

Developing financial consciousness reader

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Estimated reading time: 60 minutes



## You will read about...

- Tax compliance and noncompliance
- Social representations and attitudes to taxes
- The importance of fairness perceptions
- Motivations to tax compliance
- Rational decision making models vs. the reality

## The text is edited from excerpts from:

- Kirchler, E. (2007): *The Economic Psychology of Tax Behaviour*. Cambridge University Press, New York
- Kirchler, E., Muehlbacher, S., Kastlunger, B., Wahl, I. (2007): *Why Pay Taxes? A Review of Tax Compliance Decisions*. International Center for Public Policy Working Paper Series, at AYSPS, GSU, International Center for Public Policy, Andrew Young School of Policy Studies, Georgia State University.
- Kogler, C., Kirchler, E. (2020): *Taxpayers' Subjective Concepts of Taxes, Tax Evasion, and Tax Avoidance*. In: van Brederode, R. F. (ed.): *Ethics and Taxation*. Springer.

# Tax behaviour

According to legislature, paying taxes is a moral obligation of members of a community to their community. However, the motivation to comply or not to comply is considerably influenced by beliefs, attitudes, and social representations of taxpayers. These subjective conceptualizations and evaluations are often not objective or true, but they determine how citizens construct their subjective reality. Attitudes, judgments, and behaviour intentions eventually shape people's behaviour which is often more affected by what they think than by what actually is.

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## Tax compliance versus non-compliance

Just as the shadow economy has increased in the past, tax evasion has also risen, creating a problem of growing concern. However, as will be shown below, most taxpayers do not engage in income tax evasion. Nevertheless, tax compliance is less than perfect.

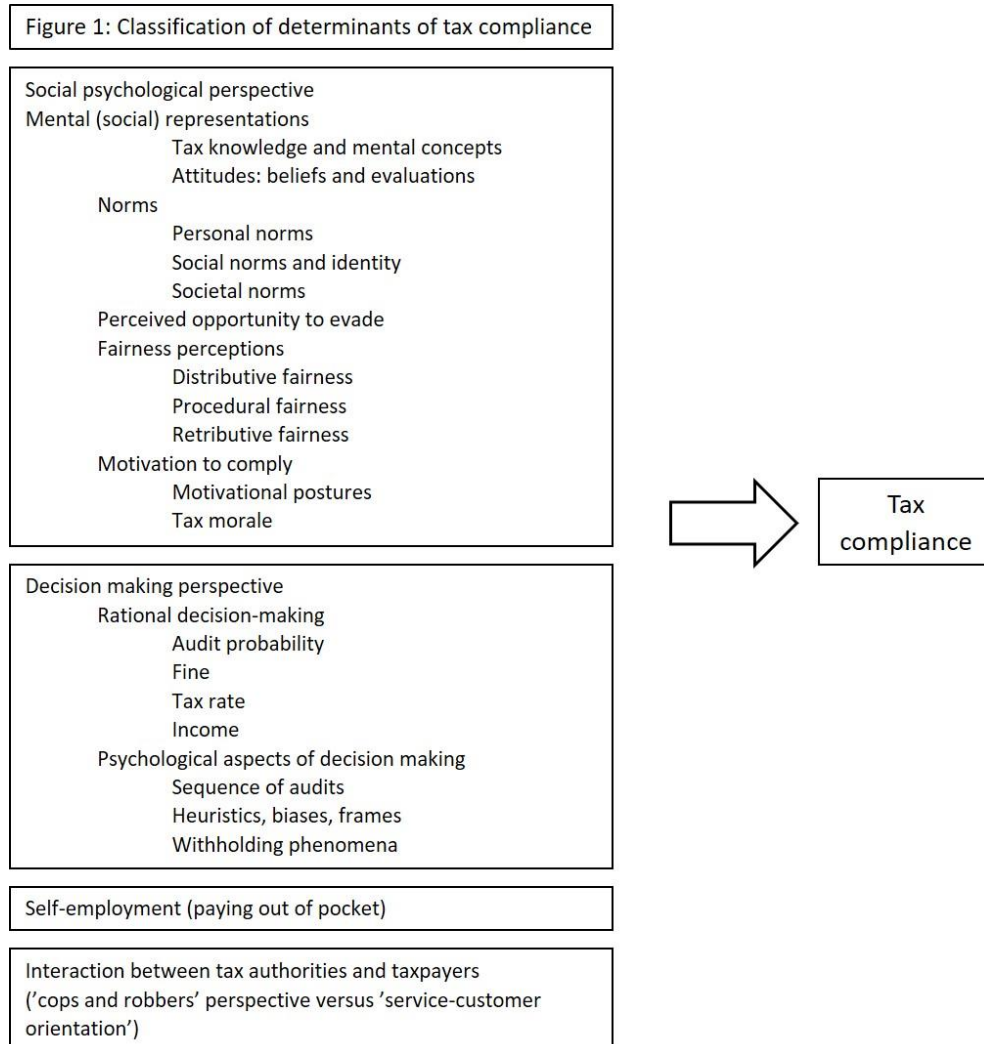
At this point the meaning of tax evasion or tax avoidance and tax compliance versus non-compliance should be clarified.

