

# **OVERVIEW OF THE TAX GAP**

Scheduled for a Public Hearing  
Before the  
HOUSE COMMITTEE ON WAYS AND MEANS  
on May 9, 2019

Prepared by the Staff  
of the  
JOINT COMMITTEE ON TAXATION



May 8, 2019  
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## INTRODUCTION

The House Committee on Ways and Means has scheduled a hearing for May 9, 2019, entitled “Understanding the Tax Gap and Taxpayer Noncompliance.” This document,<sup>1</sup> prepared by the staff of the Joint Committee on Taxation, provides a standard definition of the tax gap, a description of issues relevant to measurement of the tax gap, and a discussion of taxpayer behavioral responses and the effectiveness of measures to increase compliance.

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<sup>1</sup> This document may be cited as follows: Joint Committee on Taxation, *Overview of the Tax Gap* (JCX-19-19), May 8, 2019. This document can also be found on the Joint Committee on Taxation website at [www.jct.gov](http://www.jct.gov).

## A. Defining the Tax Gap

A standard definition of the tax gap is the shortfall between the amount of tax voluntarily and timely paid by taxpayers and the actual tax liability of taxpayers. It measures taxpayers' failure to accurately report their full tax liabilities on tax returns (*i.e.*, underreporting), pay taxes due from filed returns (*i.e.*, underpayment), or file a required tax return altogether or on time (*i.e.*, non-filing). Estimates of the tax gap provide a picture of the level of overall noncompliance by taxpayers for a particular tax year, and include shortfalls in individual income taxes, corporate income taxes, employment taxes, estate taxes, and excise taxes.<sup>2</sup> The individual behavioral responses to taxation that result in the tax gap raise a set of important policy questions, such as the optimal level of resources to devote to tax administration and the manner in which those resources are best deployed.

## B. Measuring the Tax Gap

### Total size of the tax gap

The Internal Revenue Service ("IRS") periodically conducts studies to estimate the size of the tax gap and analyze its components. Table 1 indicates that in the most recent study, the estimated annual gross tax gap, per year on average for tax years 2008-10, was \$458 billion and the annual net tax gap, which is the gross tax gap adjusted for late payments and collections due to enforcement activities, was \$406 billion. Adjusted for inflation, the gross and net tax gaps are \$504 billion and \$447 billion in 2016 dollars, respectively.<sup>3</sup> With total average tax liabilities of \$2.5 trillion per year between 2008 and 2010, the voluntary compliance rate is 81.7 percent and the net compliance rate is 83.7 percent.

According to these data, both gross and net compliance rates fell by 1.4 and 1.8 percentage points, respectively, relative to those in the previous compliance study of tax returns for tax year 2006. The two studies were conducted at different points in the business cycle, near the peak of the cycle for the 2006 study and in the midst of a severe recession during the most recent study, which is consistent with a relationship between the state of the economy and tax compliance. However, the IRS attributes most of the decline in the estimates of compliance rates to recent changes in its methodology and inclusion of new tax gap components, and not to changes in taxpayer behavior.

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<sup>2</sup> The tax gap attributable to international taxes and the informal economy is not measured in IRS tax gap studies.

<sup>3</sup> Dollar amounts were adjusted to remove the effects of inflation using the price index for personal consumption expenditures.

