

# REVENUE ADMINISTRATION (AND POLICY) IN DEVELOPING COUNTRIES— SOME ISSUES



Michael Keen  
TAXDEV Policy Conference  
IFS, March 23 2018  
Views are mine alone

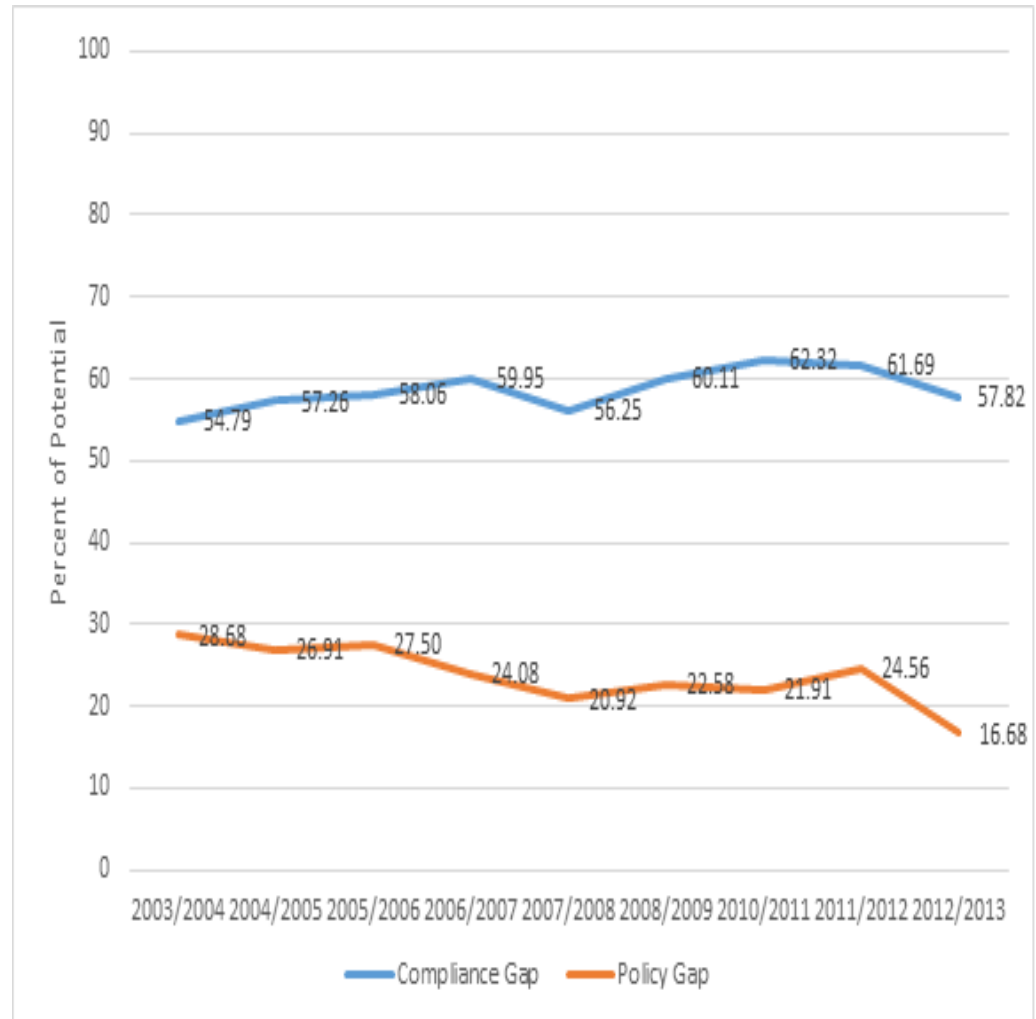
# OUTLINE

- Research and practice in tax administration
- Thresholds and segmentation
- Optimal tax administration
- Digitalization

# RESEARCH AND PRACTICE IN TAX ADMINISTRATION

# Why revenue administration matters

- Financing SDGs
- Building trust in government
- Enabling better tax policies



# How research on tax admin. is being transformed

It was about:

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

(with no established framework by which to evaluate administrative interventions—unlike policy)

