THINKING ABOUT TAX ADMINISTRATION (AND POLICY)

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Views are mine alone

Public Economics for Development

Work is now marked by:

- Empirical focus, with close attention to
  - Endogeneity issues
  - Data, esp. (but not only) large administrative datasets
- Administrative aspects
  - Likely too an increasing focus, given digitalization

A large, still rich agenda: better integrating theory, evidence, and practicalities—not least for tax

OUTLINE

- Research on tax administration
- Tax gaps in tax analysis
- Optimal tax administration
- Concluding

RESEARCH ON TAX ADMINISTRATION

Until recently

Literature on tax administration had focused on:

- Measuring administration and compliance costs
- Embellishing/puzzling over models of tax evasion

No established framework by which to evaluate administrative interventions—unlike policy

Recent explosion of empirical work

Many excellent papers using experiments, natural or other, to address aspects of compliance. E.g.:

- Compliance in VAT chains (Pomeranz, 2015)
- Lotteries (Naritomi, 2013)
- 'Nudges' (reviews in Alm (2014), Luttmer and Singhal (2014))

What has all this taught tax administrators?

- Implications for enforcing VAT chains
  - Pomeranz results seem to imply “Start at the end”
- Importance of withholding and third party information well-known
  - British land tax 1697; and Milton Friedman’s regret!
- Are lotteries/nudges first order importance?

Making theory more useful

…by providing practicable frameworks integrating policy and administration

Illustrate this with thinking around ‘tax gaps’

- What significance in wider analysis of tax systems?
- What is the ‘optimal’ tax gap?
  - Answering that requires thinking about ‘optimal’ tax administration more widely

TAX GAPS IN TAX ANALYSIS

Decomposing VAT revenue: 'C-efficiency'

Can write VAT revenue (in percent GDP) as

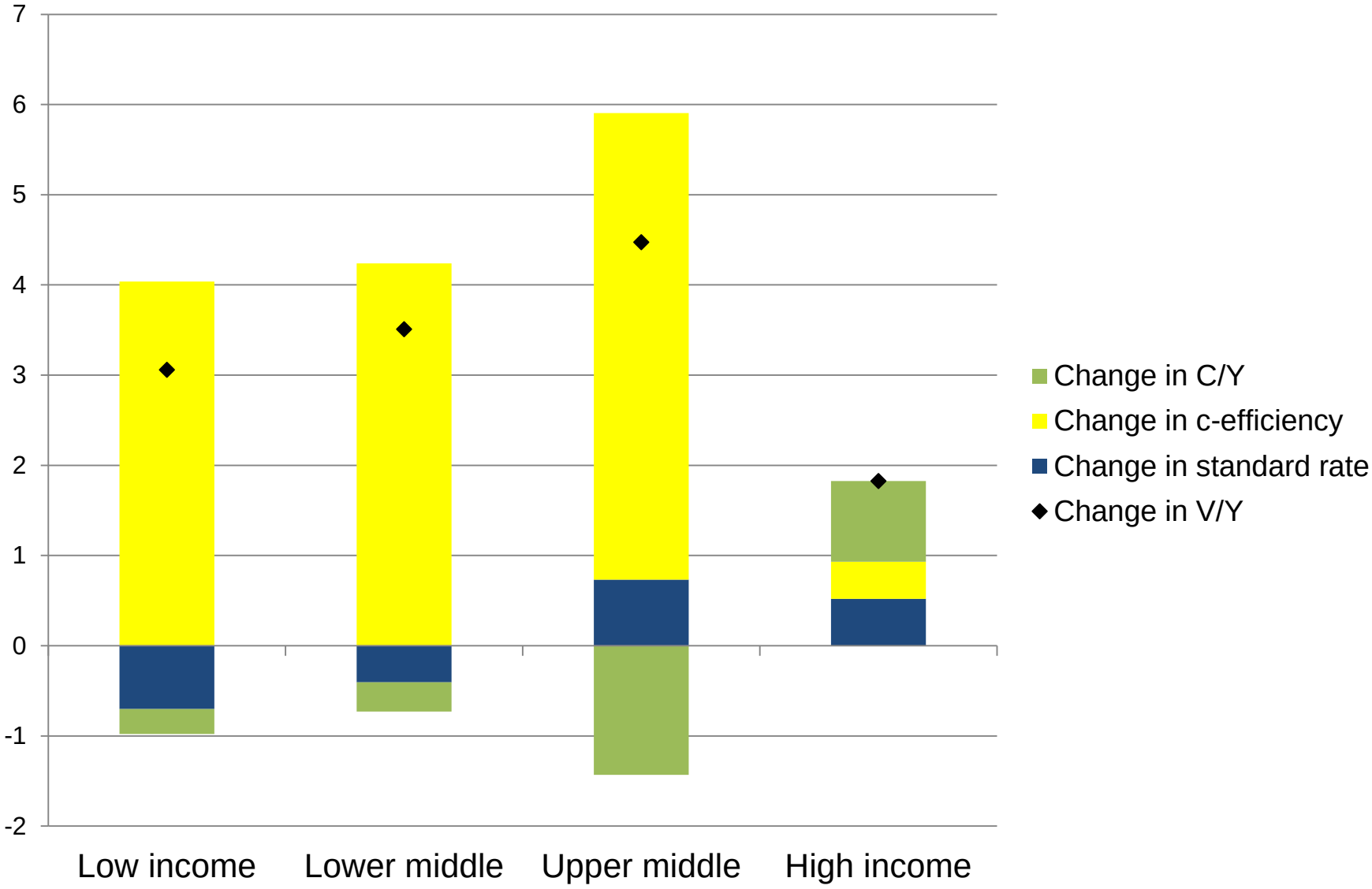
$$\frac{V}{Y} = \tau_s E^C \left(\frac{C}{Y} \right)$$

