

Deterrence and tax morale in the European Union

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Deterrence has been the prevalent strategy to enforce tax revenue both throughout history and in economic theory. This approach is, however, problematic because it is inconsistent with empirical reality. I wish to consider a new way of thinking about taxation, following psychological economics. I submit that individuals have a substantial amount of civic virtue and tax morale. Taxation is 'quasi-voluntary' and cannot reasonably be enforced by deterrence. Tax morale is lowered when the citizens have little trust in their state, and feel badly treated by the tax office. According to official surveys, the European Union is faced with a 'democracy deficit' and dwindling support from the citizens. At the EU-level, civic virtue and tax morale can be improved by offering more (direct) political participation rights and raising taxes in a decentralized way.

1. Deterrence in taxation

Nobody likes having to pay taxes. How then can people be made to pay their dues? There is a simple answer to this question: people have to be forced to pay taxes by punishing them if they try to evade such payment. This solution has predominated throughout history. (But there are exceptions – in ancient Greece, resources were shifted from the rich to the poor without coercion. Most of the public improvements were built with the liturgy, a voluntary contribution from the rich to the city state¹). This solution is also accepted as a matter of course in all countries and for all kinds of taxes. It is assumed that people only pay taxes because the government and its tax administration follow a *deterrence policy*. This does not mean that one would observe many persons being punished with fines or imprisonment. The idea is rather that the threat of punishment will suffice for people to find it more rational to pay their dues. Tax policy in the countries of

the European Union follows this lead. As is well known, the European Union does not yet have any taxing powers. Rather, the taxes required to finance the expenditures by the European Union are administered and collected by the individual member countries. Moreover, such EU expenditures, while quite large in absolute size, are only modest (1.2%) relative to the combined GDPs of the member states. The EU receives contributions by the member states consisting of customs duties, agricultural levies, 1.4% of the 'common' value added tax (VAT) base, and a budget-balancing GNP-based contribution.^{2,3} However, the European Union is likely to raise its own taxes in the future. Several European politicians have been arguing to that effect and the constitutional blueprint seems to provide for it. Thus, the European Union as an organization, as well as its member states, will be faced with the question of how to raise taxes efficiently and fairly. Taxation in the member states of the EU has reached enormous levels. In 2000, tax revenue amounted to €3.6 trillion. This is no less than 42.5% of the combined GDP in the European Union. This is large in comparison to the main competitor, the United States. In that country the tax ratio is only 29.4%, i.e. is 13 percentage points lower than in the European Union.²

Conventional tax policy suggests that people must be made to meet their tax obligations by threatening them with punishment if they fail to do so. The notion that people must be forced to pay their taxes by threat of punishment is based on established economic theory. The standard model of tax evasion is due to Allingham and Sandmo.⁴ Taxpayer behaviour is based on the expected utility maximization calculus. It represents a special application of the economic theory of crime championed by Becker.⁵ The fundamental insight is that the extent of tax evasion depends negatively on the probability of being caught and the size of the punishment if caught.⁶⁻⁹ A taxpayer with a given income faces a given (marginal) tax rate. Taxpayers are periodically asked to declare their income. Honest taxpayers report their true income, dishonest taxpayers report less than their true income. The tax administration does not know the actual (true) income and attempts to enforce tax compliance by a system of audits and penalties. The audits take the form of controls by the tax authority entailing a specific probability of detection for each individual taxpayer. Rational taxpayers are taken to declare less than their true income when the expected fine (as a multiple of the undeclared income) is less than the marginal tax rate. Following this model, the amount of undeclared income decreases the higher the expected fine. Both increase in the probability of detection and the size of the fine reduces tax evasion. The higher the deterrence, the lower tax evasion.

However, this seemingly convincing model of tax paying is faced with a major problem: it is incompatible with what is observed in reality.

In two respects, the theoretical model does not correspond to what has been found in careful empirical analyses.

- (1) *The deterrence model predicts too much tax evasion.* Most countries apply a low level of deterrence to taxpayers. The model of expected utility maximization therefore predicts a high level of tax evasion. Following the models' rationale, taxpayers should evade much more than they actually do, i.e. compliance is too high. In the case of the United States, it has been argued: 'A purely economic analysis of the evasion gamble implies that most individuals would evade if they are "rational", because it is unlikely that cheaters will be caught and penalised' (Ref. 10, p. 22). The conventionally used measure of risk aversion by Arrow-Pratt would have to be more than 30 in order to account for the present compliance rate in that country. The actually measured level of risk aversion reported, however, lies only between 1 and 2.^{10,11} Hence, actual tax evasion, as well as tax evasion reported in experiments (see Ref. 12 for a survey), is lower than the level predicted by expected utility maximization. Similar inconsistencies between the theoretical model of tax payment and empirical observations have been found for other countries.

In Switzerland, for example, it has been calculated that a coefficient of relative risk aversion of 30.8 would be necessary in order to achieve the compliance rate of 76.5% in a sample of cantons and the time period 1970-95.¹³ This coefficient is computed by using the values for the probability of detection (0.00055), the fine (0.97) and the marginal tax rate (0.24). But field evidence suggests again that relative risk aversion varies between 1 and 2. The standard tax evasion model is not able to account for the high level of compliance.

- (2) *The econometric parameter estimates are unsatisfactory.* The empirical estimates of the effects on the size of tax evasion of the parameters for the probability of being caught and the size of the fine often turn out not to be statistically significant. Moreover, sometimes their signs are inconsistent with the theory. Consider pooled cross section time series data for the 26 cantons of Switzerland over the time period 1970-95 (see Ref. 13, Table 1). In addition to the probability of detection and the size of punishment, the econometric model also includes the marginal tax rate, income per capita, and other control variables, as well as time dummies as explanatory variables.^{14,15} A multiple OLS-regression confirms that the conventional tax evasion model does not perform in a satisfactory way. While more than 70% of tax evasion in the cantons can be traced, only the size of the fine for tax evasion is statistically significant at the 5% level. The probability of detection is far from being statistically significant and moreover has a theoretically unexpected *positive* sign.

This would mean that people evade *more* taxes the more likely they are to be detected. Similar econometric results have been found in many other studies and for other countries.¹⁶⁻¹⁸

The two empirical results just reported strongly suggest that the standard model of tax evasion disregards a crucial factor in explaining taxpayers' behaviour. There is compelling evidence that the deterrence model, and therewith tax policy based on deterrence, is at best incomplete, and may even be wrong.

