

# Leniency Inflation, Deterrence, and Criminalization

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**Pros and Cons of Leniency and Criminalization 2015**  
**13<sup>th</sup> November**

# Important distinctions

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Well designed/implemented Leniency Programs (LPs)

**Vs** Real world LPs as implemented by Competition Authorities (CAs)

Effects on number of cases, nr of convictions and fines

**Vs** general deterrence and social welfare

## **Efficient law enforcement:**

- Max deterrence (general, prevention; desistance costly),  
and
- Min enforcement costs (deadweight loss for society, i.e. *us*: CAs, lawyers, econ. consultants, admin. costs of courts, police, fines, etc.)

**Many convictions may mean failure:** - deterrence + deadweight loss

# “Old” debate on criminal penalties

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- Werden and Simon, (1987)... Cseres et al. (2006)
- **Benefits**
  - Limited liability of firm owners
  - Direct targeting of the responsible individuals
  - Partial solution to the indemnification problem
  - Lower rate of recidivism (through incapacitation)
  - Higher effectiveness of LPs
- **Costs**
  - High direct cost of sanctions
  - Complex procedure (courts, juries)
  - (Much?) higher standards of proof
  - Higher social cost of Type 1 error

# Debate on EU criminal penalties

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- Buccirosi and Spagnolo (2007): Need for tougher EU sanctions: increase first EU fines before implementing criminalization with all its ‘cons’.
- ***Let’s reconsider almost 10 years later*** - New theory & evidence:
  1. Fines have increased, but cartels still form
  2. Strong distortive effect of fines highlighted
  3. No evidence for success of EU LPs as in Miller for the US
  4. Several repeat offenders which receive larger leniency reductions
  5. Strength of sanctions more important than detection probability
  6. Political issues limit fines, ex. banks which are “too big to fine”
- Criminalization the only solution?