**Table 1.—Gross and Net Tax Gaps, Selected Calendar Years  
(Billions of Dollars)**

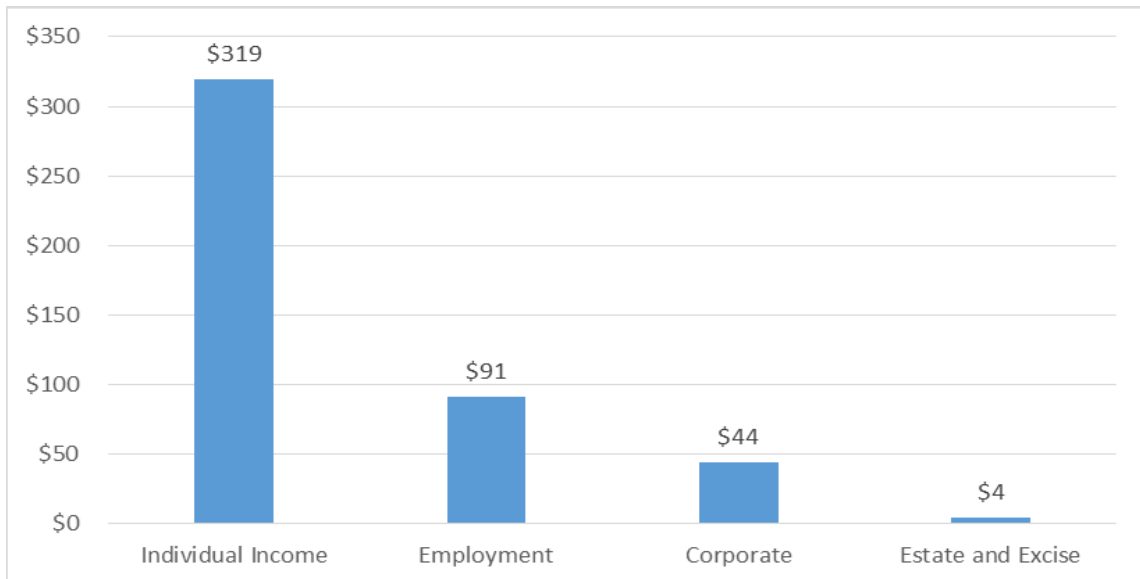
	Gross Tax Gap			Net Tax Gap		
	Nominal Dollars	2016 Dollars	Voluntary Compliance Rate (Percent)	Nominal Dollars	2016 Dollars	Net Compliance Rate (Percent)
2001	345	451	83.7	290	379	86.3
2006	450	526	83.1	385	450	85.5
2008 to 2010	458	504	81.7	406	447	83.7

Source: Internal Revenue Service, *Tax Gap Estimates for Tax Years 2008–2010*, April 2016, <https://www.irs.gov/pub/newsroom/tax%20gap%20estimates%20for%202008%20through%202010.pdf> and Internal Revenue Service, *Tax Gap Map for Tax Year 2001*, February 2007, [www.irs.gov/pub/irs-utl/tax\\_gap\\_update\\_070212.pdf](http://www.irs.gov/pub/irs-utl/tax_gap_update_070212.pdf).

Note: Amounts are adjusted to 2016 levels using the price index for personal consumption expenditures.

In its analysis, the IRS estimates the size of the gross tax gap by type of tax, category of error, and degree of information reporting. These findings are similar to those in past reports. The largest source of the tax gap is the individual income tax, followed by employment taxes and the corporate income tax. These are also the three largest sources of Federal revenues, ranked in the same order by size. Figure 1 shows that for tax years 2008-10, \$319 billion of the gross tax gap was attributable to the individual income tax, constituting the largest source of the tax gap, followed by the employment taxes and the corporate income tax. Less than one percent of the gross tax gap was attributable to estate and excise tax liabilities.

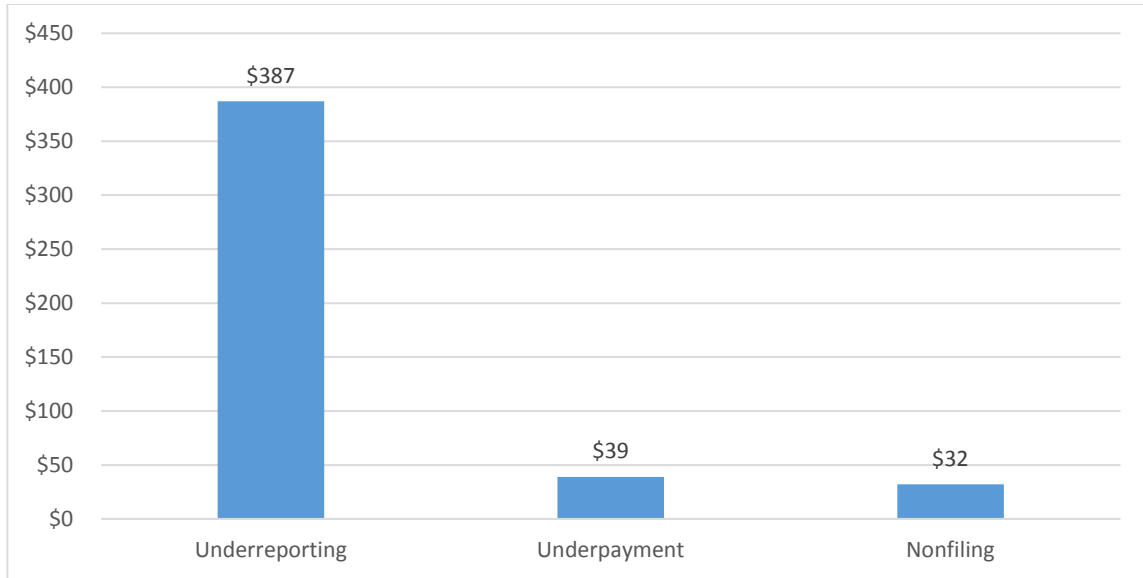
**Figure 1.—Size of the Gross Tax Gap by Type of Tax, 2008-10  
(Billions) (Nominal dollars)**



