005, the Dutch Tax and Customs Administration introduced "horizontal monitoring," as an alternative to the traditional "vertical monitoring." Horizontal monitoring allows large companies to enter a partnership with the tax authority, where both work closely together and meet regularly with the key objective of timely and legally accurate tax collections. The advantage for the companies is given by the fact that they have no uncertainty about their tax liabilities and do not have to expect additional tax payments for a concluded accounting period. Thus, companies' compliance costs are reduced and they can benefit from legal security. The partnership is also beneficial for the tax authority because personnel can be shifted to other risk areas (OECD, 2015). Other examples of such programs include the US Compliance Assurance Process, which has existed since 2005; Australia's Annual Compliance Arrangement, which started in 2008; and the South Korean Horizontal Compliance Program, which was established in 2010 (De Simone, Sansing, and Seidman, 2013).

In conclusion, the SSF recognizes the necessity of enforcement, but also stresses the role of tax authorities as service providers for taxpayers based upon trustworthy relationships (Alm et al., 2012). Thus, it is crucial to view tax evasion from different perspectives in order to foster high levels of compliance.

13.6 References

Adams, J. S. (1965). Inequity in Social Exchange. *Advances in Experimental Social Psychology*, 2, 267–299.

Ajzen, I. (1991). The Theory of Planned Behaviour. *Organizational Behaviour and Human Decision Processes*, 50, 179–211.

Allingham, M. G., and Sandmo, A. (1972). Income Tax Evasion: A Theoretical Analysis. *Journal of Public Economics*, 1, 323–338.

Alm, J., Cherry, T., Jones, M., and McKee, M. (2010). Taxpayer Information Assistance Services and Tax Compliance Behavior. *Journal of Economic Psychology*, 31, 577–586.

Alm, J., Kirchler, E., and Muehlbacher, S. (2012). Combining Psychology and Economics in the Analysis of Compliance: From Enforcement to Cooperation. *Economic Analysis and Policy*, 42, 133–151.

Alm, J., and McClellan, C. (2012). Tax Morale and Tax Compliance from the Firm's Perspective. *Kyklos*(1), 1–17.

Alm, J., McClelland, G. H., and Schulze, W. D. (1992). Why Do People Pay Taxes? *Journal of Public Economics*, 48, 21–38.

Alm, J., and Torgler, B. (2006). Culture Differences and Tax Morale in the United States and in Europe. *Journal of Economic Psychology*, 27, 224–246.

Alm, J., and Torgler, B. (2011). Do Ethics Matter? Tax Compliance and Morality. *Journal of Business Ethics*, 101, 635–651.

Andreoni, J., Erard, B., and Feinstein, J. (1998). Tax Compliance. *Journal of Economic Literature*, 36, 818–860.

Ariel, B. (2012). Deterrence and Moral Persuasion Effects on Corporate Tax Compliance: Findings from a Randomized Controlled Trial. *Criminology*, 50, 27–69.

Ayres, I., and Braithwaite, J. (1992). *Responsive Regulation: Transcending the Deregulation Debate*. Oxford: Oxford University Press.

Barkworth, J. M., and Murphy, K. (2015). Procedural Justice Policing and Citizen Compliance Behaviour: The Importance of Emotion. *Psychology, Crime and Law*, 21, 254–273.

Bazart, C., and Bonein, A. (2014). Reciprocal Relationships in Tax Compliance Decisions. *Journal of Economic Psychology*, 40, 83–102.

Becker, G. S. (1968). Crime and Punishment: An Economic Approach. *Journal of Public Economics*, 76, 169–217.

Beer, S., Kasper, M., Kirchler, E., and Erard, B. (2015). Annual Report to Congress: Audit Impact Study. Retrieved from tinyurl.com/zzcouol

Blumenthal, M., Christian, C., and Slemrod, J. (2001). Do Normative Appeals Affect Tax Compliance? Evidence from a Controlled Experiment in Minnesota. *National Tax Journal*, 54(1), 125–136.

Bobek, D. D., Hageman, A. M., and Kelliher, C. F. (2013). Analyzing the Role of Social Norms in Tax Compliance Behavior. *Journal of Business Ethics*, 115, 451–468.

Bordignon, M. (1993). A Fairness Approach to Income Tax Evasion. *Journal of Public Economics*, 52, 345–362.

Bott, K., Cappelen, A. W., Sørensen, E. Ø., and Tungodden, B. (2014). *You've Got Mail: A Randomised Field Experiment on Tax Evasion*. Bergen, Norway: NHH Norwegian School of Economics.

