

# What determines the reputation of a competition agency?

Bruce Lyons  
and  
Prishnee Armoogum

# How can we assess the performance of a competition authority?



- 
- ✦ Count activity/cases opened
  - ✦ Count successful appeals/court decisions
  
  - ✦ Evaluate individual decisions (clarity, econ/law, speed)
  - ✦ Evaluate deterrence and chilling effects (+business burden)
  
  - ✦ Count/aggregate elements of assumed best practice (OECD/CPI)
  
  - ✦ Peer review/reputation

# Previous law literature evaluating CA performance

---



- ✦ Simple case counting
  - ✦ Kovacic (2009, 2011) on how this is misleading
  
- ✦ Comparative case studies of 'efficiency and fairness of procedures'
  - ✦ Fox & Trebilcock (2013) on 9 jurisdictions
  
- ✦ Propensity to appeal decisions (& success of such appeals)
  - ✦ FTC Commissioner decisions significantly more likely to be appealed than federal district court judges...
  - ✦ ...especially when judges have basic economics training
  - ✦ Wright & Diveley (2013)

# Previous economics literature evaluating CA performance

---



## ✦ Evaluation of individual decisions

- ✦ Davies & Ormosi (2012) on inevitable case selection bias

## ✦ Benchmark each country against 'best practice'

- ✦ Buccirosi et al [inc Duso] (2011, 2012) on CPI

## ✦ Competition Policy Index

- ✦ Institutions: independence, separation of prosecutor and adjudicator, quality of law, investigative powers, level of fines
- ✦ Enforcement: activity, budget, quality of staff
- ✦ Assumed weights for 12 OECD countries 1995-2005

**Conclusion: Lack of evidence relating performance to institutional design**

- ✦ Leaving design to political whim?

# Overview of this presentation

---



1. The economics of reputation and performance
2. The reputation of competition agencies (CAs)
3. The determinants of CA reputation
4. Preliminary econometric results
5. Conclusions

# Reputation is founded on performance... ...and can improve wider behaviour



## ✦ Credibility

- ✦ Reputation is grounded in actual behaviour/performance and sustained when observed over the long-term

- ✦ Reputation of A affects how B behaves

  - ✦ Kreps & Wilson (1982), Milgrom & Roberts (1982), Barro, Gordon & Taylor (1983)

## ✦ Independent institutions can sustain reputation

- ✦ Firms – to ensure product quality

  - ✦ Klein & Leffler (1981), Shapiro (1983)

- ✦ Central banks – to ensure credible inflation target

  - ✦ Backus & Driffill (1985)

- ✦ Competition agencies – to ensure active, consistent approach and focus on long-term consumer welfare

# ***Caveat: reputation is not always founded *only* in good performance***



- 
- ✦ Conformity to norms can enhance reputation even if those norms are inefficient...
    - ✦ E.g. management fads can enhance reputation (and pay) of CEO without improving performance
    - ✦ Staw & Epstein (2000)
  
  - ✦ ...but long-run credible reputation must be founded in good performance
    - ✦ Bloom & Van Reenen (2010) on management techniques

# There is a wider social value of the good reputation of a competition agency



---

✦ “Perceptions of a competition agency’s quality directly influence judicial decisions about whether to defer to the agency’s positions, legislative decisions about the agency’s budget and statutory authority, the willingness of companies to comply with laws entrusted to the agency’s enforcement, and the agency’s ability to hire and retain capable staff. A competition agency that enjoys an excellent brand is also likely to inspire citizen confidence in government by showing that public institutions truly ‘work’.”