It is now about using large datasets and experiments, natural or other, to address aspects of compliance

# What have tax administrators learnt?

- Implications for enforcing VAT chains
  - Pomeranz results seem to imply “Start at the end”
- Limitations on third party reporting
  - Carillo, Pomeranz and Singhal (2017)
- Value of withholding and 3<sup>rd</sup> party information
  - 1284 in England; British land tax 1697

Many first order issues remain—focus now on some at intersection administration and policy

# THRESHOLDS AND SEGMENTATION

# Policy and administration meet

- Efficiency case for threshold rests on implementation costs
  - But choice can profoundly affect nature of the tax, and so is a key policy decision
- Raises wider issue of taxpayer segmentation
  - A key aspect of most modern tax administrations, which can similarly affect impact, and appropriate design, of policy



# Choosing the VAT threshold

If all taxpayers compliant(!), increasing the threshold ( $Z$ ):

- Government loses revenue (only) from those at the threshold (each dollar valued at, say, \$1.2) but saves administration costs (of say \$400)
- Taxpayer has money in the pocket and saves compliance costs (of say \$1,000)

Balancing these effects (assuming 20% tax rate and value added 20% of sales), optimal threshold is \$98,000

(Keen and Mintz, 2004)

# But what if they can choose whether to...

- Declare truthfully
- Adjust, legally, to below  $Z$
- Become ghosts/falsely declare under  $Z$
- Conceal a fraction of their sales?

Is the optimal threshold now higher or lower?