2. What is the missing factor?

Over the years, many efforts have been made to explain why tax evasion deterrence is not able to explain actual tax payment. Most scholars have attempted to keep the standard expected utility maximization model of taxation, but to improve the econometric estimates by adding more and better control variables.

In this study, I invite the reader to take another journey. I suggest a new way of thinking about human behaviour based on new research in psychological or behavioural economics.¹⁹ This requires departing from the familiar idea that human beings are selfish and solely react to extrinsic incentives. A motivation is extrinsic if the rewards come from outside the person being considered. It can, and often does, consist of monetary payments and other forms of material compensation. But it can also consist of the appreciation coming from other persons or, in general, from achieving fame and status.

The traditional model of 'homo oeconomicus'^{20,21} is amended in favour of a broader concept of human beings. Human beings are *also* motivated by *prosocial* or *altruistic* considerations.²² This does not mean that the 'homo oeconomicus' is rejected as being false. This model rightly emphasizes that, much of the time and under many circumstances, individuals systematically react to extrinsic incentives. This approach provides economics with considerable insights. Indeed, the whole intellectual programme of the 'Rational Choice' approach has been based on that premise. It has allowed economics to become a general social science and has enabled it to make important contributions to areas beyond the economy. This extension has sometimes been called 'economic imperialism',²³⁻²⁵ as it uses the mode of analysis current in modern economics to fields previously reserved for other disciplines. Such well-known areas are the economics of politics, the environment, the family, health, education, sports, religion and the arts (the pathbreaking contribution is by Becker,^{26,27} and surveys of the state of the research are given in Kirchgaessner²¹ and Frey²⁰). It has led to fields such as 'Law and Economics', 'Public Choice' or 'Rational Choice Sociology', where a new type of interdisciplinarity based on a common theoretical approach has been created.

The new approach championed here combines extrinsic with intrinsic

motivation – extrinsically motivated persons respond to rewards and punishments imposed from outside, while intrinsically motivated persons undertake an activity for its own sake, without receiving any reward from other persons.^{28–32} However, as will be seen, the emphasis is not on what behaviour is motivated by what type of motivation. This would be a hopeless task, because it is always possible to attribute some particular action to *some* type of extrinsic, or to *some* type of intrinsic, incentives. Rather, the emphasis will be on the dynamic relationship between the two types of motivation.

Section 2.1 seeks to demonstrate that intrinsic motivation in the form of ‘tax morale’ is of substantial importance in explaining tax paying behaviour. Section 2.2 introduces ‘Crowding Theory’, which establishes a systematic relationship between intrinsic and extrinsic motivation, and Section 2.3 applies Crowding Theory specifically to taxation.

2.1. *The role of tax morale*

Many scholars have appreciated that *morale* is important for explaining tax paying behaviour in a satisfactory way.^{7,10,33–40} It has been well established that taxpaying behaviour cannot be explained in a satisfactory way without taking tax morale into account. Thus, based on the American Internal Revenue Service’s Taxpayer Compliance Measurement Program, Graetz and Wilde conclude that ‘the high compliance rate can only be explained either by taxpayers’ [...] commitment to the responsibilities of citizenship and respect for the law or lack of opportunity for tax evasion’ (Ref. 11, p. 358). The same authors⁴¹ attribute the observed falling tax compliance in the United States to the erosion of tax ethics. But its effect on tax evasion has seldom been studied in a systematic way. In particular, introducing tax morale in a theoretically consistent way with the deterrence effects has been neglected. Tax morale has been introduced to account for the *level* of tax evasion (i.e. to account for the first shortcoming identified above), but not to deal with the disappointing econometric estimates of the marginal effects on tax evasion (the second shortcoming identified above).

The relationship between taxpayers and the tax office can be looked at as an implicit, relational contract.⁴² It involves strong emotional ties and loyalties, and goes far beyond transactional exchanges,⁴³ where a good or service is traded for money in an anonymous way. Social psychologists^{44,45} have been using this concept for a long time, calling it a ‘*psychological*’ contract to set it clearly apart from formal contracts, which are obeyed because the parties respond to the explicit and material sanctions previously agreed upon (psychological contracts have been successfully used to analyse relationships within the firm).⁴⁶ Tax morale must be put in the general context of the relationship between citizen and the state:

- At the one extreme, there are *exploitative governments* ruling their people in an authoritarian or even dictatorial way. Most governments in history have been of this type, and even today it applies to a large number of states. Under these conditions, the individuals have to be *forced* to pay taxes because they know only too well that most of the revenue is not used for expenditures from which they will benefit. The deterrence model is fully applicable.
- At the other extreme, there are *participatory governments* in which the taxpayers as citizens can themselves determine for what purposes the revenues should be used. This takes the form of (semi-)direct democracies, in which the citizens have initiative and referendum rights.⁴⁷⁻⁵⁰ Examples are provided by many American communes and some states, in particular California and Oregon, as well as Switzerland which, in addition, grants citizens extensive direct participation rights at the national level. Due to these participation rights, individuals establish a special relationship to 'their' state. They are *citizens* rather than subjects, and have extensive rights *and* obligations to their state. As a consequence, *civic virtue* emerges which, with respect to taxation, shows up as tax morale.⁵¹⁻⁵³
- Most states lie somewhere in between these extreme forms. West European representative democracies are close to the participatory type. Many countries in transition and most third world countries are close to the exploitative type. There may also be differences within a country. In Southern Italy, individuals exhibit no civic virtue towards the state, while in Northern Italy they do. This has been expressed in terms of social capital being low.^{54,55} In general, therefore, there is tax morale to some extent. Even with respect to taxation, individuals are not solely pursuing their own selfish benefits in the calculating manner modelled by the standard economic theory of taxation.