✦ W. E. Kovacic (2009, 2011)

# Reputation (performance?) quantified by Global Competition Review 'star ratings'



---

## ✦ Inputs

- ✦ Each CA head

  - ✦ Questionnaire

- ✦ Antitrust lawyers, economists, in-house counsel, academics, journalists

  - ✦ Questionnaire (+ selected interviews)

- ✦ Other GCR intelligence

  - ✦ News stories from daily briefings

  - ✦ Attendance at “every major competition conference” inc. ICN

## ✦ Output

- ✦ Subjective aggregation to a star rating

- ✦ Absolute scale with no adjustment for resources available

# GCR ratings in our sample of 35 agencies



Elite 5*		Fair 2½*		Main movers	
2011	2006	2011	2006	Up (+1)	Down (-½)
EC	EC	Slvkia 2*	Greece 2*	France	Ireland -1*
France	UK CC	Belgium	Russia 2*	Germany	Denmark
Germany	US FTC	[Greece]	Belgium	Japan	Finland
UK CC		[Ireland]	Israel	Spain	Slovakia
US DOJ		Mexico	Mexico	Russia	
US FTC		Denmark	Slovakia		
			S Africa		

2012

# Our sample of 35 agencies from 32 countries (over 6 years)

---



Australia

Austria

Belgium

Brazil (CADE)

Brazil (SDE)

Canada

Czech Rep.

Denmark

DG Comp

Finland

France

Germany

Greece

Hungary

Ireland

Israel

Italy

Japan

Korea

Mexico

New Zealand

Norway

Poland

Portugal

Russia

Slovakia

South Africa

Spain

Sweden

Switzerland

Netherlands

UK (CC)

UK (OFT)

US (DoJ)

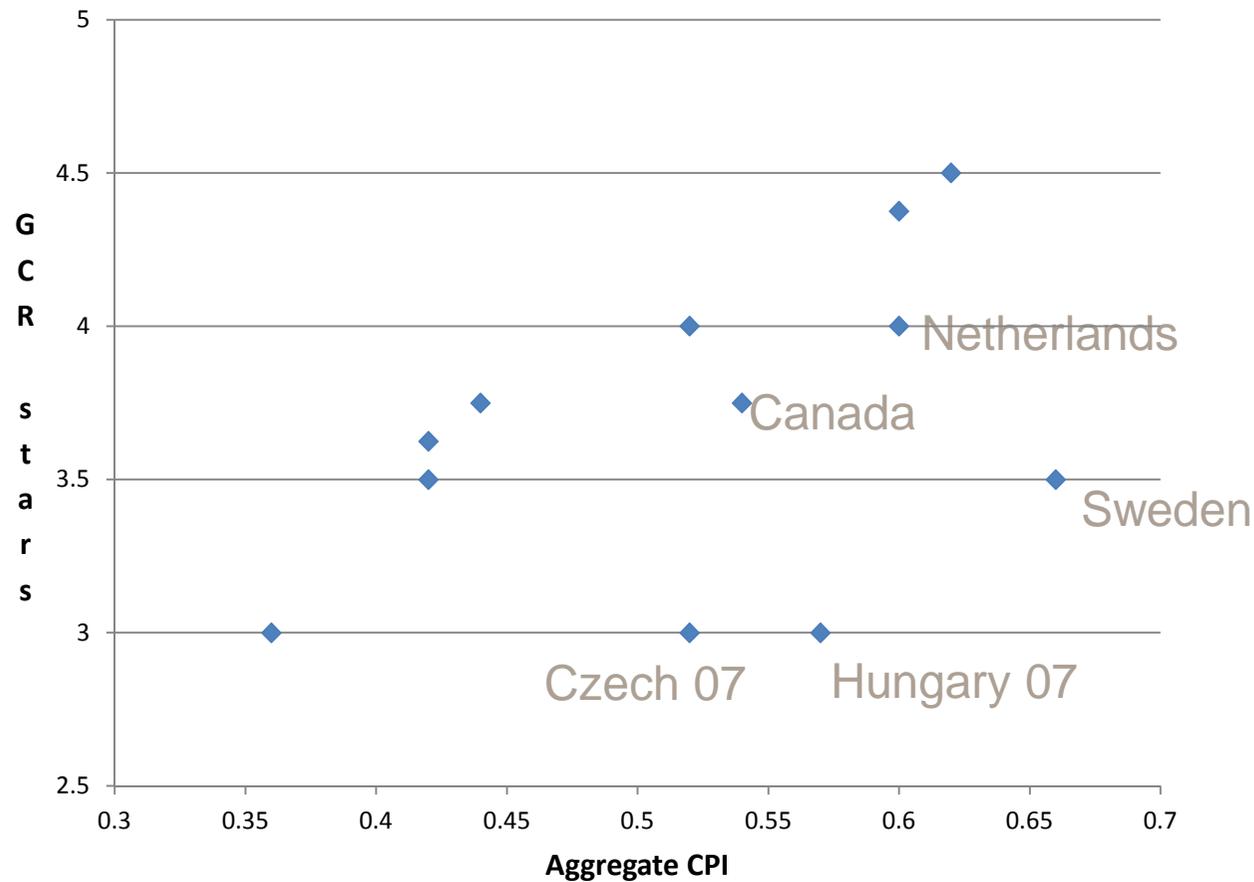
US (FTC)