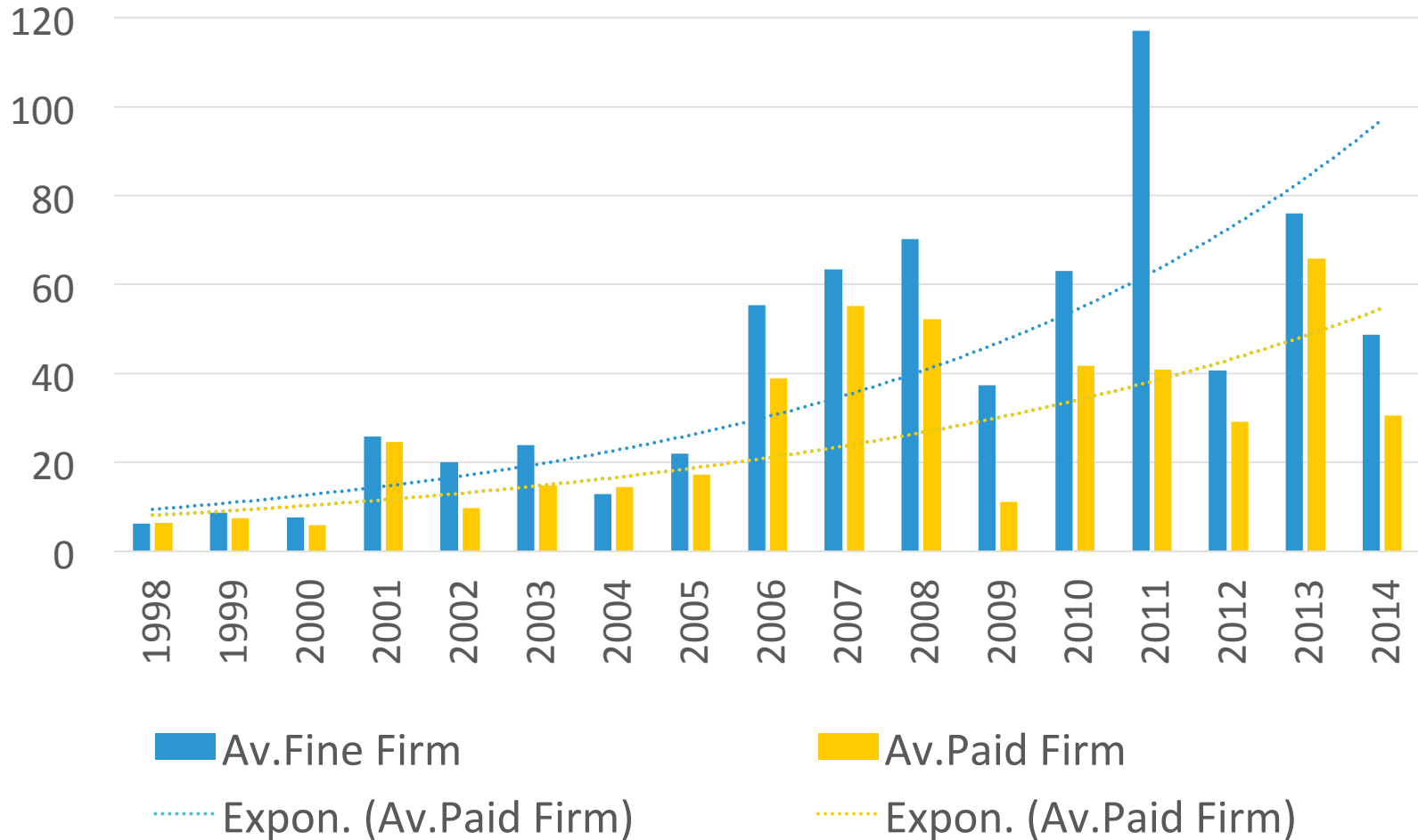
**FINES**

# EU Fines

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...increased substantially...

# Average fine set and paid, per firm EC, 1998-2014, Million €



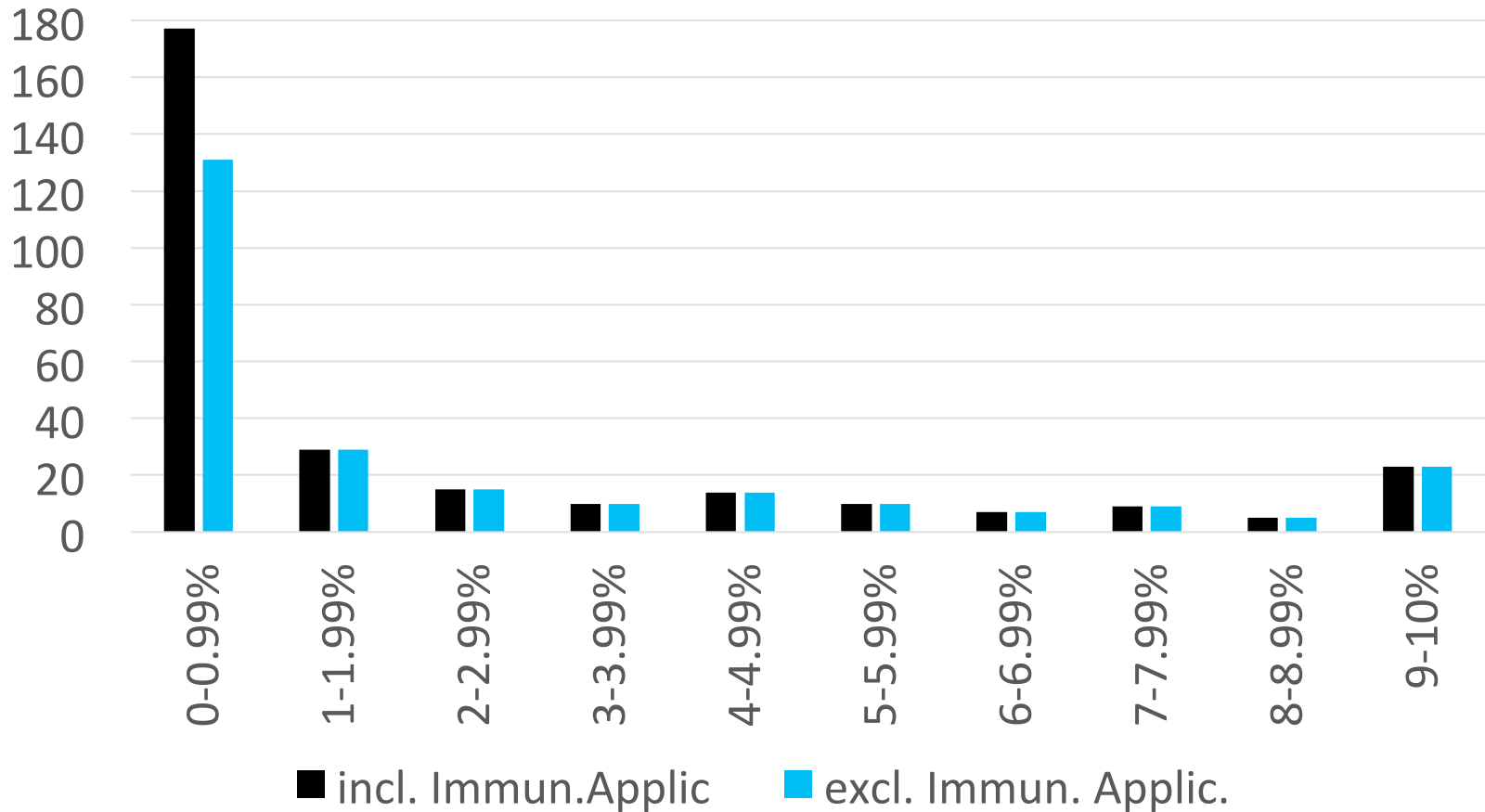
# EU Fines cont'd

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...but still way below the 10% cap  
in most cases.