2.2. *The relationship between intrinsic and extrinsic motivation*

External interventions may under some circumstances undermine intrinsic motivation, and under other conditions strengthen intrinsic motivation. The dynamic relationship between the two forms of motivation has been termed '*Crowding Theory*',^{30,32}

The fact that external interventions in the form of rewards or sanctions may crowd out intrinsic motivation is derived from insights on the part of psychologists. A group of cognitive social psychologists have identified that,

under particular conditions, monetary (external) rewards undermine intrinsic motivation.⁵⁶⁻⁶⁰ Giving rewards for undertaking an activity thus has indirect negative consequences. For that reason, the effect has been termed '*The Hidden Cost of Reward*'⁶¹ or '*Overjustification Hypothesis*'.⁶² More recently, the idea has been called '*Cognitive Evaluation Theory*'.⁶³

The undermining effect of rewards on intrinsic motivation has been generalized in economics in three different ways:

- (1) External interventions undermine intrinsic motivation when they are perceived to be *controlling* by the individuals concerned ('crowding out effect'), and they maintain or raise intrinsic motivation when they are perceived to be *supportive* (crowding-in effect) – the underlying psychological processes depend on how self-determination and self-esteem are affected.^{57,64}
- (2) All types of external interventions may negatively affect intrinsic motivation, i.e. not only offering rewards, but also issuing orders, imposing rules and regulations, as well as punishments. Thus, *deterrence* imposed by the tax authority may crowd out individuals' intrinsic willingness to conform to tax laws. Tax morale may be undermined.
- (3) The intrinsic motivation affected comprises actions undertaken both for their own sake as well as *internalized norm guided behaviour* such as a feeling of obligation to pay one's taxes.

A large and rapidly increasing number of studies have obtained laboratory as well as field evidence for the supporting and undermining effects on motivation of external interventions. The large number of laboratory experiments in psychology on the crowding effect have been summarized in no less than seven formal meta-analytical studies.^{63,65-70} They document that the crowding-out effect is a robust phenomenon of significant size under the specified conditions. Experimental research in economics lacks the long-standing and rich tradition concerning crowding effects on motivation found in psychology. There are nonetheless an increasing number of studies conducted on the subject^{71,72,73} supporting the existence of crowding-out and crowding-in under specific conditions. Crowding Theory has also been empirically analysed, and generally supported, in field studies.⁷⁴⁻⁷⁶ These studies do not, however, deal with topics directly relevant for the relationship between the tax authority and the taxpayers, and are therefore not further discussed here (see Ref. 77 for a survey on the evidence from field studies).

2.3. Application to taxation

The tax authority can be assumed to maximize expected net revenue, i.e. tax revenue less administrative costs (see, for example, Ref. 6, p. 826). But in contrast to what has been assumed in the traditional tax literature, audit costs are not the only costs. Rather, the tax officials take into account that the way they treat the taxpayers systematically affects the latter's tax morale, and therefore their willingness to pay taxes, which in turn affects the cost of raising taxes. Our approach thus differs from the notion that tax collection means using threats to get the taxpayers to pay their dues. Rather, individuals pay their taxes based on two motivations. The first is indeed their reaction to the deterrence built up by the tax administration and described by the expected utility model. The second is individuals' sense of obligation to 'their' state, embodied in their tax morale. In democratic states, both motivations matter. Nobody likes to pay taxes, not least because it involves a public good and there are incentives to free ride. Thus, deterrence is needed to enforce taxation. At the same time, there is a voluntary component to paying taxes. Tax payment can rightly be described as a 'quasi-voluntary' act.

It is realistic to assume that tax officials are aware of the effects on taxpayers' behaviour suggested by Crowding Theory. In order to maximize net tax revenue, they are interested in keeping down the costs of collecting taxes. They know that a respectful treatment of the taxpayers tends to support and raise their tax morale, which in turn considerably lowers the cost of tax collection. In contrast, a disrespectful treatment of taxpayers undermines their tax morale and therewith raises the costs of raising taxes. *Respectful treatment* can be split into two different components. First, the procedures used by auditors in their contact with taxpayers must be transparent and clear. In the case of arbitrary procedures, taxpayers feel helpless and get the impression that they are not taken seriously. Such behaviour reduces the intrinsic motivation to pay taxes. Second, respectful treatment has a direct personal component in the sense of how the individual personality of taxpayers is respected by tax officials. If they treat taxpayers as partners in a psychological tax contract, instead of inferiors in a hierarchical relationship, taxpayers have stronger incentives to pay taxes honestly.

Tax authorities only behave in a respectful way towards taxpayers when there is a substantial level of tax morale to begin with. Tax officials are, at the same time, well aware that tax payments do not solely depend on tax morale, but that extrinsic incentives play a major role. In particular, deterrence against tax evasion has to be used to prevent taxpayers with low tax morale, or lacking tax morale altogether, from exploiting the more honest taxpayers and escaping payment of their due share. The sole reliance on deterrence, as suggested by a large part of the tax compliance literature based on subjective expected utility maximization,

only represents a special case applying under restrictive conditions. Such a special case occurs when the tax officials are convinced that individuals' tax morale is low or does not exist at all. In general, however, the optimal balance seems to be the simultaneous use of both, respectful treatment and deterrence. The higher the initial level of tax morale, and the stronger the crowding out effect, the less emphasis is put on deterrence, and the more respectfully taxpayers are treated. At the same time, respectful treatment tends to raise tax morale. There may thus be mutually reinforcing effects.

3. Empirical evidence

The new view of what motivates tax payments and how deterrence affects intrinsic motivation has been analysed on two different levels – these are the two levels differentiated in Constitutional Economics.^{78–83} At the *constitutional level* (Section 3.1) the basic relationship between taxpayers and their state is established. That is the level where the basic political participation rights are established. At the *current politico-economic level* (Section 3.2) what matters is the way the taxpayers are treated by the tax authorities.

3.1. Constitutional level: citizens' political participation rights

Crowding Theory can be applied to how constitutional and other legal rules affect the individual citizens. Civic virtue is bolstered if the public laws convey the notion that citizens are to be trusted. Such trust is reflected in extensive rights and participation possibilities. Citizens may be given the freedom to act on their own with respect to economic affairs, the freedom to express themselves freely and to demonstrate and strike if they feel dissatisfied with particular government decisions and, most importantly, to take significant political decisions themselves by using referenda and initiatives. The basic notion enshrined in the constitution that citizens are, on average and in general, reasonable human beings thus generates a crowding-in effect of civic virtue and tax morale.

