Tax Administration Research Centre

Economic Growth, Legal Complexity Tax Revenues and their Determinants

Professor Christos Kotsogiannis

Director of TARC

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Legitimacy…and rule of law

‘Legitimacy has different components: the **legal framework**; the **interpretation of the law**; the **enforcement of the law in practice and what citizens actually see as legitimate actions**,’ Lotta Björklund Larsen.

- How much does lack of legal certainty cost in economic growth and revenues forgone?
- Economists have long attempted to understand the role of **rule of law** (generic term to describe legal systems) in economic outcomes
- Do some countries **grow faster** because their legal system protects **property rights** better and **enforces contracts** more efficiently and fairly?

Complexity…does it matter?

- If growth correlates with tax revenues, **expect to see that countries which provide legal certainty** (and less legal complexity) **are performing better in tax revenues**
- Common belief amongst tax practitioners/tax administrators that **tax laws are**
  - **Overly complicated**, and
  - **Often have ambiguous interpretation…**

Complexity…does it matter?

- **Complexity** is not necessarily bad, but
  - **Unnecessary complexity is distortionary**, and cause
    - Misinterpretations and so mistakes (by the very well intentioned taxpayers)
  - But quantification is not common practice
    - Maybe it should, as then policy can be targeted
  - HMRC estimates (maybe others do this too?):
      - **Legal interpretation**, 6bn (1.1% of tax gap in 2015-16))
      - **Error**, 3.3bn (0.6% of tax gap in 2015-16)
    - TARC research looks at how these mistakes occur when taxpayers fill their SAs and how to correct for this

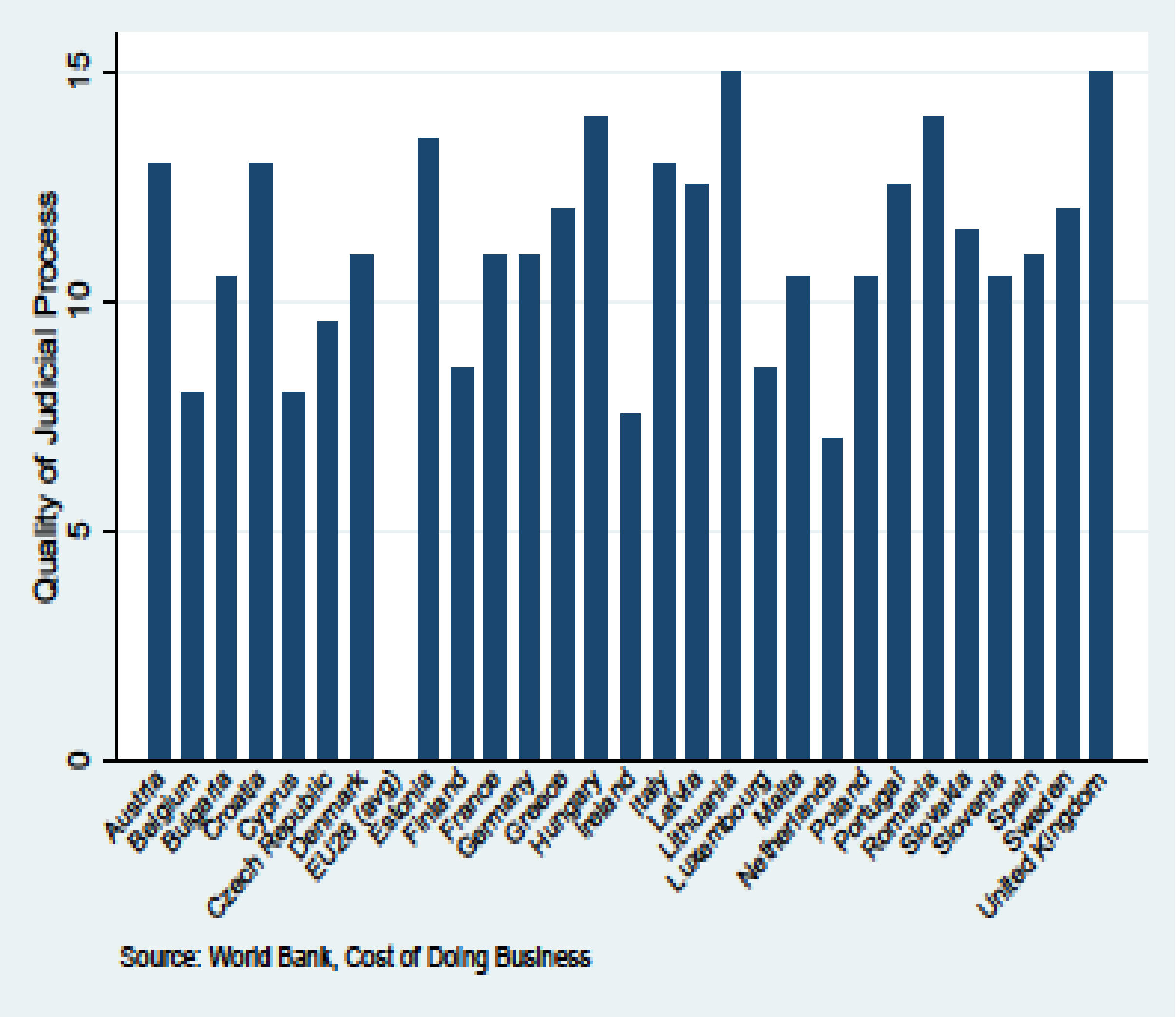
Measures of complexity

- Measures of ‘complexity’ do not exist…
  - Difficult to capture the concept…maybe
    - Number of pages of tax law?
    - Number of tax cases in dispute?
    - Frequency of changes of primary/secondary legislation?
    - Number of interpretive (circulars) documents being published?
    - Linguistic expression in tax law (AI might have something useful to say)?