**Tax compliance** is probably the most neutral term to describe taxpayers' willingness to pay their taxes. **Non-compliance** represents the most inclusive conceptualisation referring to failures to meet tax obligations whether or not those failures are intentional. The degree of compliance varies, however, and non-compliance does not necessarily imply the violation of law. The meaning of compliance can be perceived, as some authors do, as a continuum of definitions, which ranges from the narrow law enforcement approach to wider economic definitions and on to versions of taxpayer decisions to conform to the objectives of tax policy and cooperation with the society. While at the one end of the continuum non-compliance is illegal, at the other end, non-compliance can conform to the law. McBarnet published a paper in 2001 in which he distinguishes between different forms of compliance:

- **committed compliance** is taxpayers' willingness to pay their taxes without complaints;
- **capitulative compliance** refers to reluctantly giving in and paying taxes; whereas
- **creative compliance** is defined as engagement to reduce taxes by taking advantage of possibilities to redefine income and deduct expenditures within the brackets of the law.

Tax behaviour can (and has been) be investigated from a political perspective, mainly focusing on **tax law complexity and shadow economy**, and from an economic perspective, with the focus on rational **decision-making and the impact of tax audits**, fines, tax rates and income on compliance. Tax behaviour researched from a behavioural economic and economic-psychological slant has focused on various **attitudinal variables, norms and fairness and decision** anomalies. All these approaches contribute to the understanding of tax compliance, as shown in Figure 1.

Figure 1: Classification of determinants of tax compliance



Source: Kirchler 2007 (p. 3.)

In most countries there is a legal distinction between tax avoidance and tax evasion.

**Tax avoidance is not illegal, as attempts are made to reduce tax liability by legal means, taking advantage of loopholes in the law and the ‘creative designing’ of one’s own income and deductions.**

**On the other hand, tax evasion is illegal, as it involves deliberately breaking the law in order to reduce the amount of taxes due.**

Evasion can involve acts of **omission** (e.g., failing to report certain assets) or **commission** (e.g., falsely reporting personal expenses as business expenses). ‘Tax evasion behaviour’ or ‘tax cheating’ can also be described as a deliberate act of non-

compliance that results in the payment of less tax than actually owed whether or not the behaviour eventuates in subsequent conviction for tax fraud. Tax evasion excludes inadvertent non-compliance resulting from memory lapses, calculation errors, inadequate knowledge of tax laws, etc.

However, many people may have difficulties in seeing the difference between tax evasion and tax avoidance from a **moral perspective**. For example, the house painter who does a bit of extra work in the black economy violates the law, while the wealthy investor who engages a tax lawyer to look for tax havens does not. From a moral point of view their behaviour may not seem to be all that different. Clearly, the borderline between what seems morally right and wrong does not always coincide with the border between what is legal and illegal.

On James and Alley's continuum-concept, one pole would be defined as committed, voluntary compliance, followed by capitulative compliance or compliance due to threats and harassments. Then would follow creative compliance, which, in the case where taxable income is designed against the spirit and purpose of the law, would result in tax circumvention and tax flight, and end in deliberately illegal actions, defining the other pole of evasion. They propose to define compliance in terms of following both the letter and the spirit of the law.