In contrast, a constitution implying a fundamental distrust of its citizens seeks to discipline them. This corresponds to David Hume's statement: *'[...] every man ought to be supposed to be a knave [...]', and that 'this general citizens' behaviour has to be guarded against'. The distrust in the citizens shows itself in various ways. Most generally, it consists in curtailing institutions of direct democracy because the 'classe politique' feels that citizens are unable to take reasoned political decisions. A sign of distrust towards the citizens is also enshrined in the constitution when government is given a lot of supervisory power, and when little room is left to the individuals to act on their own. In such cases, controls by bureaucracy and police are extensive, and a citizen is considered not to be

*D. Hume (1898 [1754]) *Essays: Moral, Political, Literary* London: Longmans, Green

trustworthy in any undertaking. The burden of the proof to have acted correctly lies with the individual citizen, while the public authority is considered to be correct *a priori*. These attitudes are also reflected in the fundamental construction of tax laws. In some countries (e.g. Germany or France), it is assumed that all citizens want to cheat with regard to taxes, and they therefore have to prove that they have paid all that they legally owe. In other countries (e.g. Switzerland and the United States), it is assumed that the citizens are prepared to pay their 'fair share', and the tax administration has to prove if this is not the case.⁸⁴

The effects of a distrustful constitution show up in various ways. The citizens are dissatisfied with the political system and respond by breaking the constitution and its laws whenever they find it advantageous. In particular, the individuals adopt a purely calculating attitude towards paying taxes. They compare the benefits to be gained from evading taxes with the expected costs if caught, irrespective of whether tax evasion is illegitimate or illegal. The interactions between individuals and the government are then characterized by high transactions costs and low productivity. As the political system functions badly, general cynicism tends to take over. Such a development occurred in many communist countries and still exists in totalitarian states.⁸⁵

Attempts to measure the effect of different constitutional conditions on citizens' civic virtue are necessarily faced with great difficulties and uncertainties, and there is only partial evidence available. Most promising are indirect approaches, which look at revealed behaviour in terms of tax payments. Switzerland presents a suitable test case, because the various cantons have different degrees of political participation. The more extended is that opportunity for political participation in the form of citizens' meetings, obligatory and optional referenda and initiatives, and the broader are the respective competencies, the higher is tax morale and (*ceteris paribus*) tax compliance.⁸⁶ In cantons with a high degree of direct political control, the part of income concealed falls short of the mean of all the cantons by 7.7 percentage points or, in absolute terms, the average amount of income concealed is about SFr 1,600 (per taxpayer) less than the mean income concealed in all cantons. In contrast, in those cantons with a low degree of political control, where tax morale is (*ceteris paribus*) lower, the part of concealed income is four percentage points higher than the average income gap, and the mean income undeclared exceeds the mean of all cantons by about SFr 1,500. These results are consistent with the hypothesis that greater opportunities for democratic participation lead to higher civic virtue, as reflected in taxpayer behaviour. Such conclusions are supported by a study⁸⁷ analysing the influence of the various extents of direct democratic participation rights on tax morale as measured in the World Values Survey. This survey collects the responses to the question of whether people 'think it can always be justified, never be justified, or something

in between: Cheating on taxes if you have the chance'. It turns out that direct democratic rights have a highly significant and large positive effect on tax morale.

The empirical evidence collected for Switzerland can be generalized. Citizens can be considered responsible persons who, in principle, are prepared to contribute to the provision of public goods. On the other hand, assuming that all citizens want to exploit tax laws to the fullest crowds out civic virtue on which an effective constitution and other public laws crucially depend. Individuals then try to evade taxes according to subjectively expected selfish utility. Therefore, care must be taken not to design a system of laws fundamentally distrusting citizens. Rather, citizens should be involved as much as possible in public affairs. This can best be achieved by granting them extensive direct political participation rights.

3.2. *Current politico-economic process: how taxpayers are treated*

To study the effect on taxpayer behaviour of how taxpayers are treated by the tax office, a survey was sent to the tax authorities of the 26 Swiss cantons.¹³ Detailed questions were asked about the legal background of tax evasion: the use and size of fines, the link between tax payments and the provision of public services, the perceived feedback effect of tax evasion at the level of public services, the intensity of control by tax authorities, the existence of tax amnesties, and whether the tax register is published in a jurisdiction. The survey also included questions on the treatment of taxpayers by tax authorities in day-to-day audits, in particular when a taxpayer is suspected of not having correctly declared his or her income. The following questions serve specifically to identify the policy parameters included in the theoretical model.

The extent of *respectful treatment* of the taxpayers is captured by:

- Fully observing procedures based on formal and informal rules. What happens in a typical case if a taxpayer does not declare taxable income at all (procedures, fines), if a tax declaration is wrongly filled out or, in a second stage, if taxpayers do not react?
- Acknowledgement of individual citizens' rights and personality. What does the tax administration do if taxpayers mistakenly declared taxable income too high? Are there any differences in treatment whether these mistakes are formally wrong, e.g. mistakes in adding up columns of figures, or possibilities for legal tax avoidance, e.g. tax deductions, are not used? Are there attempts to find out whether taxpayers intentionally or mistakenly declare too low a taxable income? Are mistakes in the tax declaration to the advantage or to the disadvantage of *taxpayers*?
- Avoiding high penalties for minor offences and giving taxpayers the benefit of the doubt. What are the minimum, maximum and standard

finances for tax evasion, the fines relating to inheritances and self-declaration, as a multiple of the tax payment (or in percent of the tax payment)?

Deterrence of tax evasion has been captured in the following way.

The respective questions inquire into taxpayers' legal duties and penalties for not complying. Is the criminal code applied in the case of tax fraud, i.e. is it possible to impose a prison sentence or a monetary fine? What is the maximum monetary fine in the case of tax fraud (maximum fine in thousands of Swiss Francs)? What is the average monetary fine for tax fraud? Are the monetary fines for tax fraud added to the fine for tax evasion if tax fraud is part of the criminal code? What is the maximum prison sentence for tax fraud? What is the average prison sentence for tax fraud?

The way taxpayers are treated by tax authorities reveals interesting differences amongst the Swiss cantons. Only 58% of Swiss cantonal tax authorities believe that mistakes in reported incomes are, on average, in favour of taxpayers; 31% believe that mistakes are neither to the advantage nor to the disadvantage of taxpayers, and 12% believe that mistakes are to the disadvantage of taxpayers. These answers indicate a general lack of distrust towards taxpayers.