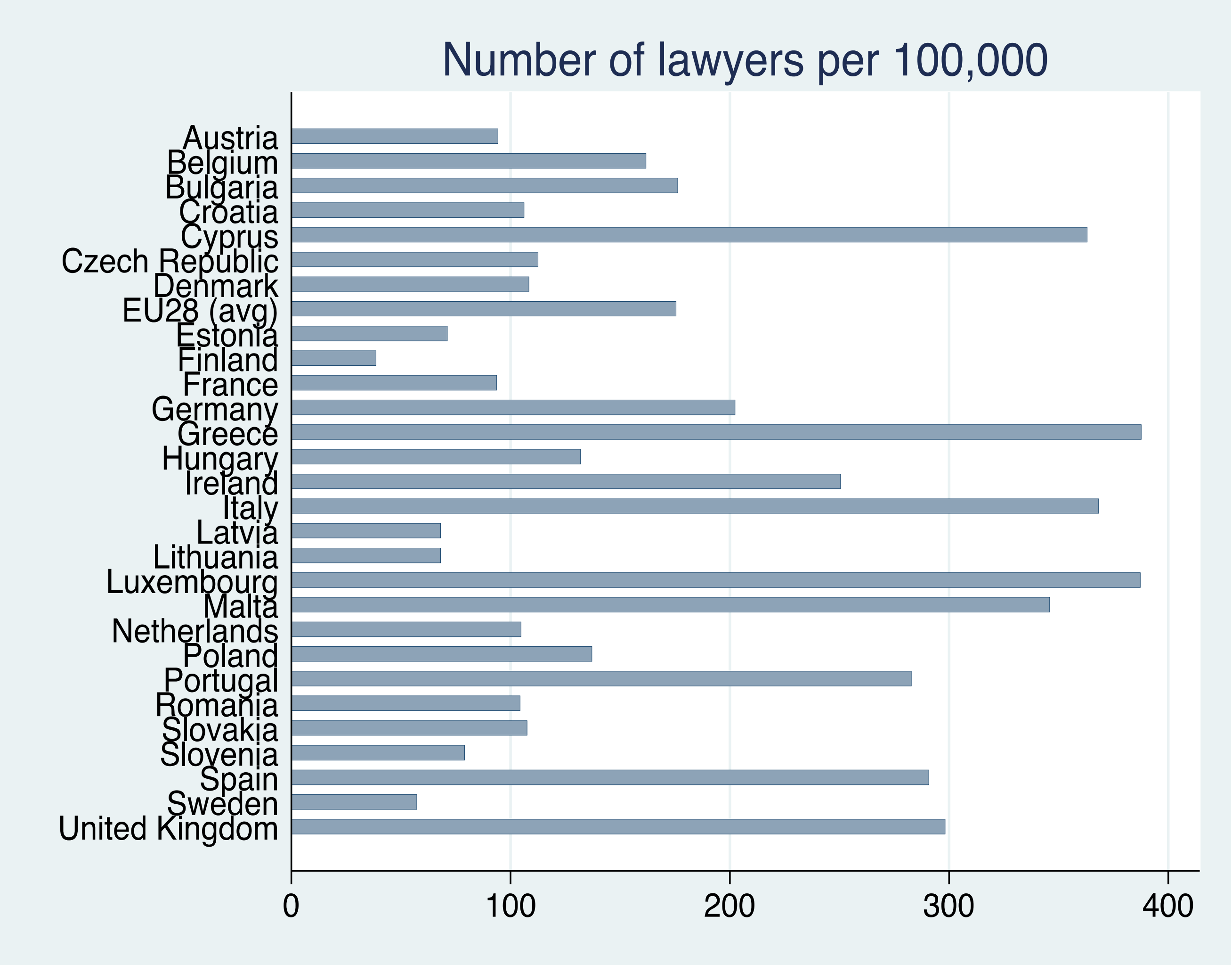
Not unreasonable that…

- Complexity correlates with ‘legal variables’

