

What motivates tax compliance?

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I examine this broad question by looking at three specific questions:

- 1) What does theory say about what motivates tax compliance?
- 2) What does the evidence really show?
- 3) How can government use these insights to improve compliance?

1) What does theory say about what motivates tax compliance?

- The starting point: Economics-of-crime model
 - A rational individual weighs the expected benefits of successful cheating against the risky prospects of detection and punishment.
 - The individual pays taxes because he or she is afraid of getting caught and penalized.
 - Indeed, the individual pays taxes because – and only because – of the fear of detection and punishment.
- So compliance depends upon enforcement.

Insights and limitations

- So enforcement motivates compliance – and the evidence is clear that deterrence matters.
- But:
 - Can compliance be explained entirely by the financial considerations stemming from enforcement?
 - Plus, the standard theory predicts that a higher tax rate actually increases compliance.
 - And the standard theory is elegant in its simplicity – so it necessarily omits many potentially relevant factors.
- So deterrence matters, but it seems implausible that it is the only thing that matters.
- What other factors might motivate compliance?

Theoretical extensions within the economics-of-crime approach

- Employer withholding
 - Expanded individual choices (e.g., labor supply, occupation, ...)
 - Alternative tax and penalty systems
 - Systematic audit selection rules
 - Complexity and uncertainty
 - Use of paid preparers
 - Government services
 - Positive rewards
- *These extensions complicate considerably the comparative statics of the compliance choice, and withholding especially gets predictions closer to observations. Even so, they leave enforcement as the main factor that motivates compliance, and they also do not change the compliance-tax rate response.*

Theoretical extensions using ***“behavioral economics”***

The standard economics model of human behavior is based on several assumptions:

- Individuals are rational.
- Individuals have unlimited willpower.
- Individuals are self-interested.

However, there is much evidence that these assumptions are often unrealistic:

- Individuals face limits on their ability to compute (e.g., “bounded rationality”)
- They systematically misperceive , or do not perceive at all, the true cost of their actions (e.g., “fiscal illusion”, “saliency”, “overweighting” of probabilities)
- They face limits on their “self-control” (e.g., “hyperbolic discounting”, Christmas savings clubs”)
- They are affected by the ways in which choices are “framed” (e.g., reference points, gains versus losses, loss aversion, risk-seeking behavior)
- They are affected by the social context in which, and the process by which, decisions are made
- They are motivated by notions of fairness, altruism, trust, guilt, shame, morality, alienation, emotions, patriotism, social customs, social norms, “tax morale”, ...

- Behavioral economics uses these so-called “departures” from the standard assumptions as the starting point for a more realistic view of how individuals actually make their choices and what motivates them.
- More broadly, behavioral economics uses methods from other social sciences (especially psychology) to inform the analysis of individual decision making.
- Behavioral economics has been applied in two broad (and not mutually exclusive) dimensions:
 - Using **non-expected utility models** – focusing on the individual
 - Using models with **social interactions** – focusing on the group
- In the area of compliance, what does this work suggest?

Theoretical extensions with *non-expected utility models*

Here the focus is on the individual, and the individual is assumed to have a utility function that differs from the standard one in terms of what is valued and how it is valued, via such approaches as prospect theory, rank dependent expected utility theory, ...

→ *These models change the “probability” and the “objective function”. In doing so, they considerably complicate the analysis of the individual decision, but they can generate predicted levels of compliance that better approximate observed levels, especially if they have subjective (overweighting of) probabilities. However, they do not typically change the comparative statics results as long as the payoff to evasion is still based on the tax rate.*

Theoretical extensions using **social interactions**

Here the focus is on the group, and an individual's choices depend on the social environment in which choices are made.

- An individual is motivated not simply by self-interest (narrowly defined) but by group notions like social norms, trust, intrinsic motivation, fairness, reciprocity, tax morale, ...
- An individual is also motivated by individual notions stemming in part from group factors like guilt, morality, altruism, ...

→ *These models can generate the “correct” comparative statics responses (mainly because they break the link between evasion and the tax rate in payoffs), and they can also give predicted levels of compliance that come much closer to observed levels, but (again) at the cost of considerable complexity.*

Overall, theory suggests several main conclusions about what motivates tax compliance:

- Enforcement matters – but many other factors matter in the tax compliance decision beyond enforcement.
- An individual does not always behave as assumed in the standard economic approach.
- Individuals are social creatures and are influenced by group considerations.

2) What does the evidence show?

- Evidence on tax evasion is very hard to find, for obvious reasons.
- Even so, research has been increasingly creative in finding ways to examine evasion using mainly:
 - field data (including natural experiments)
 - controlled field experiments
 - laboratory experiments.
- What does the evidence show?

What factors have been shown with “naturally occurring” field data to motivate compliance?