If a taxpayer does not report his or her true taxable income, tax authorities can contact him or her in several different ways: 54% of the cantons phone the person concerned and ask how the mistake(s) occurred in the tax reporting form and what explanation the taxpayer has. All of the cantons send a letter to the taxpayer, half of them with a standard formulation. Nearly 85% ask the taxpayer to pay a visit to the tax administration office, but only half of the cantons explicitly mention the possibility of punishment. Thus, tax authorities rarely adopt the strategy of explicit deterrence, but rather seek to gain additional information. Ninety-six percent of the cantonal tax authorities correct reported incomes that are too high, i.e. reduce taxable incomes when taxpayers commit mistakes that are to their disadvantage. Twenty-seven percent of the tax authorities correct reported taxable income, even if taxpayers fail to profit from legal tax savings.

The following four propositions relating to the interaction of deterrence and tax morale are proposed.

Proposition 1: A deterrence policy reduces tax evasion, provided tax morale does not exist or is constant.

Proposition 2: In the absence of a relative price effect, the application of deterrence raises tax evasion, as tax morale is crowded out.

Proposition 3: When the deterrence effect is larger than the crowding out effect, tax evasion is reduced.

Proposition 4: A more respectful treatment of taxpayers by the tax authority unequivocally reduces tax evasion, as tax morale is bolstered.

These four propositions were econometrically tested.¹³ The variable to be explained (dependent variable) is the amount of income evaded in percent of true income among Swiss cantons over the period 1970–95. The estimation results can then be compared with the four propositions. The empirical evidence suggests that neither pure deterrence (Proposition 1) nor pure crowding-out (Proposition 2) is the appropriate model. Various variables indicate that *both* deterrence and crowding-out of tax morale play a role in explaining tax evasion. The empirical estimates suggest that deterrence via the size of punishment and authoritarian behaviour is able to reduce tax evasion (Proposition 3). But that is not the case for the probability of being detected where the crowding-out effect possibly dominates the direct deterrence effect, leading to a higher incidence of tax evasion. Our theoretical model including endogenous tax morale thus takes this result into account, which, in the framework of pure deterrence, contradicts theoretical expectations.

The empirical evidence is fully consistent with Proposition 4. A more respectful treatment of taxpayers leads to less tax evasion. A respectful treatment of taxpayers by the tax office reduces tax evasion by about the same amount as does an authoritarian procedure.

4. What future for taxation in the European Union?

The European Union has not yet directly raised any taxes. It may therefore be thought that the issue of balancing deterrence and tax morale is of little, or no, relevance. However, this implication does not hold because it is quite likely that the European Union will, in the future raise its own individual taxes. While this is not in the official programmes yet, some politicians have already started to discuss that possibility. The power to tax is likely to be accorded to the EU in the 'constitution' being presently discussed as well as in further developments due to take place in the future. The taxation issues here discussed do not only apply to the individual member countries but also to the European Union as an organization. The problems arising from this will be particularly severe as the taxes accorded to the EU will be perceived by the populations as *new* and *additional* taxes – and such taxes tend to be resented by the population more than old established taxes. Therefore, the task of raising taxes in a way that is considered efficient and fair by the population will be the more difficult.

In the coming years, the European Union must choose a position somewhere between two polar options.

- (1) The European Union authorities can embark on a taxation policy in which the tax subjects are forced by *deterrence* to pay their dues. Under present conditions, this seems to be the only feasible policy. Taxpayers are rather dissatisfied with democratic conditions in the EU as will be shown below. They must therefore be expected to have low civic virtue and tax morale with respect to that political unit. But then the deterrence policy faces considerable costs. The resistance to paying (what are perceived to be *additional*) taxes to the EU significantly raises collection costs. The tax subjects seek all legal (and also illegal) ways and means of escaping the new taxes. They are not hindered in their efforts by any moral constraints.
- (2) The European Union may engage in a decisive effort to *win the support* of its citizens, and to therewith *build up civic virtue and tax morale*. Such a policy may not be restricted to a narrowly conceived tax policy, but must involve the whole relationship between the European Union and its citizens.

The following aspects have to be taken into account.

- The most frequently heard criticism of the European Union is certainly its '*democracy deficit*'. Many observers argue that this institution has been very successful in its economic aspects. In contrast, its political organization is considered to be far from perfect. It might even be argued that it lacks the essential features of a modern democracy, in particular a government responsive to the citizens. The Eurobarometer data (the Eurobarometer collects official data for the EU) reported in Figure 1 suggests indeed that the citizens of the various member countries are rather dissatisfied with democracy in the European Union.

As the graph shows, in the spring of 1999, 42% of the persons living in the European Union declare themselves to be 'satisfied with democracy in the EU'. This average increased compared to spring one year earlier (1998), when it was only 35%. A significant increase may be observed for Portugal, Belgium and Spain. This improved satisfaction is possibly due to the fact that the European Parliament, whose members are directly elected by the citizens of the 15 member states, set a process in motion that led to the resignation of the European Commission under the presidency of Jacques Santer on 15 March 1999.

However, it must still be noted that clearly less than half (42%) of the citizens report being satisfied with the way democracy works in the European Union. Dissatisfaction is particularly marked in Sweden (19%), Denmark (30%), the United Kingdom (32%), and Finland (37%). Thus, the Scandinavians, who are particularly proud of having

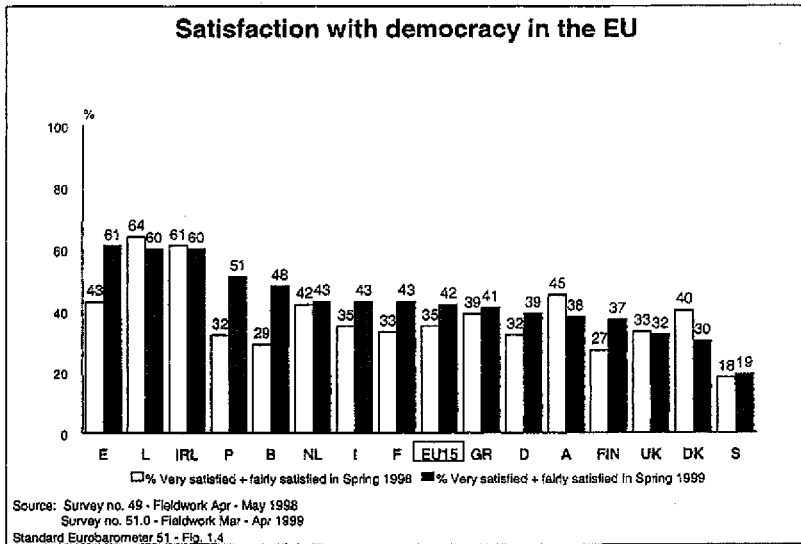


Figure 1. Satisfaction with democracy in the European Union.

well-functioning democracies in their own countries, are most dissatisfied. Dutch citizens show about average satisfaction (43%) with democratic conditions in the EU. In several member countries, satisfaction with democracy in the European Union even dropped (despite the display of strength of the European Parliament vis-à-vis the European Commission): from spring 1998 to spring 1999, satisfaction with democracy in the EU dropped by 10 percentage points in Denmark (from 40% to 30%), and in Austria by 7 percentage points (from 45% to 38%). The 'democracy deficit' must be overcome by credibly inviting the citizens to partake in decision-making. This means that the whole construction of the Union must be reconsidered, including the way the transition economies in Eastern Europe are to be integrated.