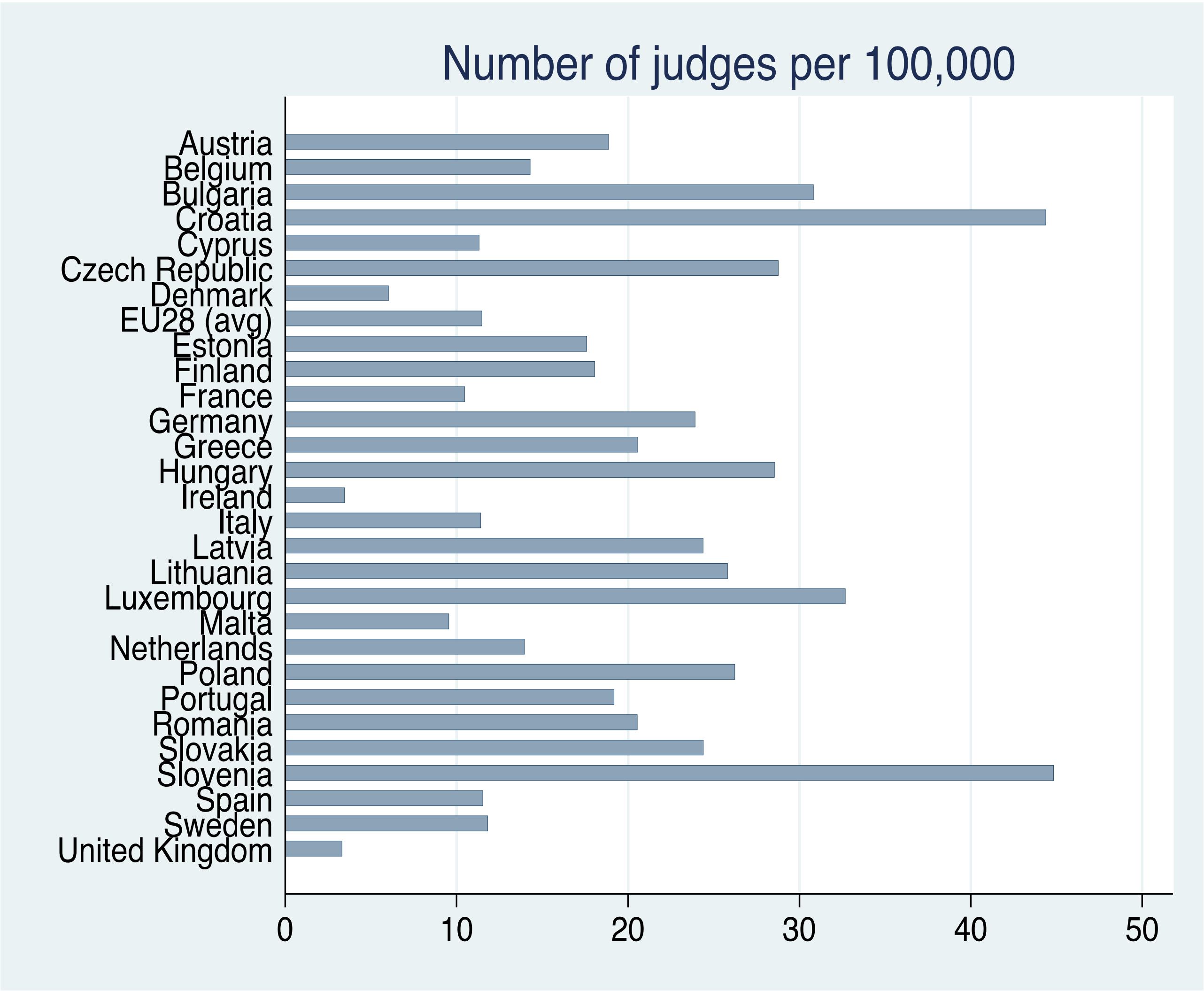
Legal uncertainty



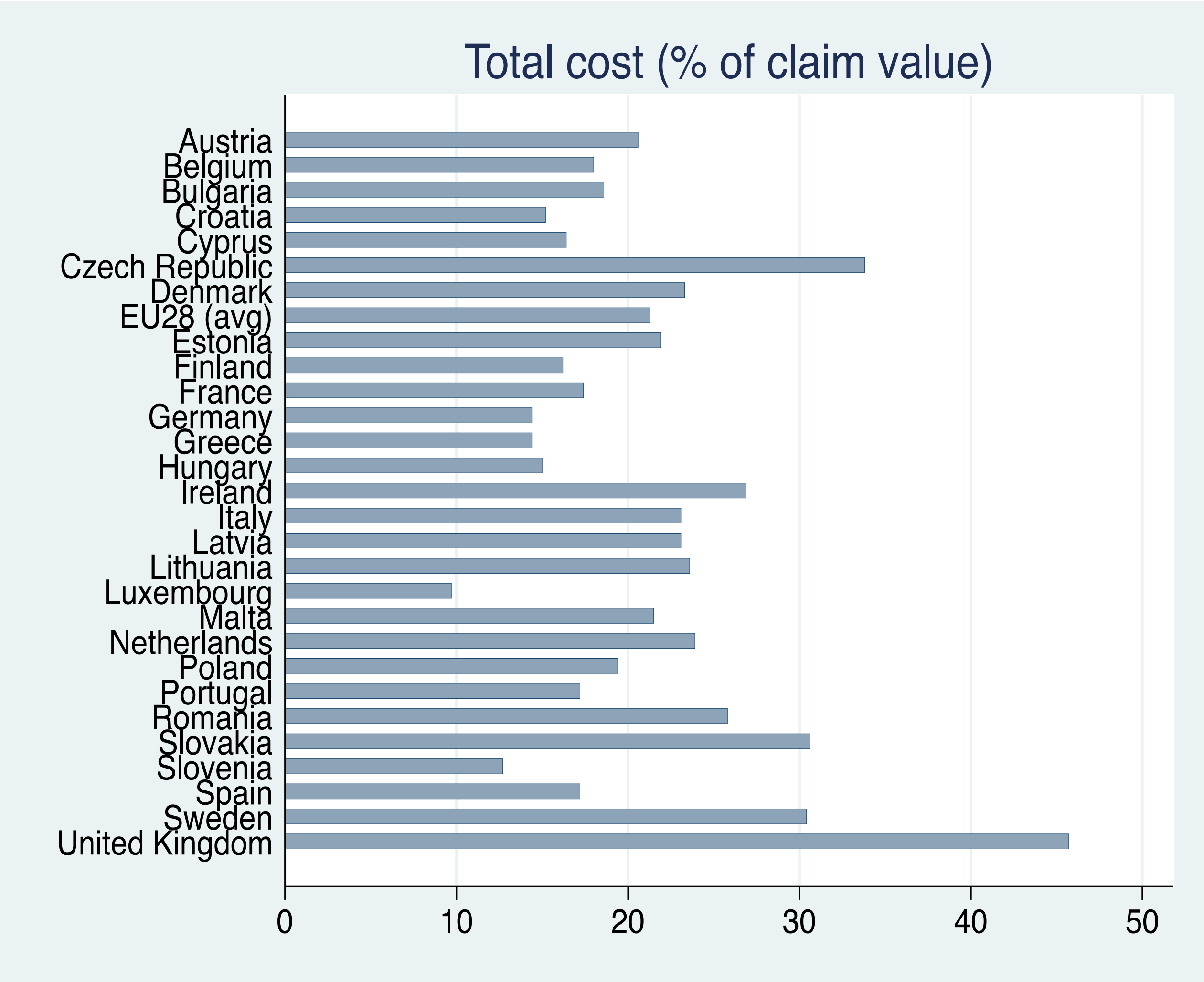
Legal uncertainty