- Audit rates
- Endogenous audit selection/strategic audit selection
- Coordinated audit selection of state and federal agencies
- Fine rates
- Non-financial penalties
- Tax rates
- Tax amnesties
- Information sharing and exchange
- Benefits (e.g., social insurance programs)

Limitations

- Can the compliance data really be believed?
- Can these field data “identify” the independent effects of audit rates, fine rates, ... on compliance, or what is their “internal validity”?

What about controlled field experiments?

- Controlled field experiments allow some factors suggested by theory to be examined.
- They generate precise data on individual choices, though not typically on compliance.
- They allow a single policy to be changed one-at-a-time, which allows its individual and separate effects to be determined by comparing a treatment group with a control group.
- They use “real” people.

→ Field experiments give control, they generate data, they can be replicated, and they have a limited degree of internal validity (e.g., “cause and effect”) – but they are expensive and they cannot analyze many factors.

A “typical” controlled field experiment

- A treatment sample of individuals receives a message (e.g., a letter or an electronic notification) telling them some policy-relevant information (e.g., “your tax return will be closely examined”, “most people pay their taxes”, “paying taxes helps others”).
- A control sample of individuals receives a neutral message.
- The impact is examined by a simple comparison of the treatment group compliance with the control group compliance.

To date most controlled field experiments have used this “message” approach.

What about laboratory experiments?

- Laboratory experiments allow many factors suggested by theory to be examined.
- They generate precise data on individual compliance choices.
- They allow a single policy/institution to be changed one-at-a-time, which allows its individual and separate effects to be determined.
- They typically use student subjects.

→ Experiments give control, they generate data, they can be replicated, they are relatively inexpensive, and they have a high degree of internal validity – but they typically use students.

A “typical” laboratory experiment

- Human subjects are given (or earn) income.
- They must decide how much income to “report”.
- They pay taxes on reported income.
- They do not pay taxes on unreported income, but unreported income may be discovered and penalized.
- This process is repeated for several rounds.
- At the end of the experiment, subjects are paid an amount that depends upon their overall performance (e.g., accumulated earnings).
- Various policy changes can be introduced, one-at-a-time, and their separate compliance impact can be determined.

What factors have been examined experimentally?

- Audit rates
- Productivity of audits
- Audit selection methods (e.g., targeted audit programs)
- Tax rates and tax structures
- Tax withholding systems
- Matched versus non-matched income
- Fine rates
- Public disclosure of compliance
- Public good
- Individual rewards
- Tax amnesties
- Overweighting of low probabilities
- Taxpayer communication (“cheap talk”) and information dissemination
- Collective decision processes (including voting)
- Social norms
- Perceptions of inequity (e.g., differences in tax burdens)
- Complexity and uncertainty
- Taxpayer services

Limitations of field and laboratory experiments?

→What is the “external validity” of experiments,
given especially subject pools?

Summary:

What does all of this evidence show?

Individuals respond predictably, if not always significantly, to:

- Increased audit rates
- Increased threat of audits via a “message”
- More “productive” audits
- Repeated audits
- Strategic/targeted audit selection
- Public disclosure of audit
- Public dissemination of audit information
- Increased penalty rates
- Higher tax rates
- Greater use of source-withholding
- More use of information-sharing between government audit agencies
- Greater rewards – public or private – for compliance
- Closer taxes-services linkage
- Increased taxpayer participation in group decisions
- Expectations of a tax amnesty
- Increased complexity and uncertainty – and better taxpayer services

Summary redux:

What are some “surprising” research results?

1) Audits affect compliance, but...

- More audits increase compliance, but the reported income-audit rate elasticity is small and varies across studies.
- More audits increase compliance but in a non-linear way, so that the deterrent effect diminishes with higher audit rates.
- Audits have a “spillover” effect, or an increase in compliance independent of revenues generated directly from the audits themselves, whose magnitude varies from 4 to 12.
- Audits have a greater deterrent effect than fines, despite their theoretical equivalence (at least in an expected value sense).
- Strategic audit selection is far – far – better than random selection, especially a “cutoff rule”, but random selection seems necessary for audit schemes to work.
- The “shadow value” of an auditor – the extra revenue generated from an audit over and above the cost of the audit – often ranges from 3 to 5.

2) Perceptions of audit rates affect compliance...

- Individuals appear to substantially misperceive audit rates, typically overweighting a (low) probability of audit. So “psychology” – and other behavioral economics factors – matters.

3) Fines affect compliance, but...

- The deterrent effect of fines is small, and audits have a greater deterrent effect.
- But fines are relatively understudied.

4) Positive inducements improve compliance, with...

- Individual rewards increasing compliance (e.g., lotteries, social insurance benefits)
- Group payoffs increasing compliance (e.g., “public goods”).