Source: Internal Revenue Service, *Tax Gap Estimates for Tax Years 2008–2010*, April 2016.

Figure 2 shows that for tax years 2008-10 underreporting of individual income tax liabilities was the largest component of the tax gap. Only 16 percent of the gross tax gap was attributable to nonfiled tax returns and underpayment of tax liabilities.

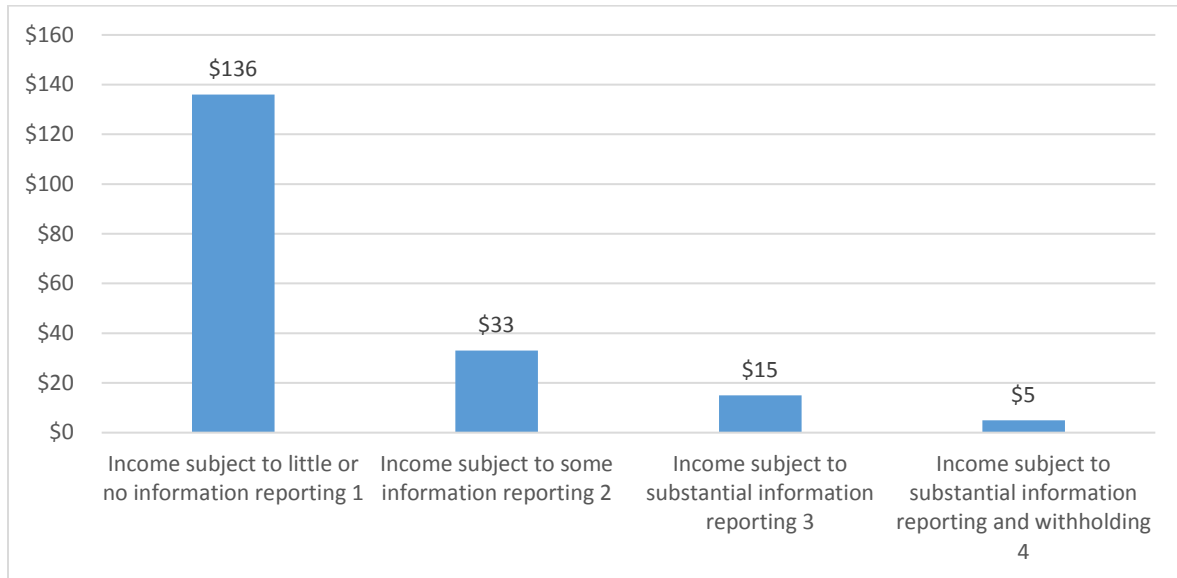
**Figure 2.—Size of the Gross Tax Gap by Category of Error, 2008-10  
(Billions) (Nominal dollars)**



Source: Internal Revenue Service, *Tax Gap Estimates for Tax Years 2008–2010*, April 2016.

Evidence shows that compliance is greatest for sources of income, such as wages and salaries, which are reported to the IRS by employers and other payers and for which taxes are withheld by third parties. Noncompliance is greatest for income and tax preferences, including self-employment income, for which third-party information is not separately reported to the IRS and is very difficult to obtain. Figure 3 shows that in 2008-10, the gross tax gap was \$136 billion for income that is subject to little or no information reporting. In contrast, it was \$15 billion and \$5 billion for income that was subject to substantial information reporting, and information reporting together with withholding, respectively.

