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EIEF and Oliver Wyman Lecture in  
Finance, Law and Behavioral Studies

27 November 2018





E I N A U D I   I N S T I T U T E   F O R   E C O N O M I C S   A N D   F I N A N C E

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Luigi Guiso

Law(s) and Disorder:  
political instability breeds legal complexity

27 November 2018

# Legal complexity: first notion

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- Legal systems are intrinsically complex
- This is no wonder: a LS shares the features of any complex system
  - Laws are interconnected
  - The system tends to reproduce itself (autopoiesis)
  - Tends to adapt and co-evolve with other systems (economic and political systems)
  - May be non-ergodic and where it ends depends on where it starts from (path dependence)

# Legal complexity: first notion

- Can evolve non linearly as outputs (laws) act as inputs for other laws

$$z_{t+1} = f(z_t) = z_t^2 + c$$

–  $c$  is fixed and  $z$  is variable

– start at  $z_t=0 \Rightarrow$

$$- z_{t+1} = f(z_t) = c$$

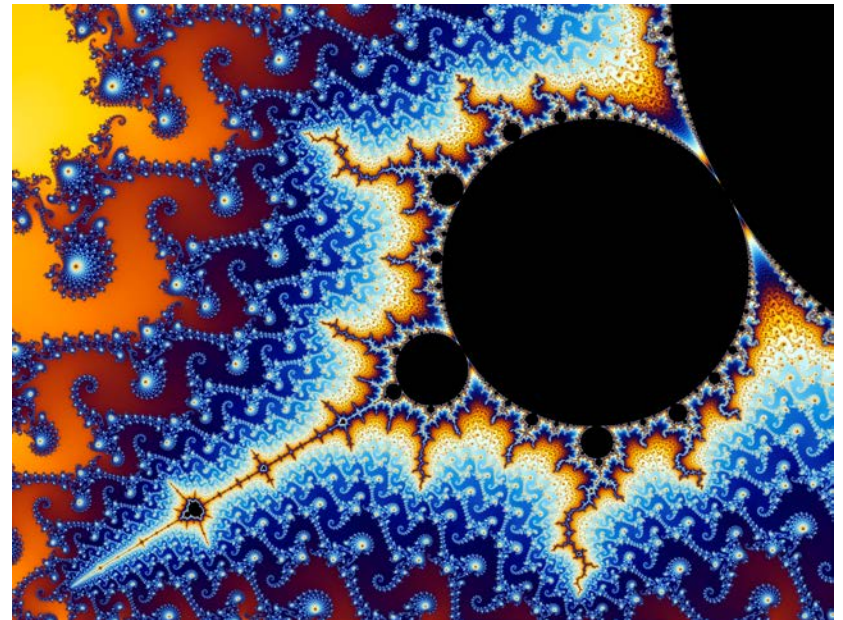
– but then  $z_{t+2} = z_{t+1}^2 + c = c + c^2$

– and subsequently

$$z_{t+3} = c + (c + c^2)^2$$

..etc...

## The Shape of the Legal System A Mandelbrot Set



*A particular set of complex numbers with a highly convoluted fractal when plotted*

**This notion is NOT the focus of this talk**

## Legal complexity: second notion

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- In many countries legal systems are increasingly perceived as difficult to interpret and understand
- The legal system is being accused of being “too complex”
  - Common citizens complain that tax codes are hard to grasp
  - Laws difficult to interpret by ordinary people
  - Even law scholars complain about inconsistencies of the laws and financial intermediaries about the increased complexity of regulation
- Common to all, is a complaint about *an abuse* (inflation) of legislation
  - Too many existing laws
  - Too many new laws

I focus on this notion

# Stock and flows of laws: a bit of evidence

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- Document aggregate patterns in a few countries in Europe
  - France, Germany, Italy
- Look at both stocks and flows , e.g.
  - N. Existing laws:
  - Number of words/pages of legislation:
  - Growth over past xx years

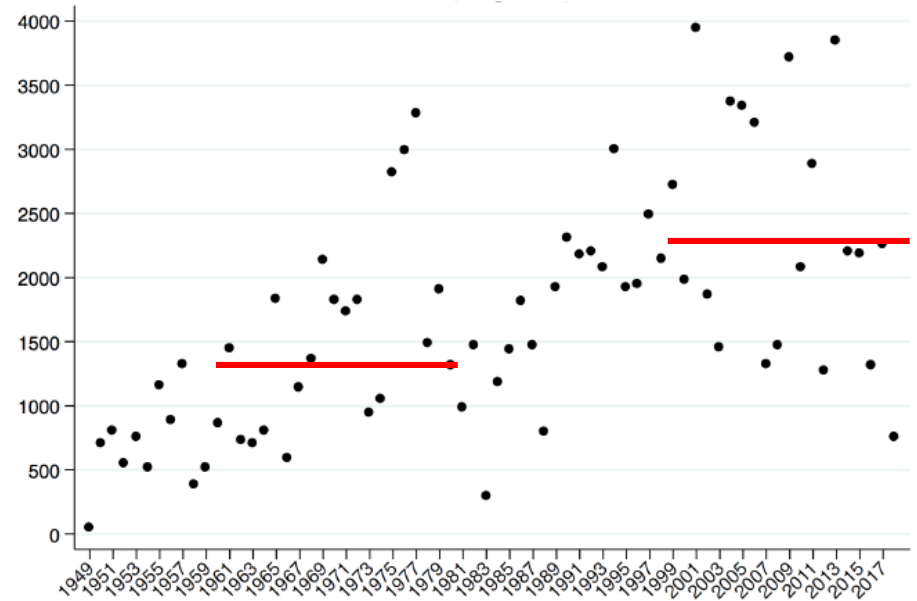
# Germany: 1949-2017

## Flows per year

### Number of New laws

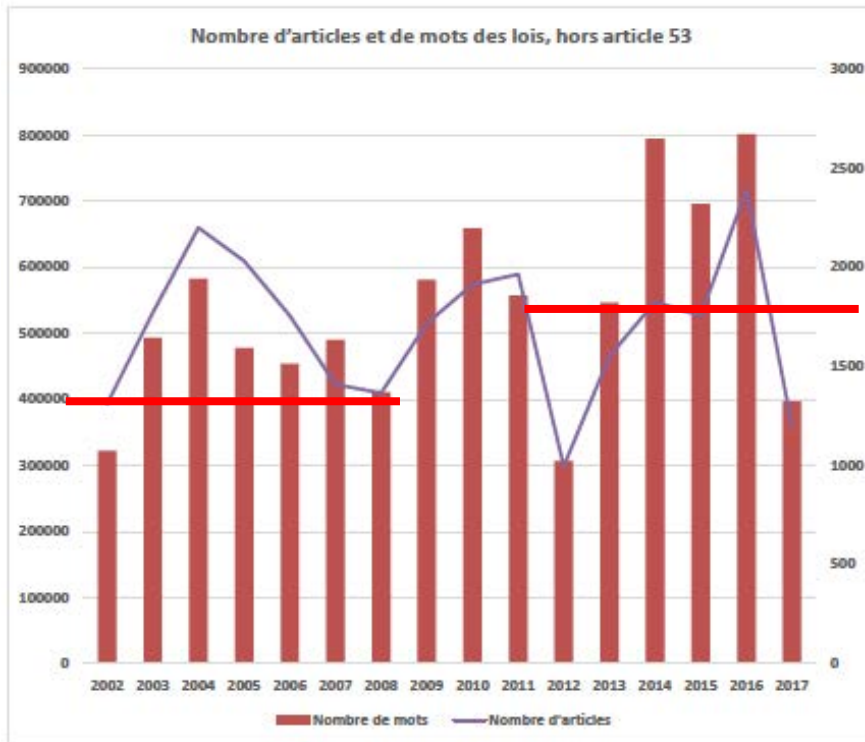


### Number of Words of Legislation



# France: 2000-2017

## Flows per year



## Stocks (2010)

	Articles	Words
Laws (2016)	19845	2.4 million
Ordinances (600)	45548	0.5 million
Decrees (26198)	135000	14.4 million
Codes (58)	107000	12.5 million
<b>Total</b>	<b>307000</b>	<b>29.8 million</b>

