Full length article

Tax morale, tax compliance and the optimal tax policy

Gaetano Lisi *

Department of Economics and Law, University of Cassino and Southern Lazio, via S. Angelo, I-03043 Cassino (FR), Italy

A B S T R A C T

This paper incorporates the positive relationship between tax compliance and tax morale into the social welfare function and derives the optimal tax policy in the presence of honest taxpayers and tax evaders. The right mix of policy instruments of deterrence for clamping down on tax evasion depends on taxpayers' morality. Monitoring turns out to be an effective tool for controlling illegal activities, thus a tighter audit is recommended in any case. For honest taxpayers, this increase in monitoring should be offset by tax reductions. In contrast, in the case of tax evaders, the increase in monitoring should be accompanied by higher penalties.

© 2015 Economic Society of Australia, Queensland. Published by Elsevier B.V. All rights reserved.

1. Introduction

In a very influential paper, Slemrod (1990, p. 157) notes that "[…] in its current state, optimal tax theory is incomplete as a guide to action concerning the […] critical issues in tax policy. It is incomplete because it has not yet come to terms with taxation as a system of coercively collecting revenues from individuals who will tend to resist".[1] In short, the theory of optimal taxation presumes that taxes can be fully enforced, but the literature on tax compliance clearly demonstrates that this assumption is not realistic (see, for example Andreoni et al., 1998). As a result, the empirical relevance of optimal tax theory and its impact on practical tax policy are weak (Slemrod, 1990). Indeed, the normative policy implications derived from the existing theory may be misleading when tax evasion is feasible. A distortionary commodity tax in fact may become part of the optimal tax policy when an efficient income tax can be evaded, but the distortionary commodity tax cannot be evaded (Gueth and Sausgruber, 2004).[2]

Furthermore, the theory of optimal taxation has placed a very low emphasis on the intrinsic motivations of why people pay taxes, i.e. on tax morale (Gueth and Sausgruber, 2004; Torgler and Schaltegger, 2005). The concept of tax morale was introduced in the tax compliance literature to resolve the *tax compliance puzzle*, i.e. to explain the high degree of tax compliance in the presence in many countries of a very low deterrence level (Torgler, 2007; Slemrod, 2007). A high tax morale (individual attitude) does not necessarily translate into a high level of tax compliance (individual behaviour); nevertheless, several studies show that tax morale has a significant positive effect on tax compliance decisions (see e.g.

---

* Tel.: +39 0776 996150.
  E-mail address: gaetano.lisi@unicas.it.

[1] Based on the assumptions of rational and self-interested taxpayers, the theory of optimal taxation aims to give recommendations on how to develop an efficient tax system, such that the cost of taxation is reduced in the best possible way.

[2] However, optimal taxation theory may be able to rationalise the coexistence of commodity and income taxes when tax evasion is taken into account (see e.g. Cremer and Gahvari, 1993, 1996; Boadway et al., 1994; Richter and Boadway, 2005).

Cummings et al., 2009; Halla, 2012; Molero and Pujol, 2012). Hence, there is a strong need to incorporate behavioural aspects of tax compliance into the debate on optimal tax policy (Gueth and Sausgruber, 2004; Torgler and Schaltegger, 2005).[3]

Following the behavioural branch of tax compliance literature, this paper incorporates the close relationship between tax compliance and tax morale into the optimal tax theory. Instead of examining the behaviour of taxpayers, we study the normative policy implications, namely "what the tax authority might do" in the presence of two different kinds of taxpayers: honest taxpayers and tax evaders.[4] First, we develop a theoretical model where the decision to evade taxes or to comply with the tax rules depends on taxpayers' morality, namely, tax compliance positively depends on tax morale. Afterwards, we incorporate the "tax compliance–tax morale" relationship into the social welfare function and derive the optimal tax policy. The main result is that the right mix of policy instruments of deterrence for clamping down on tax evasion (the optimal tax policy) is different according to the type of taxpayer that is taken into account. In the case of honest taxpayers, the tax authority should substitute a higher taxation and penalty with tighter monitoring, so as to reward honest taxpayers by alleviating their tax burden, while maintaining high alertness for infractions. Instead, in the case of tax evaders, the tax authority should enforce both a higher penalty and an increased monitoring. This tax policy is in line with a 'responsive regulation' and is consistent with retributive justice, since a fair tax authority should support honest taxpayers and prosecute persistent tax evaders with the full rigour of the law (Ayres and Braithwaite, 1992; Braithwaite, 2003a,b). Eventually, the behavioural approach to optimal tax policy, which puts emphasis on behavioural aspects of tax compliance, leads to different conclusions and recommendations for the tax authority.