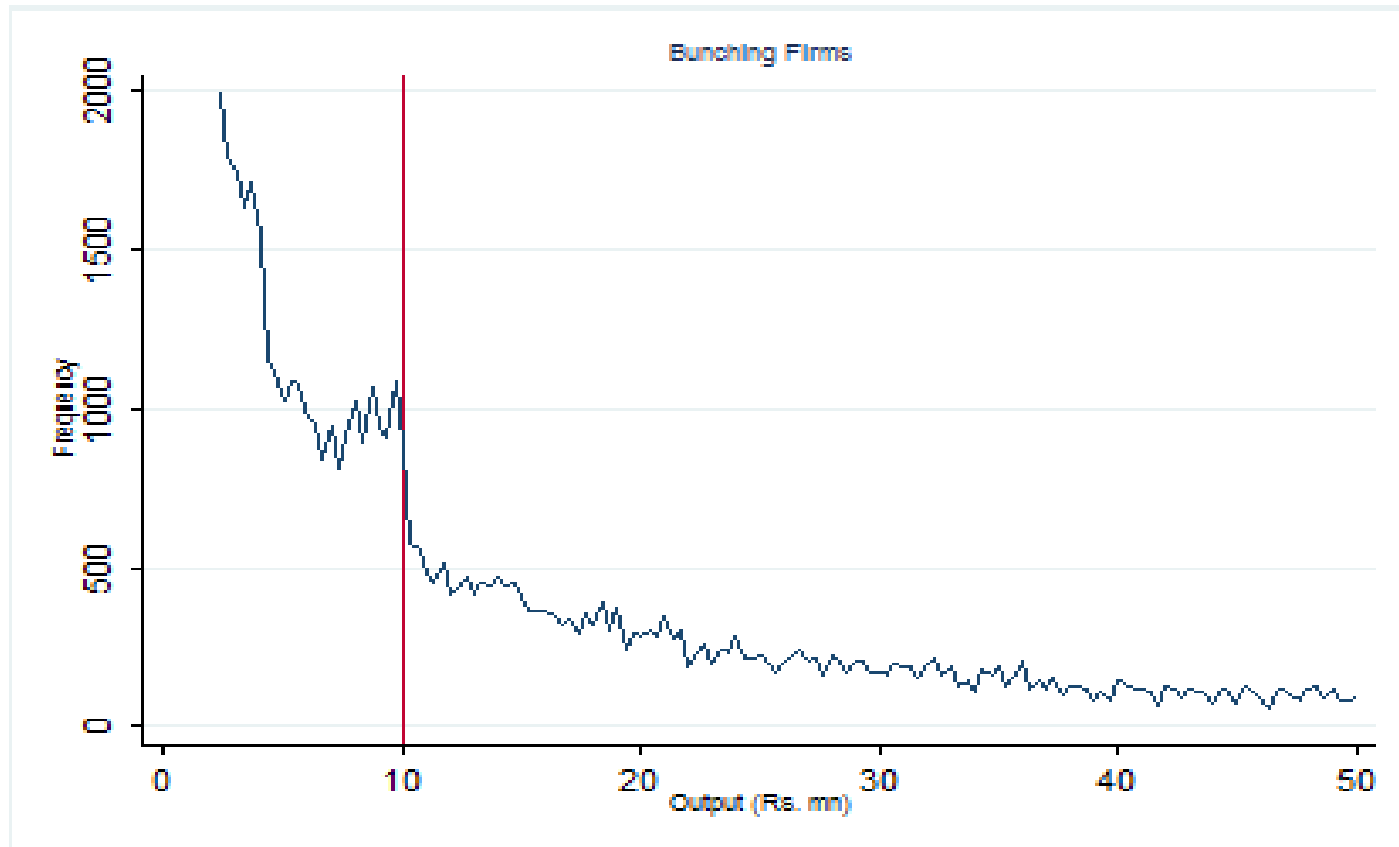
# Then taxpayers partition such that

Starting at the lowest level of true potential sales:

- Lowest are (honestly) out of the system
- Next lowest adjust out (type *A*)
- Then there are the bounders, who falsely declare below  $Z$  (type *B*)
- Then the cads, declaring above  $Z$  but below truth
- And the largest are fully honest

(Kanbur and Keen, 2014)

# Adjusters (and bounders?) in practice



Source: Chatterjee and Wingender (2012)

Ghosts? Non-filers 7% all potential US taxpayers

# Towards optimal segmentation...

But what is the optimal threshold?

- It is high enough that there are no 'bounders'  
This is because increasing threshold gives:
  - Increased output of A's
  - No output or revenue loss from B's who become A's
- More generally, likely higher than with full compliance

# ...with compliance patterns suggesting:

Administrative challenges are related to size:

- For top: compliance likely to be good; control avoidance and ensure timely payment
- Middle segment: Concealment
- Bottom segment: Concealment and ghosts

This looks much like LTO, MTOs and STOs....

# But problem much more complex

- What treatment within partitions?

Taxpayer size	Estimated number of taxpayers	Estimated turnover range (SP)	VAT regime	Income tax regime	Tax office
Large	1,000-1,500	≥ 70 million	Monthly	Real (self assessment)	LTO
Medium 1 (larger)	10,000-12,000	15 -70 million	Quarterly	Real (self-assessment)	Eight, integrated offices
Medium 2 (smaller)	30,000-40,000	5-15 million	Exempt	Real (administrative. Assessment0)	Current offices
Small and micro	370-450,000	<5 million	Exempt	Lump sum	Current offices

- Many other instruments—including non-tax

# OPTIMAL TAX ADMINISTRATION



# Two Questions

# Q1: How should we assess administrative Interventions?

E.g. how do we know if resourcing for audit should be increased, or shifted to registration?

- 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: 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?

# Answers

# On the policy side: Optimal choice of tax rate, $T$

- 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/emerging countries

# Answer to Q1 is: The enforcement elasticity

Optimality requires equating

- The (adjusted) ratio of administration and compliance costs to tax revenue

to

- Elasticity of revenue with respect to the intervention = '*enforcement elasticity of tax revenue*'

E.g. if administrative and compliance costs resp. 0.6 and 1.1 percent of revenue (and marginal value of public spending 1.2) more enforcement is desirable if and only if enforcement elasticity exceeds 0.1

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

Not much:

- Experimental evidence
    - For audit, = 0.1-0.2
  - Empirically, some IRS work (Plumley)...
    - Mainly concerned with choice between administrative instruments
- ...suggests elasticity of 0.6-0.85

