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Deterrence vs. gamesmanship: Taxpayer response to targeted audits and endogenous penalties☆

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ABSTRACT

Taxpayers with large amounts of non-third-party-reported income usually self-report at least a portion of it, an act inconsistent with common theories of compliance. I explain this behavior by generalizing the classical evasion theory to realistically account for the endogeneity of audit and payment rates. These taxpayers refrain from more evasion not due to deterrence, but to tilt the odds and payoffs of the evasion gamble. The introduction of this incentive helps explain many empirical findings that seemingly contradict a more restrictive and unrealistic version of the "deterrence paradigm." I also estimate feasible structural calibrations, the first based on observed compliance behavior, of taxpayers' perceptions of the relationship between evasion, audit probabilities, and payment rates.

1. Introduction

The U.S. Internal Revenue Service (IRS) estimates that \$450 billion of the \$2660 billion federal tax liability for TY2006 went unpaid.[1] In response to the 16.3% noncompliance estimate for TY01, Senator Max Baucus stated that the tax gap is "unacceptable"[2] and that its elimination "could reduce the deficit by three-fourths . . ., cover most of the \$492 billion

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[1] More precisely, it was not paid "in a timely manner." This reflects a slight, statistically insignificant, decrease in the overall voluntary compliance rate from 83.7% for TY2001 to 83.1% for TY2006. See IRS (2012) and IRS (2007).

[2] *Baucus Calls For Bolder IRS Action to Close Tax Gap*, Press Release, U.S. Senate Finance Committee, February 14, 2006. Available at http://www.finance.senate.gov/newsroom/ranking/release/?id=14d69969-d6a3-418e-939e-0f0da7068fa5 (last accessed January 26, 2014).

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in annual Social Security outlays . . ., [or] completely pay for the $294 billion in annual Medicare costs."[3] In contrast, the standard economic theory of tax evasion leads one to wonder not why the tax gap is so large, but why it is so small. Under this theory taxpayers treat evasion as they would any other gamble and are deterred solely by the risk of being caught and penalized. However, low aggregate measures of audit and penalty rates do not appear sufficient to deter taxpayers from larger-than-observed amounts of noncompliance.[4] "Indeed, the puzzle of tax compliance behavior may be why people pay taxes, not why they evade them" (Alm et al., 2010a).

This article addresses the compliance puzzle for a particular but important category of taxpayers, namely those with large amounts of unmatched income. "Unmatched" refers to income that is not reported to the tax agency by a corroborating third-party. These taxpayers warrant special attention for two distinct reasons. First, they tend to underreport their unmatched income, but only a portion of it. This is noteworthy because such behavior is not readily explained by the most commonly posited solutions to the tax compliance puzzle. Second, these taxpayers are common in the U.S., underreport relatively large amounts of income on a per capita basis, and contribute disproportionately to the total tax gap.[5] This makes an understanding of their behavior all the more pressing and policy-relevant.

What are the commonly posited solutions to the tax compliance puzzle, and why do they not explain the behavior of high unmatched income taxpayers? These theories can essentially be categorized as corresponding to "ability" and "willingness" to evade. This nomenclature is borrowed from the title of Kleven et al. (2011), in which "ability" is defined as the possession of "evadable" unmatched income. Taxpayers are largely compliant in self-reporting matched income (i.e. income subject to third-party reporting), but tend to underreport 100% of unmatched income. However, both Kleven et al. (2011) and Phillips (2013) show that the pattern of 100% underreporting holds only for low unmatched income taxpayers, not high unmatched income taxpayers.[6] High income taxpayers have the "ability" to evade more tax liability, but do not. "Taking information reporting into account, taxpayers still appear to be more honest than might be expected . . ." (Andreoni et al., 1998).