Boylan, S. J., and Sprinkle, G. B. (2001). Experimental Evidence on the Relation Between Tax Rates and Compliance: The Effect of Earned vs. Endowed Income. *Journal of the American Taxation Association*, 23, 75–90.

Braithwaite, V. (2003). *Taxing Democracy: Understanding Tax Avoidance and Evasion*. Aldershot: Ashgate.

Braithwaite, V. (2009). *Defiance in Taxation and Governance: Resisting and Dismissing Authority in a Democracy*. Cheltenham: Edward Elgar.

Braithwaite, V., Murphy, K., and Reinhart, M. (2007). Taxation Threat, Motivational Postures, and Responsive Regulation. *Law and Policy*, 29, 137–158.
Casagrande, A., Cagno, D., Di, Pandimiglio, A., and Spallone, M. (2015). The Effect of Competition on Tax Compliance: The Role of Audit Rules and Shame. *Journal of Behavioral and Experimental Economics*, 59, 96–110.
Casal, S., Kogler, C., Mittone, L., and Kirchler, E. (2016). Tax Compliance Depends on Voice of Taxpayers. *Journal of Economic Psychology*, 56, 141–150.
Chang, O. H., Nichols, D. R., and Schultz, J. J. (1987). Taxpayer Attitudes Toward Tax Audit Risk. *Journal of Economic Psychology*, 8, 299–309.
Christian, R. C., and Alm, J. (2014). Empathy, Sympathy, and Tax Compliance. *Journal of Economic Psychology*, 40, 62–82.
Cialdini, R. B., and Trost, M. R. (1998). Social Influence: Social Norms, Conformity and Compliance. In S. T. Fiske, D. T. Gilbert and G. Lindzey (Ed.), *The Handbook of Social Psychology*. Boston: Oxford University Press.
Coricelli, G., Joffily, M., Montmarquette, C., and Villeval, M. C. (2010). Cheating, Emotions, and Rationality: An Experiment on Tax Evasion. *Experimental Economics*, 13, 226–247.
Coricelli, G., Rusconi, E., and Villeval, M. C. (2014). Tax Evasion and Emotions: An Empirical Test of Re-integrative Shaming Theory. *Journal of Economic Psychology*, 40, 49–61.
Cuccia, A. D., and Carnes, G. A. (2001). A Closer Look at the Relation Between Tax Complexity and Tax Equity Perceptions. *Journal of Economic Psychology*, 22, 113–140.
Cullis, J. G., and Lewis, A. (1997). Why People Pay Taxes: From a Conventional Economic Model to a Model of Social Convention. *Journal of Economic Psychology*, 18, 305–321.
Dawes, R. M. (1980). Social Dilemmas. *Annual Review of Psychology*, 31, 169–193.
De Simone, L., Sansing, R. C., and Seidman, J. K. (2013). When Are Enhanced Relationship Tax Compliance Programs Mutually Beneficial? *Accounting Review*, 88, 1971–1991.
Doerrenberg, P., and Peichl, A. (2013). Progressive Taxation and Tax Morale. *Public Choice*, 155, 293–316.
Elffers, H., and Hessing, D. J. (1997). Influencing the Prospects of Tax Evasion. *Journal of Economic Psychology*, 18, 289–304.
Elffers, H., Weigel, R. H., and Hessing, D. J. (1987). The Consequences of Different Strategies for Measuring Tax Evasion Behavior. *Journal of Economic Psychology*, 8, 311–337.
Eriksen, K., and Fallan, L. (1996). Tax Knowledge and Attitudes Towards Taxation: A Report on a Quasi-Experiment. *Journal of Economic Psychology*, 17, 387–402.
European Commission. (2015). Study to Quantify and Analyse the VAT Gap in the EU Member States. Retrieved from ec.europa.eu/taxation_customs/resources/documents/common/public-ations/studies/vat_gap2013.pdf
Feld, L. P., and Frey, B. S. (2002). Trust Breeds Trust: How Taxpayers Are Treated. *Economics of Governance*, 3, 87–99.
Feld, L. P., and Frey, B. S. (2007). Tax Compliance as the Result of a Psychological Tax Contract: The Role of Incentives and Responsive Regulation. *Law and Policy*, 29, 102–120.