# Putting this framework to work?

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

Finds welfare gain negative

—mainly because of large compliance costs: a reminder of their importance

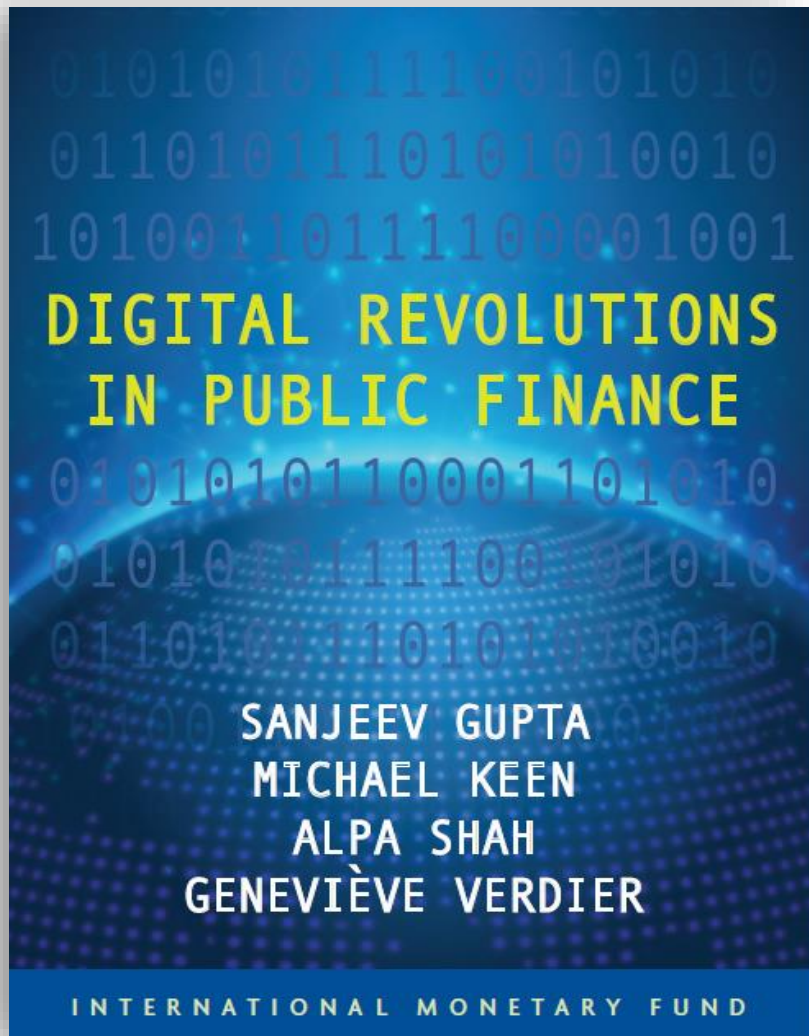


## A2: Administration is more likely to be preferred to rate increase...

- Higher is the elasticity of taxable income
  - Because that means high inefficiency
- Higher is enforcement elasticity
- Higher is the tax rate
- Lower are administration and (especially) compliance costs

# DIGITALIZATION

# Is this time different?



- Much past bad IT experience
- Leapfrogging?
  - Kenya exampleBut how replicable?
- Will/should we do the same, but better—or do different?

<http://www.elibrary.imf.org/drpf>.