Under-reporting reduces the tax revenues of the state, affects public provision of goods and services, undermines tax effects on fair income redistribution, corrodes feelings of fair treatment and creates disrespect for the law. Therefore, there is little doubt that non-compliance should be contained, and evasion, in particular, needs to be combated. It is, however, **wrong to assume that the majority of people try to evade or avoid paying taxes**. Survey studies and experiments on income tax behaviour show that honesty characterises a majority of participants. The level of tax compliance generally appears to be quite high in most countries, regardless of the incentives to cheat, and much higher than expected by most economists relying on the rational choice model. This evidence seems to contradict the fact that the amount of US federal income tax evaded equals the US federal deficit as well as the assertion that shadow economy and tax evasion are of growing concern. We are left with seemingly contradictory findings on tax evasion: **on the one hand, the amount of evaded tax and the size of the shadow economy have increased, on the other hand, most studies find that only a minority of taxpayers evades taxes; the majority complies**. The interpretation favoured here is that, while the number of

people evading is still small, the amount (or sum) of evaded tax is increasing, and corporate crime is alarming. In other words, the few people evading higher amounts and corporations engaging in tax evasion and avoidance represent an increasing problem, while the quantity of people evading may remain constant. That being said, the absolute financial value of shadow work and tax avoidance is increasing at an alarming rate.

## Social representations, attitudes and fairness perceptions of taxation

Tax laws are **difficult to understand** and are of little interest to the ordinary taxpayer. This attitude can result from the belief that taxes are to be paid, taxes are unavoidable as income is taxed at source, or that attempting to understand the law is not worth the frustration due to its complexity.

While taxes might not be a frequently disputed issue in day-to-day conversations, people do try to make sense of their contributions to the community when taxes are due or whenever government spending is contested or new taxes are introduced. Moreover, people discussing taxation issues evaluate fiscal policy, tax rates and the use of taxes for the provision of public goods, as well as the interaction between themselves as taxpayers and tax authorities. Eventually, motivation to comply or not to comply develops, and this shapes subsequent behaviour.

### Social Representations

Unfamiliar and complex phenomena that are of high social relevance as, for instance, unexpected changes in the political arena, in economics (e.g., the introduction of the Euro) or in society in general (i.e., migration), stimulate interpersonal discussion and public discourse. Public discourse serves mutual information about the unfamiliar developments and sense-making. Since the majority of citizens are most likely not experts with regard to these topics, they usually exchange their lay views in order to understand and evaluate these issues. This serves the purpose of gaining information about the unfamiliar in order to understand and make sense of it. While experts are claimed to discuss phenomena of interest on an abstract level, follow the rules of logic, and aim at systematically evaluating arguments, the **discourse of laypeople is more concrete and symbolic**. Accordingly, knowledge is confounded with personal opinions, beliefs and attitudes, and subjective views of reality shaped by ideological

convictions and new content is categorized and integrated in existing concepts. These concepts emerging from social discourse are referred to as social representations.

In short, **a social representation can be considered as collective knowledge and feelings toward a social object or topic including shared attitudes on a societal or group level, which is influenced by individual attitudes.** However, social representations and attitudes are not equivalent concepts. Generally speaking, social representations can be described as systems of values, notions, ideas, knowledge, and practices shared by a group in respect to a social object and they fulfil two functions:

- First, to enable individuals to understand relevant phenomena and to provide orientation within the social environment.
- Second, to facilitate communication between the members of a group by providing a code for social exchange that allows unambiguous denotation and classification of diverse aspects of the environment.

While most people recognise the need for contributing to the public budget and are aware of public goods, their feelings towards taxes are often negative. Taxpayers' **knowledge is generally poor**, and survey studies reveal that taxpayers feel unqualified to file their taxes appropriately; thus, they need to seek help from tax practitioners. Despite their lack of competence and rather negative subjective concepts and evaluations of taxation, most taxpayers want tax practitioners to assist in correctly filing their taxes rather than provide advice to aggressively reduce the tax burden. Studies on subjective concepts about taxation show that **perceptions and interpretations of taxation differ between employment groups**: whereas the self-employed consider mainly limitation of freedom to invest 'their' money in their business, other white-collar workers and civil servants refer to fairness and norms. Taxpayers in general consider tax evasion illegal, but tax avoidance and tax flight legal, and accept them as driven by motives to save one's own money. Similarity of views of taxpayers and tax officials is related to the parties' mutual understanding of each other and the law, leading to a willingness to cooperate.