# Fine paid, as % of global turnover EC, 1998-2014, Million €



# New empirical evidence

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## **Combe and Monnier (2011) and Connor and Lande (2012)**

- argue empirically that EU fines are still too low to deter cartels

## **Allain et al (2013)** rely on B&S (2007) to compute optimal fine

- Suggest EC fines (2005-2010) 30-80% are deterrent, 50-80% are “overdeterrent” (for longer duration)

## **Motta et al. (2013)**

- investigations and convictions significantly reduce firm value (2-5%), but fines amount to less than 9% of it!!

## **Difficult to reach a conclusion... but revealed preference:**

- do sanctioned firms fire their CEOs?
- do internal incentive schemes penalize illegal practices?

# New theoretical results

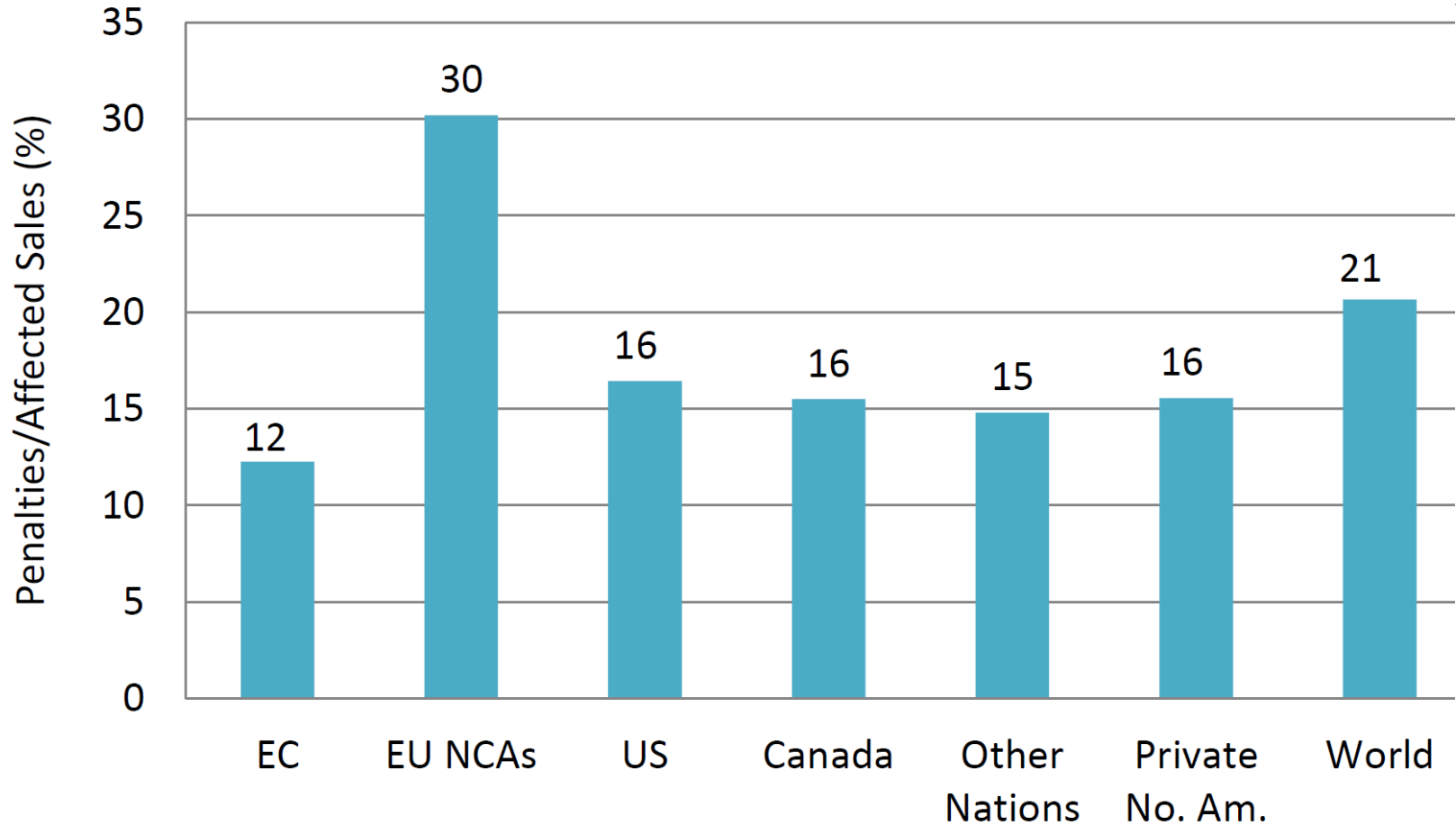
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**Bageri et al (EJ 2013):** Distortive effect of non-deterrent fines (based on affected commerce)