where V is VAT revenue, Y is GDP, τ_S is the standard VAT rate, C is consumption, and

$$E^C \equiv \frac{V}{\tau_s C}$$

is 'C-efficiency'

C-efficiency drove changes in VAT Revenue, 2003-2010



So what drives C-efficiency?

With V^* the revenue that would be raised if implementation of current system were perfect:

$$E^C = \frac{V}{\tau_S C} = \left(\frac{V^*}{\tau_S C}\right)\left(\frac{V}{V^*}\right) = (1-P)(1-\Gamma)$$

where P is a 'policy gap' and Γ a 'compliance gap'

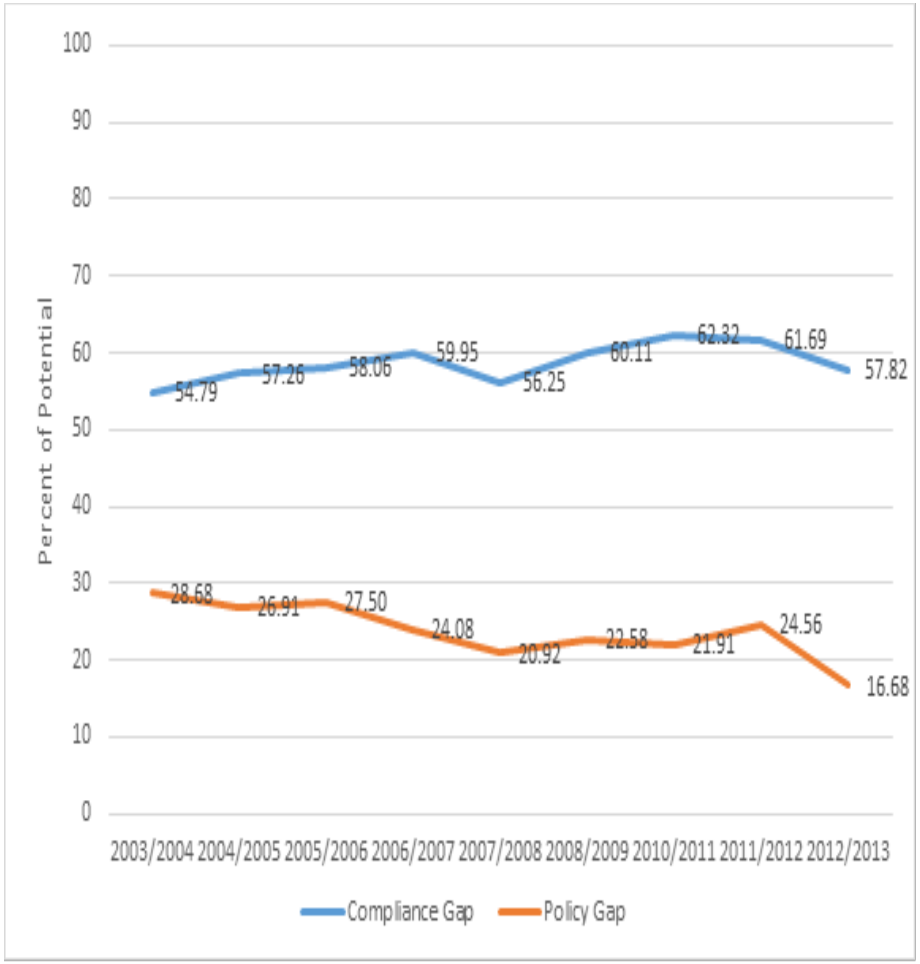
The compliance gap

≡Excess of tax (e.g. VAT) theoretically due over that actually collected, as percent of former