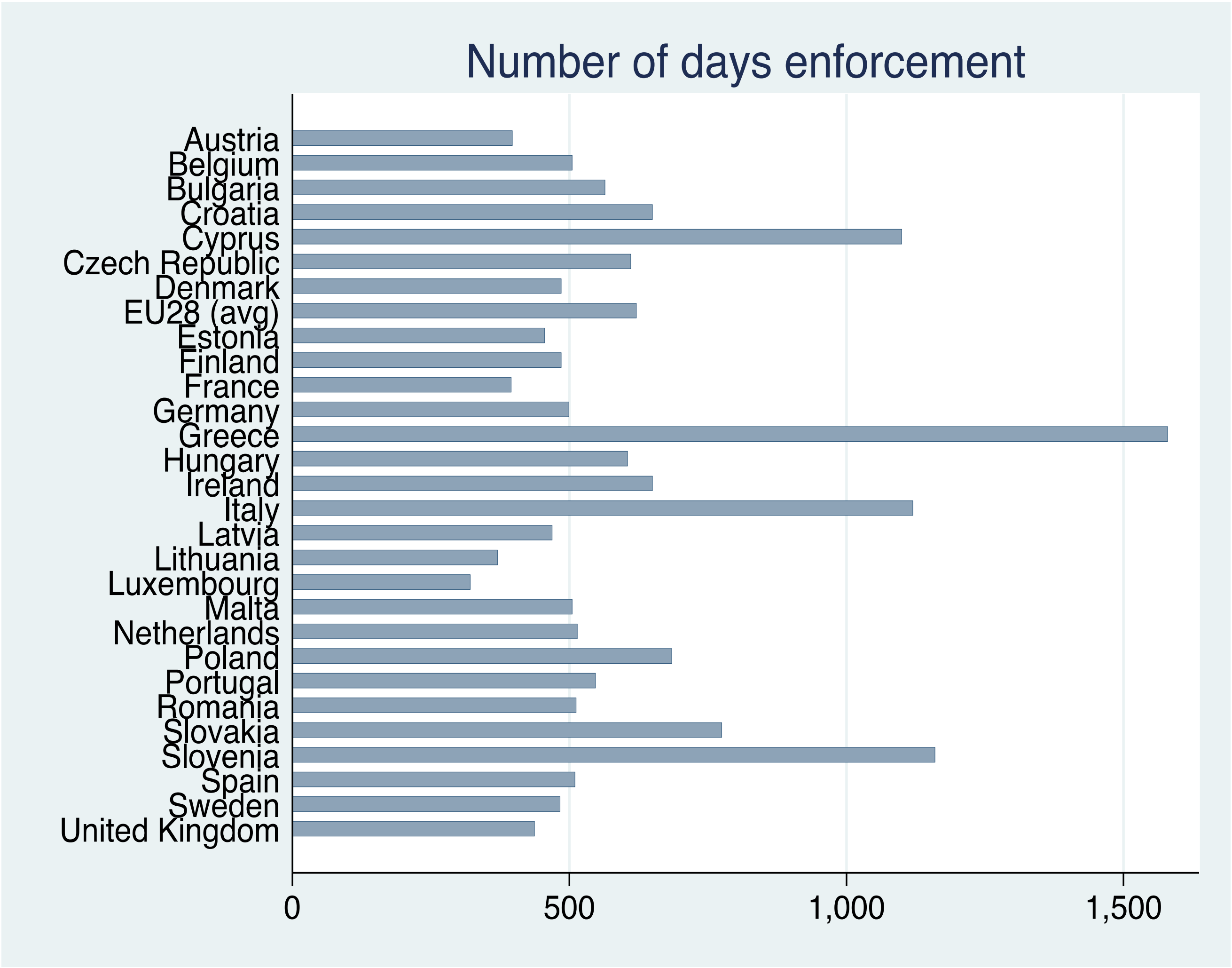
Legal uncertainty



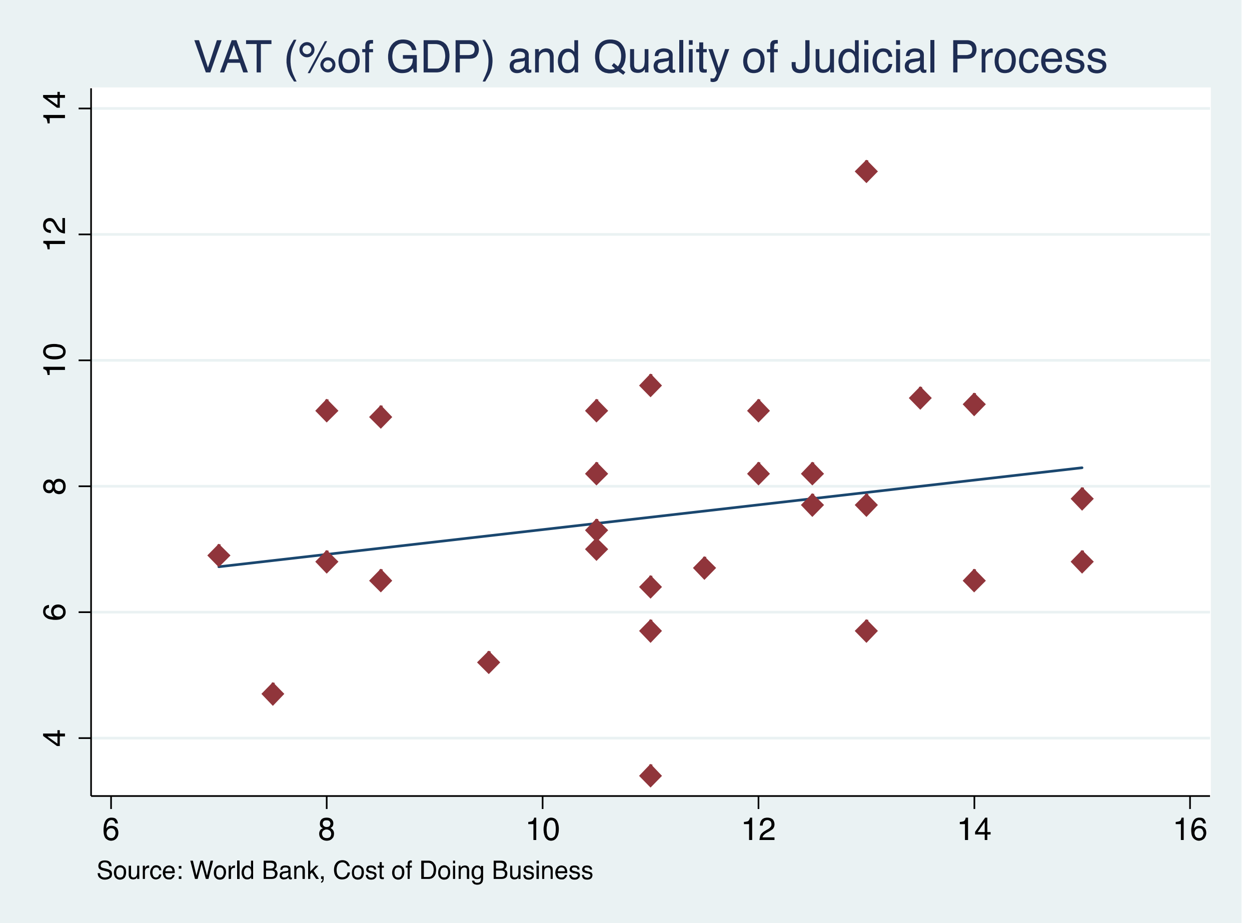
Legal uncertainty