- Citizens must be convinced that the new taxes imposed by the EU are used for purposes they find reasonable. One possibility (suggested by Brennan and Buchanan^{79,80}) is to strengthen benefit taxation. Particular taxes are used for particular purposes (for instance a defence tax to pay for EU military outlays). This enables taxpayers to see more clearly what happens with their taxes. The current impression of many citizens that the revenues are mostly spent on an inefficient bureaucracy (an

impression which has led to the term 'Eurocracy') must also be overcome.

- The new European taxes have to be raised in a way considered 'fair' by the citizens. Empirical research has clearly established that equity is of great importance to prevent tax evasion⁸⁸⁻⁹⁰. Taxpayers are to be treated in a respectful way. Such a policy is not easy to undertake within the EU, because many of the member countries are far from pursuing such a policy with respect to their own taxation. A centralized EU-administration to raise the EU-taxes directly would certainly be opposed by the national governments, and even more so by the taxpayers. A better solution is to let the national, or perhaps even local, tax offices raise the EU-taxes. A more citizen-oriented system of European tax collection seems to be possible only if the EU is more decentralized and therefore more responsive to the wishes of the citizens. It is desirable to seek new and effective forms of federalism. A proposal for a new type of citizen-oriented federalism has been proposed under the term 'Functional, Overlapping, Competing Jurisdictions' or 'FOCI' by Frey and Eichenberger.⁹² However, such decentralization also *within* national states would again meet with the opposition of the national governments of the member states. There is obviously no simple solution to these opposing interests of the EU-administration, the various government levels of the member states, and the taxpayers.
- The additional taxes raised by the Union must be reasonably low. It would certainly increase the level of acceptance of this new tax if some national or local taxes could be reduced accordingly. But the national member states are most likely to cling to their existing taxes and would therefore veto or passively undermine any such attempt. Experience suggests quite generally that it is difficult, if not impossible, to give up any taxes once established.

The two options of either embarking on deterrence *or* to building up civic virtue mark polar cases; intermediate solutions are certainly possible. The research presented suggests, however, that it is not easy to combine successfully deterrence and tax morale. Due to crowding out, an attempt to raise taxes by authoritarian means tends to undermine civic virtues and tax morale. The two policy options cannot therefore simply be combined. Rather, it must be carefully balanced to what extent the citizens follow their sense of duty and pay their due share, and to what extent deterrence is used to prevent free riding while still maintaining tax morale. As suggested by Feld and Frey,¹⁵ deterrence and tax morale can be combined without crowding out civic virtue by sanctioning small violations of the

tax code only mildly, while simultaneously protecting honest taxpayers by sanctioning severe violations heavily.

5. Concluding remarks

The discussion reveals two quite different options. The option of raising taxes in the countries of the European Union by *deterrence* is undesirable and costly, but feasible. It is undesirable because it does not fit into a modern democratic state based on the continuous and high level of consent of its citizens. It will be costly because the taxpayers will seek legal and illegal ways of escaping the new burden. Already now, a significant part of the economy has gone underground, no longer paying taxes and disregarding regulations. The shadow economy has been estimated to lie somewhere between 24 and 30% of official GDP in EU countries such as Greece, Italy, Spain, Portugal and Belgium, and between 13 to 23% in EU countries such as Denmark, Ireland, France, the Netherlands, Germany and the UK. In some of the accession countries, the percentage is even higher; it is estimated, for instance, to be between 20 and 28% in Hungary and Poland, and 9 to 16% in the Czech Republic (the figures refer to 1990–93, see Ref. 92, Table 2; Ref. 93). The likely new tax to be directly imposed by the European Union tends to increase the incentives to shift into the shadow economy and makes today's situation even worse. However, a deterrence policy has a good chance of being implemented. It corresponds to the tradition in many of the member states, as well as to the way the EU bureaucracy now tends to act.

The option of building up a closer relationship between the citizens and the European Union is arduous and takes much time, but is desirable. It is laborious, because it requires fundamental changes in the EU constitution. The citizens must be involved in both fundamental and daily decisions. It conforms to what the founders of the European movement always dreamt of. It also conforms to a Europe of the 21st century built on fundamental trust between citizens and government.

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References

1. C. Adams (1993) *For Good or Evil. The Impact of Taxes on the Course of Civilization* (London: Madison Books).
2. S. Cnossen (2001) *Tax Policy in the European Union. A Review of*