**Figure 3.—Size of the Gross Tax Gap by Visibility, 2008-10  
(Billions) (Nominal dollars)**



Source: Internal Revenue Service, *Tax Gap Estimates for Tax Years 2008–2010*, April 2016.

Notes: <sup>1</sup>Includes nonfarm proprietor income, other income, rents and royalties, farm income, Form 4797 income; <sup>2</sup>Includes partnership and S corporation income, capital gains, alimony income; <sup>3</sup>Includes pensions and annuities, unemployment compensation, dividend income, interest income, taxable Social Security benefits; <sup>4</sup>Includes wages and salaries.

### **Data and methodology**

Prior to 2000, the IRS relied on compliance data collected by the Taxpayer Compliance Measurement Program (“TCMP”) survey to conduct studies. These earlier IRS compliance studies were based on comprehensive in-office audits of a random sample of taxpayers in which taxpayers were required to provide documentation supporting every item on the tax return. Public opposition to the TCMP grew because of concerns about the burden imposed on taxpayers in the sample. The last TCMP examined tax returns from 1988, and the IRS canceled its plans to conduct another TCMP in 1995. Beginning in 2000, the IRS established the National Research Program (“NRP”), a new compliance data collection approach which was developed to meet a number of objectives, including minimizing the burden of data collection without sacrificing data quality.<sup>4</sup> Since the inception of the NRP, there have been three studies of the tax gap, for tax years 2001, 2006, and 2008-10.<sup>5</sup>

<sup>4</sup> Charles Bennett, “Preliminary Results of the National Research Program’s Reporting Compliance Study of Tax Year 2001 Individual Returns,” in Justin Dalton and Beth Kliss (eds.), *Proceedings of the 2005 IRS Research Conference* (IRS Research Bulletin, 2006), pp. 3-14. Available at [www.irs.gov/pub/irs-soi/05bennett.pdf](http://www.irs.gov/pub/irs-soi/05bennett.pdf).

<sup>5</sup> In the 15 years prior to the NRP, the IRS conducted three studies on the tax gap for tax years 1985, 1988, and 1992.

In the 2008-10 study, the IRS relied heavily on the NRP to estimate individual income tax underreporting, the largest component of the tax gap.<sup>6</sup> The IRS collects information each year from examinations of a random sample of about 13,000 taxpayers under the NRP. This sampling methodology is designed to result in a sample that is representative of the total filing population. One advantage of this random sampling is that it includes individuals who would not normally have been selected for a regular IRS audit, providing the IRS both with information on compliant taxpayers as well as on noncompliant taxpayers who would not be identified through existing IRS detection tools.

Each annual individual income tax return in the NRP sample contains information from a wide array of tax return line items and is a rich source of data for compliance analysis. For the most complicated returns (for example, those with reported self-employment income), the IRS conducts a full-scale audit, requiring either an in-office interview or a field audit with an examiner or revenue agent reviewing most of the return. In many other cases, however, the IRS identifies only a few questionable items and sends taxpayers a letter requesting documentation supporting these claims. In the simplest cases, the IRS compares the taxpayers' returns to information available from third parties and does not contact the taxpayers at all. Varying the degree of taxpayer interaction with the complexity of the return reduces the study's cost to the IRS as well as the burden imposed on taxpayers, especially those who are compliant and who would not typically be selected for an audit.<sup>7</sup>

In order to estimate other components of the tax gap, the IRS uses a variety of other data sources and empirical methods. For example, the IRS uses administrative data from operational audits to estimate underreporting of corporate income taxes. Unlike the examination of individuals, these companies are not selected randomly. Various econometric techniques are used to adjust for the statistical bias resulting from use of a nonrandom sample, but the IRS notes that there is considerable uncertainty about the overall results because of these and other data limitations. The IRS uses yet another approach to determine underreporting of payroll taxes (other than self-employment income taxes). In the absence of more recent audit data, the IRS applies estimated compliance rates from a study released in 1993 to the reported taxes over the 2008–2010 period. Because of these data limitations, the findings may provide an incomplete picture of current compliance behavior.<sup>8</sup>

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<sup>6</sup> According to this study, revenue lost due to underreporting is larger than that due to nonfiling and underpayment for individual income taxes, employment taxes, corporate income taxes, estate taxes, and excise taxes.