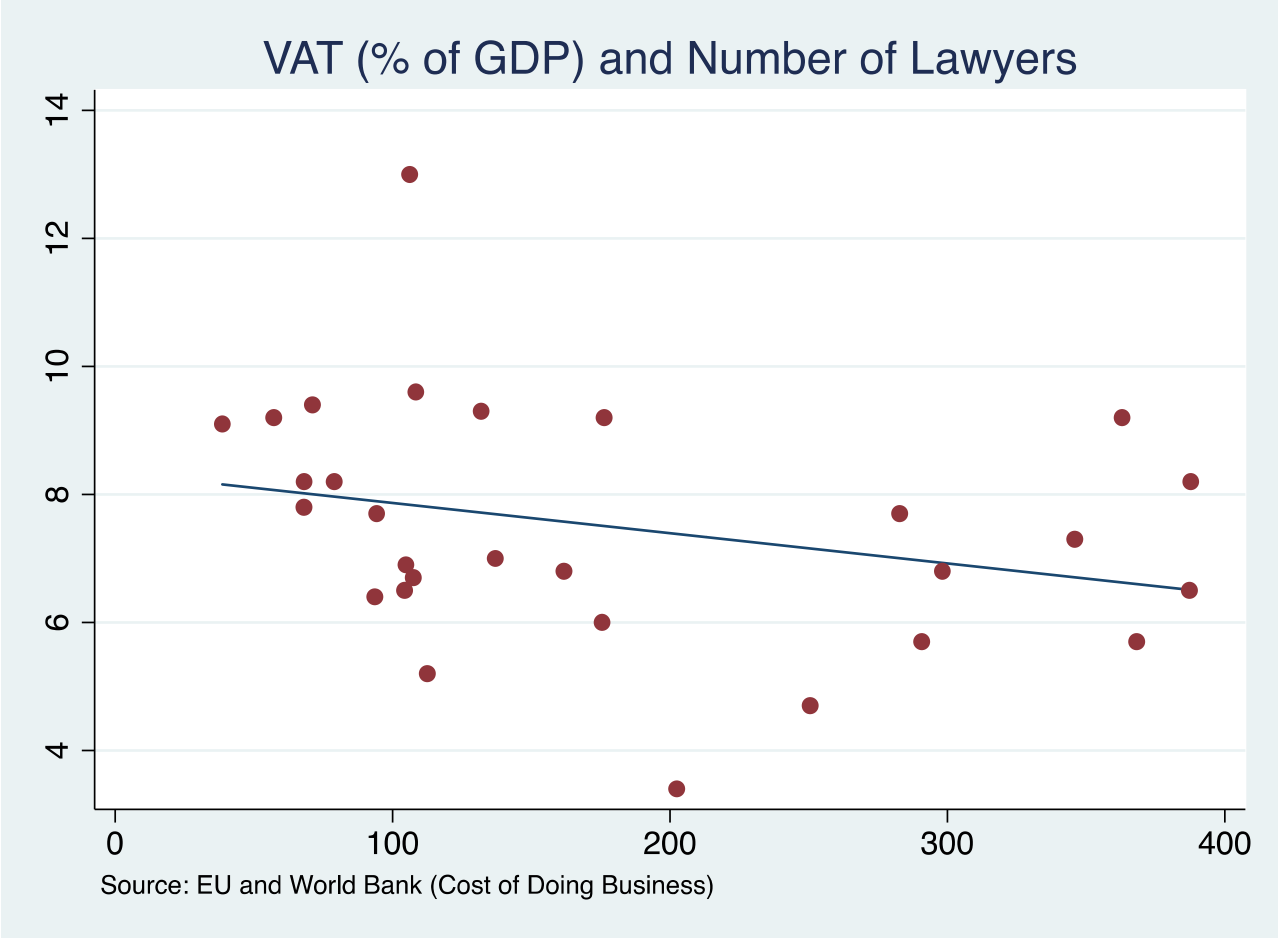
Legal uncertainty



Correlation (not causation)



Correlation (not causation)