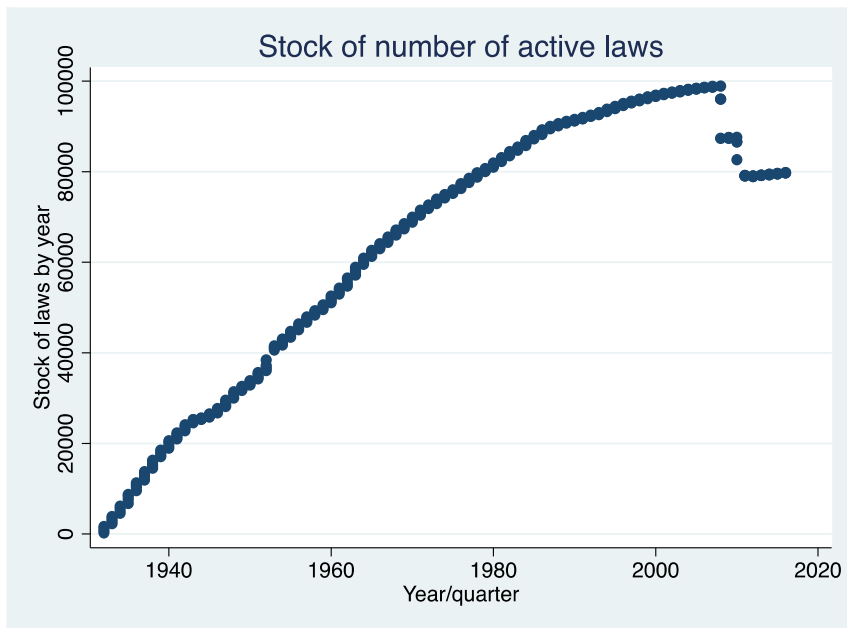
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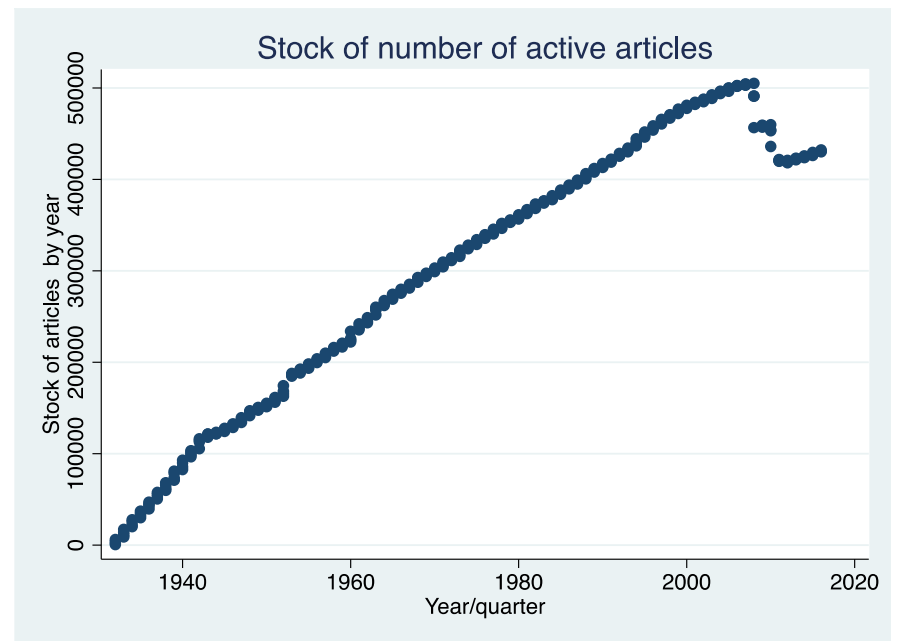
# Italy: 1946-2016

## Stocks per year

### Applicable Number of Laws



### Applicable number of articles



# Summary and big question

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- Body of legal norms is large and on a long-term growing path: creation far exceeds destruction
- Many “natural” forces may be behind it
  - World complexity requires new and more legislation
  - Innovations in many sectors (e.g. ICT revolution) call for new legislations
  - Financial crisis play a similar role – new “fixes” may be required
  - International treaties and European integration are a source of new legislation
  - (But perhaps also stronger incentives to “create” than to “destroy”)

**Is this an issue?**

- (Beyond the transitional dynamics – the adaptation process - that new and more laws unavoidably require)

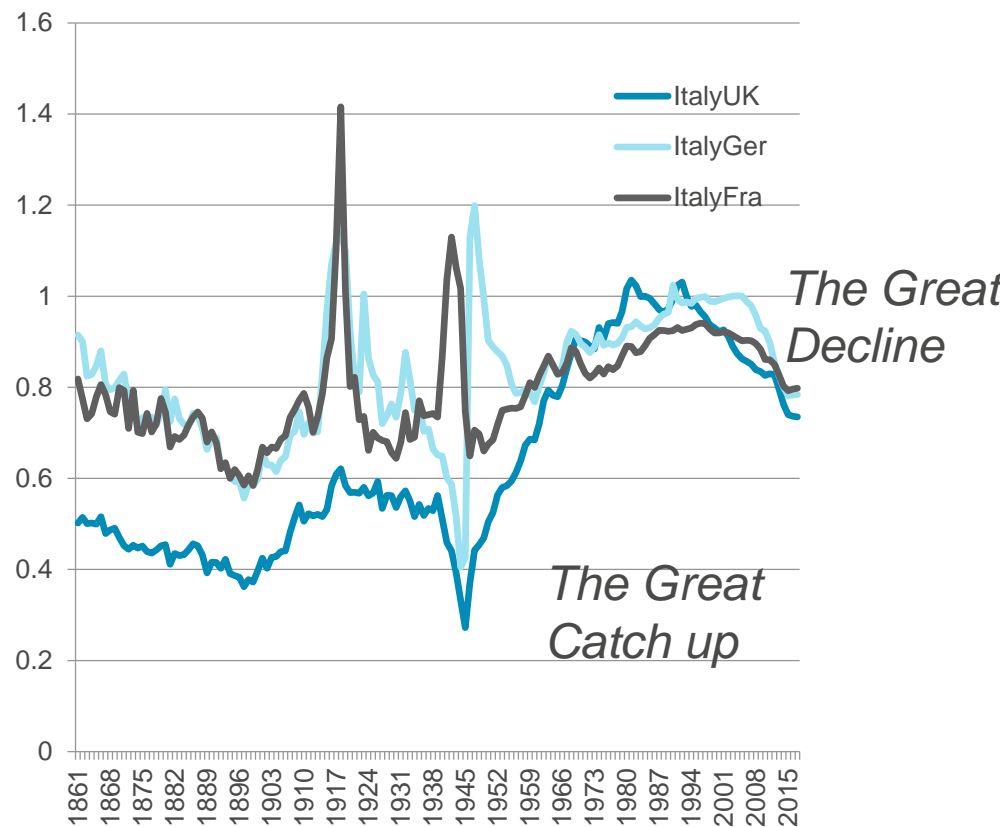
# Synthetic answer

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- **Normally no**
  - increased legal complexity is an effect of a more complex world that requires more/different legal rules to be managed
- **Sometimes yes**
  - Legal complexity **in excess of its natural trend** can be an independent cause of bureaucratic and economic collapses
  - This happens whenever there are incentives to produce laws **also when they are not needed**
- Political instability can be the triggering factor of distorted incentives

# Sometimes...is the case of Italy?

- Draw on Italy's experience over the past 40 years to show evidence of the damaging effects of legal complexity
- Italy is thought to have all the ingredients
  - Marked political economy
  - Laws inflation
  - Deteriorated bureaucracy
  - Declining Economy



But what is the causal chain?

# A new story

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A failure of governance triggered by a big shock to the country  
political stability

- With the collapse of the Soviet Union and the Fall of the Berlin Wall Italy's political equilibrium breaks down
- Up to then essentially a stable system, with a lot of churning within the DC party, but uniform and stable political agenda
- Big opposition party, but impossible to alternate (*K* factor)

# The Break up

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- The break up of the Soviet Union upsets the domestic equilibrium: the communist party collapses, the DC and the allied parties...swept up by a political scandal (Mani Pulite – clean hands))
- A period of political instability begins
- Three out of 7 legislatures during the Second Republic end up prematurely. Their end was
  - unanticipated *before* the elections
  - predictable since the very beginning after legislature starts

# Why does all this matter?

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- Political instability alters politicians and MP incentives
- Horizons shortens → little time for the public opinion and voters to assess the **quality** of the legislation
- Use legislation to **signal activism** rather than to **solve problems**
- Incentive is stronger for bad politicians who can now enter this market
- This leads to a proliferation of laws and a worsening in the quality of the legislation

# Bureaucratic collapse

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- Too many laws hamper the efficiency of the bureaucracy called to implement the laws
- Complex laws harder to interpret and apply, absorbing bureaucracy time and energy
- Length of time to apply the laws increases, further amplifying politicians incentives to produce laws
- Political instability generates a loop:
  - Excessive laws → bureaucratic inefficiency → excessive laws
- Which leads potentially to a collapse of the bureaucracy ....and of the economy



## Let us document it

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- Need to show that the advent of the “Second Republic” marks a discontinuity
- The discontinuity has two dimensions:
  - Increased political instability (weaker governments)
  - Excessive and worse legislation
- Both must be followed by a worsening of bureaucracy

# Political instability I

## Three Out of Seven Legislatures end up Before Term

Legislature				Senate			Lower chamber		
Number	Days	Completed	Coalition	% of seats coalition	% of seats Majoritarian party	Number of Senators slack	% of seats coalition	% of seats Majoritarian party	Number of MPs slack
X	1,757	Yes	Center	0.58	0.40	24	0.56	0.37	51
XI	722	No	Center	0.54	0.34	12	0.54	0.33	27
XII	755	No	Center right	0.49	0.19	-3	0.58	0.18	36
XIII	1,847	Yes	Center left	0.54	0.32	11	0.51	0.27	7
XIV	1,794	Yes	Center right	0.56	0.26	28	0.58	0.28	53
XV	732	No	Center left	0.50	0.32	1	0.55	0.35	34
XVI	1,781	Yes	Center right	0.55	0.46	16	0.55	0.44	29