Attitude can be defined as a psychological evaluation of a particular object or situation with some degree of favour or disfavour that potentially influences behaviour. **Attitudes constitute an individual's disposition to respond favourably or unfavourably** to an object, a person, an institution, an event, or to any discernible aspect of the individual environment. In contrast to social representations



which address a socially built and shared concept, attitudes address individual opinions.

Existing definitions of attitudes relate to cognitive, affective, and conative characteristics. While cognitive responses are expressions of beliefs about characteristics or attributes of an event or situation (e.g., the belief that taxes are important for the provision of public goods or in contrast a theft by the state), affective responses are feelings toward the respective object (e.g., feelings related to taxes as expression of citizens' cooperation with the state or feelings toward the spending of tax money by the government). Conative responses are intentions and actions in relation to the attitude object (e.g., intentions to comply with the tax laws or to evade taxes).

The psychological literature on tax behaviour comprises studies on the relation between attitudes and tax compliance. However, it is important to emphasize that theoretical concepts, operationalizations, and measurement of attitudes vary considerably. As a consequence, sometimes evaluations of taxpayers' behaviours are confounded with evaluations of tax authorities, the government or fiscal policy. Overall, these studies reveal a **statistically significant, but moderate influence of attitudes towards taxation on intended behaviour** (i.e., self-reported behaviour). Therefore, the relation between attitudes and actual behaviour might be even weaker.

In a recent study, Kasper and his colleagues aimed at identifying potential changes in the evaluations of different types of taxpayers. In addition to the three types of taxpayers that had been considered in a previous (typical taxpayers, honest taxpayers, and tax evaders), tax avoiders were included as a further type. Participants had to fill in a questionnaire measuring attitudes towards these four types of taxpayers. The study included 235 Austrian participants, mainly employed, but also self-employed taxpayers. On the aggregated level all types of taxpayers were evaluated as rather positive. The scores of tax evaders were only slightly higher than zero, which means that they were evaluated quite neutral. In relative terms, there were substantial differences between the different types of taxpayers. Honest taxpayers were judged as equally positive as tax avoiders while the typical taxpayers were evaluated more positive than tax evaders, but not as positive as honest taxpayers and tax avoiders. In comparison to a reference study conducted two decades earlier, it is noticeable that tax evaders were not evaluated better than the

typical taxpayer anymore, but in the current study the tax avoiders are evaluated clearly positive and very similar to honest taxpayers. The evaluation on the single dimension stupid versus intelligent revealed an interesting result. While typical and honest taxpayers were judged as being moderately intelligent, tax evaders were perceived as significantly more intelligent, even surpassed by the tax avoiders, who were evaluated as most intelligent.

## Fairness perceptions

Besides moral principles and sentiments, the social dynamics that have received much attention are issues of fairness, either of the tax code or its enforcement, and taxpayers' evaluation of government expenditures.

In social psychology, three areas of justice are differentiated: distributive justice, procedural justice, and retributive justice.

- **Distributive justice** refers to the exchange of resources, both benefits and costs. Equity theories draw attention to the fair distribution of the results of exchanges between partners. If rewards and costs are borne equally and distributed fairly between partners, exchange is balanced, and the relationship is judged to be satisfactory. According to the equity rule, which is most likely applied in business relationships, partners are compensated in proportion to their contributions. In the field of tax compliance, distributive justice refers to taxpayers' perception of the balance of their share to the commons relative to the benefits they are entitled to receive, and to the contributions others make relative to their share of public goods. Research on horizontal fairness has examined the distribution of resources between taxpayers of comparable income groups.
- **Procedural justice** refers to the processes of resource distribution. In other words, if people perceive the formula used to distribute resources (benefits and costs) as fair, then procedural fairness is high. Procedures of allocation of resources are regarded as fair if the partners involved are treated in a way they think is appropriate. Treatments are considered fair if decisions about resource allocation are perceived as being consistent, accurate and free of errors, representative and ethical, and correctable in case of errors.
- **Retributive justice** is concerned with the perceived appropriateness of sanctions in cases of norm breaking. The central questions refer to attributions of responsibility to those guilty of wrongdoing, the restoration of damages to the wronged party and the punishment a norm-breaker deserves.



