

Journal of Public Economics 89 (2005) 1611-1637



www.elsevier.com/locate/econbase

## Timing tax evasion

Dirk Niepelt\*

Institute for International Economic Studies, Stockholm University, 106 91 Stockholm, Sweden Study Center Gerzensee, 3115 Gerzensee, Switzerland

Received 24 April 2004; received in revised form 13 October 2004; accepted 17 October 2004 Available online 18 January 2005

## Abstract

Standard models of tax evasion implicitly assume that evasion is either fully detected, or not detected at all. Empirically, this is not the case, casting into doubt the traditional rationales for interior evasion choices. I propose two alternative, dynamic explanations for interior tax evasion rates: First, fines increasing in the duration of an evasion spell, implying that the expected costs of evasion increase convexly with the time spent non-reporting, while the benefits increase linearly. Second, different vintages of income sources subject to aggregate risk and fixed costs when switched between evasion states. The dynamic approach yields a transparent representation of revenue losses and social costs due to tax evasion, novel findings on the effect of policy on tax evasion, and a tractable framework for the analysis of tax evasion dynamics. © 2004 Elsevier B.V. All rights reserved.

*JEL classification:* E6; H2 *Keywords:* Dynamic tax evasion; Detection risk; Duration dependent fine; Inaction range; Optimal taxation

## 1. Introduction

Illegal, intentional underreporting of income reduces the income tax revenue for the U.S. Department of the Treasury by about 15 to 20 percent. In other developed economies, the revenue loss due to tax fraud appears to be of the same order of magnitude, if not

<sup>\*</sup> Institute for International Economic Studies, Stockholm University, 106 91 Stockholm, Sweden. Tel.: +46 8 162527; fax: +46 8 161443.

E-mail address: dirk.niepelt@iies.su.se.

<sup>0047-2727/</sup>\$ - see front matter © 2004 Elsevier B.V. All rights reserved. doi:10.1016/j.jpubeco.2004.10.001

larger.<sup>1</sup> Not only is the volume of tax evasion and semi-legal tax avoidance quantitatively important, the elasticity of evasion and avoidance is also high. In fact, evasion and avoidance may be at least as relevant for tax policy as the labor supply or savings responses on which traditional public finance has its focus.<sup>2</sup>

Existing theories of tax evasion emphasize risk aversion or endogenous detection probability in order to rationalize the observation that households evade some, but typically not all, taxes.<sup>3</sup> None of these factors is sufficient, however. In fact, the finding of an interior evasion rate in the standard model crucially depends on the implicit assumption that evasion is either fully detected, triggering fines proportional to the total amount of taxes evaded, or not detected at all. While central for existing theories of tax evasion, this "all-or-nothing" assumption is often implausible (for example in the context of internationally diversified financial investments) and at odds with the data (see below). But relaxing the assumption and replacing it with the opposite extreme of uncorrelated detection risk, results in a corner solution because risk aversion or endogenous detection probability no longer give rise to convex costs of evasion.

This paper argues that there are other forces that push towards an interior evasion rate, and that these forces arise from *dynamic* considerations. I explore two mechanisms. The first relies on fines upon detection of evasion that depend on the duration of an evasion spell, for example because fines are proportional to the cumulative evaded tax. Such fines imply that the expected costs of evasion increase convexly with the time spent non-reporting, while the benefits increase linearly. Privately optimal evasion choices are therefore characterized by a stopping time: Income is first evaded, and later reported, in order to maximize the expected return net of taxes, fines, and other costs. The second mechanism relies on a cross-section of vintages of otherwise identical income sources that are subject to aggregate return risk and fixed costs when switched between evasion states (i.e., between being declared or not declared to the tax authority). These fixed costs imply that old sources of income are only sluggishly switched between evasion states, while the status of new sources immediately responds to shocks. In equilibrium, the evasion rate is typically interior, displays hysteresis, and strongly responds to changes in various institutional parameters.

The potential importance of dynamic considerations for a household's tax evasion strategy has been noted before. Allingham and Sandmo (1972, Section 5) discuss an extension of their static argument, with detection of evasion triggering investigations on prior reporting by the tax authority. Engel and Hines (1999) document the empirical relevance of such a link between detection and investigations on prior reporting. They

<sup>&</sup>lt;sup>1</sup> For estimates of the tax gap in the U.S. and other countries, see Andreoni et al. (1998) or Slemrod and Yitzhaki (2002) and the sources cited therein. These estimates abstract from hypothetical tax revenues from illegal sources of income; see also Cowell (1990).

<sup>&</sup>lt;sup>2</sup> See, for example, MaCurdy (1992), Slemrod (1992), Feldstein (1995), Agell et al. (1996), and Auerbach and Slemrod (1997).

<sup>&</sup>lt;sup>3</sup> The seminal papers are Allingham and Sandmo (1972) and Yitzhaki (1974), building on Becker's (1968) work. Andreoni et al. (1998) and Slemrod and Yitzhaki (2002) review the literature.

## دريافت فورى 🛶 متن كامل مقاله

- امکان دانلود نسخه تمام متن مقالات انگلیسی
  امکان دانلود نسخه ترجمه شده مقالات
  پذیرش سفارش ترجمه تخصصی
  امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
  امکان دانلود رایگان ۲ صفحه اول هر مقاله
  امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
  دانلود فوری مقاله پس از پرداخت آنلاین
  پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات
- ISIArticles مرجع مقالات تخصصی ایران