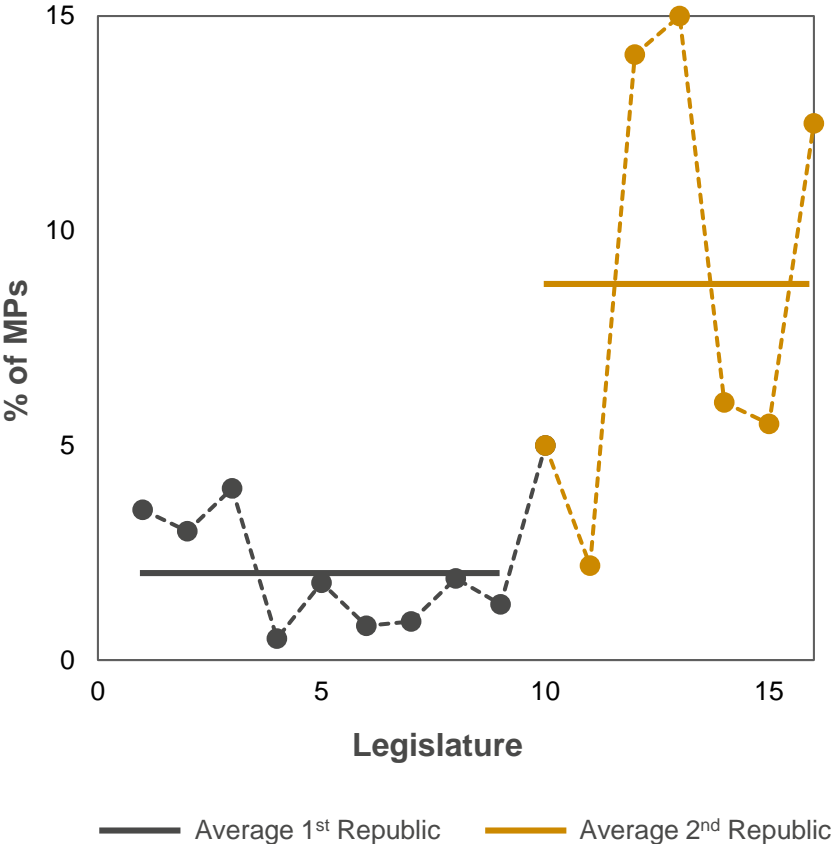
# Political instability II

## Symptomatic Indexes of Political Instability

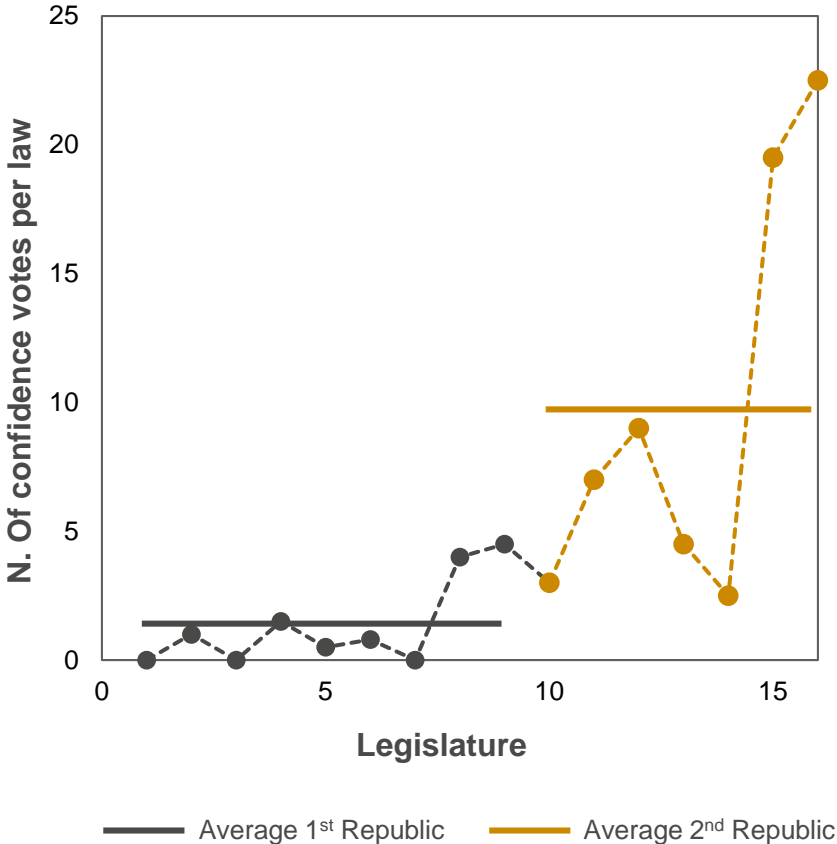
	I Republic	II Republic
<b>Fragmentation of Government coalition</b>	<b>0.35</b>	<b>0.61</b>
N. Technocratic Governments	0	3
Share of Standard Laws	0.86	0.46
Share of Executive orders	0.14	0.32
Share of Delegated Laws	0	0.22

# Political instability III

%MP Switching party (4 times)