# GCR star ratings cannot be fully explained by assumed best practice

*(Buccirossi et al's aggregate CPI)*



2005 comparison



# Our approach



- 
- ✦ Maintained hypothesis that GCR stars provide an acceptable measure of 'reputation' or 'performance'
  
  - ✦ No assumptions about what institutional features sustain a high reputation
    - ✦ i.e. no *ex ante* weights
  
  - ✦ Estimate what determines reputation:
    1. General national characteristics
    2. CA budget
    3. CA institutional design
    4. CA human resource characteristics

# *Determinants of reputation:*

## 1. General national characteristics

---



- ✦ Population
  - ✦ Range of cases; economies of scale
  
- ✦ Income per capita
  - ✦ Skills, development, priorities, affordability
  
- ✦ Tradition of good governance
  - ✦ Absence of corruption, political stability, etc
  
- ✦ Common law system
  - ✦ May be more or less effective than civil law

# *Determinants of reputation:*

## **2. CA budget**

---

### ✦ Resources for each case

- ✦ Less prone to decision error
- ✦ Quicker decisions
- ✦ Hiring & retention of better staff

### ✦ Investment in skills, methodologies, etc

- ✦ Wider review of potential cases
- ✦ Investment in industry understanding
- ✦ Research on improved methods
- ✦ Guideline development
- ✦ Writing clear decisions using appropriate economics & law
- ✦ Better remedy design
- ✦ Evaluation studies
- ✦ Advocacy to business, government & consumers

# *Determinants of reputation:*

## 3. Institutional design of CA



---

✦ Three basic designs: *who makes first instance decisions?*

✦ Fox & Trebilcock (2013)

✦ **Integrated** agency

✦ Bifurcated agency/**tribunal**

✦ Bifurcated agency/**judicial**

✦ *Note:* integrated agency associated with inquisitorial approach; bifurcated models suggest prosecutorial approach

✦ Specialisation of CA on competition

✦ Age of institution (including clear predecessors)

## *Determinants of reputation:*

### **4. Composition of human resources**

---



- ✦ Balance between lawyers, economists and others
- ✦ PhD level economics training
- ✦ Age of staff
- ✦ Length of tenure

# Preliminary results:

## 1. General national characteristics



---

<u>GCR Rating</u>	(1)
Population	0.39***
Income p.c.	0.44***
Governance index	0.27*
Common law	0.45***

*R<sup>2</sup> within* 0.05

*between* 0.79

*overall* 0.73

# Preliminary results:

## 2. Budget



---

<u>GCR Rating</u>	(2)
Budget	0.24***
Population	
Income p.c.	
Governance index	
Common law	