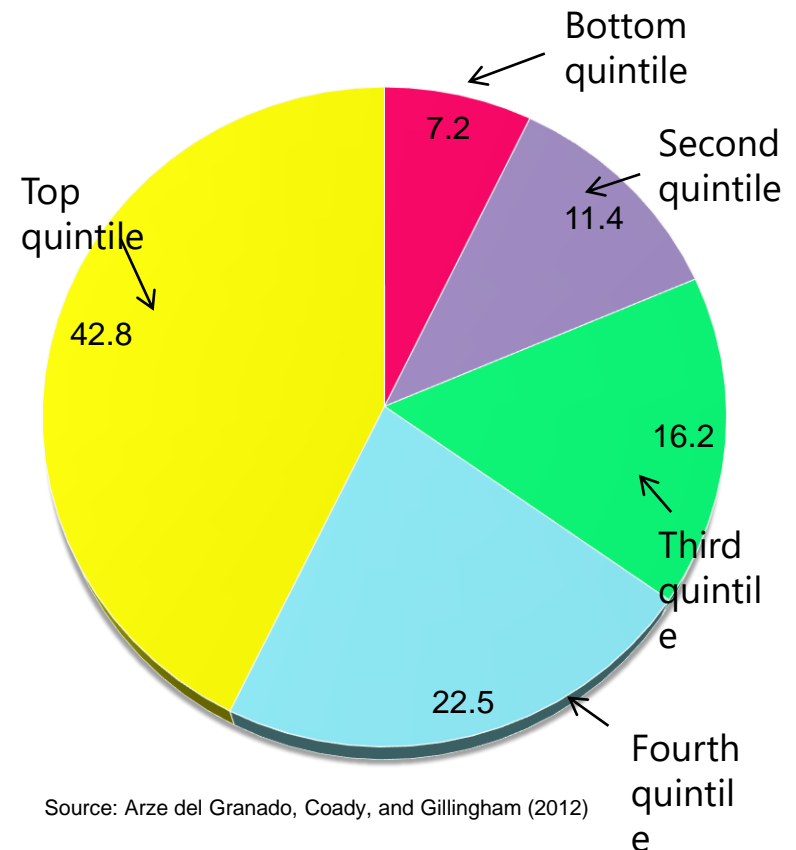
# Doing things differently?

E.g. biometrics can make poll subsidy more practicable—an important additional instrument

—Can replace price subsidies, help poor and leave money left over

But institutional obstacles to more efficient policies may remain

Distribution of Petroleum Product Subsidies by Income Group  
(In percent of total petroleum product subsidies)



Source: Arze del Granado, Coady, and Gillingham (2012)

# Doing the same but better?



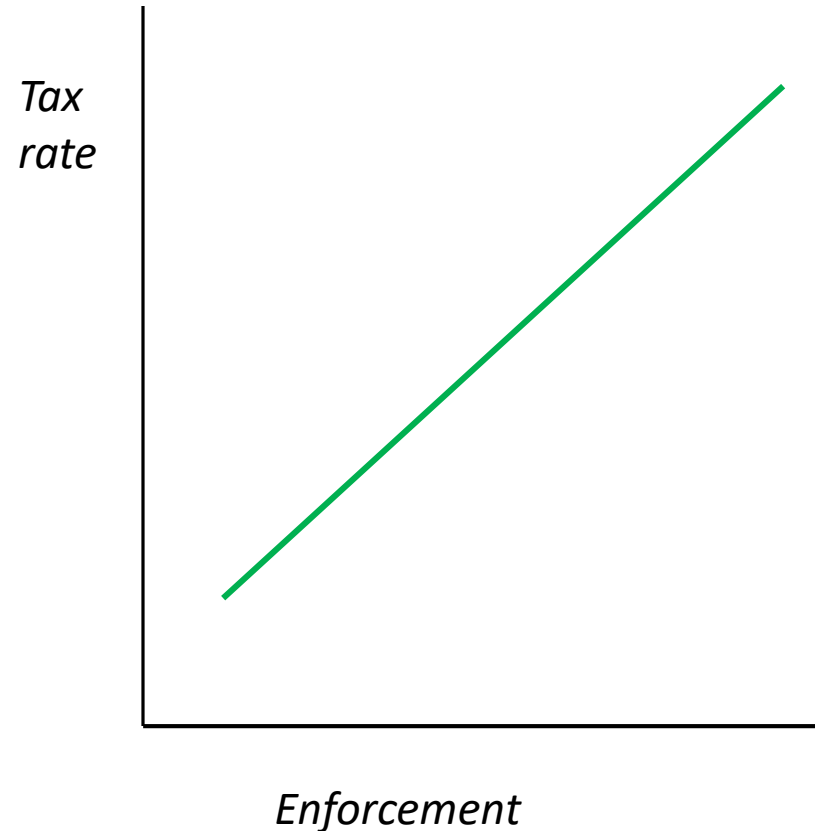
## Blockchain

- Can embed VAT in smart contracts
  - But is VAT needed if chain is secure?
- If customs more secure, does that argue for higher tariffs?