Frecknall-Hughes, J., and Kirchler, E. (2015). Towards a General Theory of Tax Practice. *Social and Legal Studies*, 24, 289–312.
Frey, B. S. (1997). A Constitution for Knaves Crowds Out Civic Virtues. *Economic Journal*, 107, 1043–1053.
Frey, B. S., and Torgler, B. (2007). Tax Morale and Conditional Cooperation. *Journal of Comparative Economics*, 35, 136–159.
Gaisbauer, H. P., Schweiger, G., and Sedmak, C. (2015). Outlining the Field of Tax Justice. In H. P. Gaisbauer, G. Schweiger, and C. Sedmak (Eds.) *Philosophical Explorations of Justice and Taxation* (pp. 1–14). Berlin: Springer.
Gangl, K., Muehlbacher, S., De Groot, M., et al. (2013). "How Can I Help You?" Perceived Service Orientation of Tax Authorities and Tax Compliance. *FinanzArchiv: Public Finance Analysis*, 69, 487–510.
Gemmell, N., and Hasseldine, J. (2014). Taxpayers' Behavioural Responses and Measures of Tax Compliance "Gaps": A Critique and a New Measure. *Fiscal Studies*, 35, 275–296.
Hallsworth, M., List, J., Metcalfe, R., and Vlaev, I. (2014). The Behavioralist as Tax Collector: Using Natural Field Experiments to Enhance Tax Compliance (No. w20007). *SSRN Electronic Journal*. ssrn.com/abstract=2418122
Hasseldine, J., Hite, P., James, S., and Toumi, M. (2007). Persuasive Communications: Tax Compliance Enforcement Strategies for Sole Proprietors. *Contemporary Accounting Research*, 24, 171–194.
Holler, M., Hoelzl, E., Kirchler, E., Leder, S., and Mannetti, L. (2008). Framing of Information on the Use of Public Finances, Regulatory Fit of Recipients and Tax Compliance. *Journal of Economic Psychology*, 29, 597–611.
IRS (Internal Revenue Service). (2012). IRS Releases New Tax Gap Estimates. Retrieved from www.irs.gov/uac/irs-releases-new-tax-gap-estimates-compliance-rates-remain-statistically-unchanged-from-previous-study
IRS. (2014). Your 2014 Taxpayer Receipt. Retrieved from www.whitehouse.gov/2014-taxreceipt
Jun, B.-h., Cho, M., and Park, M.-H. (2015). Procedural Fairness and Taxpayers' Response: Evidence from an Experiment. *Korean Economic Review*, 31, 301–326.
Kahneman, D., and Tversky, A. (1979). Prospect Theory: An Analysis of Decision Under Risk. *Econometrica: Journal of the Econometric Society*, 47, 263–292.
Kaplan, S. E., Reckers, P. M., West, S. G., and Boyd, J. C. (1988). An Examination of Tax Reporting Recommendations of Professional Tax Preparers. *Journal of Economic Psychology*, 9, 427–443.
Kastlunger, B., Kirchler, E., Mittone, L., and Pitters, J. (2009). Sequences of Audits, Tax Compliance, and Taxpaying Strategies. *Journal of Economic Psychology*, 30, 405–418.
Kastlunger, B., Lozza, E., Kirchler, E., and Schabmann, A. (2013). Powerful Authorities and Trusting Citizens: The Slippery Slope Framework and Tax Compliance in Italy. *Journal of Economic Psychology*, 34, 36–45.
Kastlunger, B., Muehlbacher, S., Kirchler, E., and Mittone, L. (2011). What Goes Around Comes Around? Experimental Evidence of the Effect of Rewards on Tax Compliance. *Public Finance Review*, 39, 150–167.
Kim, C. K., Evans, J. H., and Moser, D. V. (2005). Economic and Equity Effects on Tax Reporting Decisions. *Accounting, Organizations and Society*, 30, 609–625.

Kirchler, E. (2007). *The Economic Psychology of Tax Behaviour*: Cambridge: Cambridge University Press.

Kirchler, E., Hoelzl, E., and Wahl, I. (2008). Enforced Versus Voluntary Tax Compliance: The "Slippery Slope" Framework. *Journal of Economic Psychology*, 29, 210–225.

Kirchler, E., Kogler, C., and Muehlbacher, S. (2014). Cooperative Tax Compliance from Deterrence to Deference. *Current Directions in Psychological Science*, 23, 87–92.

Kirchler, E., and Maciejovsky, B. (2001). Tax Compliance Within the Context of Gain and Loss Situations, Expected and Current Asset Position, and Profession. *Journal of Economic Psychology*, 22, 173–194.

Kirchler, E., Muehlbacher, S., Hoelzl, E., and Webley, P. (2009). Effort and Aspirations in Tax Evasion: Experimental Evidence. *Applied Psychology*, 58, 488–507.