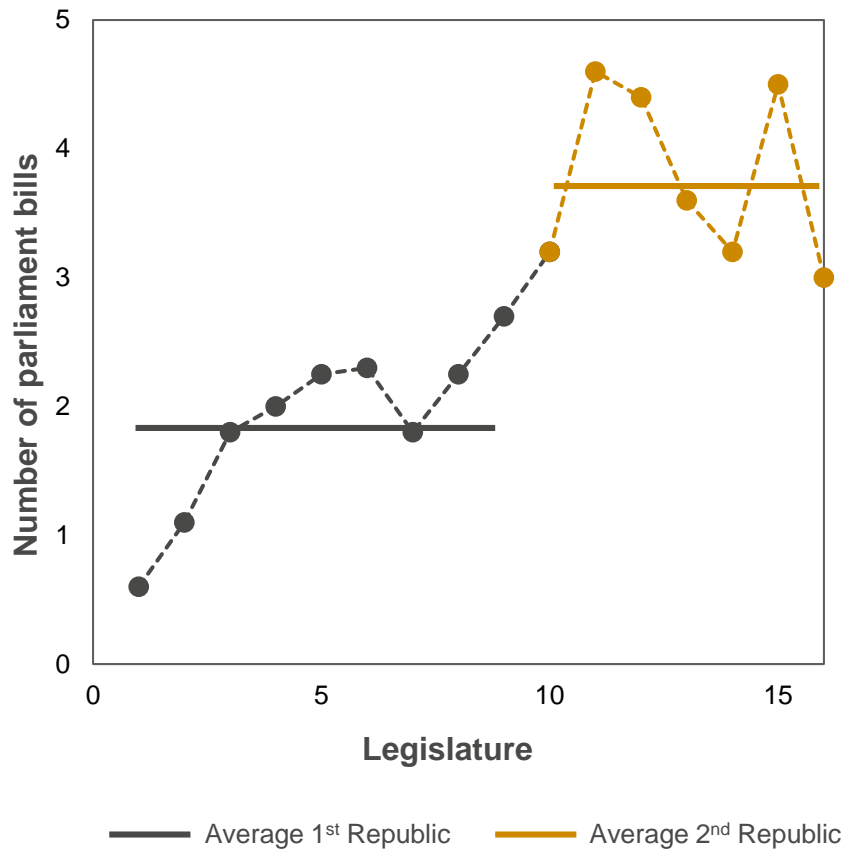


N. Confidence Laws (7 times)

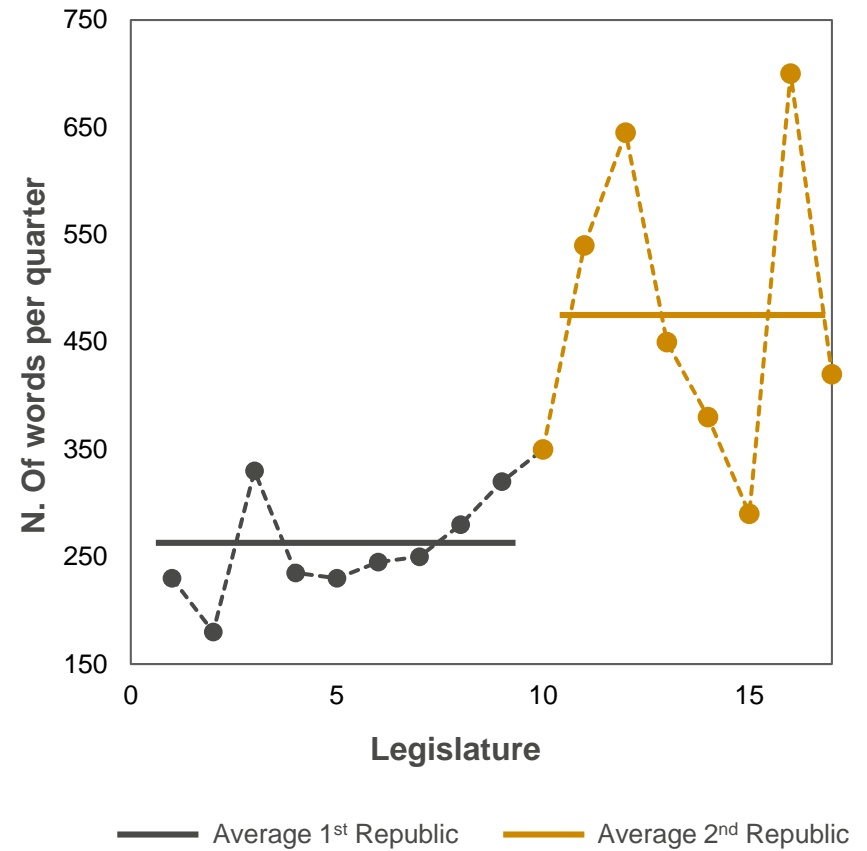


# Legislative activism

## N. of Parliamentary Bills (2 times)

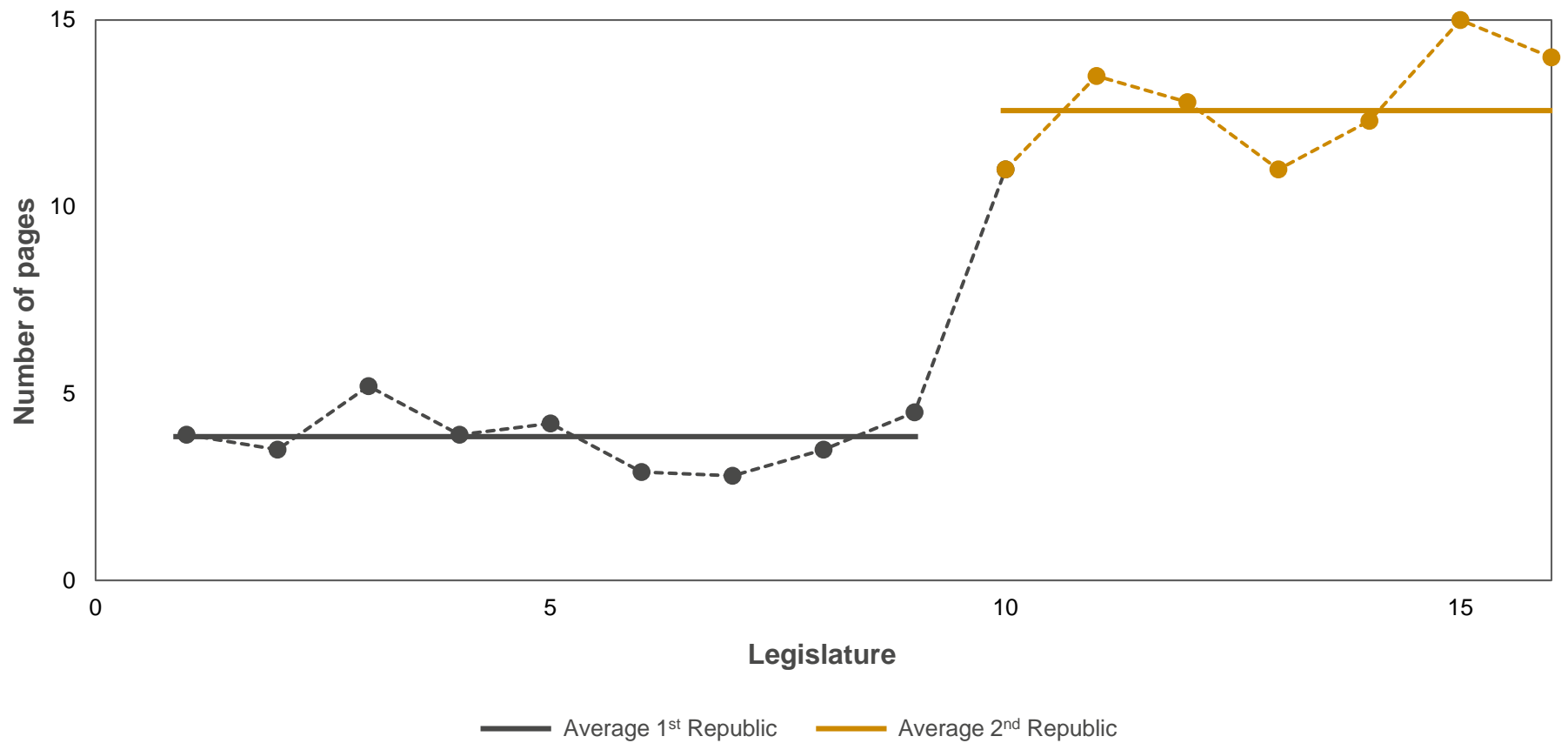


## N. of words per quarter (2 times)



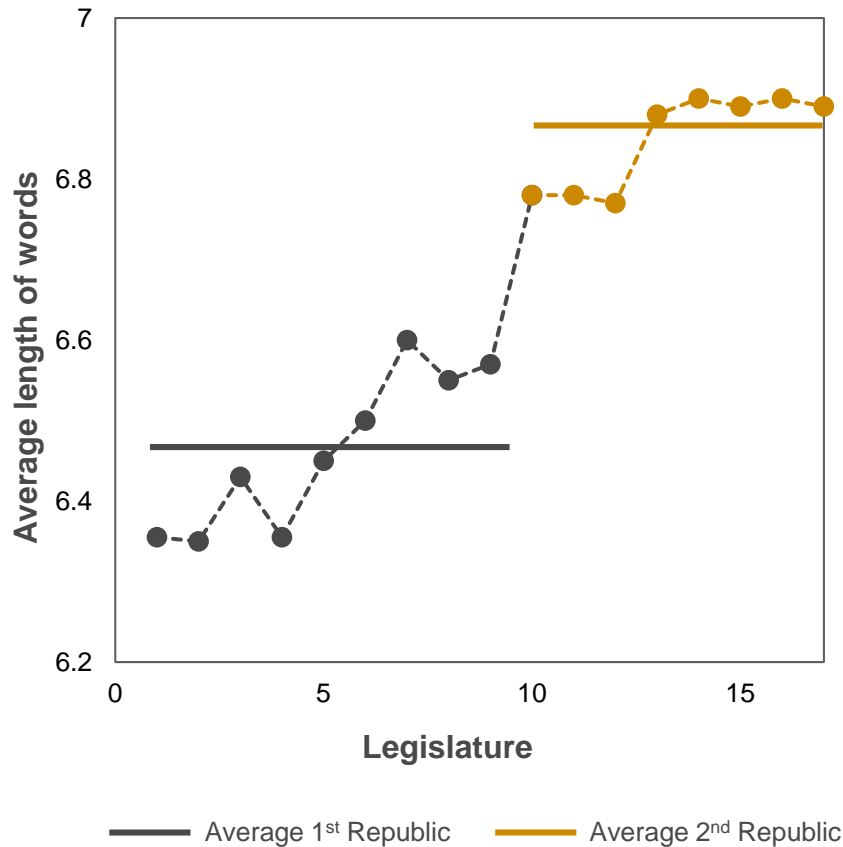
# Quality of single laws I

Average N. of words per law (2 times)