<sup>7</sup> Joint Committee on Taxation, *Factors Affecting Revenue Estimates of Tax Compliance Proposals: A Joint Working Paper of the Congressional Budget Office and the Staff of the Joint Committee on Taxation* (JCX-90-16), November 2016. This document can be found on the Joint Committee on Taxation website at [www.jct.gov](http://www.jct.gov).

<sup>8</sup> Internal Revenue Service, *Tax Gap Estimates for Tax Years 2008–2010*, April 2016.



## **The informal economy**

One type of noncompliance that is not explicitly included in the IRS tax gap studies and that is uniquely difficult to observe and measure is the gap generated by the informal economy. Economies were once thought to consist of formal and informal sectors, with the informal economy a separate and hidden economy having no direct links to the formal economy. However, an evolving understanding points to formal and informal sectors as interrelated, interdependent, and sometimes overlapping. Attempts to define and measure the size of the informal economy have not yet yielded a standardized set of concepts, and definitions of the informal economy vary across studies and continue to change, as do theories about their effects on employment, productivity, and growth. As definitions of the informal economy vary from study to study, so also do estimates of the size of taxed and untaxed economic activity in the informal economy.<sup>9</sup>

The informal economy, which may be marked by evasion of employment regulations or taxation, is not easily visible and currently is generally unmeasured in the United States. In the absence of direct measures, research identifies a high level of overlap between informal employment and three types of non-standard employment: own account self-employment, temporary employment, and part-time employment.<sup>10</sup> In the United States in 2008, 6.9 percent of total employment was own account self-employment,<sup>11</sup> 4.2 percent was temporary employment, and 12.2 percent was part-time employment.<sup>12</sup>

The amount of income not reported by participants in the informal economy is not well understood, but is a subset of the amount of income not reported in the overall economy. The types of tax not reported by these participants are likely primarily individual income tax, particularly from business income, and self-employment tax. As measured by the IRS, the gross tax gap from non-filing and underreporting of individual business income and self-employment tax was between \$194 billion and \$220 billion on average for tax years 2008-10.<sup>13</sup> These estimates may be suggestive, but do not precisely describe the informal economy. Two caveats are in order: first, a substantial and unknowable fraction of this \$194 billion to \$220 billion came from people who were not participating in the informal economy; second, some activity in the

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<sup>9</sup> The informal economy is sometimes defined as that consisting of the informal sector, which produces legal goods and services in an unregulated environment; the underground sector which produces legal goods and services, but uses illegal production and distribution processes; and the criminal sector, which produces illegal goods and services and distributes those illegally. For more on various definitions, see The Brookings Institution Metropolitan Policy Program, “Measuring the Informal Economy- One Neighborhood at a Time,” September 2006.

<sup>10</sup> Women in Informal Employment Globalizing and Organizing, “Statistics on the Informal Economy: Definitions, Regional Estimates and Challenges,” April 2014.

<sup>11</sup> Own account self-employment refers to those workers who work on their own account or with one or more partners, hold the type of jobs defined as “self-employment jobs” and have not engaged any employees to work for them on a continuous basis. <http://www.npdata.be/Dok/OESO/Work/OECD-Labour-2017.pdf>.

<sup>12</sup> These data are available at <http://stats.oecd.org/index.aspx>.

<sup>13</sup> JCT staff calculations based on Tax Gap Map from IRS, *Tax Gap Estimates for Tax Years 2008-2010* April 2016, p. 3, available at <https://www.irs.gov/pub/newsroom/tax%20gap%20estimates%20for%202008%20through%202010.pdf>.

informal economy may be especially difficult for the IRS to detect and may result in unreported tax much larger than \$194 to \$220 billion.