# A basic question

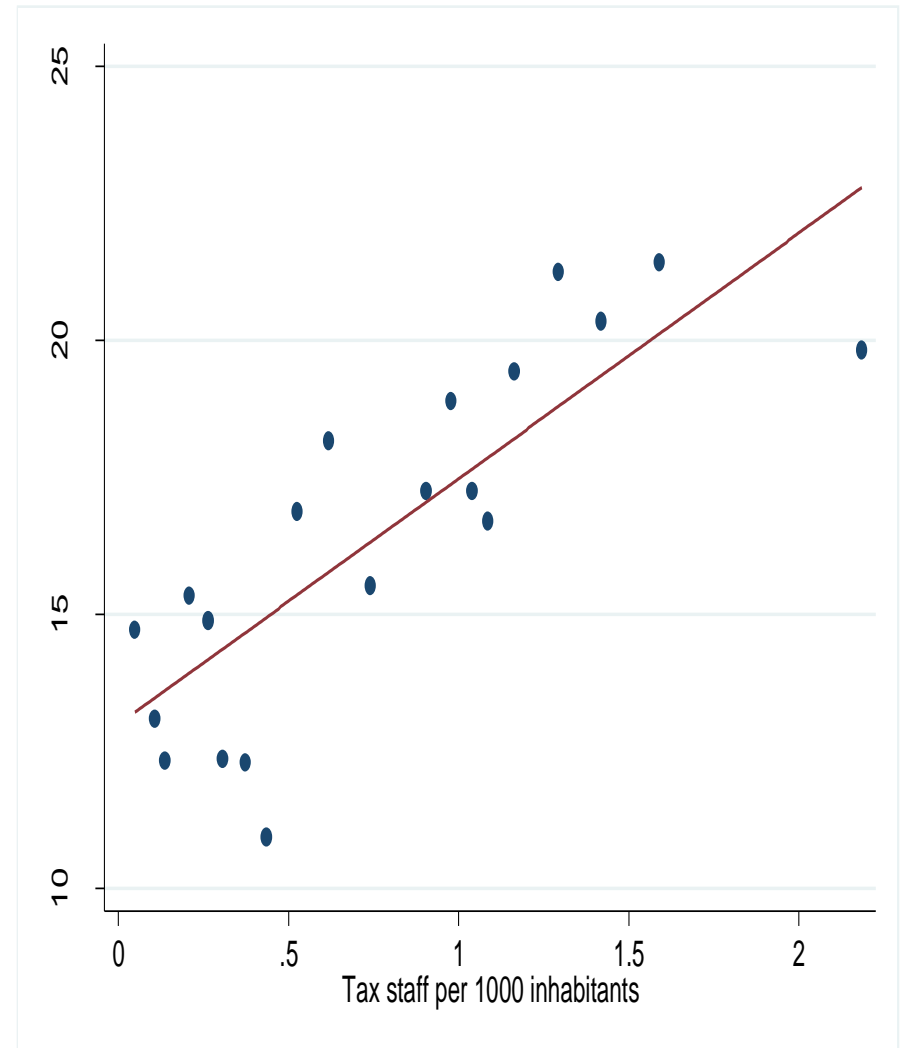
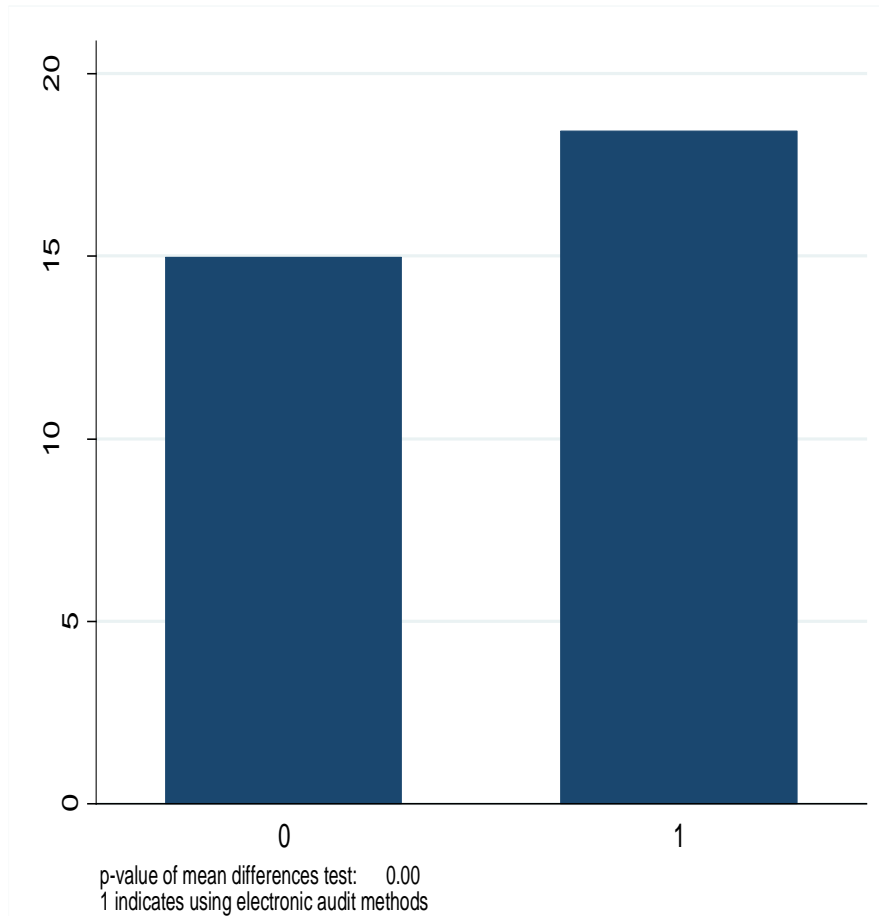
Will digitalization lead to higher or tax rates?