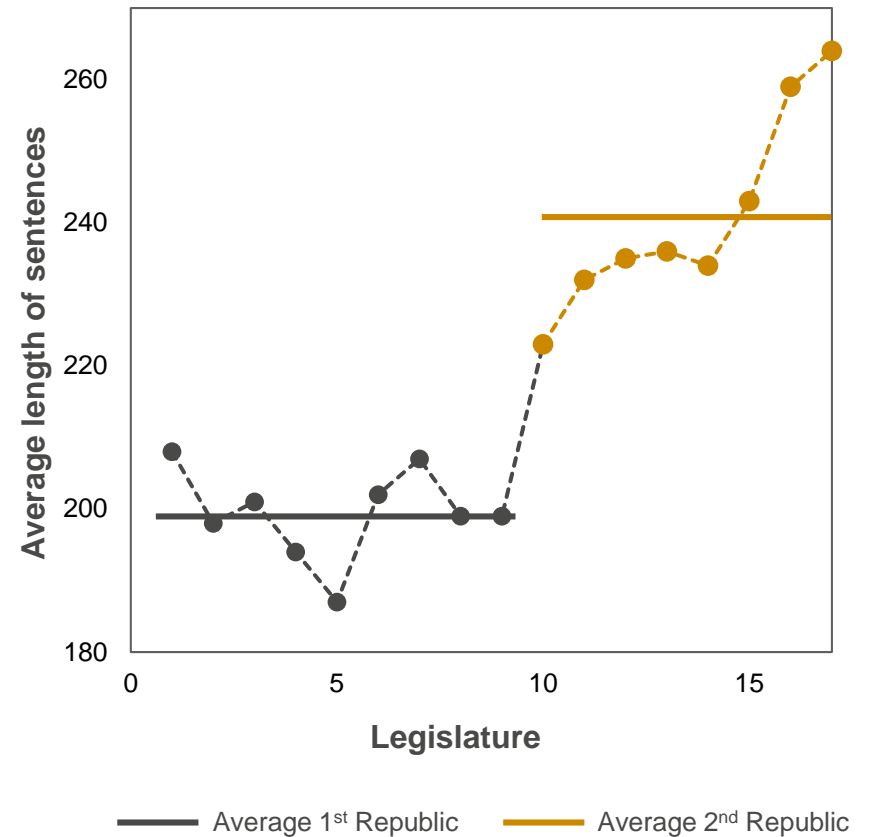


# Quality of single laws II

## Average word length (1.07 times)

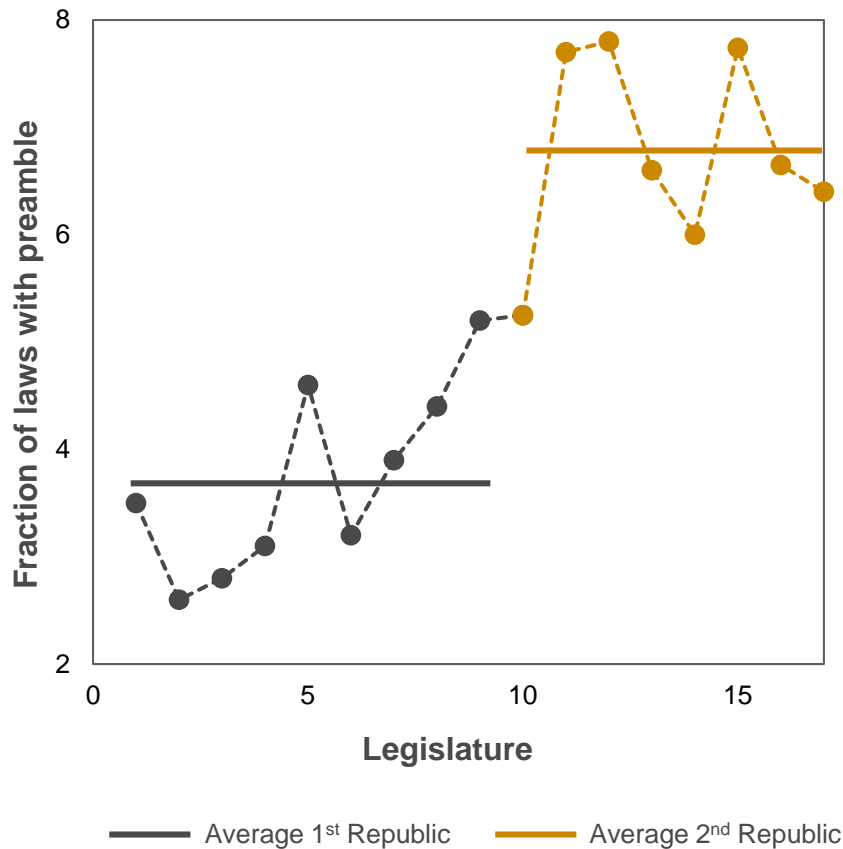


## Average sentences length (1.2 times)

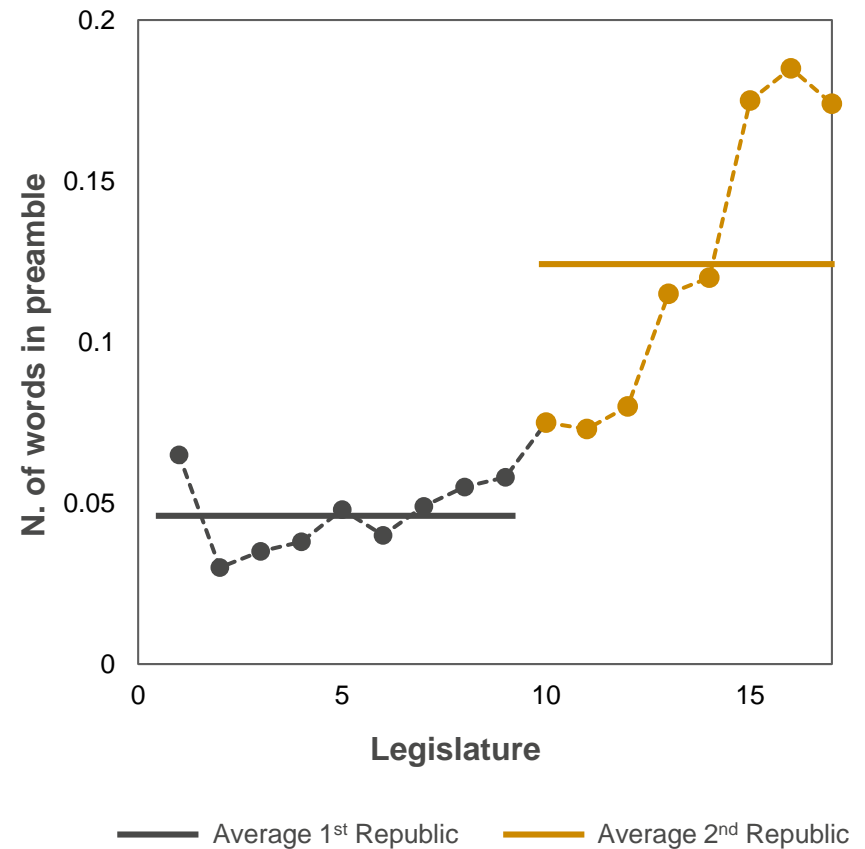


# Quality of single laws III

Share of laws with preamble (1.85 times)



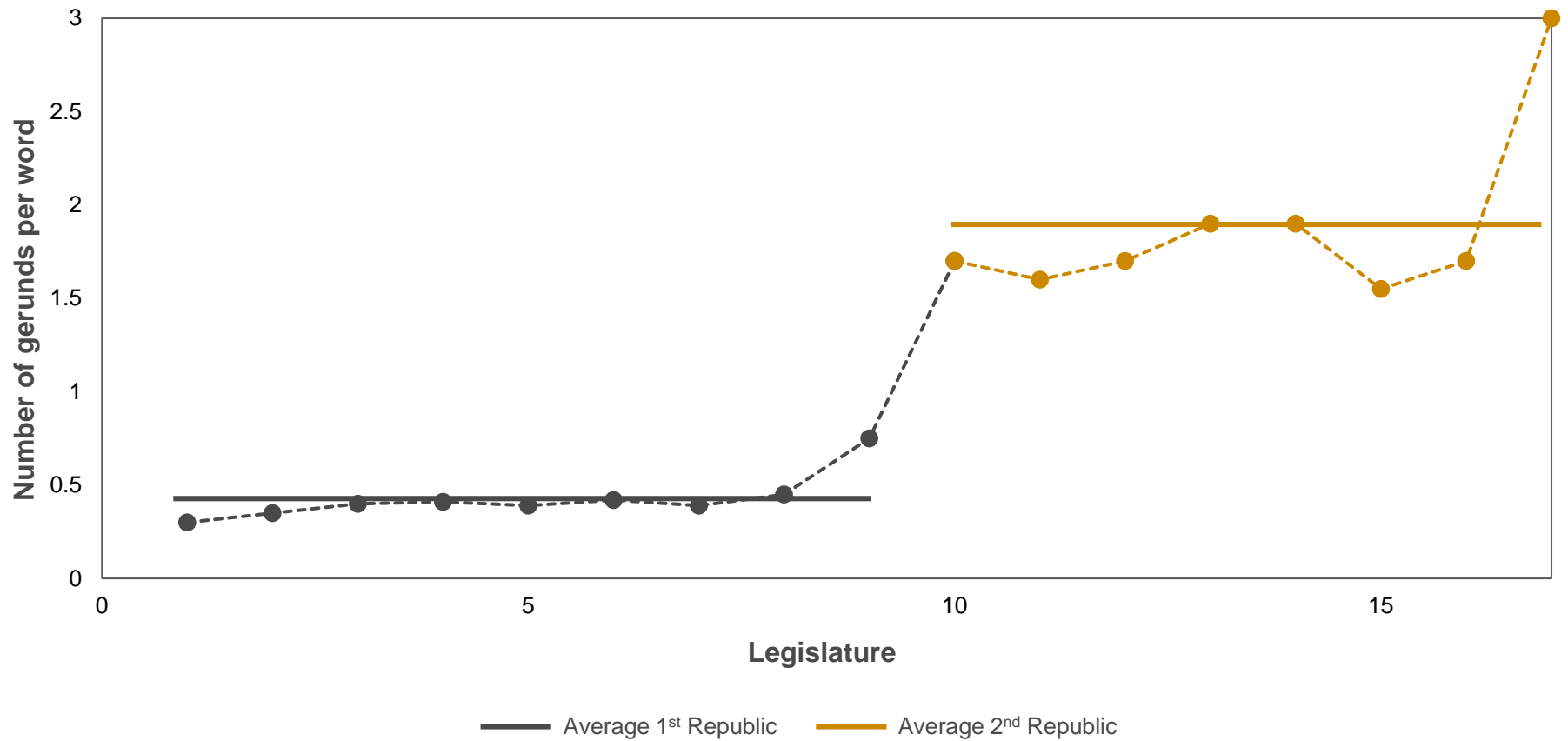
N. of words in preamble (3 times)