*R<sup>2</sup> within* 0.04

*between* 0.49

*overall* 0.44

# Preliminary results:

## 2. Budget



---

<u>GCR Rating</u>	(2)	(3)
Budget	0.24***	0.11**
Population		0.34***
Income p.c.		0.30**
Governance index		0.34**
Common law		0.40***
	<i>R<sup>2</sup> within</i>	
	0.04	0.05
	<i>between</i>	
	0.49	0.85
	<i>overall</i>	
	0.44	0.78

# *Preliminary results:*

## 3. Institutional design



---

<u>GCR Rating</u>	(4)
Budget	0.07 <sup>+</sup>
Population	0.35 <sup>***</sup>
Income p.c.	0.26 <sup>**</sup>
Governance index	0.38 <sup>**</sup>
Common law	0.56 <sup>***</sup>
Tribunal	-0.35 <sup>**</sup>
Judicial	-0.27 <sup>+</sup>
Prosecutorial	
%Competition staff	
Age of agency	

# *Preliminary results:*

## 3. Institutional design



---

<u>GCR Rating</u>	(4)	(5)
Budget	0.07 <sup>+</sup>	0.08 <sup>*</sup>
Population	0.35 <sup>***</sup>	0.35 <sup>***</sup>
Income p.c.	0.26 <sup>**</sup>	0.26 <sup>**</sup>
Governance index	0.38 <sup>**</sup>	0.40 <sup>***</sup>
Common law	0.56 <sup>***</sup>	0.56 <sup>***</sup>
Tribunal	-0.35 <sup>**</sup>	
Judicial	-0.27 <sup>+</sup>	
Prosecutorial		-0.31 <sup>**</sup>
%Competition staff		
Age of agency		

# Preliminary results:

## 3. Institutional design




---

<u>GCR Rating</u>	(4)	(5)	(6)
Budget	0.07 <sup>+</sup>	0.08 <sup>*</sup>	0.08 <sup>+</sup>
Population	0.35 <sup>***</sup>	0.35 <sup>***</sup>	0.35 <sup>***</sup>
Income p.c.	0.26 <sup>**</sup>	0.26 <sup>**</sup>	0.28 <sup>**</sup>
Governance index	0.38 <sup>**</sup>	0.40 <sup>***</sup>	0.37 <sup>**</sup>
Common law	0.56 <sup>***</sup>	0.56 <sup>***</sup>	0.52 <sup>***</sup>
Tribunal	-0.35 <sup>**</sup>		
Judicial	-0.27 <sup>+</sup>		
Prosecutorial		-0.31 <sup>**</sup>	-0.27 <sup>**</sup>
%Competition staff			-0.00 <sup>+</sup>
Age of agency			

# Preliminary results:

## 3. Institutional design



<u>GCR Rating</u>	(4)	(5)	(6)	(7)
Budget	0.07 <sup>+</sup>	0.08 <sup>*</sup>	0.08 <sup>+</sup>	0.08 <sup>+</sup>
Population	0.35 <sup>***</sup>	0.35 <sup>***</sup>	0.35 <sup>***</sup>	0.33 <sup>***</sup>
Income p.c.	0.26 <sup>**</sup>	0.26 <sup>**</sup>	0.28 <sup>**</sup>	0.25 <sup>*</sup>
Governance index	0.38 <sup>**</sup>	0.40 <sup>***</sup>	0.37 <sup>**</sup>	0.39 <sup>***</sup>
Common law	0.56 <sup>***</sup>	0.56 <sup>***</sup>	0.52 <sup>***</sup>	0.54 <sup>***</sup>
Tribunal	-0.35 <sup>**</sup>			
Judicial	-0.27 <sup>+</sup>			
Prosecutorial		-0.31 <sup>**</sup>	-0.27 <sup>**</sup>	-0.29 <sup>**</sup>
%Competition staff			-0.00 <sup>+</sup>	
Age of agency				0.05