**Justice considerations imply that taxpayers compare their contributions and benefits as well as their treatment with others, and judgments of fairness depend on the perspective a person takes. Judgments of fairness may regard individual treatment and outcomes relative to other individuals or focus on group and societal outcomes.**

At an individual level, taxpayers are concerned with their individual tax burden and with their share of public goods.

Wenzel developed a framework that relied on two dimensions: the first dimension classified justice and fairness perceptions at an individual, group or societal level, while the second dimension distinguished between the distribution of resources, procedures and retributive justice. At the individual level, the perceived recipient unit is the individual. Taxpayers are concerned about fairness of their outcomes as well as being treated in a way they are entitled to in relation to their merits, efforts and needs. At the group level, the perceived recipient unit is a social group, e.g., occupational group, income group, a minority group in the country. **Taxpayers are concerned about fairness of the outcomes as well as of the treatment of their group.** Group members judge entitlements and treatments that they receive as members of a specific group, and resource allocation and procedures directed towards their group. Concerns regard specific constraints, tax rates, benefits, audits; and sanction practices are made with reference to a specific group. On the group level, dynamics of social categorisation and identification with a category come into play. At the societal level, the category to which taxpayers refer is the whole nation. Fairness judgments regard taxation in the country, fairness of progressive, regressive or flat tax, and procedures applied by the tax office.

Although it seems reasonable to assume that willingness to pay one's taxes rises if the distribution of tax burdens across citizens and groups is perceived as fair, if the exchange relationship with the government is balanced, and if procedural justice is high, the results of empirical studies do not unequivocally confirm this assumption. Lack of congruent findings in tax compliance research is not limited to justice perceptions. To the best of our knowledge, no study has revealed negative effects of perceived distributive justice; however, the positive impact on tax compliance was not always confirmed, and if the impact reached statistical significance, the effects were rather small. While it can be argued that tax behaviour is complex with many

variables influencing tax compliance, making it unlikely that one isolated determinant might explain a large proportion of variance, it should also be noted that there are probably **inter-individual and situational differences with regard to the relevance of fairness and justice issues** that might not be important to all taxpayers to an equal extent or relevant in all circumstances. For instance, experimental results have shown that taxpayers who received no public transfer generally perceived their exchange equity with the government to be less equitable than taxpayers who received a public transfer. However, the effect of the public transfer on reported income depends on the extent to which taxpayers refer to their perception of equity in their tax-reporting decisions. Participants who perceived equity to be important in their tax-reporting decisions reported more income when they received a public transfer, but reported less income when they received no public transfer, as predicted by equity theory. In contrast, participants who perceived equity to be less important in their tax-reporting decisions acted directionally consistent with the predictions of the neoclassical economic model. Besides inter-individual differences, situational differences may lower the predicted effect of justice issues. Because individuals' information processing capacities are limited, most individuals base their distributive justice perceptions on very few – one or two – salient dimensions of the situation. Depending on the actual social situation, taxpayers may perceive themselves as individuals or as members of a social group, such as a particular occupational group, or as members of the nation and interpret and evaluate fairness issues differently.

## **Motivation to comply**

The motivation to comply depends on subjective constructs of tax phenomena and collective sense-making of subjective tax knowledge, on myths and legends about taxation and others' tax behaviour, on subjective constructs and evaluations of perceived and internalised norms, perceived opportunities not to comply and fairness perceptions. The condensation of these variables results in the motivation and drive of taxpayers to behave honestly.