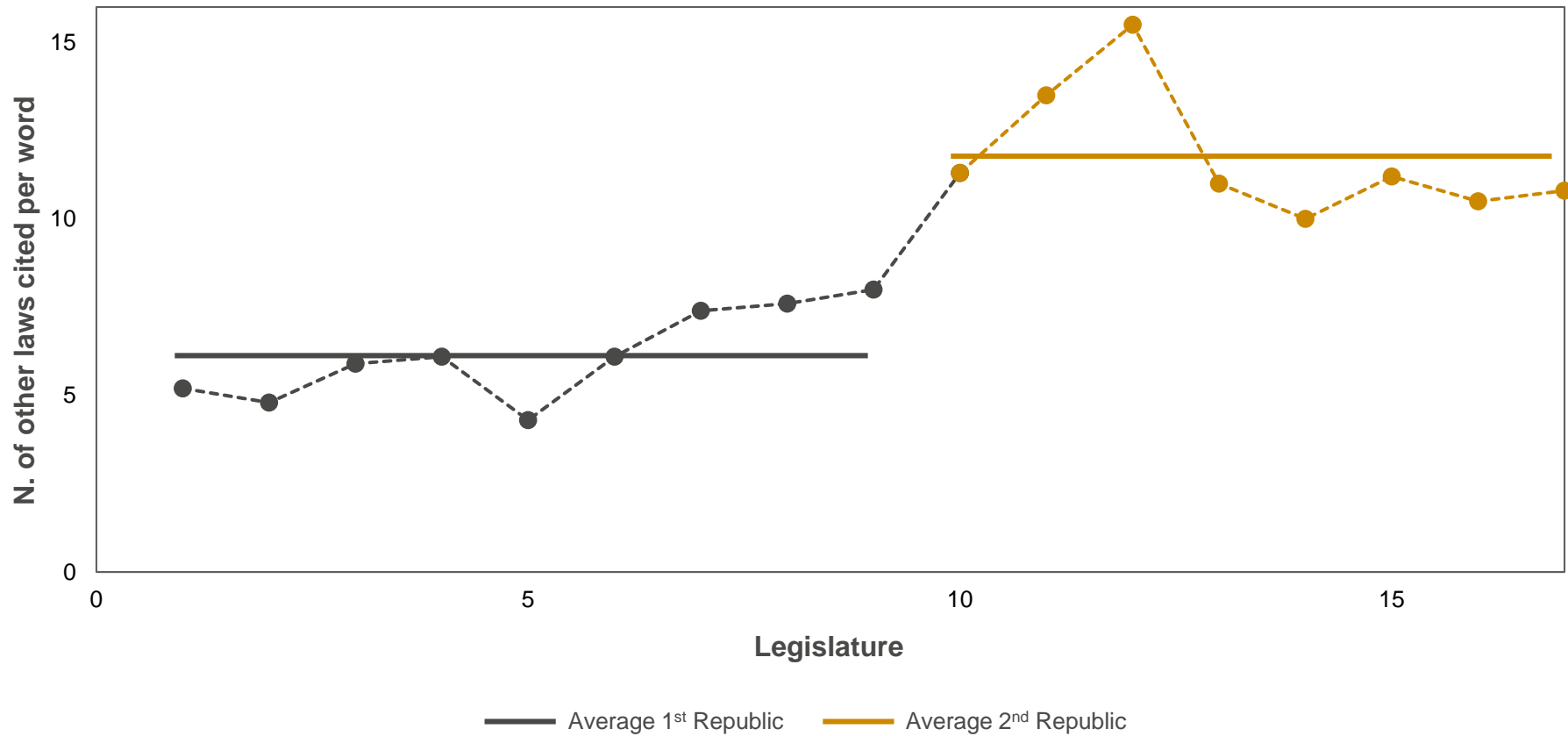
# Quality of single laws IV

N. of gerunds per word (4 times)



# System complexity

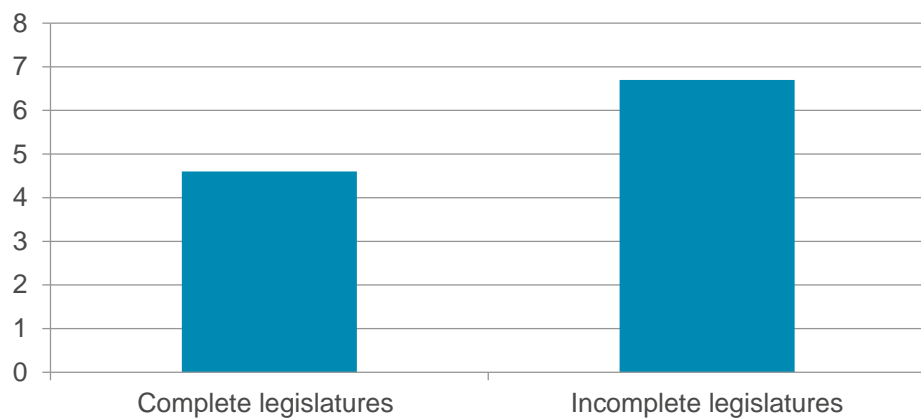
N. of law cited per word (2 times)



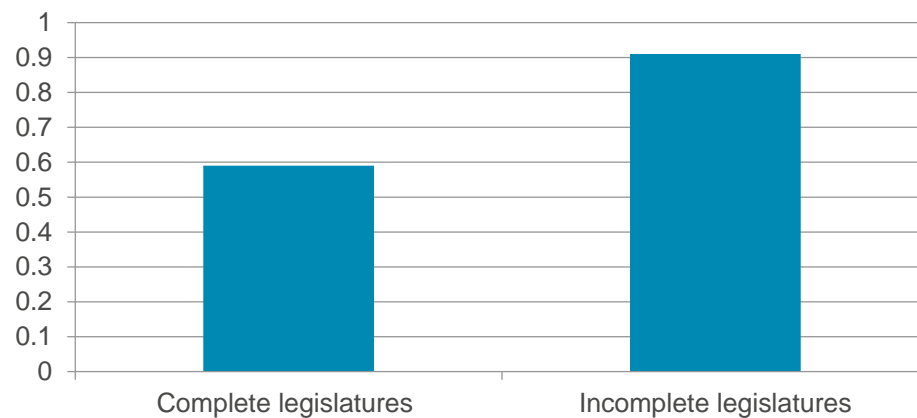
# Unveiling the mechanism

Low quality politicians are 50% more active when political instability is high

## N. Bills Presented by Low Quality Politicians



## N. Laws Sponsored by Low Quality Politicians



Quality of politicians: market wage before being appointed MP

# Stories of bureaucracy collapse I

## THE WALL STREET JOURNAL.

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<https://www.wsj.com/articles/the-real-italian-job-make-the-economy-more-productive-1519756489>

EUROPE

### Italy: The Country That Forgot How to Grow

Dysfunctional government and entrenched habits are holding back businesses, researchers say



*Pizza is a great Italian invention*

*It is also continuously reinvented*

*Pinsere – a small pizzeria in Rome – is one successful case*

*Only one shop, natural thing would be to expand and set up a chain*

*Why he does not do it?*

*“Would take me to hire four lawyers to be able to comply with the legislation. I cannot afford it”*

# Stories of bureaucracy collapse II

- A program that allows external researchers to access INPS data on individuals working histories
- Access the data on site
- A new rule requires all researches to take a 8-hours tutorial on the “Piano di Prevenzione ed Emergenza”
- Essentially, an evacuation plan in case on emergency!
- The law is thought for INPS work force but is ambiguous
- Bureaucracy has all incentive to interpret it cautiously



The screenshot shows the top navigation bar of the INPS website. On the left is the INPS logo, which consists of the letters 'INPS' in white on a blue square background with a circular arrow icon below it. To the right of the logo is a dark blue horizontal bar containing the text: 'L'Istituto', 'Dati, ricerche e bilanci', 'Avvisi, bandi e fatturazione', 'INPS Comunica', and 'Prestazioni e s'. Below this bar are three circular icons: a purple one with a laptop icon labeled 'Tutti i servizi', an orange one with a lightbulb icon labeled 'Trova la prestazione', and a teal one with a person icon labeled 'Entra in MyINPS'. Below the navigation bar is a light gray breadcrumb trail: a home icon followed by '/ Dati, ricerche e bilanci / Visitinps scholars'. To the left of the breadcrumb is a blue circular icon containing a white document icon. To the right of the icon is the text 'Visitinps scholars' in a large, bold, black font.