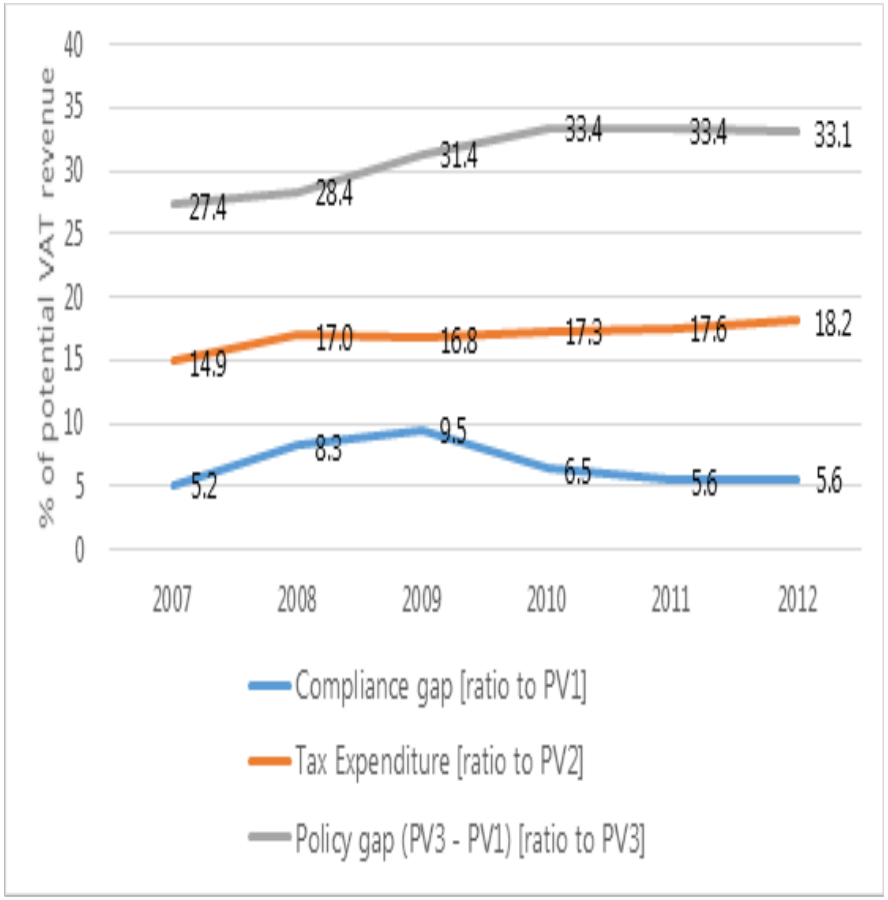
- An increasing focus in many countries. E.g.:
  - UK has produced 'VAT gaps' for several years
  - Reckon (2009) and CASE (2013) for EU
  - RA-GAP project at IMF, esp. for developing countries
- Ideally, combine with analysis of 'policy gaps'
  - Similar to tax expenditures

For example (from RA-GAP)

Uganda



South Africa

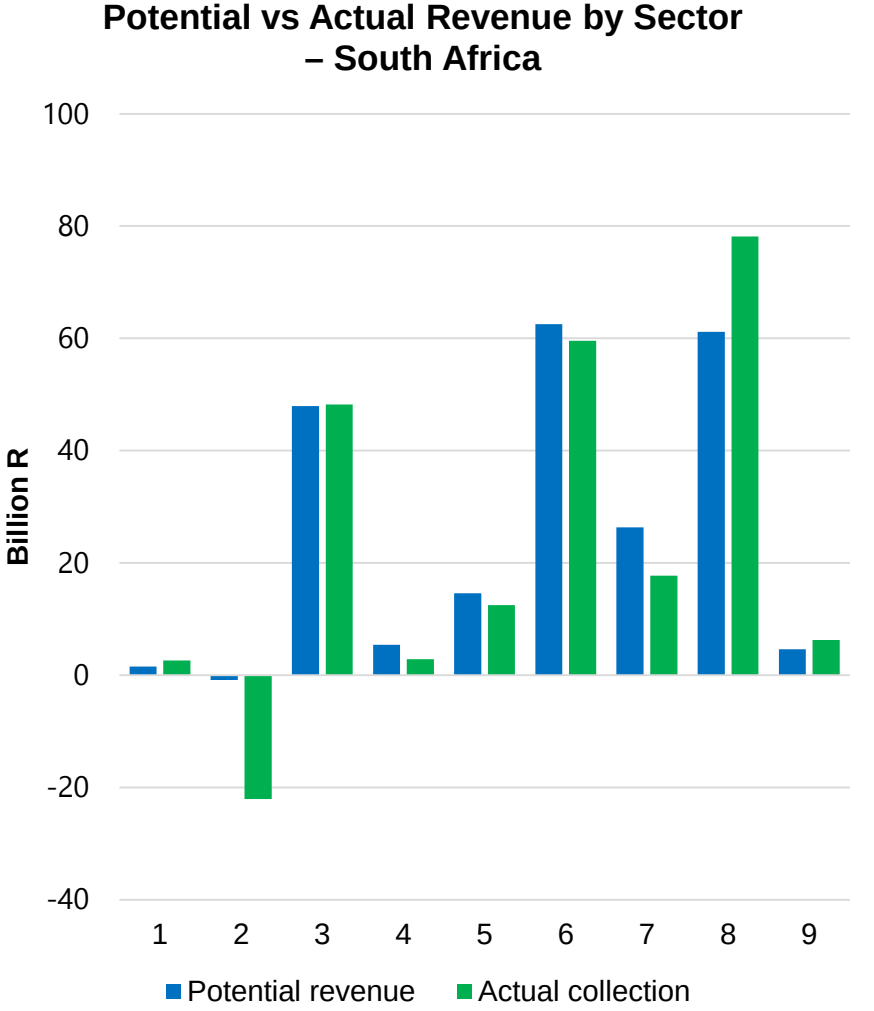


Uses of gap analysis

Can identify:

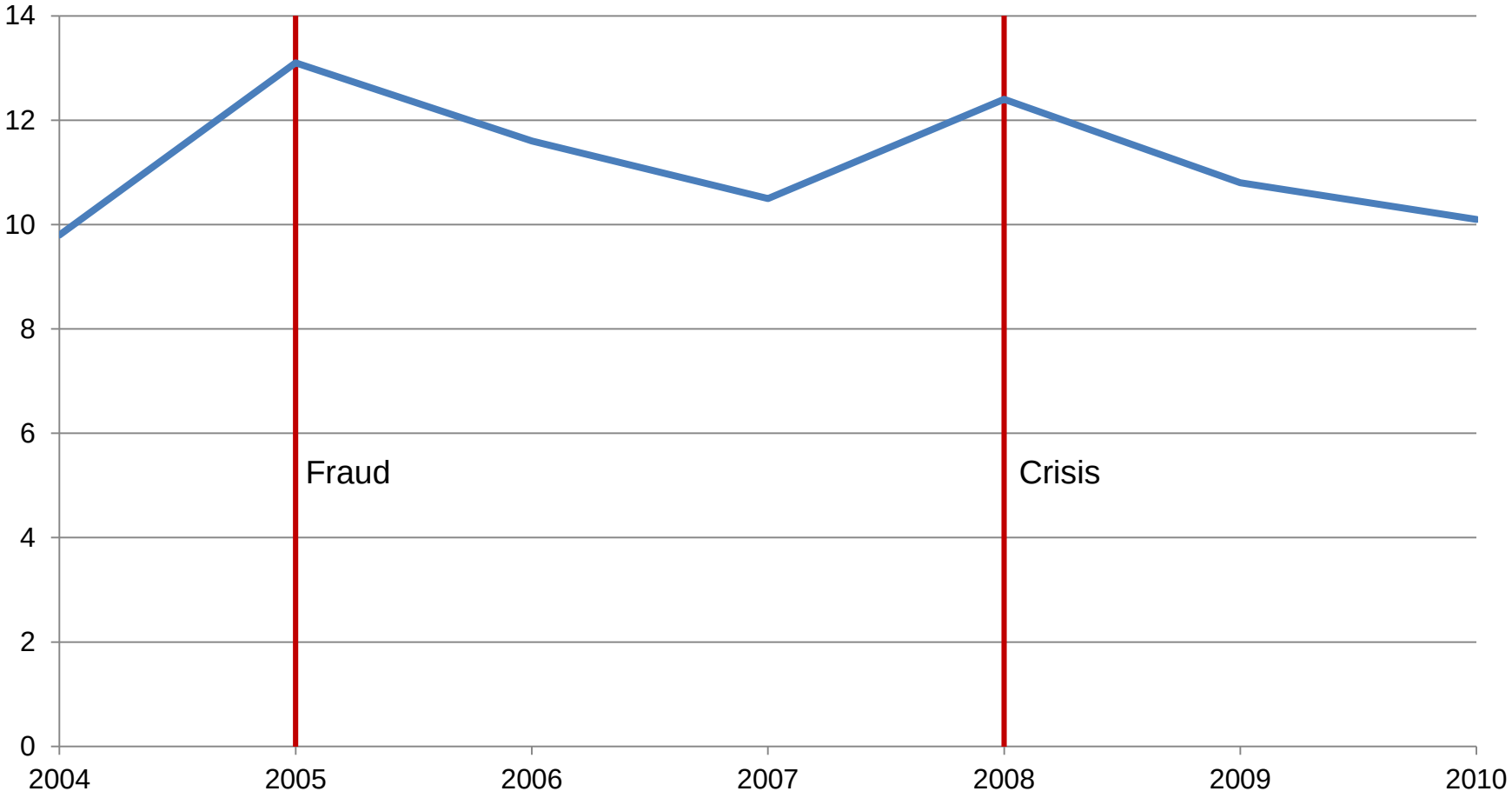
- Priorities for reform: e.g.:
  - In Uganda, key issue is compliance gap, halving it would raise 3% of GDP
  - For South Africa, policy gap seems the larger concern
- Areas in which to improve compliance
  - Not just total gap that matters

VAT gaps by sector



Sectors:	
1. Agriculture, forestry and fishery	6. Wholesale and retail trade, catering and accommodations
2. Mining and quarrying	7. Transport, storage and communications
3. Manufacturing	8. Financial intermediation, insurance, real estate and business services
4. Electricity, gas and water	9. Community and social services
5. Construction	

And UK compliance gap



But—Is compliance gap too big or too small?

- A tendency to think that whatever compliance gap is, it's too big
  - But closing it is costly, including through possible impact on activity
- So what is the optimal compliance gap?
  - How, more generally, to characterize optimal administrative interventions?

OPTIMAL TAX ADMINISTRATION

Three Questions

Q1: How should we assess administrative Interventions?

- There is an established framework for assessing optimal tax rates—focused on the "elasticity of taxable income"

- Is there are an administration-side analogue?
  - i.e. a sufficient statistic summarizing what's needed to make normative judgments?