Kirchler, E., Muehlbacher, S., Kastlunger, B., and Wahl, I. (2010). Why Pay Taxes? A Review of Tax Compliance Decisions. In J. M.-V. J. Alm and B. Torgler (Ed.), *Developing Alternative Frameworks for Explaining Tax Compliance* (pp. 15–31). London: Routledge.

Kleven, H. J., Knudsen, M. B., Kreiner, C. T., Pedersen, S., and Saez, E. (2011). Unwilling or Unable to Cheat? Evidence from a Tax Audit Experiment in Denmark. *Econometrica*, 79, 651–692.

Kogler, C., Batrancea, L., Nichita, A., Pantya, J., Belianin, A., and Kirchler, E. (2013). Trust and Power as Determinants of Tax Compliance: Testing the Assumptions of the Slippery Slope Framework in Austria, Hungary, Romania and Russia. *Journal of Economic Psychology*, 34, 169–180.

Kogler, C., Batrancea, L., Nichita, A., Olsen, J., and Kirchler, E. (2014). Cross-cultural Research on Tax Compliance, Corruption and Shadow Economy. Paper presented at the 28th International Congress of Applied Psychology in Paris, France.

Kogler, C., Mittone, L., and Kirchler, E. (2015). Delayed Feedback on Tax Audits Affects Compliance and Fairness Perceptions. *Journal of Economic Behavior and Organization* , 124, 81–87.

Lago-Peñas, I., and Lago-Peñas, S. (2010). The Determinants of Tax Morale in Comparative Perspective: Evidence from European Countries. *European Journal of Political Economy*, 26, 441–453.

Lewis, A. (1982). *The Psychology of Taxation*. New York: St. Martin's Press.

Luttmer, E. F. P., and Singhal, M. (2014). Tax Morale. *Journal of Economic Perspectives*, 28, 149–168.

Maciejovsky, B., Kirchler, E., and Schwarzenberger, H. (2007). Misperception of Chance and Loss Repair: On the Dynamics of Tax Compliance. *Journal of Economic Psychology*, 28, 678–691.

Maciejovsky, B., Schwarzenberger, H., and Kirchler, E. (2012). Rationality Versus Emotions: The Case of Tax Ethics and Compliance. *Journal of Business Ethics*, 109(3), 339–350.

McCaffery, E. J., and Baron, J. (2004). Framing and Taxation: Evaluation of Tax Policies Involving Household Composition. *Journal of Economic Psychology*, 25, 679–705.

McKerchar, M. (2001). The Study of Income Tax Complexity and Unintentional Non-Compliance: Research Method and Preliminary Findings. ATAX Discussion Paper. University of Sydney. Australia.

Mendoza, J. P., Wielhouwer, J., and Kirchler, E. (2015). The Backfiring Effect of Auditing on Tax Compliance. *SSRN Electronic Journal*. ssrn.com/abstract=2597479

Mittone, L. (2006). Dynamic Behaviour in Tax Evasion: An Experimental Approach. *Journal of Socio-Economics*, 35, 813–835.

Moeschler, D. (2015). Social Representations of Taxes and Intentions Toward Compliance. *Economies and Finances*. Retrieved from http://dumas.ccsd.cnrs.fr/dumas-01108337.

Moscovici, S. (1961). *La psychanalyse, son image et son public*. Paris: Presses universitaires de France.

Muehlbacher, S., Hartl, B., and Kirchler, E. (2015). Mental Accounting and Tax Compliance Experimental Evidence for the Effect of Mental Segregation of Tax Due and Revenue on Compliance. *Public Finance Review*, 45(1), 1–22.

Muehlbacher, S., Kirchler, E., and Schwarzenberger, H. (2011). Voluntary Versus Enforced Tax Compliance: Empirical Evidence for the "Slippery Slope" Framework. *European Journal of Law and Economics*, 32, 89–97.

Murphy, K. (2004). The Role of Trust in Nurturing Compliance: A Study of Accused Tax Avoiders. *Law and Human Behavior*, 28, 187–209.

OECD (Organization of Economic Cooperation and Development). (2013). *Co-operative Compliance: A Framework from Enhanced Relationship to Co-operative Compliance*. Paris: OECD Publishing.

OECD. (2015). *Tax Administration 2015: Comparative Information on OECD and Other Advanced and Emerging Economies*. Paris: OECD Publishing.