# Stories of bureaucracy collapse III

- How the madness on Italian bureaucracy blocked the reconstruction works following the April 2009 earthquake in the city of l'Aquila:
- In the first four years after the earthquake, l'Aquila was the subject of:
  - 5 Special Laws,
  - 21 Directives of the Deputy Commissioner,
  - 25 Acts of the Emergency Management Agency
  - 51 Acts of the Mission Technical Structure
  - 62 deliberations of the Civil Protection
  - 73 Decrees of the Prime Minister
  - 152 Decrees of the Delegated Commissioner
  - 720 municipal regulations

Source: Gian Antonio Stella, Corriere della Sera, March 8 2016

# Stories of bureaucracy collapse IV

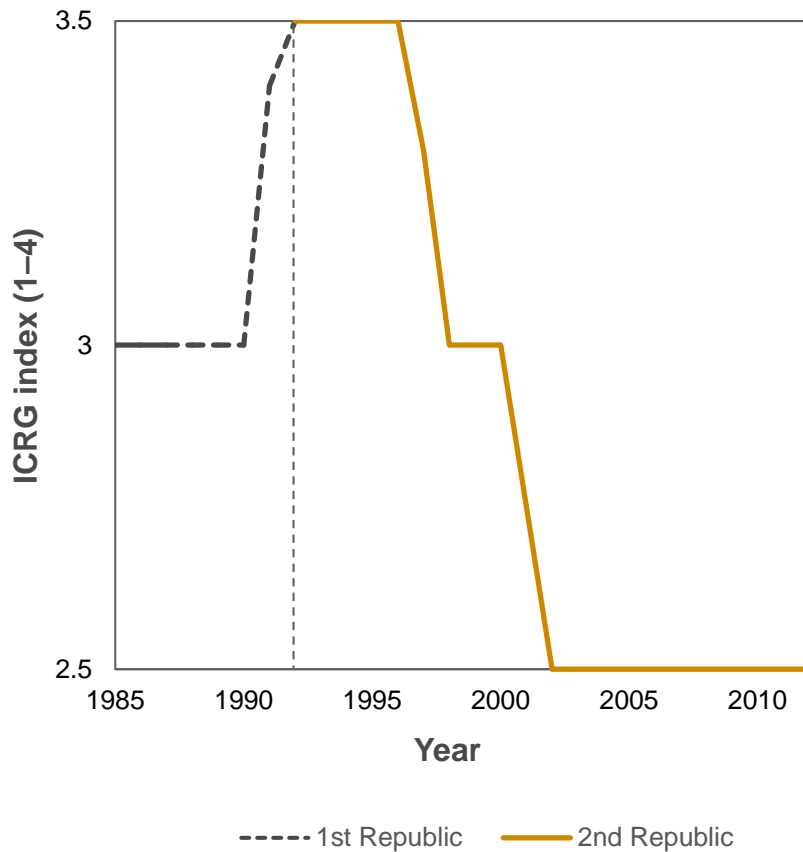
- Development program for the Sardinia Regional Government
- Treat a sample of young Sardinians with an entrepreneurship program
- Treatment: a one year program, 2/3 abroad at US institutions: start up and product development and Silicon Valley
- Competitive call funded with EU and regional funds
- Applications through the Sardinia Gov Web Site