The rest of this paper is organised as follows. Section 2 presents the benchmark theoretical model where tax compliance depends on tax morale. Section 3 derives the optimal mix of taxation, penalty and monitoring in a context where the tax authority maximises the social welfare function. This section also provides the economic meaning of the mathematical results and remarks on policy implications. Section 4 concludes.

2. Tax compliance and tax morale: a theoretical model

Following Allingham and Sandmo (1972), many theoretical studies have addressed the issue of tax evasion in standard optimal tax models (see Myles, 1995). However, there is a lesser body of literature on tax evasion by firms (Hashimzade et al., 2010). In most of the studies on tax compliance in fact research has focused on personal income tax evasion, while studies on tax morale in cases of business tax evasion are very limited (Torgler and Schaltegger, 2005). In this sense, we go beyond the related theoretical literature by using a model that stresses the key role of the firm. We consider a baseline search and matching model (see, for example Pissarides, 2000) with a continuum of homogeneous workers of measure one and free entry of one-job firms (i.e. small businesses). The utility of using the matching models in this type of analysis is straightforward. On the one hand, these models allow us to obtain macroeconomic outcomes (namely, the rates of employment and unemployment) and, on the other hand, by the "one-job firms" assumption, they allow us to analyse the behaviour of entrepreneurs and small businesses.

Search and matching models are well-known in the economic literature and thus we only introduce them briefly. In matching-type models, the creation of employment is characterised by trading frictions due to costly and time-consuming matching of workers and firms. Precisely, an aggregate matching function is used to summarise these frictions and the number of job matches formed per unit of time is $m = f(v, u)$, where v is vacancy rate and u is unemployment rate. The matching function is strictly increasing but concave in both arguments and displays constant returns to scale. This common assumption allows us to introduce the key variable of the model $\theta \equiv \frac{v}{u}$ commonly termed 'market tightness'. It follows that $q(\theta) \equiv \frac{f(v,u)}{v} = f(1, \theta^{-1})$ and $g(\theta) \equiv \frac{f(v,u)}{u} = f(\theta, 1)$ are the instantaneous probability of filling a vacancy and of finding a job, respectively. In order to clarify the above formulas, we express the matching function by the functional form which is commonly used in matching models, namely the *Cobb–Douglas function*, $m = f(v, u) = v^{1-\alpha} \cdot u^{\alpha}$, where $0 < \alpha < 1$ is the elasticity of the matching function with respect to the unemployment rate. Hence, $q(\theta) = \theta^{-\alpha}$ with $\frac{\partial q(\theta)}{\partial \theta} = -\alpha \cdot \theta^{-\alpha-1} < 0$, and $g(\theta) = \theta^{1-\alpha}$ with $\frac{\partial g(\theta)}{\partial \theta} = (1-\alpha) \cdot \theta^{-\alpha} > 0$.[5] Finally, job destruction occurs at the exogenous rate δ. Therefore, the matching and job destruction rates allow us to obtain the evolution of the unemployment rate over time:

$$\dot{u} \equiv \frac{du}{dt} = \delta \cdot (1 - u) - \theta^{1-\alpha} \cdot u \tag{1}$$

---

[3] The relationship between tax compliance and tax policy is at once complex, challenging and fascinating (Torgler, 2008) and the usefulness of going beyond a deterrence approach is evident. In that, the enforcement strategy is connected with high costs (Slemrod, 1992) and predicts far too little compliance and far too much tax evasion (Feld and Frey, 2002). Furthermore, the empirical support for the deterrent effect of audits and fines is weak and unstable (Kirchler et al., 2008).

[4] Focusing attention on the diffusion process of tax moral (the behaviour of taxpayers) is very important, since this may help the tax authority in finding proper interventions to increase tax moral and thus increase tax compliance. Nevertheless, the negative aspect is that tax morale is usually regarded as very slowly-changing (Lindbeck and Nyberg, 2006; Halla, 2012). Hence, it may be even more interesting to study different policy implications (for example, the behaviour of the tax authority) in the presence of tax evasion.

[5] Standard assumptions are employed: $\lim_{\theta \to \infty} g(\theta) = \lim_{\theta \to 0} q(\theta) = \infty$; $\lim_{\theta \to 0} g(\theta) = \lim_{\theta \to \infty} q(\theta) = 0$.