- Depends on precise impact on administration and compliance costs
- And hinges on whether tax rates and enforcement efforts are strategic complements (as on right) or substitutes
  - A basic question on which we know little



# Some signs?

## Using Electronic Audit Methods



**CONCLUDING**



# ISORA: Collecting information on tax administrations

International Survey on Revenue Administration (ISORA)

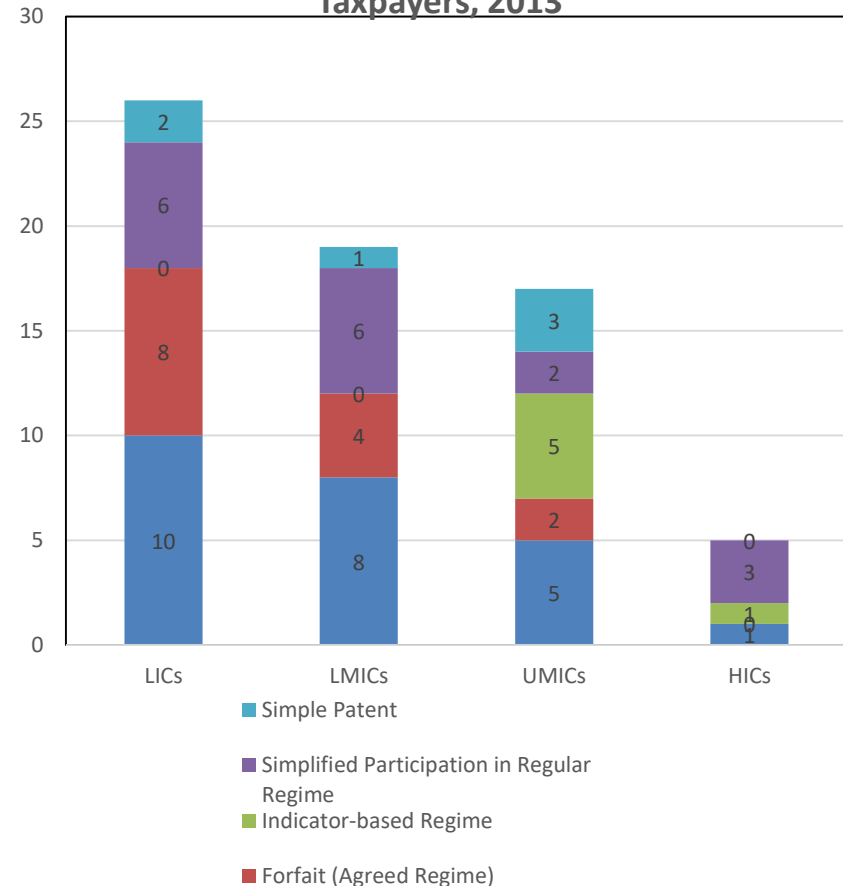
Powered by RA-FIT



World Customs Organization  
Organisation Mondiale des Douanes

- Second wave 89 countries:  
<http://data.rafit.org>
- Poor response rates on some key items (arrears...) tell a story

Simplified Regime Types for Small Taxpayers, 2013

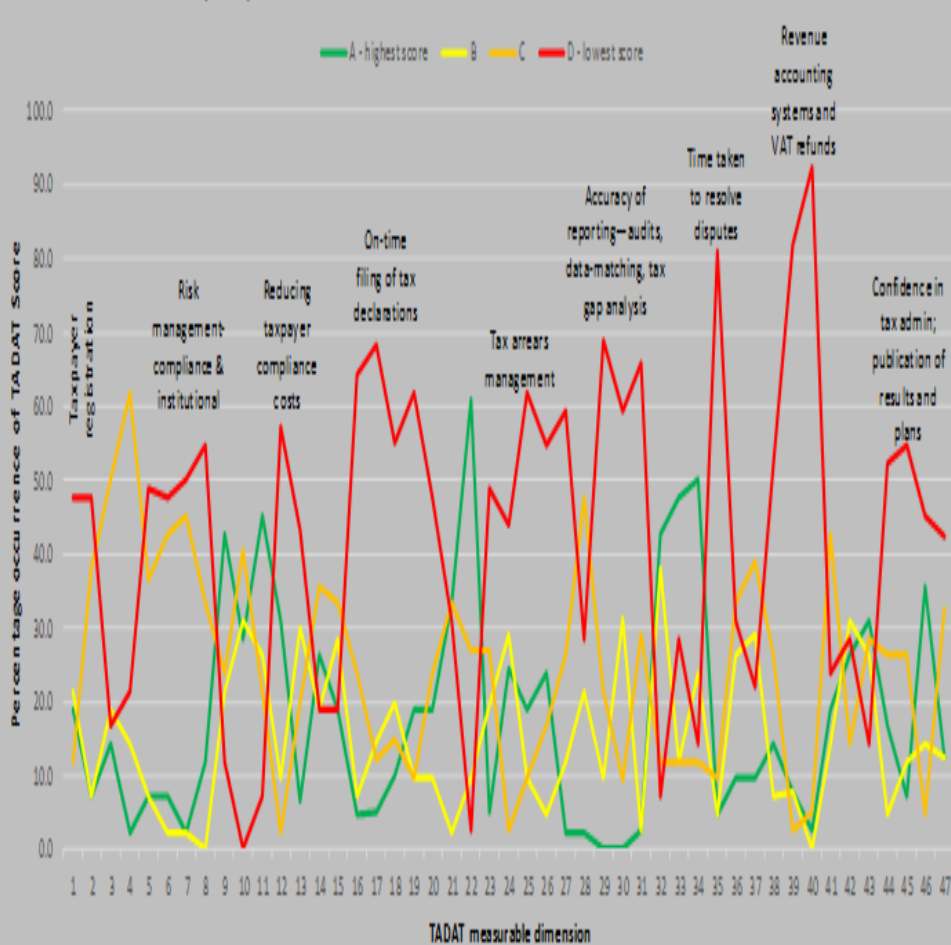


# TADAT: Tax Administration Diagnostic Assessment Tool



# Becoming a rich source of information

Frequency of a TADAT Score's Occurrence at the Dimension Level—42 Assessments



- 47 dimensions × 40+ countries
- Dabla-Norris (2017) et al. use TADAT data to argue stronger administration improves productivity

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