Q2: What is the optimal compliance gap?

- The compliance gap is not a welfare measure
  - As noted earlier: may not be worth expend resources to reduce the gap; and reducing it may worsen the tax distortion
- So, how do we know if a compliance gap is too big or too small?

Q3: Administration or policy to raise revenue?

A very basic question for policy-makers:

If additional revenue is needed, is it better to secure this by

(a) Strengthening administration, or

(b) Increasing statutory rates?

A framework to address them

Integrating the analysis of tax policy and administration (Keen-Slemrod, 2016)

Pure efficiency: Extending a standard model to allow (non-) compliance and administration costs

$$U = wl - T(wl - e) - C(e, \alpha) + V(r)$$

where $r = T(wl - e) - A(\alpha)$

Taxpayer chooses l and e; government chooses T and α

Optimal choice of tax rate, T

- Well-known: A sufficient statistic for behavioral responses to tax rate changes is "elasticity of taxable income" = elasticity of reported tax base to (one minus) tax rate
  - Higher this is, the lower is the optimal tax rate
- Large empirical literature seeks to estimate this
  - Almost all for advanced countries

Answers

Choice of administrative intervention

The optimal choice of α satisfies

$$\phi = E(z, \alpha)$$

where:

- ϕ is an adjusted ratio of (marginal) administration and compliance costs to revenue
- $E(z, \alpha)$ is the *enforcement elasticity of tax revenue*

So answer to Q1 is: The enforcement elasticity

Like the taxable income elasticity, $E(z, \alpha)$ is a sufficient statistic for behavioral impact

E.g. If $v' = 1.2$, a/z=0.006 and c/z=0.011, more enforcement is desirable iff $E(z, \alpha)$ exceeds 0.1

What we know about the enforcement elasticit(ies) of taxable income?

- Evidence from panel of EU compliance gaps suggests $E_Z = 0.17$
- Experimental evidence
  - For audit, $E_Z = 0.1\text{-}0.2$
- Empirically, some IRS work (Plumley)…
  - Mainly concerned with choice between administrative instruments

…suggests E_Z for audit of 0.6-0.85 (?)

More on the cost term

This is

$$\phi = \frac{\alpha\left(\frac{c_\alpha}{v'}\right) + \alpha a'}{tz}$$

which differs from standard cost/ revenue ratio in:

(a) Discounting compliance costs by v': because they are not financed from distorting tax revenue

(b) It is marginal costs that matter

Putting this framework to work

A discrete administration reform is desirable iff

$$\Delta U \equiv (v' - 1)t\Delta z - v'\Delta a - \Delta c$$

Meiselman (2017) applies this to effect of letters sent to suspected non-Detroit city tax nonfilers

Finds welfare gain negative

– mainly because of large compliance costs

A2: Optimal compliance gap

The gap is $g \equiv e/wl$, and the optimal gap is characterized by an inverse elasticity rule

$$\frac{g}{1-g} = \frac{-\phi}{E(e,\alpha)}$$

So for this we need to know the evasion elasticity.

E.g., with the cost figures above, a compliance gap of 14.5% is optimal iff a 10 percent increase in spending on enforcement would reduce evasion about 5%.

A3: Administration vs. rate increase

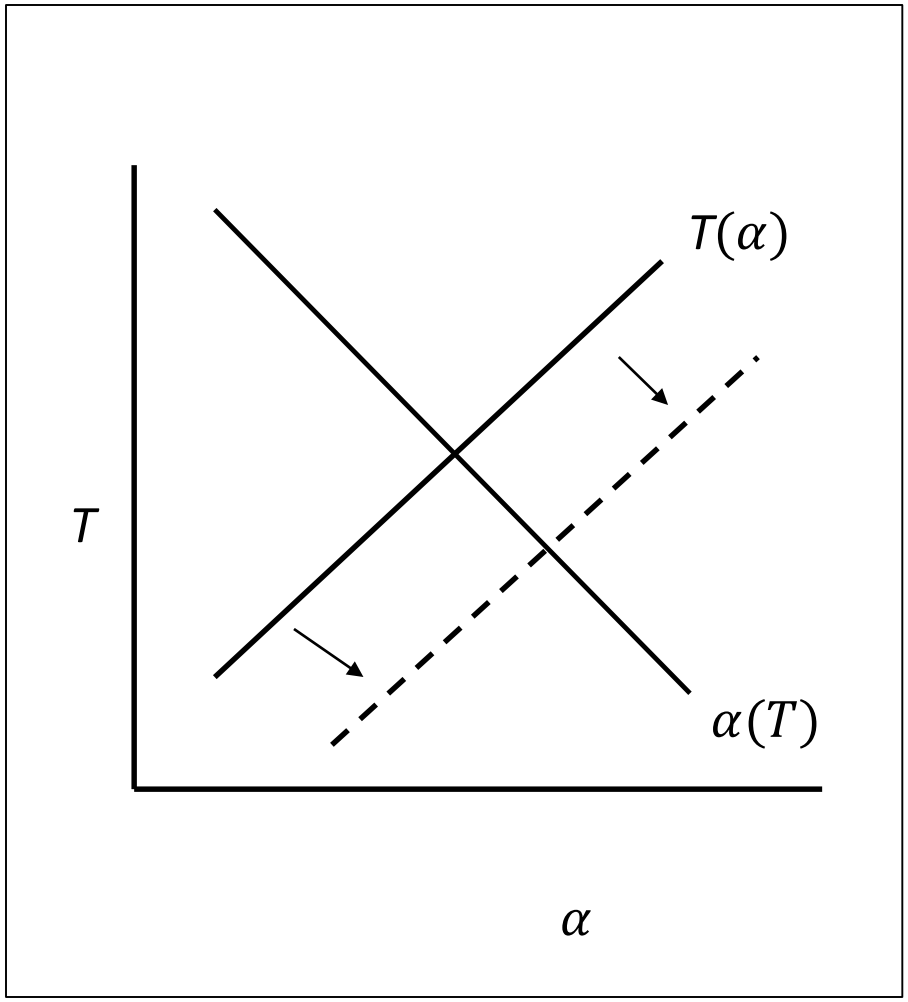
Answer is more likely to be enforcement:

- Higher is the elasticity of taxable income
  - Because that means high inefficiency
- Higher is the tax rate
- Higher is enforcement elasticity
- Lower are administration and compliance costs
  - Former especially damaging to case for implementation

And more

Answer to Q3 prompts another question

Are enforcement and tax rates strategic complements or subs.?



Matters because e.g.:

- If technology makes detecting evasion easier…
- Optimal tax rate goes down if strategic substitutes (on left)…
- …but goes up if they are complements

Some extensions

- Many are straightforward…
  - Multiple administrative instruments
    - Results on allocation of a fixed administration budget
  - Discrete reforms
  - When part of *c* is a transfer
  - Multiple households
- Generalizing concealment costs to $c(e, avoidance, l)$—but only a small redefinition of ϕ is needed

CONCLUDING

Two views

"…it is time to put to rest the claim that [evasion, avoidance, and administration] is…understudied"

Slemrod and Yitzhaki, 2002

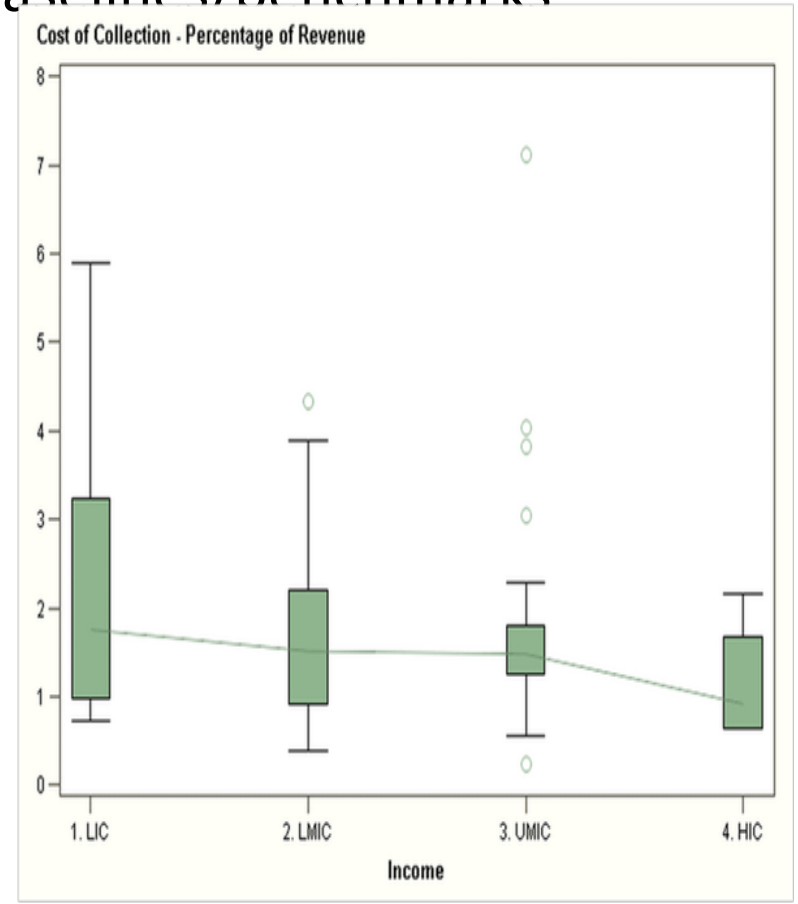
"…there is still only a relatively small scholarly literature [on] tax administration"