But not all bad…

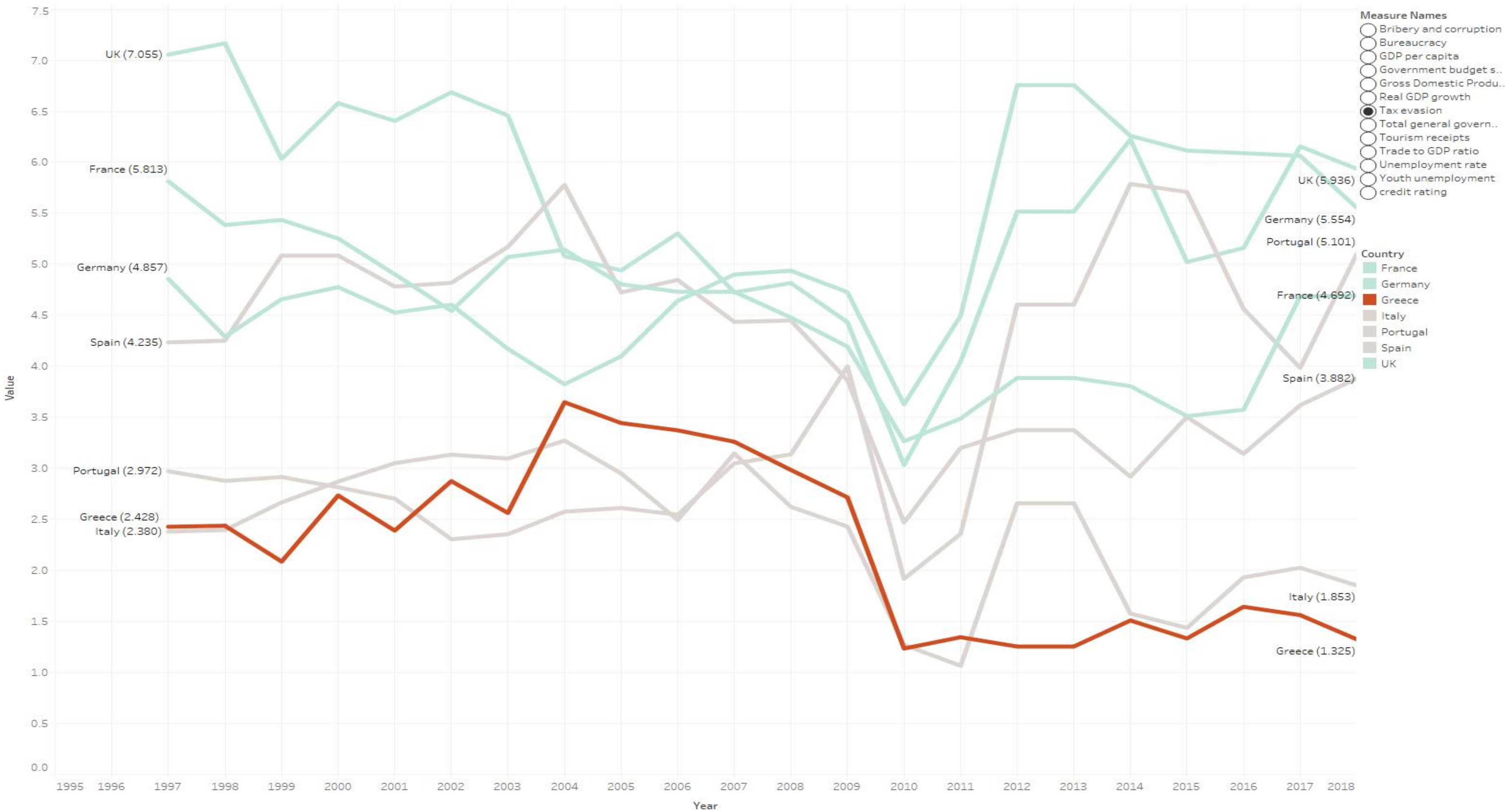
- **Complexity is not necessarily bad**. Galli and Profeta (2009) suggest the existence of a trade-off in the determination of tax complexity: on one side complexity is beneficial for a heterogeneous population, since it allows a design closer to individuals' preferences, while on the other side it is costly (higher incentives for tax elusion and evasion)

- The simplification of the tax system may not be an effective deterrent to tax evasion because taxpayers do not necessarily consider a complex tax system to be unfair (Christie and Holzner, 2006; Slemrod, 2007)

- Despite its crucial role in setting the stage for tax evasion and corruptive behaviours, **research on the relationship between legal complexity, bureaucracy and tax revenues is scarce**

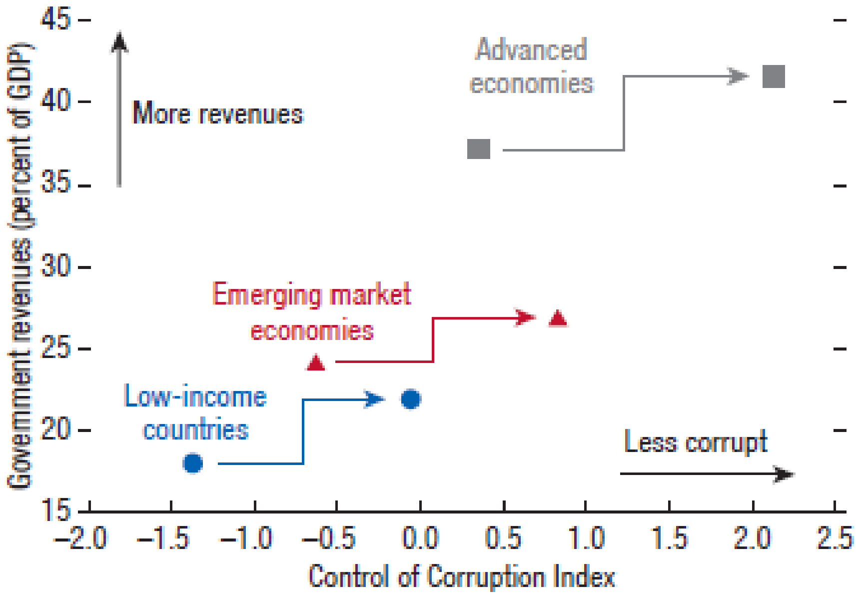
Corruption and evasion bad for tax revenues

Tax Evasion (is not a threat to economy): 1995-2018



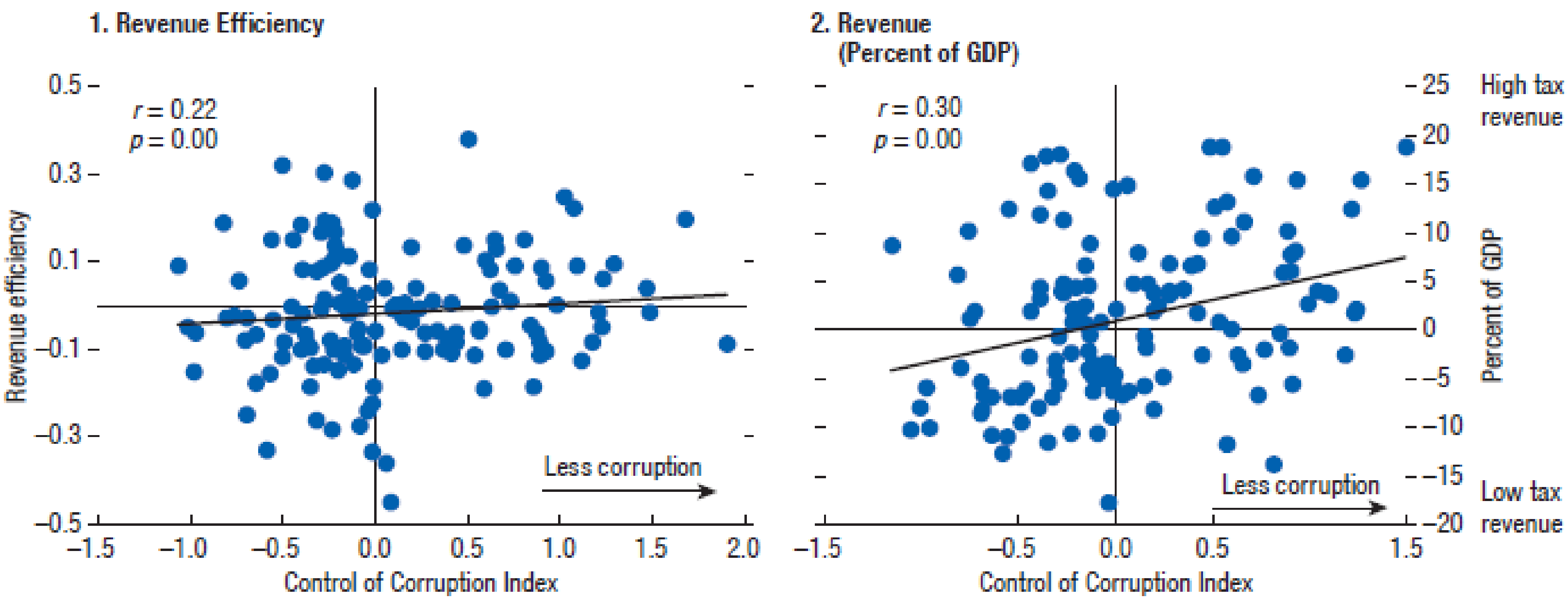
Source: IMD World Competitiveness Center