On the individual level, **motivational postures** are the driving factor of compliance and non-compliance, whereas at the national level, tax morale and civic duty are the motivational forces leading to or deterring from engagement in the shadow economy, tax evasion and avoidance. Motivational postures are an **integrative concept of taxpayers' beliefs, evaluations and expectations relative to their tax authority,**

as well as their actions in response to their beliefs, evaluations and expectations. Thus, motivational postures integrate the following concepts: subjective knowledge of tax law, subjective concepts, attitudes, norms and fairness perceptions, as well as intended behaviour. Motivational postures determine **how taxpayers position themselves in relation to tax authorities**. They determine cooperation and non-compliance and justification processes.

Braithwaite and her colleagues have identified five motivational postures. **Commitment and capitulation reflect an overall positive orientation towards tax authorities, whereas resistance, disengagement and game-playing reflect a negative orientation**. Table 1 represents definitions of the five postures accompanied by statements representing them. Depending on the motivational posture of taxpayers, enforcement strategies should vary from self-regulation to enforced self-regulation, and from discretionary and non-discretionary command regulation to prosecution. When taxpayers admit wrongdoing, correct their mistakes and begin meeting the law's expectations, the tax official's task is to educate, keep records and deliver service and advice. When taxpayers behave in an adversarial fashion, show resistance and disengagement, tax officials should respond with much harder measures, command regulation and finally respond with prosecution.

On the aggregate societal level, the concept of **tax morale** implies the collective (intrinsic) motivation to comply. Tax morale can be defined as the 'attitude of a group or the whole population of taxpayers regarding the question of accomplishment or neglect of their tax duties; it is anchored in citizens' tax mentality and in their consciousness to be citizens, which is the base of their inner acceptance of tax duties and acknowledgment of the sovereignty of the state' (Schmölders) or as '**internalised obligation to pay tax**', also linked to the concept of civic duty. Civic duty proposes that people are motivated not just by a concern to maximise their own well-being, but by a sense of responsibility and loyalty to the society and nation.

Responsible citizens with high levels of civic duty are collaborative even if the system allows non-compliance. Their behaviour is not regulated externally by audits and sanctions but by their concern for the society. Willingness to comply derives from a strong sense of civic duty. Considering tax morale as a social representation that guides taxpayers' behaviour, the concept has also much in common with Braithwaite's concept of motivational postures that was presented above, which places an even greater emphasis on the relationship with the tax authority. Generally, **higher morale was**

**found to be positively related to tax compliance, and on the aggregate level, high tax morale in a country was found to be negatively related to shadow economy.**

These findings and Braithwaite's work on motivational postures demonstrate the importance of subjective and socially shared representations of tax phenomena with regard to citizens' engagement in the shadow economy and tax evasion and avoidance.

Table 2: Motivational postures and statements representing them

Motivational posture	Description	Statements representing motivational postures	Regulatory strategies
<b>Commitment</b>	Commitment combines a positive orientation towards tax authorities and deference. The tax system is perceived as desirable, tax law and tax collection are perceived as fair. Committed taxpayers feel a moral obligation to pay their share and to act in the interest of the collective.	a) Paying tax is the right thing to do. b) I feel a moral obligation to pay my tax. c) Overall, I pay my tax with goodwill.	Self-regulation (make compliance easy by education, record-keeping, service delivery)
<b>Capitulation</b>	Capitulation reflects a positive orientation in terms of acceptance of the tax authorities which hold legitimate power to pursue the collective's goals. As long as citizens act according to the law, authorities are perceived to act in a supportive way.	d) If you cooperate with the Tax Office, they are likely to be cooperative with you. e) The tax system may not be perfect, but it works well enough for most of us. f) No matter how cooperative or uncooperative the Tax Office is, the best policy is to always be cooperative with them.	Enforced self-regulation (help to comply by real time business examinations, record-keeping reviews)
<b>Resistance</b>	Resistance reflects a negative orientation and defiance. The authority of tax officers may be doubted and their acts may be perceived as controlling and dominating rather than as supportive.	g) If you don't cooperate with the Tax Office, they will get tough with you. h) It's important not to let the Tax Office push you around. i) It's impossible to satisfy the Tax Office completely.	Command regulation (discretionary; deter by detection; audits with/without penalty )