Hasseldine, 2011

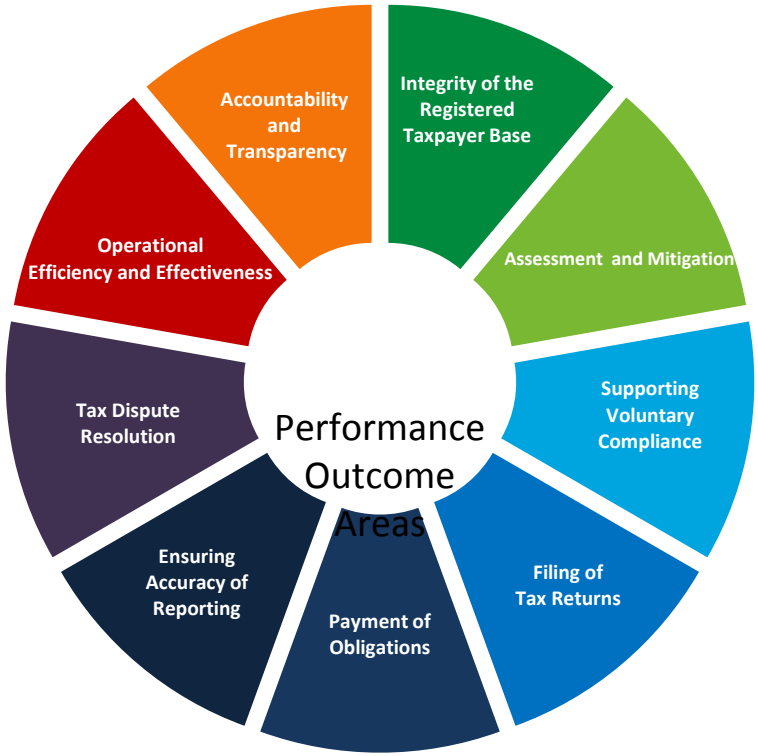
First view has become more persuasive—but much remains

And two new data sources

ISORA/RA-FIT: Collects RA data and establish baselines/benchmarks



TADAT: Assessment tool



ISORA: Collecting information on tax administrations

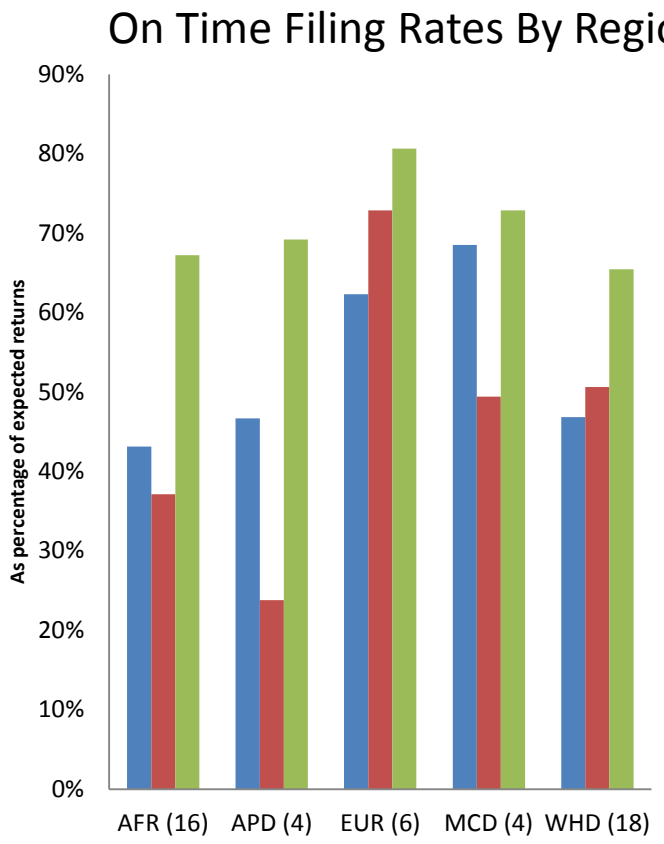
International Survey on Revenue Administration (ISORA)
Powered by RA-FIT