- Issues and Options*. Studies in Economic Policy, Erasmus University Rotterdam.
3. S. Cnossen (1988) Day of reckoning approaches for the European Community. In H. Stein (ed), *Tax Policy in the Twenty-First Century* (New York: Wiley), pp. 125–147.
 4. M. G. Allingham and A. Sandmo (1972) Income tax evasion: a theoretical analysis. *Journal of Public Economics*, 1 (November), 323–338.
 5. G. S. Becker (1968) Crime and punishment: an economic approach. *Journal of Political Economy*, 76, 169–217.
 6. J. Andreoni, B. Erard and J. Feinstein (1998) Tax compliance. *Journal of Economic Literature*, 36, 818–860.
 7. B. Torgler (2001) What do we know about tax morale and tax compliance? *RISEC, International Review of Economics and Business*, 48, 395–419.
 8. R. L. Frey and B. Torgler (2002) Entwicklung und Stand der Steuermoralforschung. *Wirtschaftswissenschaftliches Studium*, 31, 130–135.
 9. J. Slemrod and S. Yitzhaki (2002) Tax avoidance, evasion and administration. In: A. J. Auerbach and M. Feldstein (Eds) *Handbook of Public Economics*, Vol. 3 (Amsterdam: North-Holland).
 10. J. Alm, G. McClelland and W. D. Schulze (1992) Why do people pay taxes? *Journal of Public Economics*, 48, 21–48.
 11. M. J. Graetz and L. L. Wilde (1985) The economics of tax compliance: facts and fantasy. *National Tax Journal*, 38 (September), 355–363.
 12. B. Torgler (2002) Speaking to theorists and searching for facts: tax morale and tax compliance in experiments. *Journal of Economic Surveys*, 16, 657–684.
 13. B. S. Frey and L. P. Feld (2002) Deterrence and morale in taxation: an empirical analysis. *CESifo Working Paper* No. 760.
 14. W. W. Pommerehne and H. Weck-Hannemann (1996) Tax rates, tax administration and income tax evasion in Switzerland. *Public Choice*, 88(1–2), 161–170.
 15. L. P. Feld and B. S. Frey (2002) Trust breeds trust: how taxpayers are treated. *Economics of Governance*, 3, 87–99.
 16. C. T. Clotfelter (1983) Tax evasion and tax rates: an analysis of individual returns. *Review of Economics and Statistics*, 65, 363–373.
 17. K. Beron, H. V. Tauchen and A. D. Witte (1988) A structural equation model for tax compliance and auditing. Working Paper Series, Mimeo 2556, National Bureau of Economic Research.
 18. J. Slemrod, M. Blumenthal and C. W. Christian (2001) Taxpayers response to an increased probability of audit: evidence from a controlled experiment in Minnesota. *Journal of Public Economics*, 79, 455–483.
 19. B. S. Frey (2001) *Inspiring Economics: Human Motivation in Political Economy* (Cheltenham, UK and Northampton, MA: Edward Elgar).
 20. B. S. Frey (1999) *Economics as a Science of Human Behaviour*. 2nd rev. and extended edn (Boston and Dordrecht: Kluwer).

21. G. Kirchgässner (2000) *Homo Oeconomicus: Das ökonomische Modell individuellen Verhaltens und seine Anwendung in den Wirtschafts- und Sozialwissenschaften*, 2nd edn (Tübingen: Mohr (Siebeck)).
22. B. S. Frey and S. Meier (2002) Pro-social behavior, reciprocity or both? *CEifo Working Paper* No. 750.
23. G. J. Stigler (1984) Economics – the imperial science? *Scandinavian Journal of Economics*, **86**, 301–313.
24. J. Hirshleifer (1985) The expanding domain of economics. *American Economic Review*, **75**(May), 53–68.
25. E. Lazear (2000) Economic imperialism. *Quarterly Journal of Economics*, **115**, 99–146.
26. G. S. Becker (1976) *The Economic Approach to Human Behavior* (Chicago: Chicago University Press).
27. G. S. Becker (1981) *A Treatise on the Family* (Cambridge, MA: Harvard University Press).
28. E. L. Deci (1972) Intrinsic motivation, extrinsic reinforcement and inequity. *Journal of Personality and Social Psychology*, **22**(1), 113–120.
29. E. L. Deci (1975) *Intrinsic Motivation* (New York: Plenum Press).
30. B. S. Frey (1997) *Not Just for The Money. An Economic Theory of Personal Motivation* (Cheltenham, UK and Brookfield, USA: Edward Elgar).
31. B. S. Frey and M. Osterloh (Eds) (2002) *Successful Management by Motivation. Balancing Intrinsic and Extrinsic Motivation* (Berlin, Heidelberg and New York: Springer).
32. R. Bénabou, and J. Tirole (2003) Intrinsic and extrinsic motivation. *Review of Economic Studies*, forthcoming.
33. R. D. Schwartz and S. Orleans (1967) On legal sanctions. *University of Chicago Law Review*, **34**, 282–300.
34. A. Lewis (1982) *The Psychology of Taxation* (Oxford: Blackwell).
35. J. A. Roth, J. T. Scholz and A. Dryden Witte (1989) *Taxpayer Compliance* (Philadelphia: University of Pennsylvania Press).
36. D. J. Pyle (1991) The economics of taxpayer compliance. *Journal of Economic Surveys*, **5**, 163–198.
37. J. Slemrod (Ed.) (1992) *Why People Pay Taxes. Tax Compliance and Enforcement* (Ann Arbor: University of Michigan Press).
38. J. Alm, I. Sanchez and A. de Juan (1995) Economic and noneconomic factors in tax compliance. *Kyklos*, **48**(1), 3–19.
39. J. G. Cullis and A. Lewis (1997) Why people pay taxes: from a conventional economic model to a model of social convention. *Journal of Economic Psychology*, **18**, 305–321.
40. M. Kucher and L. Goette (1998) Trust me: an empirical analysis of taxpayer honesty. *Finanz Archiv*, **55**(3), 429–444.
41. M. J. Graetz, J. F. Reinganum and L. L. Wilde (1986) The tax compliance game: toward an interactive theory of law enforcement. *Journal of Law, Economics and Organization*, **39**, 1–32.
42. G. A. Akerlof (1982) Labor Contracts as Partial Gift Exchange. *Quarterly Journal of Economics*, **84**, 488–500.