<b>Motivational posture</b>	<b>Description</b>	<b>Statements representing motivational postures</b>	<b>Regulatory strategies</b>
<b>Disengagement</b>	Disengagement also reflects a negative orientation and correlates with resistance. Individuals and groups keep socially distant and blocked from view and have moved beyond seeing any point in challenging tax authorities.	j) If I find out that I am not doing what the Tax Office wants, I'm not going to lose any sleep over it. k) I don't care if I am not doing the right thing by the Tax Office. l) If the Tax Office gets tough with me, I will become uncooperative with them.	Command regulation (non-discretionary; use full force of the law; prosecution)
<b>Game-playing</b>	Game-playing expresses a view of law as something that can be moulded to suit one's purposes rather than as a set of regulations that should be respected as guideline of one's actions. In the field of tax behaviour, game-playing refers to 'cops-and-robbers' games with taxpayers detecting loopholes for their advantages and perceiving tax officers as cops who engage in catching cunning taxpayers.	m) I enjoy spending time working out how changes in the tax system will affect me. n) I enjoy talking to friends about loopholes in the tax system. o) I like the game of finding the grey area of tax law.	-

Source: Kirchler 2007



## Tax compliance decisions

A taxpayer may voluntarily decide to pay taxes or make an explicit decision to avoid paying the full share. A single person's contribution does not really make much difference in the overall contributions to public goods. Therefore, not paying one's taxes is advantageous as the amount of public goods and one's participation in them remains almost unchanged, while at the same time one saves on taxes. If few taxpayers evade taxes, public goods will not disappear or be reduced significantly; however, if a considerable number of taxpayers evade, the provision of public goods is not guaranteed and ultimately everyone will suffer from a suboptimal choice.

### **The tax system represents a social dilemma with individual interests being in conflict with collective interests.**

Two or more people are interdependent on obtaining outcomes; if few people try to maximise their own outcomes, defection is the rational choice. However, if a large number or all people maximise their outcome, the effect is that, sooner or later, everyone gets less than if they had chosen to cooperate. In other words, the tax system represents an n-player social dilemma, often referred to as tragedy of the commons, with defection as each taxpayer's rational strategy, independent of how other taxpayers decide to behave. If single taxpayers choose to pay their full share of taxes, they will be worse off because they support the free-riding, parasitic others.

### **From a mathematical and economic perspective, the optimal strategy for rational individuals is not to cooperate. On the aggregate level, this strategy leads to the worst outcome for the commons and ultimately for each individual.**

Therefore, participants need to be forced to cooperate by control mechanisms and severe sanctions in case of defection. A psychological perspective raises two considerations. First, **individuals are not necessarily egoistic utility maximisers but frequently behave altruistically**; they even donate to charity if there are no constraints and their donations remain anonymous. Second, **control and sanctions are not necessarily the best strategies to ensure cooperation**. In the case where one's own rational behaviour harms others, people are often considerate. The content and context of the situation are important determinants of cooperation, even if the structure of the social dilemma remains invariant and the rational strategy is defection. Also, ethical standards, individual and social norms, fairness considerations,

etc. prevent inconsiderate, egoistic utility maximisation. In social dilemma experiments, participants' cooperative behaviour also increases if their behaviour is publicly known, if they are allowed to communicate with each other and if mutual sympathy is established.

The **neoclassical economic approach to tax behaviour starts from the assumption that individuals and groups are rational agents** trying to maximise their outcome by avoiding taxes. Audits and sanctions to detect evasion are perceived as the dominant instruments to ensure cooperative behaviour. The likelihood of audits and sanctions allows a taxpayer to conceive of the tax system as a game in which they choose between (a) a sure loss, namely the taxes due, or (b) a probable gain via evasion and non-detection, or (c) a probable major loss resulting from evasion, detection and punishment. Decisions whether or not to pay taxes are predominantly considered choices regarding optimal portfolio allocation between a safe and a risky option. Becker assumes that individuals maximise the expected utility of the criminal behaviour by weighting the uncertain benefits of successful deviance against the risk of detection and punishment.

With regard to taxes, individuals are assumed to maximise their expected utility of the evasion by weighting the uncertain benefits of successful evasion against the risk of audits, detection and sanctions.