# *Preliminary results:*

## 4. Composition of human resources



---

<u>GCR Rating</u>	(8)
Budget	0.10**
Population	0.35***
Income p.c.	0.34***
Governance index	0.32**
Common law	0.39***
Tribunal	
Judicial	
Prosecutorial	
%Law	-0.44**
%Eco	0.14
#Economics PhD	
Staff ave. tenure	
Staff ave. age	

# *Preliminary results:*

## 4. Composition of human resources



---

<u>GCR Rating</u>	(8)	(9)
Budget	0.10**	0.09*
Population	0.35***	0.32***
Income p.c.	0.34***	0.31**
Governance index	0.32**	0.33**
Common law	0.39***	0.38***
Tribunal		
Judicial		
Prosecutorial		
%Law	-0.44**	-0.49**
%Eco	0.14	0.13
#Economics PhD		0.09**
Staff ave. tenure		
Staff ave. age		

# Preliminary results:

## 4. Composition of human resources



<u>GCR Rating</u>	(8)	(9)	(10)
Budget	0.10**	0.09*	0.10**
Population	0.35***	0.32***	0.32***
Income p.c.	0.34***	0.31**	0.36***
Governance index	0.32**	0.33**	0.28*
Common law	0.39***	0.38***	0.47***
Tribunal			
Judicial			
Prosecutorial			
%Law	-0.44**	-0.49**	
%Eco	0.14	0.13	
#Economics PhD		0.09**	
Staff ave. tenure			-0.01
Staff ave. age			-0.00

# Preliminary results:

## 4. Composition of human resources



<u>GCR Rating</u>	(8)	(9)	(10)	(11)
Budget	0.10**	0.09*	0.10**	0.07+
Population	0.35***	0.32***	0.32***	0.33***
Income p.c.	0.34***	0.31**	0.36***	0.26**
Governance index	0.32**	0.33**	0.28*	0.39***
Common law	0.39***	0.38***	0.47***	0.48***
Tribunal				
Judicial				
Prosecutorial				-0.19+
%Law	-0.44**	-0.49**		-0.36*
%Eco	0.14	0.13		
#Economics PhD		0.09**		0.08*
Staff ave. tenure			-0.01	
Staff ave. age			-0.00	

# Preliminary results: Overall



<u>GCR Rating</u>	(8)	(9)	(10)	(11)	(12)	(5)
<b>Budget</b>	0.10**	0.09*	0.10**	<b>0.07+</b>	<b>0.07+</b>	<b>0.08*</b>
<b>Population</b>	0.35***	0.32***	0.32***	<b>0.33***</b>	<b>0.33***</b>	<b>0.35***</b>
<b>Income p.c.</b>	0.34***	0.31**	0.36***	<b>0.26**</b>	<b>0.24*</b>	<b>0.26**</b>
<b>Governance</b>	0.32**	0.33**	0.28*	<b>0.39***</b>	<b>0.40***</b>	<b>0.40***</b>
<b>Common law</b>	0.39***	0.38***	0.47***	<b>0.48***</b>	<b>0.54***</b>	<b>0.56***</b>
Tribunal						
Judicial						
<b>Prosecutorial</b>				<b>-0.19+</b>	<b>-0.27**</b>	<b>-0.31**</b>
<b>%Law</b>	-0.44**	-0.49**		<b>-0.36*</b>		
<b>%Eco</b>	0.14	0.13				
<b>#Economics PhD</b>		0.09**		<b>0.08*</b>	<b>0.06+</b>	
Staff ave. tenure			-0.01			
Staff ave. age			-0.00			

# Preliminary conclusions on: *What determines the reputation of a CA?*

**Warning: results are preliminary**

---



- ✦ National governability facilitates enforcement
  - ✦ Highly correlated with income per capita
  
- ✦ Common law helps
  - ✦ More flexible/responsive setting (or Anglo-Saxon bias?)
  
- ✦ Scale matters
  - ✦ Not just budget
  
- ✦ Integrated agencies have the highest reputation
  - ✦ Evidence that inquisitorial system is better than prosecutorial
  
- ✦ Invest in well qualified economists
  - ✦ ...and don't worry about reducing the proportion of lawyers!
    - ✦ But this result is less robust than others!