Intra-European Organisation of Tax Administrations

OECD

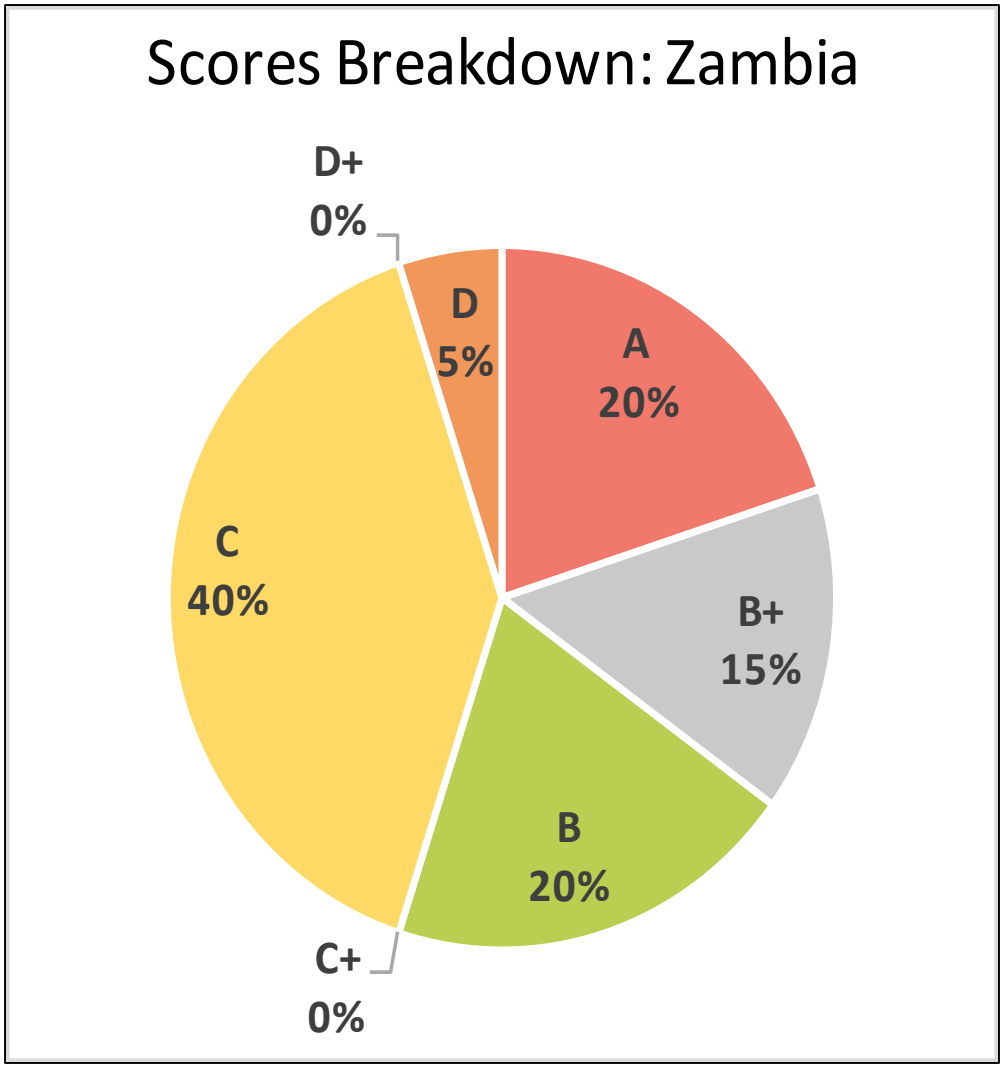
World Customs Organization
Organisation Mondiale des Douanes

- Understand historical performance
- Establish baselines by income group and other groupings
- Identify trends

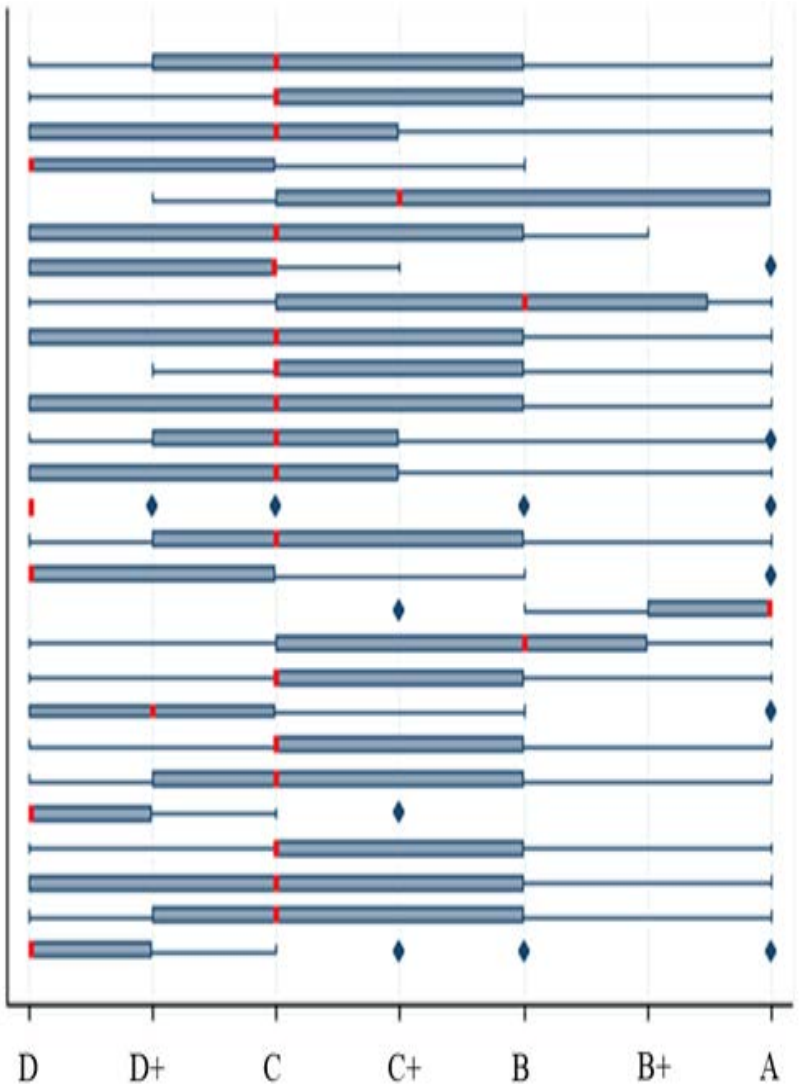


Source: RA-FIT Database, 2010

TADAT



Results from 27 countries



www.tadat.org

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