### **C. The Economics of Tax Compliance**

#### **Role of taxpayer behavior in the tax gap**

Faced with a statutory tax, a taxpayer may avoid paying this tax by foregoing the activity which generates the tax, or the taxpayer may evade the tax by underreporting the amount, underpaying the amount, or failing to file a return altogether. In the first case, the taxpayer's avoidance is legal. In the second, third, and fourth cases, the taxpayer's evasion is illegal. Policymakers may try to minimize the degree of legal avoidance by designing policies that are tightly written and allow for few loopholes, and they may try to minimize evasion by instituting various enforcement mechanisms, such as allowing for third party verification through information reporting, and increasing penalties and audits.

In some cases, taxpayers may choose whether or not to evade taxes by weighing the expected costs (for example, the probability of being caught and the consequences when caught, including social stigma) against the expected benefits of such evasion (for example, the likelihood of not being caught and the foregone taxes paid).<sup>14</sup> Evidence also shows that taxpayers do not fully optimize their behavior by weighing costs and benefits as described above, and that simple and salient tax policies often improve taxpayer compliance.<sup>15</sup> In designing policy and enforcement tools, policymakers who seek to achieve optimal levels of tax compliance must likewise weigh the relative costs (for example, more audits and enforcement activity as well as increased burdens on individuals as they attempt to comply with laws)<sup>16</sup> against the relative benefits (for example, increased tax revenue, and an increased perception that the system is fair).<sup>17</sup>

#### **Some tools for improving compliance**

Lawmakers have a number of available policy tools for improving compliance, including increasing the probability of detection, increasing the consequences when caught, and closing loopholes that might otherwise allow for reduction or elimination of tax through unintended changes in taxpayer behavior. In addition, policy designs can take into account taxpayer burdens

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<sup>14</sup> Gary Becker, "Crime and Punishment, an Economic Approach," *Journal of Political Economy*, vol. 76, issue 2, 1968, pp. 169-217; Michael G. Allingham, and Agnar Sandmo, "Income Tax Evasion: a Theoretical Analysis," *Journal of Public Economics*, 1972, vol. 1, issue 3-4, pp. 323-338.

<sup>15</sup> Raj Chetty, Adam Looney, and Kory Kroft, "Salience and Taxation: Theory and Evidence," *American Economic Review*, 2009, 99:4: 1145-1177.

<sup>16</sup> Joel Slemrod, "Which is the simplest tax system of the all?" in Henry Aaron and William Gale (eds.), *Economic Effect of Fundamental Tax Reform*, The Brookings Institution, 1996, pp. 355-391.

<sup>17</sup> Joel Slemrod, and Shlomo Yitzhaki, "The Optimal Size of a Tax Collection Agency," *Scandinavian Journal of Economics*, 1987, vol. 89, issue 2, pp. 183-192.

and potential effects of these burdens on rates of voluntary compliance. Observers note that compliance significantly relies on taxpayers' intrinsic motivation to pay taxes, *i.e.*, tax morale. Efforts to create tax systems and policies that are perceived to be simple and fair may improve tax morale and, therefore, compliance.<sup>18</sup>

However, not all efforts to eliminate the tax gap are optimal. From an economic standpoint, optimal policies are those that improve compliance while best utilizing limited IRS resources. For example, it would not be optimal if a dollar used to increase IRS enforcement efforts did not result in at least a dollar of increased tax revenue collected. From this view, it is rarely, if ever, optimal to attempt to reduce the amount of taxpayer evasion to zero. That said, the return on investment from additional spending on IRS enforcement activities is likely much greater than one-to-one given current spending levels.<sup>19</sup>

### Information reporting

One tool for improving compliance is reliable and objective third-party verification of income, which increases the probability of being caught evading taxes and increases the cost of evasion to the taxpayer, thereby decreasing the overall level of tax evasion by taxpayers. Information reporting by payors and brokers is required in a broad category of payments to taxpayers, including wages and salaries, dividends, interest, share sales, real estate sales, and others. Some empirical evidence shows that the introduction of third-party information reporting in tax administration, in fact, leads to more accurate reports of income on tax returns. For example, an analysis of small businesses operating as sole-proprietorships in 2011 shows a sharp increase in accuracy of reporting of business receipts in response to a new information reporting regime and the introduction of new Form 1099-K, although the overall effect on evasion was dampened by a simultaneous increase in reported expenses, which are not observable to the IRS.<sup>20</sup>

### Withholding

In simple textbook models of taxation, the question of who remits the tax does not affect overall collections or levels of tax evasion. However, in settings where the costs and benefits of evading taxes differ across economic agents, requiring tax remittance from one party rather than another, impacts overall compliance. Empirical evidence suggests that increasing withholding rates may, in certain settings, improve total tax collections.<sup>21</sup>

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<sup>18</sup> OECD, Public Consultation Document, "What is Driving Tax Morale?" 2019, pp. 6-10.