43. O. E. Williamson (1985) *The Economic Institutions of Capitalism. Firms, markets, Relational Contracting* (New York: Free Press).
44. E. Schein (1965) *Organization Psychology* (Englewood Cliffs, NJ: Prentice Hall).
45. D. M. Rousseau and J. Mclean Parks (1993) The contracts of individuals and organizations. *Research in Organizational Behavior*, **15**, 1–43.
46. M. Osterloh and B. S. Frey (2000) Motivation, knowledge transfer, and organizational forms. *Organization Science*, **11**(5), 538–550.
47. D. B. Magleby (1984) *Direct Legislation. Voting on Ballot Propositions in the United States* (Baltimore and London: The John Hopkins University).
48. T. E. Cronin (1989) *Direct Democracy. The Politics of Initiative, Referendum and Recall* (Cambridge, MA: Harvard University Press).
49. B. S. Frey (1994) Direct democracy: politico-economic lessons from Swiss experience. *American Economic Review*, **84**(2), 338–348.
50. B. S. Frey (2002a) Direct democracy for transition economies. Paper prepared for the Collegium Budapest, Institute for Advanced Study project on 'Honesty and Trust', August, 2002.
51. J. Alm, G. McClelland and W. Schulze (1999) Changing the social norm of tax compliance by voting. *Kyklos*, **52**, 21–48.
52. B. S. Frey (2003) Flexible citizenship for a global society. *Politics, Philosophy and Economics*, **2**(1), 93–114.
53. L. P. Feld and R. Tyran (2002) Tax evasion and voting: an experimental analysis. *Kyklos*, **55**, 197–222.
54. R. D. Putnam (1993) *Making Democracy Work* (Princeton: Princeton University Press).
55. M. Paldam (2000) Social capital: one or many? Definition and measurement. *Journal of Economic Surveys*, **14**, 629–653.
56. E. L. Deci and R. M. Ryan (1980) The empirical exploration of intrinsic motivational processes. *Advances in Experimental Social Psychology*, **10**, 39–80.
57. E. L. Deci and R. M. Ryan (1985) *Intrinsic Motivation and Self-Determination in Human Behavior* (New York: Plenum Press).
58. E. L. Deci and R. M. Ryan (1987) The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology*, **53**, 1024–1037.
59. T. S. Pittman and J. F. Heller (1987) Social motivation. *Annual Review of Psychology*, **38**, 461–489.
60. R. E. Lane (1991) *The Market Experience* (Cambridge: Cambridge University Press).
61. M. R. Lepper and D. Greene (Eds) (1978) *The Hidden Costs of Reward: New Perspectives on Psychology of Human Motivation* (Hillsdale, NY: Erlbaum).
62. M. R. Lepper, D. Greene and R. E. Nisbett (1973) Undermining children's intrinsic interest with extrinsic rewards: a test of the overjustification hypothesis. *Journal of Personality and Social Psychology*, **23**, 129–137.

63. E. L. Deci, R. Koestner and R. M. Ryan (1999) A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, **125**(6), 627–668.
64. E. L. Deci and R. Flaste (1995) *Why We Do What We Do? The Dynamics of Personal Autonomy* (New York: Putnam).
65. A. Rummel and R. Feinberg (1988) Cognitive evaluation theory: a meta-analytic review of the literature. *Social Behaviour and Personality*, **16**, 147–164.
66. H. S. Tang and V. C. Hall (1995) The overjustification effect: a meta analysis. *Applied Cognitive Psychology*, **9**, 365–404.
67. J. Cameron and W. D. Pierce (1994) Reinforcement, reward, and intrinsic motivation: a meta-analysis. *Review of Educational Research* **64** (Fall), 363–423.
68. U. J. Wiersma (1992) The effects of extrinsic rewards on intrinsic motivation: a meta-analysis. *Journal of Occupational and Organizational Psychology*, **65**, 101–114.
69. R. Eisenberger and J. Cameron (1996) Detrimental effects of reward. reality or myth? *American Psychologist*, **51**, 1153–1166.
70. J. Cameron, K. M. Banko and W. D. Pierce (2001) Pervasive negative effects of rewards on intrinsic motivation: the myth continues. *Behavioral Analyst*, **24**, 1–44.
71. S. Gaechter and E. Fehr (1997) Social norms as a social exchange. *Swiss Journal of Economics and Statistics*, **133**(2–2), 275–292.
72. E. Fehr, S. Gaechter and G. Kirchsteiger (1997) Reciprocity as a contract enforcement device. *Econometrica*, **65**(4), 833–860.
73. I. Bohnet, B. S. Frey and S. Huck (2001) More order with less law: on contract enforcement, trust and crowding. *American Political Science Review*, **95**(1, March), 131–144.
74. H. G. Barkema (1995) Do job executives work harder when they are monitored? *Kyklos*, **48**, 19–42.
75. B. S. Frey and F. Oberholzer-Gee (1997) The cost of price incentives: an empirical analysis of motivation crowding-out. *American Economic Review*, **87**(4), 746–755.
76. U. Gneezy and A. Rustichini (2000) A fine is a price. *Journal of Legal Studies* **29**(1), 1–18.
77. B. S. Frey and R. Jegen (2001) Motivation crowding theory: a survey of empirical evidence. *Journal of Economic Surveys*, **15**(5), 589–611.
78. J. M. Buchanan and G. Tullock (1962) *The Calculus of Consent. Logical Foundations of Constitutional Democracy* (Ann Arbor: University of Michigan Press).
79. G. Brennan and J. M. Buchanan (1985) *The Reason of Rules. Constitutional Political Economy* (Cambridge: Cambridge University Press).
80. G. Brennan, and J. M. Buchanan (1980) *The Power to Tax. Analytical Foundations of a Fiscal Constitution* (Cambridge: Cambridge University Press).
81. B. S. Frey (1983) *Democratic Economic Policy* (Oxford: Blackwell).

82. J. M. Buchanan (1991) *Constitutional Economics* (Oxford: Basil Blackwell).
83. D. C. Mueller (1995) *Constitutional Economics* (Cambridge: Cambridge University Press).
84. G. Schmolders (1970) Survey research in public finance: a behavioural approach to fiscal policy. *Public Finance*, 25, 300–306.
85. J. T. Gross (1982) A note on the nature of Soviet totalitarianism. *Soviet Studies*, 34, 367–376.
86. B. S. Frey (1997) A constitution for knaves crowds out civic virtues. *Economic Journal*, 107(443), 1043–1053.
87. B. Torgler (2002) Preaching matters: tax morale and religiosity. WWZ-Discussion Paper 02/03, University of Basel.
88. K. W. Smith (1992) Reciprocity and fairness: positive incentives for tax compliance. In: J. Slemrod (Ed.) *Why People Pay Taxes. Tax Compliance and Enforcement* (Ann Arbor: University of Michigan Press), pp. 223–250.
89. K. A. Kinsey (1992) Deterrence and alienation effects of IRS enforcement: an analysis of survey data. In: J. Slemrod (Ed.) *Why People Pay Taxes. Tax Compliance and Enforcement* (Ann Arbor: University of Michigan Press).
90. B. Torgler (2002) Tax morale and institutions. WWZ-Discussion Paper 02/07, University of Basel.
91. B. S. Frey and R. Eichenberger (1999) *The New Democratic Federalism for Europe: Functional Overlapping and Competing Jurisdictions* (Cheltenham, UK: Edward Elgar).
92. F. Schneider and D. Enste (2000) Increasing shadow economy all over the world – fiction or reality? *Journal of Economic Literature*, 38(1), 77–114.
93. F. Schneider and D. Enste (2002) *The Shadow Economy. An International Survey* (Cambridge: Cambridge University Press).

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