Onu, D., and Oats, L. (2015). The Role of Social Norms in Tax Compliance: Theoretical Overview and Practical Implications. *Journal of Tax Administration*, 1, 113–137.

Pickhardt, M., and Seibold, G. (2014). Income Tax Evasion Dynamics: Evidence from an Agent-Based Econophysics Model. *Journal of Economic Psychology*, 40, 147–160.

Porcano, T. M. (1985). Distributive Justice and Tax Policy. *Accounting Review*, 59, 619–635.

Rechberger, S., Hartner, M., Kirchler, E., and Hämmerle, F. K. (2010). Tax Amnesties, Justice Perceptions, and Filing Behavior: A Simulation Study. *Law and Policy*, 32, 214–225.

Sandmo, A. (2005). The Theory of Tax Evasion: A Retrospective View. *National Tax Journal*, 58, 643–663.

Schepanski, A., and Shearer, T. (1995). A Prospect Theory Account of the Income Tax Withholding Phenomenon. *Organizational Behavior and Human Decision Processes*, 63, 174–186.

Schmölders, G. (1959). Fiscal Psychology: A New Branch of Public Finance. *National Tax Journal*, 12, 340–345.

Schmölders, G. (1960). *Das Irrationale in der öffentlichen Finanzwirtschaft*. Frankfurt am Main: Suhrkamp.

Schneider, F. (2015). Size and Development of the Shadow Economy of 31 European and 5 Other OECD Countries from 2003 to 2015: Different Developments. Retrieved from www.econ.jku.at/members/Schneider/files/publications/2015/ShadEcEurope31.pdf

Schwartz, R. D., and Orleans, S. (1967). On Legal Sanctions. *University of Chicago Law Review*, 34, 274–300.

Shu, L. L., Mazar, N., Gino, F., Ariely, D., and Bazerman, M. H. (2012). Signing at the Beginning Makes Ethics Salient and Decreases Dishonest Self-Reports in Comparison to Signing at the End. *Proceedings of the National Academy of Sciences*, 109, 15197–15200.

Slemrod, J. (1998). On Voluntary Compliance, Voluntary Taxes, and Social Capital. *National Tax Journal*, 51, 485–491.

Slemrod, J., Blumenthal, M., and Christian, C. (2001). Taxpayer Response to an Increased Probability of Audit: Evidence from a Controlled Experiment in Minnesota. *Journal of Public Economics*, 79, 455–483.

Taylor, N. (2003). Understanding Taxpayer Attitudes Through Understanding Taxpayer Identities. In V. Braithwaite (ed.), *Taxing Democracy: Understanding Tax Avoidance and Evasion* (pp. 71–92). Aldershot: Ashgate.

Thaler, R. (1999). Mental Accounting Matters. *Journal of Behavioral Decision Making*, 12, 183–206.

Torgler, B. (2004a). Tax Morale in Asian Countries. *Journal of Asian Economics*, 15, 237–266.

Torgler, B. (2004b). Moral Suasion: An Alternative Tax Policy Strategy? Evidence from a Controlled Field Experiment in Switzerland. *Economics of Governance*, 5, 235–253.

Torgler, B. (2005). Tax Morale and Direct Democracy. *European Journal of Political Economy*, 21, 525–531.

Torgler, B. (2006). The Importance of Faith: Tax Morale and Religiosity. *Journal of Economic Behavior and Organization*, 61, 81–109.

Torgler, B. (2007). *Tax Compliance and Tax Morale: A Theoretical and Empirical Anal ysis*: Cheltenham: Edward Elgar.

Torgler, B., and Schneider, F. (2009). The Impact of Tax Morale and Institutional Quality on the Shadow Economy. *Journal of Economic Psychology*, 30, 228–245.

Tyler, T. R. (2006). Psychological Perspectives on Legitimacy and Legitimation. *Annual Review of Psychology*, 57, 375–400.

Wahl, I., Muehlbacher, S., and Kirchler, E. (2010). The Impact of Voting on Tax Payments. *Kyklos*, 63, 144–158.

Wartick, M., and Rupert, T. (2010). The Effects of Observing a Peer's Likelihood of Reporting Income on Tax Reporting Decisions. *Advances in Taxation*, 19, 65–94.

Wenzel, M. (2002). The Impact of Outcome Orientation and Justice Concerns on Tax Compliance: The Role of Taxpayers' Identity. *Journal of Applied Psychology*, 87, 629.

Wenzel, M. (2003). Tax Compliance and the Psychology of Justice: Mapping the Field. In V. Braithwaite (Ed.), *Taxing Democracy: Understanding Tax Avoidance and Evasion* (pp. 41–70). Aldershot: Ashgate.