5) Tax rates affect compliance, but...

- The level of tax rates matters in an individual's compliance decision, although the magnitude – and even the direction – of impact is unclear.
- One's tax rate relative to others' (e.g., “fiscal inequity”) matters – if you think your tax rate is “too high” relative to others, you will comply less.
- The use of taxes affects compliance, especially when subjects can choose the use of their taxes.

6) Process (versus outcome) affects compliance, and ...

- There seems to be a “social norm” of compliance, in which one’s compliance depends upon various group factors.
- Social norms can be affected by the institutions that face individuals, by individuals’ attitudes toward these institutions, and by individual participation via voting in the selection of those institutions.
- Subjects pay more when they choose the use of their taxes by voting than when the identical use is imposed upon them, compliance is greater when the vote indicates a clear group consensus, and compliance is significantly and dramatically lowered by the imposition without taxpayer choice of an unpopular program.
- Attitudes toward tax evasion are influenced by the social environment – the trust in government, the trust in institutions, the attitudes of their neighbors, ... – in which they live. And these measures of tax morale have real effects.
- Group heterogeneity affects compliance through “social capital”, with greater heterogeneity (race, religion) often reducing tax compliance.

7) The information that individuals have about the tax system and other individuals affects compliance, but...

- Higher audit rates have no impact on compliance if this “official” information is not provided; if it is provided, higher audit rates increase compliance.
- Knowing what your neighbors are doing affects your own decisions, and not always in a way that increases compliance.
- Information per se does not always improve compliance. Rather, it is mainly information on the behavior of one’s neighbors that has a large impact on filing and reporting behavior.
- Group heterogeneity affects compliance through “social capital”, with greater heterogeneity (race, religion) often reducing tax compliance.
- Knowing how your tax dollars are spent often has a positive, if small, impact on compliance.

8) Tax amnesties affect compliance, and...

- The revenue impact is generally small and positive.
- The longer run impacts on compliance are generally small (and sometimes negative).
- A "well-designed" amnesty, or one in which enforcement efforts increase after the amnesty, overcomes any post-amnesty decline in compliance.
- An amnesty may be a useful device to ease the transition to a tougher tax regime, a device that clears the books before the new regime is installed.

9) A complicated tax system affects compliance, but the impact is far from clear...

- Field data suggest that an increase in complexity leads to greater use of a “tax practitioner” – and compliance is lower for returns prepared by a practitioner.
- Laboratory experiments suggest that a more complicated tax system tends to decrease compliance, and that better administrative services that make it easier for an individual to pay taxes tends to improve compliance – but the effects are weak.

10) Individuals are motivated by many factors beyond narrow financial interest, including...

- Individuals who have greater sympathy (as measured by the frequency of pro-social behavior) are more compliant.
- Individuals who are “primed” to elicit empathy are more compliant.
- Individuals who are “primed” to do the moral thing are more compliant, although the effects may be transitory.

Overall, then...

An individual's motivation for compliance is affected by multiple factors, including but going beyond the narrow financial considerations of enforcement. Indeed, research suggests several “motivational postures” – or segments or partitions:

- “Pathologically honest” (committed to report honestly regardless of incentives to cheat)
- Conflicted (social norms, moral constraints)
- Fearful (may not file, may overpay)
- Surprised (e.g., unexpected balance due)
- Careless/negligent/procrastinator
- Strategic (homo economicus, rational calculator)
- “Pathologically defiant”/distrustful (committed to repudiate one's tax responsibilities even in the face of significant deterrence).

And taxpayers may fall into different segments in different contexts and/or different times.

3) How can government use these insights to improve compliance?

People are complicated and are motivated by many factors in their compliance decisions. Even so, the evidence on motivations suggests that:

- Detection and punishment must be present.
- Other tools need to be used as well. In particular, the tax administration should provide services to make it easier for agents to pay taxes.
- And the tax administration – and government itself – must be seen as treating people fairly and honestly, giving people something for their taxes.

Three “paradigms” for tax administration

- The “Enforcement” paradigm

Taxpayers are viewed and treated as potential criminals, and the emphasis is on repression of illegal behavior through frequent audits and stiff penalties. **So: Increase detection and punishment.**

- The “Service” paradigm

There is a role of tax administration as a facilitator and as a provider of services to taxpayer-citizens. **So: Improve the services of the tax administration by becoming more “consumer-friendly”.**

- The “Trust” paradigm

Individuals are more likely to respond either to enforcement or services if they believe that the government generally and the tax administration specifically are honest; that is, “trust” in the authorities can have a positive impact on compliance. **So: Change the culture (or the “social norm” of paying taxes).**

- There should be a “full house” of strategies to address the “full house” of motivations.