In their seminal works, Allingham and Sandmo and Srinivasan start with the assumption that taxpayers have the choice between two main strategies: a taxpayer may (a) declare the actual income, or (b) declare less than the actual income. When selecting the latter strategy, the **payoff** will depend on whether or not the taxpayer is investigated by the tax authorities. If the taxpayer is not investigated, he or she is clearly better off than under strategy (a). If the taxpayer is investigated and evasion is detected, he or she is worse off. Taxpayers are assumed to engage in maximising income by taking a decision under uncertainty. The economic model is based on the assumption that taxpayers are self-interested and generally engage in tax evasion if it pays. The theory states that taxpayers will evaluate the expected outcomes of the choice to evade and the choice not to evade taxes. They will compare the outcomes and prefer the option with the highest expected profit. Since taxes represent costs, a rational taxpayer chooses the option that costs less.

## The effect of audit probabilities, fines, tax rate and income effects

Empirical research consistently shows that the rational model (consisting variables of income, audit probability, fine rates and tax rates) is not working as neoclassical economics had intended.

The effect of audit probabilities on compliance has been studied most frequently as effect of the objective probability of audit occurrences. Most **empirical studies found support for the effect of audit probability on compliance, though the reported effects are sometimes weak**. Empirical evidence for the impact of high audit probabilities is quiet strong. Yet, in practice tax audits are costly and research consequently changes its focus towards alternative control mechanisms. Alternative audit mechanisms (e.g. auditing when the declaration falls below a certain threshold, or systems in which the detection of non-compliance increases future audit probability) lead to higher tax compliance even if the audit rules implicated fewer audits than random control systems. Also the findings by Guala and Mittone can be used to design an efficient audit-scheme. According to their results it might be advisable to audit particularly young and inexperienced taxpayers. Probably they will “learn” to be compliant if their very first tax file is checked by authorities.

There is a **multiplicative linkage between the effect of fines and audit rates, therefore, they may substitute each other**, as long as neither of them is set to zero. Higher fines simply make evading taxes more hazardous for taxpayers and should, therefore, deter from evasion. Empirically the deterrent effect of fines could not always be supported. The **observed effects were weaker than expected** and some studies even suggest that an increase of penalties can have undesirable effects and result in more tax avoidance. Interestingly, increasing the fines can even have the opposite effect by initiating tax avoidance. Some of the findings suggest that a policy based on deterrence is effective only in combination with frequent audits. The most extreme penalties will have no effect, if it is common knowledge that audits virtually do not occur.

Would higher tax rates decrease compliance? No clear hypothesis emerges from the standard economic model. Two counteracting effects are proposed: On the one hand, a high tax rate reduces effective income and, therefore, makes tax evasion more profitable. On the other hand, by reducing effective income absolute risk aversion increases. Consequently, evasion should be reduced. **Most empirical studies on the impact of tax rates support the assumption that high tax burdens have negative**

**impact on compliance. However, the strong connection of income and tax rate makes final conclusions difficult.**

Regarding income-effects, predictions of the standard economic model are ambiguous. Though wealthier citizens are more likely to evade their taxes since the level of absolute risk aversion decreases with income, it is not clear if severity of evasion is an increasing or decreasing function of income. Definite conclusions cannot be drawn from the empirical studies reported. **Evidence for income effects is inconsistent.** Though a slight majority of studies reports a negative relation of income and compliance, also opposite and zero effects were found. The ambiguous evidence could possibly be explained by other variables moderating or mediating the effect of income. Besides the problem of relative risk-aversion, several variables can be imagined to weaken the income effect or to trigger its direction. For instance, opportunities for tax avoidance might vary with income. High-income earners are able to afford professional tax advisors, who know about the loopholes in tax law. If tax avoidance is possible, the tax burden can be reduced without breaking the law and taking the risk of paying a fine. Also, self-employed have more possibilities to avoid taxes than employed taxpayers. However, self-employed taxpayers have also more opportunities for tax evasion and opportunities might further increase with the number of different income sources. Hence, in compliance decisions the level of income might interact with its source.

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