Revenues versus corruption



Sources: IMF, World Economic Outlook database; and Worldwide Governance Indicators.
Note: The figure shows the average government revenues as a share of GDP (excluding grants) for countries with the lowest levels of corruption (top 25 percent of control of corruption) and highest levels of corruption (bottom 25 percent) for each of these groups: low-income countries, emerging market economies, and advanced economies. It excludes oil exporters, for which oil revenues are a key driver of total revenues. The Control of Corruption Index provides a relative measure of perceived corruption that ranges from –2.5 (high corruption) to 2.5 (low corruption).

Revenue versus corruption



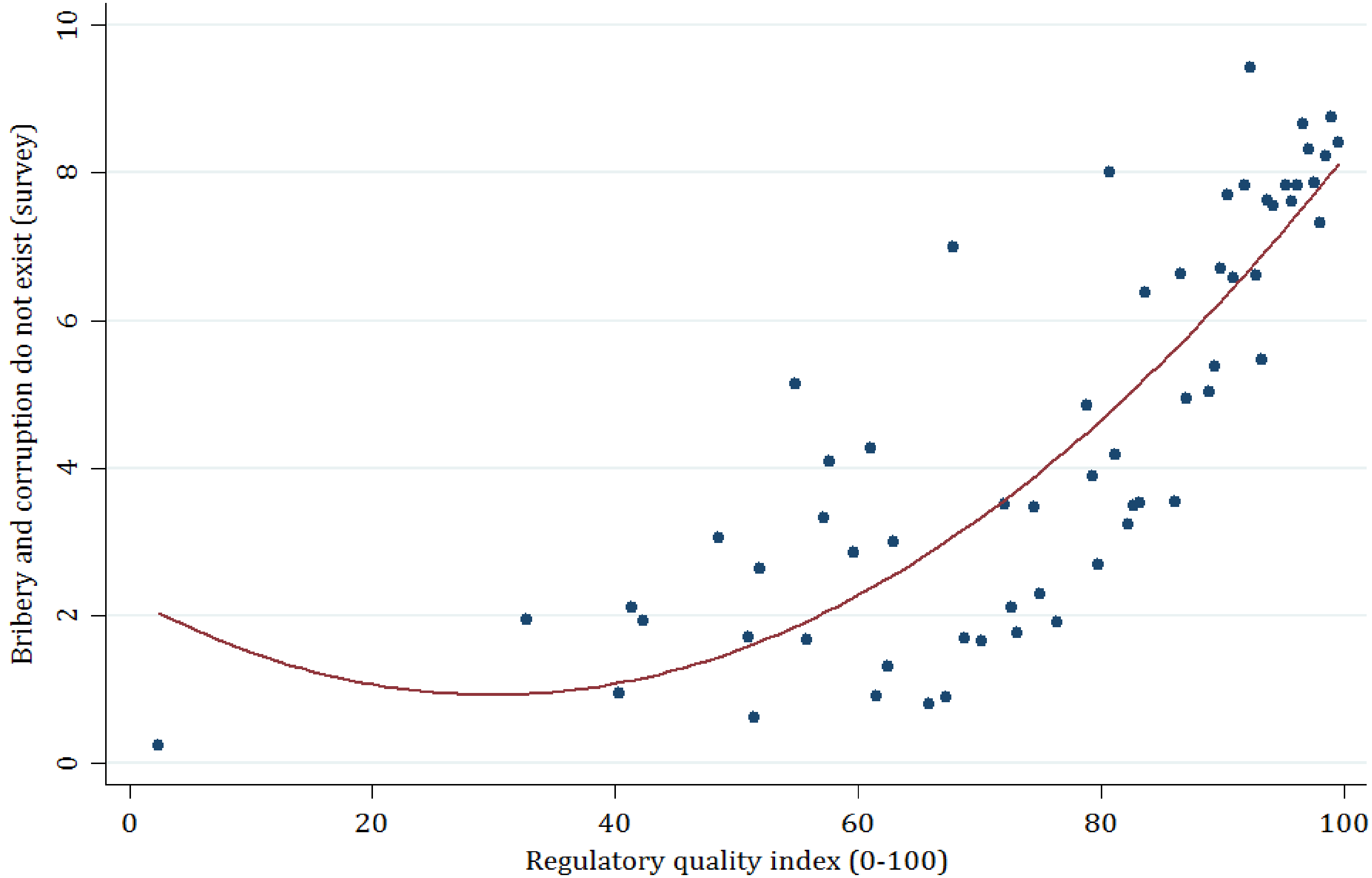
Sources: IMF, World Economic Outlook database; and Worldwide Governance Indicators.
Note: Revenue efficiency is calculated based on personal income tax efficiency and value-added tax c-efficiency. It compares what countries collect relative to what they should collect, based on average statutory tax rates. See the online-only Annex 2.1. Both the revenue variables and the Control of Corruption Index are adjusted for GDP per capita. Revenue data is the average of 2015–17 (excludes oil exporters), and revenue efficiency is an average of 2013–16. Control of corruption shows 2017 data. *r* = coefficient of correlation.