# What determines the reputation of a competition agency?

Bruce Lyons  
and  
Prishnee Armoogum

**Spare slides...**

---



# Previous legal literature evaluating CA performance



---

## ✦ Simple case counting

- ✦ Misleading unless also assess investment in methods, guidelines, hiring & retention, influence on legislative reform

- ✦ Kovacic (2009, 2011)

## ✦ Comparative case study of 'efficiency and fairness of procedures'

- ✦ International comparison suggests 'procedure/process norms can be fulfilled within a number of institutional designs'

- ✦ Fox & Trebilcock (2013) on 9 jurisdictions

## ✦ Propensity to appeal decisions (& success of such appeals)

- ✦ US FTC Commissioner decisions significantly more likely to be appealed than federal district court judges...

- ✦ ...especially when judges have basic economics training

- ✦ Apparent expertise of commissioners undermined by political appointment

- ✦ Wright and Diveley (2013)

# Previous economics literature evaluating CA performance

---



- ✦ Evaluation of individual decisions
  - ✦ Expensive, so inevitable case selection bias
    - ✦ Davies & Ormosi (2012) for assessment of methods
  
- ✦ Benchmark each country against 'best practice'
  - ✦ Buccirossi et al [inc Duso] (2011, 2012)
- ✦ Competition Policy Index
  - ✦ Institutions: independence, separation of prosecutor and adjudicator, quality of law, investigative powers, level of fines
  - ✦ Enforcement: activity, budget, quality of staff
  - ✦ Assumed weights for 12 OECD countries 1995-2005
- ✦ Find CPI has significant impact on productivity growth
  - ✦ 22 industries

# Reputation is founded on performance... ...and can improve wider behaviour



- 
- ✦ Reputation for toughness/benevolence can be credible when choices are observed over the long-term
    - ✦ Repeated game theory
    - ✦ Kreps & Wilson (1982), Milgrom & Roberts (1982)
  
  - ✦ Reputation can change/improve behaviour of economic agents
    - ✦ Credible monetary policy rules change inflation expectations
    - ✦ Barro, Gordon & Taylor (1983)
  
  - ✦ Reputation can be sustained in independent institutions
    - ✦ Firms – to ensure product quality
      - ✦ Klein & Leffler (1981), Shapiro (1983)
    - ✦ Central banks – to ensure credible inflation target
      - ✦ Backus & Driffill (1985)
    - ✦ Competition agency – consistent approach and focus on long-term consumer welfare

# Some evidence from finance on how reputation affects performance



- 
- ✦ Firms improve the price of an initial public offering of shares if they use a high reputation...
    - ✦ Auditor
      - ✦ Beatty (1989)
    - ✦ Underwriter/investment bank
      - ✦ Carter et al (1990, 1998); Fang (2005)
  
  - ✦ Published forecasts by high reputation analysts have a larger impact on share prices
    - ✦ Stickel (1992)

# Global Competition Review 'star ratings'



## ✦ Inputs

- ✦ Questionnaire to each **CA head**
- ✦ Questionnaire (+ selected interviews) with **antitrust lawyers, economists, in-house counsel, academics, journalists**
- ✦ Review of GCR daily briefings (**news stories**)
- ✦ Other GCR intelligence
  - ✦ News stories from daily briefings
  - ✦ Conferences

## ✦ Output

- ✦ Subjective aggregation to a star rating
  - ✦ Conservative; influenced by self-assessment, activity, appeals and consensus view (esp. local competition bar)
- ✦ Absolute scale with no adjustment for resources available

# Some economics of reputation (2)



---

✦ Good institutions are the major source of long-term economic success

✦ North (1990), Greif (1989), Rodrik & Subramanian (2003)

✦ But details of institutional design can profoundly alter their effectiveness

✦ Williamson (1976)