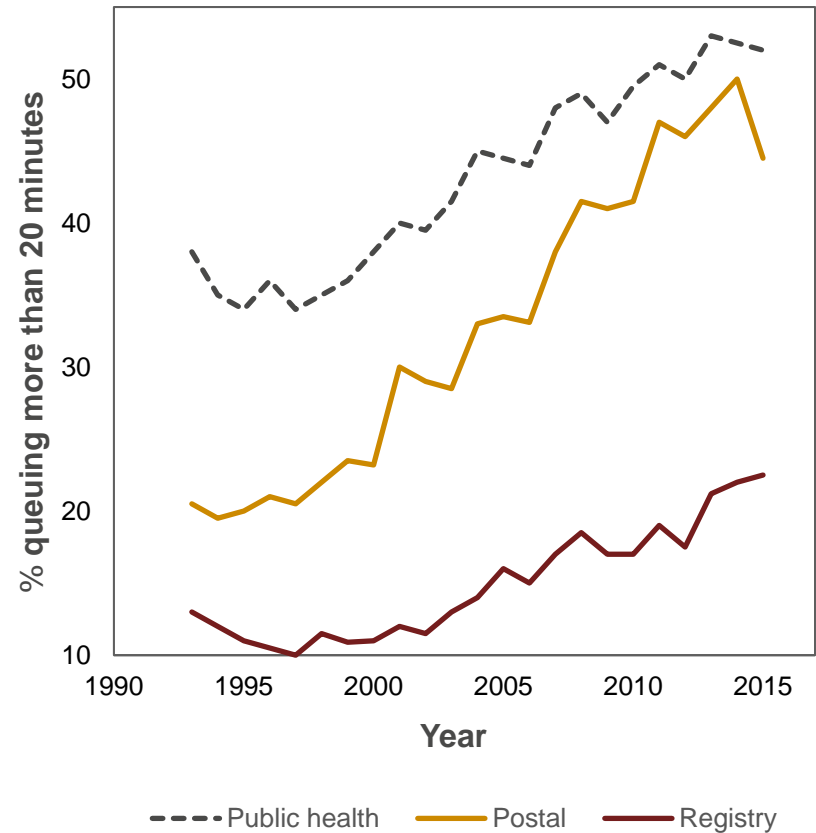
## PROGRAMMA ENTREPRENEURSHIP AND BACK

# Bureaucratic collapse: Harder evidence

## The collapse of bureaucratic efficiency in Italy's Second Republic



a. ICRG index of quality of bureaucracy

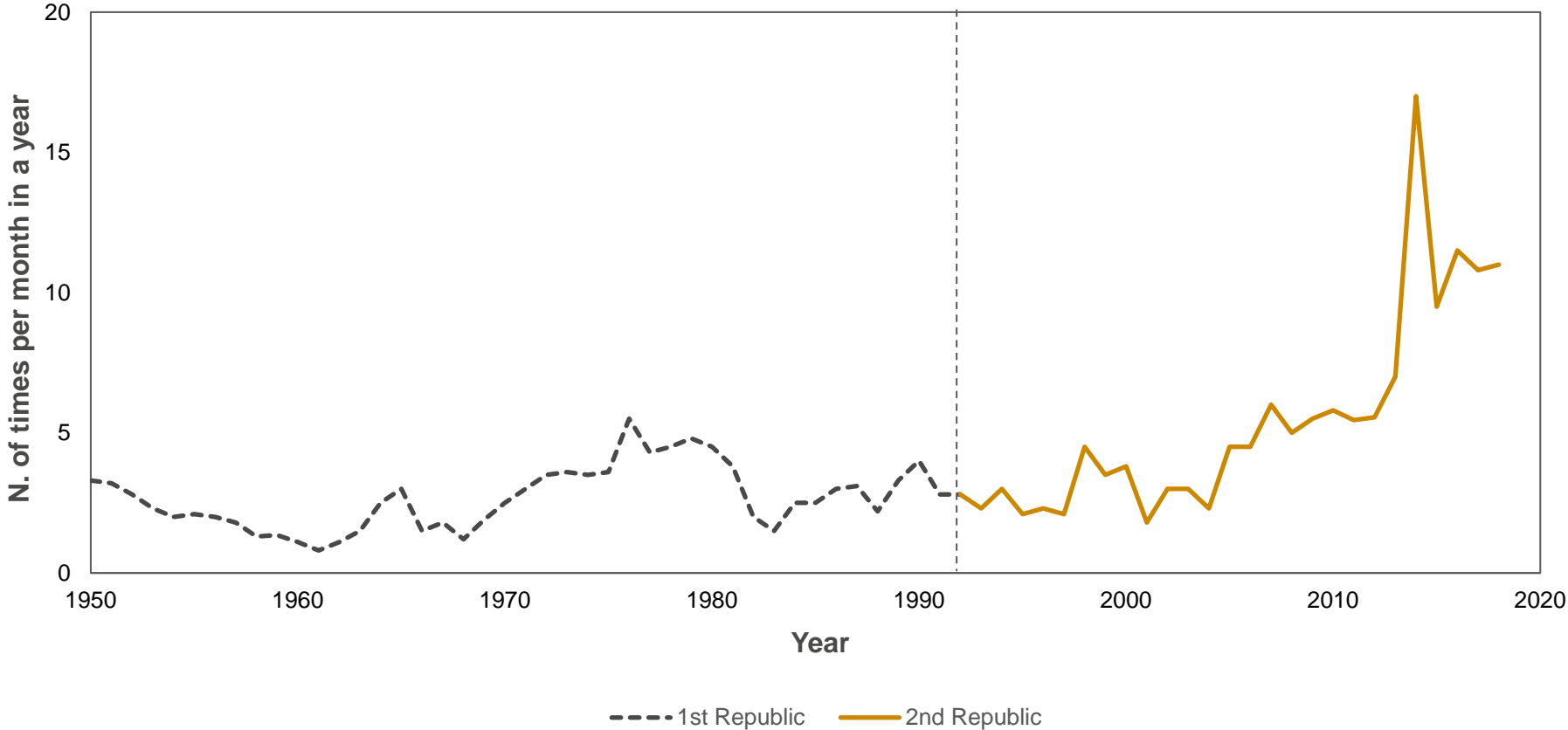


b. Queuing time



# Bureaucratic collapse: Perception

## Bureaucracy: Front Page Citations Corriere della Sera (4 times)

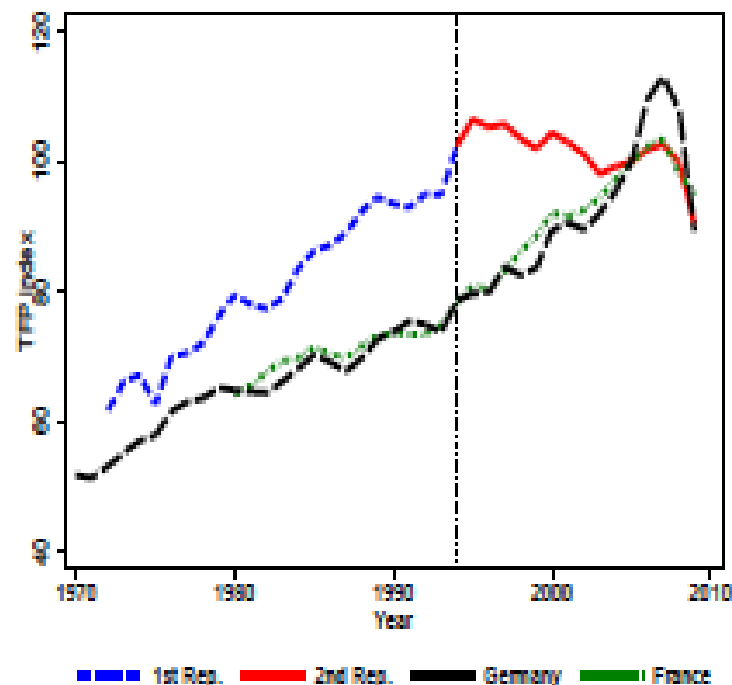


# The Great Economic Efficiency Decline

- Has specific timing, the early 1990s, the II Republic
  - Before the Euro
  - Before China enters the WTO and globalization unfolds
  - All sectors, all areas involved
- It is a whole country problem

N. of laws cited per word (no trend, no jump)

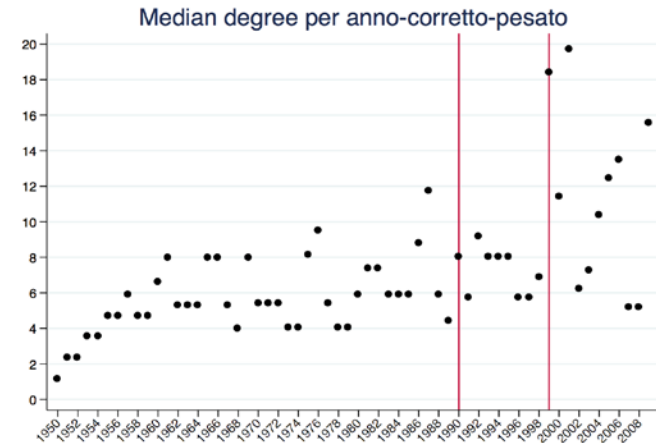
Figure 9: Italy's TFP



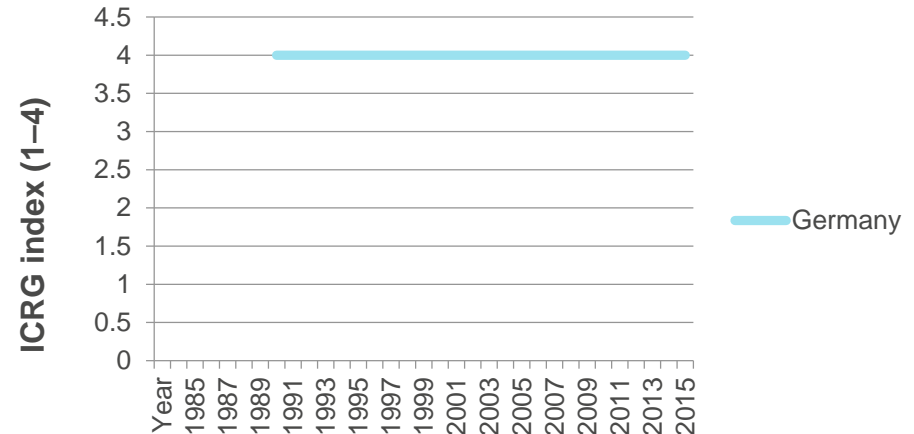
# Not in Germany, a stable country

- Subject to the same external political shocks as Italy: the collapse of Soviet Union and of the Berlin wall
- Subject to an increase in legislative production
- But politically stable
- No worsening in legislative complexity
- No worsening of bureaucracy

## N. of laws cited per word (no trend, no jump)



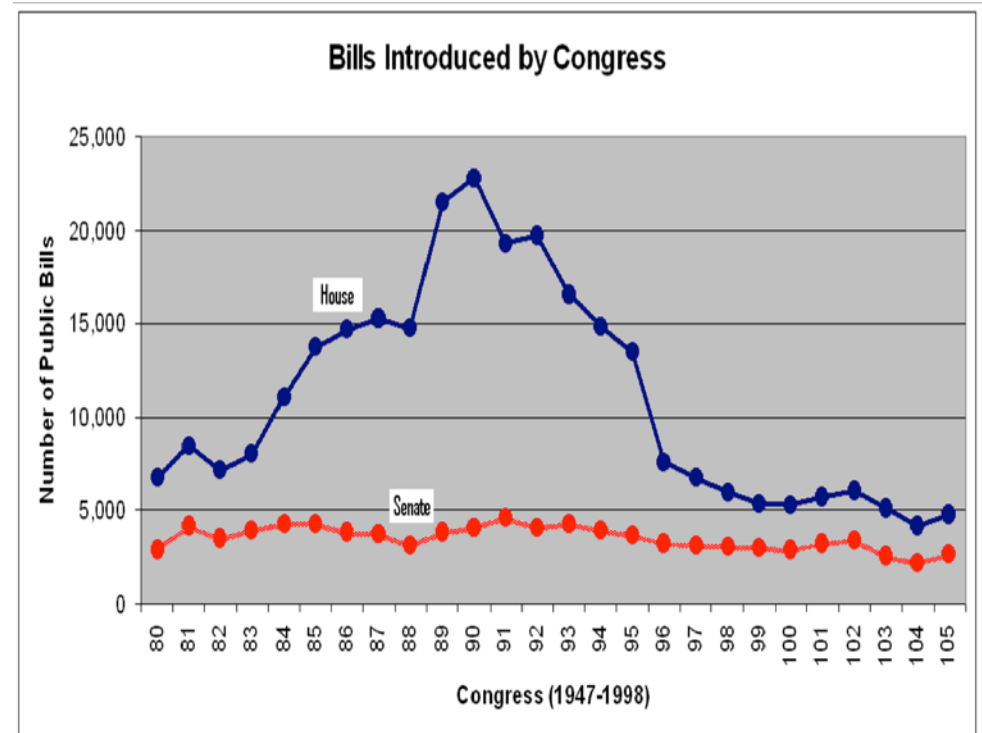
## Quality of Bureaucracy:



# Is only Italy at risk?

- Highlighted mechanism – MPs and of Government to signal through legislative production - is common to all democracies
- No single country is sheltered against the risk
- A US example: effect of prohibiting bills co-signature in the House but not in the Senate

## N. of laws cited per word (no trend, no jump)



# Conclusions

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## In a nutshell

- Legal complexity can be a nightmare when caused by political instability
  - Can trigger a self-reinforcing loop: un-necessary, complex laws hamper the functioning of the state => encourages the production of even more laws => leads to an economic collapse

## What is missing?

- Which sectors/segments of the economy are more likely to be the target of “bad” politician in search on consensus ?
- Depends on what is most salient: in a financial crisis, great demand for fixing financial markets and thus an opportunity for offering new laws

# A recommended reading

From *The Federalist Papers*, 62 (Alexander Hamilton)

- The internal effects of a mutable policy are still more calamitous. It poisons the blessing of liberty itself. It will be of little avail to the people, that the laws are made by men of their own choice, if the laws be so voluminous that they cannot be read, or so incoherent that they cannot be understood; if they be repealed or revised before they are promulgated, or undergo such incessant changes that no man, who knows what the law is to-day, can guess what it will be to-morrow. Law is defined to be a rule of action; but how can that be a rule, which is little known, and less fixed?
- Another effect of public instability is the unreasonable advantage it gives to the sagacious, the enterprising, and the moneyed few over the industrious and uniformed mass of the people. Every new regulation concerning commerce or revenue, or in any way affecting the value of the different species of property, presents a new harvest to those who watch the change, and can trace its consequences; a harvest, reared not by themselves, but by the toils and cares of the great body of their fellow-citizens. This is a state of things in which it may be said with some truth that laws are made for the FEW, not for the MANY.
- In another point of view, great injury results from an unstable government. The want of confidence in the public councils damps every useful undertaking, the success and profit of which may depend on a continuance of existing arrangements. What prudent merchant will hazard his fortunes in any new branch of commerce when he knows not but that his plans may be rendered unlawful before they can be executed? What farmer or manufacturer will lay himself out for the encouragement given to any particular cultivation or establishment, when he can have no assurance that his preparatory labors and advances will not render him a victim to an inconstant government? In a word, no great improvement or laudable enterprise can go forward which requires the auspices of a steady system of national pol