Wenzel, M. (2004a). An Analysis of Norm Processes in Tax Compliance. *Journal of Economic Psychology*, 25, 213–228.

Wenzel, M. (2004b). The Social Side of Sanctions: Personal and Social Norms as Moderators of Deterrence. *Law and Human Behavior*, 28, 547–567.

Wolters Kluwer CCH. (2015). Federal Tax Law Keeps Piling Up. Retrieved July 14, 2016, from www.cch.com/TaxLawPileUp.pdf

Yaniv, G. (1999). Tax Compliance and Advance Tax Payments: A Prospect Theory Analysis. *National Tax Journal*, 52, 753–764.

Zeelenberg, M., and Pieters, R. (2006). Feeling Is for Doing: A Pragmatic Approach to the Study of Emotions in Economic Behavior. In D. De Cremer, M. Zeelenberg, and K. Murnighan (Eds.), *Social Psychology and Economics* (pp. 117–137). New York: Psychology Press.

The Cambridge Handbook of Psychology and Economic Behaviour

Second Edition

Edited by
Alan Lewis
University of Bath

CAMBRIDGE
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University Printing House, Cambridge CB2 8BS, United Kingdom

One Liberty Plaza, 20th Floor, New York, NY 10006, USA

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314–321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre, New Delhi – 110025, India

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Information on this title: www.cambridge.org/9781316613900
DOI: 10.1017/9781316676349

First edition published 2008

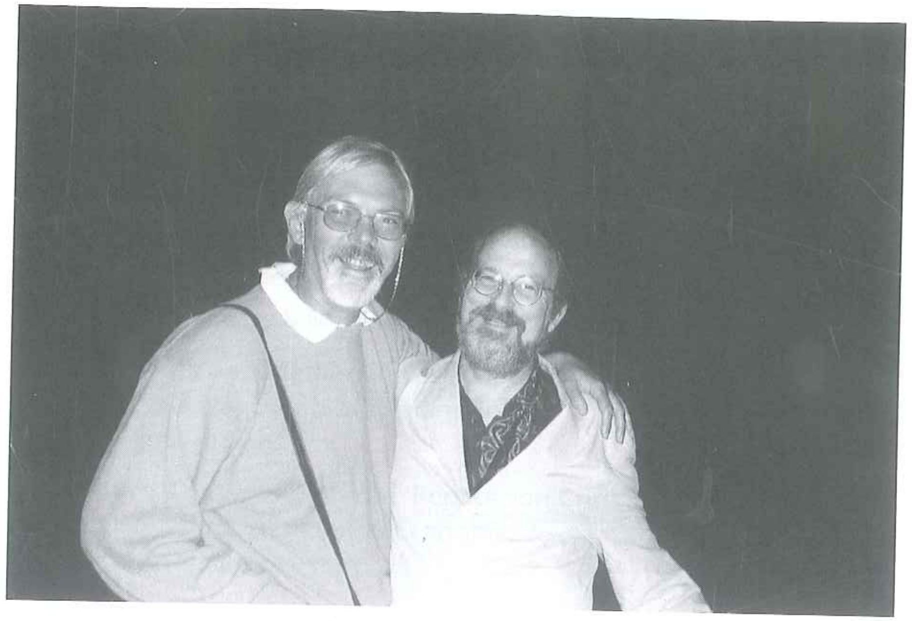
Second edition 2018

Printed in the United Kingdom by TJ International Ltd. Padstow Cornwall

A catalogue record for this publication is available from the British Library.

Library of Congress Cataloging-in-Publication Data
Names: Lewis, Alan, 1952– author.
Title: The Cambridge handbook of psychology and economic behaviour / edited by Alan Lewis, University of Bath.
Description: Second edition. | Cambridge, United Kingdom; New York, NY: Cambridge University Press, 2018. | Includes bibliographical references and index.
Identifiers: LCCN 2017040154 | ISBN 9781107161399 (hardback) | ISBN 9781316613900 (paperback)
Subjects: LCSH: Economics–Psychological aspects. | Consumer behavior.
Classification: LCC HB74.P8. C36 2018 | DDC 330.01/9–dc23
LC record available at https://lccn.loc.gov/2017040154

ISBN 978-1-107-16139-9 Hardback
ISBN 978-1-316-61390-0 Paperback



This is dedicated to Paul Webley (1953–2016), a good friend of economic psychology and a good friend of ours.