# Data sources



- 
- ✦ Panel of 35 agencies from 32 countries over 6 years (2006-11)
    - ✦ Determined by availability of GCR rankings
  
  - ✦ *Supplementary data*
    - ✦ GCR reports on CA budget and human resources
    - ✦ World Bank on governance indicators, GNI
      - ✦ Governance = control of corruption + political stability + government effectiveness + voice & accountability + regulatory quality + rule of law
    - ✦ Fox & Trebilcock (2013) on institutional design
    - ✦ OECD on: competition law & policy; CP & regulatory reform
    - ✦ ABA on Competition Laws Outside the US
    - ✦ Tetley (2000) on common law jurisdictions
    - ✦ CA websites to fill the gaps
    - ✦ Small amount of interpolation for missing years

# Some descriptive statistics from our sample (2011)



	Highest/oldest	Lowest/youngest
Population	EU, US, Brazil	Den,S'kia,Fin,Nor,Ire,NZ
GNI pc	Nor, Switz, Den	Rus, Brz, Mex, S Af
Governance	Den, Fin, NZ, Swe	Gr, S Af, Brz, Mex, Rus
CA age	USDJ, FTC, Jap, UKCC	Austria, Ire, Port
Budget	USDJ, USFTC, EC, Jap	Austria,Skia,Bel, BzISD
Staff ave tenure	Jap, USboth, Kor	Sp, Isr, Gr, S Af
Staff ave age	Bel, USboth, It, Ger	Sw, Bzl, Isr, S Af, Rus
Law %	USboth, Aus, Sw, Bel	Kor, Jap
Economics %	Gr, Ire, Fin	USboth, Pol, Jap, NZ
Economics PhD	USboth, Rus, EC, Sp	Sl, CZ, Aus, BzIS; all=0
Competition staff %	11 CAs with 100%	USF,PI,Dn,Cz,OFT,BzS

# *Determinants of reputation:*

## 3. Institutional design of CA

- 
- ✦ Three basic designs; Fox & Trebilcock (2013)
    - ✦ *Note:* often hybrid elements
    - ✦ **Integrated agency**
      - ✦ Commission within CA makes first-level adjudication
      - ✦ E.g. EC, Japan, US FTC
    - ✦ **Bifurcated agency/tribunal**
      - ✦ CA goes to specialised tribunal
        - ✦ E.g. Belgium, Canada, South Africa
    - ✦ **Bifurcated judicial**
      - ✦ CA goes to court for enforcement
        - ✦ E.g. US DoJ
    - ✦ *Note:* imperfect proxy for inquisitorial versus prosecutorial models
  - ✦ Specialisation of CA on competition
  - ✦ Age of institution (including clear predecessors)
    - ✦ ‘Worked out how to do it’ *versus* ‘breath of fresh air’?

# Econometric methodology



- 
- ✦ Cardinal dependent variable
    - ✦ 7 point scale including half-stars
      - ✦ Similar results with ordered probit
    - ✦ Several 'dummy variables' (=1 if x; =0 otherwise)
    - ✦ Natural logs of other RHS levels variables
      - ✦ Unless specified
  
  - ✦ Random effects panel estimation
    - ✦ Some interesting measures do not vary (much) over time
      - ✦ E.g. agency design
    - ✦ FE often rejected anyway
    - ✦ Not yet tried IV estimation
  
  - ✦ Significance levels (2-tail)
    - ✦ \*\*\* = 1%; \*\* = 5%; \* = 10%; + = 20% (or 10% 1-tail)

# Ordered probit results



- 
- ✦ Very similar overall
  - ✦ Cut points evenly spaced
    - ✦ Except a bit more compressed for 4½ and 5 stars
  - ✦ Most significant variables substantially improve sig. level
    - ✦ Including: –Judicial\*\*\*
  - ✦ But some important exceptions:
    - ✦ GNIpc, %Law and #Economics PhD...
    - ✦ ...each drop to insignificance