Economic growth and corruption

“ The annual cost of bribery alone is over 1.5 trillion dollars—roughly two percent of global GDP. [...] Our latest research underlines **the high fiscal cost of corruption, leading to a massive loss in public revenue and lower-quality public spending**. This […] confirms what we had all long suspected: corruption lowers growth. It increases inequality. It feeds distrust.”

Christine Lagarde - IMF Managing Director, Speech at the U.S. Chamber of Commerce in Washington DC (April 2nd 2019)

Corruption and legal complexity



Source: IMD World Competitiveness Center (2018)

Legal complexity and corruption

- Corruption is a **complex phenomenon** influenced by factors such as **complexity of law and regulations**, **oppressive bureaucracy** and **cultural aspects** (Di Vita, 2018; Fisman and Miguel, 2006)

Source: IMD World Competitiveness Center

Corruption and tax revenues

- Studies mostly find **a negative impact of corruption on tax revenues** (Hwang, 2002; Gumpta, 2007; Baum et al., 2017)

- Widespread corruption harms compliance and undermines the rule of law, **increasing tax evasion** (Aghion et al., 2016)

- Corruption **encourages the development of informal sector, eroding the potential tax base** (Schneider and Enste, 2000)

Source: IMD World Competitiveness Center

Legal complexity and corruption

- Previous studies in the literature highlighted the negative impact of corruption on tax revenues
- But what are the effects of the "facilitators" of corruption such as legal complexity and bureaucracy?

Hypothesis to be tested…

- **Legal complexity** (bureaucracy) **reduce legal certainty** increasing the room for corruption and tax evasion, thereby **negatively affecting tax revenues** and **economic growth**

Corruption and legal complexity

- Panel data: **63 high and middle income countries, period 1997-2017**

- Key variables of interest:

    - **Tax Complexity:** Regulatory quality: composite index (0-100) from World Governance Indicators, World Bank It measure the ability of the government to formulate and implement sound policies and regulations that promote private sector development

    - **Legal complexity (proxied by ‘bureaucracy’):** Survey based index (0-10) from the IMD World Competitiveness Center database Country-level average to the question “Bureaucracy does not hinder your business activity”; Respondents are C-level and middle-level managers

Estimation

Estimate the following

$$R_{it} = \alpha_i + \gamma R_{it-1} + \beta LC_{it} + \delta B_{it} + \sum_{k=1}^{n} \eta_k X_{kit} + \kappa_i + u_{it}$$

R_{it} denotes different tax revenue aggregates (total collected taxes, corporate income tax, personal income tax and indirect taxes)

LC_{it} and B_{it} express the **legal complexity** and the **burden of bureaucracy**

X_{kit} represents a set of controls which includes **GDP per capita**, **share of trade to GDP**, **share of agricultural added value**, **tax rates**

Estimation method: **Two-step difference GMM**, using lags up to *t-2* to instrument lagged tax revenue aggregates terms, GDP per capita, share of trade to GDP, and share of added value in agriculture

Results: Total tax revenues

GMM for Log of Total Tax Revenues (% GDP)

Variables	(1)	(2)	(3)	(4)
Regulatory quality	0.010***		0.003**	0.005***
	(0.001)		(0.000)	(0.000)
Bureaucracy		0.024***	0.012***	0.037***
		(0.001)	(0.002)	(0.003)
Interaction				0.002***
				(0.000)
Observations	751	978	711	711
Countries	61	61	60	60
AR1	0.041	0.008	0.028	0.017
AR2	0.149	0.536	0.782	0.779
Hansen	0.235	0.954	0.280	0.324

Standard errors in parentheses

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Results: Corporate income tax revenue

GMM for Log of Corporate Income Tax Revenues (% GDP)

Variables	(1)	(2)	(3)	(4)
Regulatory quality	0.011***		0.006**	0.009***
	(0.002)		(0.002)	(0.002)
Bureaucracy		0.066***	0.076***	0.059***
		(0.006)	(0.008)	(0.012)
Interaction				0.002***
				(0.001)
Observations	691	761	674	674
Countries	59	60	59	59
AR1	0.001	0.000	0.000	0.000
AR2	0.882	0.141	0.201	0.225
Hansen	0.396	0.771	0.354	0.293

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Results: Personal income tax revenue

GMM for Log of Personal Income Tax Revenues (% GDP)

Variables	(1)	(2)	(3)	(4)
Regulatory quality	0.009***		0.010***	0.011***
	(0.002)		(0.002)	(0.003)
Bureaucracy		0.035***	0.035***	0.036***
		(0.002)	(0.007)	(0.010)
Interaction				0.000
				(0.001)
Observations	694	884	685	685
Countries	58	59	58	58
AR1	0.001	0.013	0.000	0.000
AR2	0.912	0.499	0.661	0.652
Hansen	0.138	0.437	0.172	0.193

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Results: Indirect tax revenue

GMM for Log of Indirect Tax Revenues (% GDP)

Variables	(1)	(2)	(3)	(4)
Regulatory quality	0.003***		0.003***	0.002***
	(0.000)		(0.001)	(0.001)
Bureaucracy		0.006***	0.012***	0.015***
		(0.001)	(0.001)	(0.002)
Interaction				0.000***
				(0.000)
Observations	621	635	587	587
Countries	58	58	57	57
AR1	0.005	0.004	0.009	0.008
AR2	0.950	0.970	0.557	0.548
Hansen	0.226	0.905	0.257	0.257

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Summing up

- Legal aspects in revenue mobilisation and growth are generally neglected
- But they should not
  - **Legal environment affects growth** and so should affect revenue performance, and economic growth—but we do not know a lot of this
  - **Great opportunity for Tax Administrations to work with** academics to shed more light on these important aspects

Contact

Christos Kotsogiannis
email: c.kotsogiannis@exeter.ac.uk
twitter: @KotsogiannisC

TARC (Tax Administration Research Center)
email: tarc@exeter.uk
twitter: @TARC2013