<sup>19</sup> Congressional Budget Office, *Additional Information on Program Integrity Initiative for the Internal Revenue Service in the President's Budgetary Proposals for Fiscal Year 2012*, June 23, 2011, p.2.

<sup>20</sup> Joel Slemrod, Brett Collins, Jeffrey Hoopes, Daniel Reck, and Michael Sebastiani, "Does Credit-Card Information Reporting Improve Small-Business Tax Compliance?" *Journal of Public Economics*, 2017, 149: 1-19.

<sup>21</sup> Wojciech Kopczuk, Justin Marion, Erich Muehlegger, and Joel Slemrod, "Does Tax Collection Invariance Hold? Evasion and the Pass-through of State Diesel Taxes," *American Economic Journal: Economic*

## Audits

A taxpayer's perceived probability of audit is an important component of the taxpayer's decision to comply with a requirement to pay tax.<sup>22</sup> To the extent that actual audit rates affect taxpayer perceptions, actual audit rates may be an important deterrent to noncompliance. In addition to the effect of perceived probability of audit, there is a specific deterrence effect of audits on the audited. Individuals generally appear to alter their perceived probability of audit upwards in the few years following an actual audit, increasing reported wages, self-employment income, and other types of income for three to four years following the audit.<sup>23</sup>

## Penalties

Penalties are an important policy tool in the standard model of deterrence described above. For example, a penalty for the failure to timely file tax returns or information returns may foster compliance in meeting these deadlines.<sup>24</sup> A penalty increases the cost of evasion to the taxpayer, which should motivate compliance. However, for various reasons taxpayers do not fully optimize their behavior by weighing costs and benefits, which may dampen the full deterrence effect of a penalty regime.

## Letters and notifications

When they are effective, letters and notifications are a relatively inexpensive tool for improving compliance. Research shows that depending on the content of the letters, the context for the mailing, and the characteristics of the receiver, letters may or may not encourage compliance, however. Furthermore, the majority of existing studies fail to find evidence that letters improve tax morale, the intrinsic motivation to comply.<sup>25</sup>

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*Policy*, 2016, 8(2): 251-286; Eleanor Wilking, "Hotel Tax Incidence with Heterogeneous Firm Evasion: Evidence from Airbnb Remittance Agreements," 2017, Working Paper, University of Michigan.

<sup>22</sup> See for example, Michael Chirico, Robert P. Inman, Charles Loeffler, John MacDonald, and Holger Sieg, "An Experimental Evaluation of Notification Strategies to Increase Property Tax Compliance: Free-Riding in the City of Brotherly Love," *Tax Policy and the Economy*, 2016, 30(1): 129-161.

<sup>23</sup> Jason DeBacker, Bradley T. Heim, Anh Tran, and Alexander Yuskavage, "Once Bitten, Twice Shy? The Lasting Impact of IRS Audits on Individual Tax Reporting," *Journal of Financial Economics*, 2015, 117(1): 122-138.

<sup>24</sup> Currently, the failure to file penalty in the Code applies to all returns required to be filed under subchapter A of Chapter 61 (relating to income tax returns of an individual, fiduciary of an estate or trust, or corporation; self-employment tax returns, and estate and gift tax returns), subchapter A of chapter 51 (relating to distilled spirits, wines, and beer), subchapter A of chapter 52 (relating to tobacco, cigars, cigarettes, and cigarette papers and tubes), and subchapter A of chapter 53 (relating to machine guns and certain other firearms).

<sup>25</sup> Joel Slemrod, "Tax Compliance and Enforcement," *NBER Working Paper*, No. 24799, July 2018.