If "ability" does not do the trick, it is natural to appeal to an explanation that addresses taxpayers' "willingness" to evade. However, the existing theories regarding willingness also seem lacking in this context. The classical works of Allingham and Sandmo (1972) and Yitzhaki (1974) employ the Becker (1968) "deterrence paradigm," theorizing that taxpayers' willingness is limited by the deterrence effect of audit and penalty threats. As already mentioned however, aggregate measures of audit and penalty rates appear insufficient to deter much of anything.[7] Other theories suggest that "willingness" is instead driven by prosocial, psychological, or behavioral considerations that are not captured by the amoral, rational, consumption-driven calculus of the classical evasion theory.[8] Although these behavioral theories are helpful towards explaining the minority of U.S. taxpayers with unmatched income who are wholly compliant, they are less helpful in explaining the behavior of high income taxpayers who underreport large amounts of income, just not as much as expected. The idea that high income taxpayers do not follow the same "rules" as everyone else is perhaps best demonstrated by the well-known and surprising empirical result of Slemrod et al. (2001), in which high income taxpayers in Minnesota actually self-reported less income in response to an exogenous increase in the threat of audit.

In this article I contend that the partial compliance of these high unmatched income taxpayers is the result of gamesmanship rather than inability or the previously described concepts of unwillingness. By "gamesmanship" I refer to the fact that these taxpayers exert some control over the parameters of the evasion gamble, specifically the likelihood of audit and the rate of payment conditional upon examination. When audit and penalty rates are low the expected return to a marginal dollar of underreporting may very well be large. In fact, the marginal return may be positive *even conditional upon examination* if the tax agency does not detect much of the underreporting.[9] However, this marginal dollar of evasion also makes it more likely that the taxpayer faces examination and incurs a penalty on his detected underreporting; therefore, taxpayers may face low audit and penalty rate *levels* but still make a rational choice of forgoing some evasion in order to increase the likelihood that the preferred states, either not being audited or facing low payments conditional upon audit, occur. Therefore, the term "gamesmanship" is used to distinguish from the traditional "deterrence effect" in which taxpayers are discouraged from large amounts of evasion out of aversion to the (presumed) loss in utility when audited. This traditional deterrence effect depends critically on the *level* of audit and payment rates, whereas gamesmanship depends on the *responsiveness* of these policy parameters.

The term "gamesmanship" also acknowledges a relevant game theoretic literature on tax evasion. These works usually derive the government's audit strategy and commonly predict a strategy more sophisticated that simply "drawing names

[3] April 14, 2005 statement of U.S. Senator Max Baucus at U.S. Senate Finance Committee Hearing: *The $350 Billion Question: How to Solve the Tax Gap*. Available at http://finance.senate.gov/imo/media/doc/041405mb1.pdf (last accessed January 26, 2014).

[4] See the Andreoni et al. (1998), Slemrod and Yitzhaki (2002), and Slemrod (2007) surveys.

[5] See Phillips (2013), IRS (2007), and Schuetze and Bruce (2004).

[6] There are more high unmatched income taxpayers in the U.S. (the population studied in Phillips, 2013) rather than Denmark (the population studied in Kleven et al., 2011), and therefore more "partially" compliant taxpayers in the U.S.

[7] Slemrod (2007) explains that "the dismissive argument goes as follows: given the average probability of audit . . ., the penalties typically assessed for noncompliance . . ., and what we know about the degree of risk aversion from other contexts, noncompliance should be much, much higher than it apparently is." It is worth noting that Professor Slemrod is summarizing this argument, not endorsing it.

[8] The chapters in *Developing Alternative Frameworks for Explaining Tax Compliance* (2010, edited by Alm et al.) cover many such alternatives. Other works include Alm et al. (1992), Alm et al. (1993b), Bosco and Mittone (1997), Alm and Torgler (2006), Dhami and al-Nowaihi (2007), Feld and Frey (2007), Fortin et al. (2007), and Cummings et al. (2009).

[9] As discussed later, aggregate data suggest this is true for many U.S. taxpayers.