1. Diversified firms receive larger  $F$  than those which focus on one market (total=relevant revenue)
2. Cartels that expect fines have an incentive to increase cartel  $P$  above monopoly  $P$
3. Firms with lower profit-revenue ratio receive much larger  $F$  relative to cartel profits

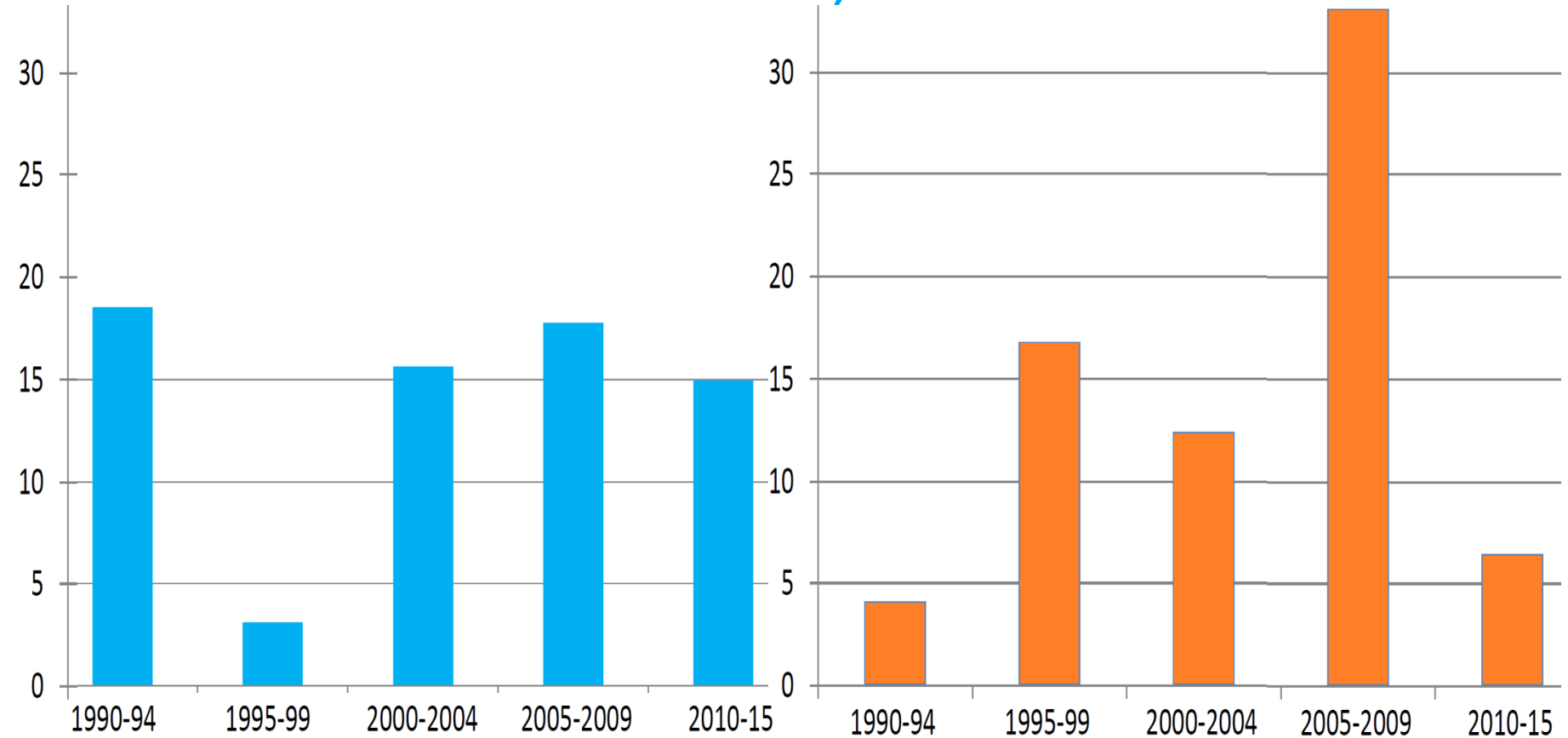
See extensions by Katsulakos et al. (2013, 2015)

# Mean Severity of Penalties on International Cartels, 1990-2015



# Mean Severity of EC and US Cartel Fines

Mean: **EC=12.4%**, **US=16.4%**



**LENIENCY**

# New experimental results

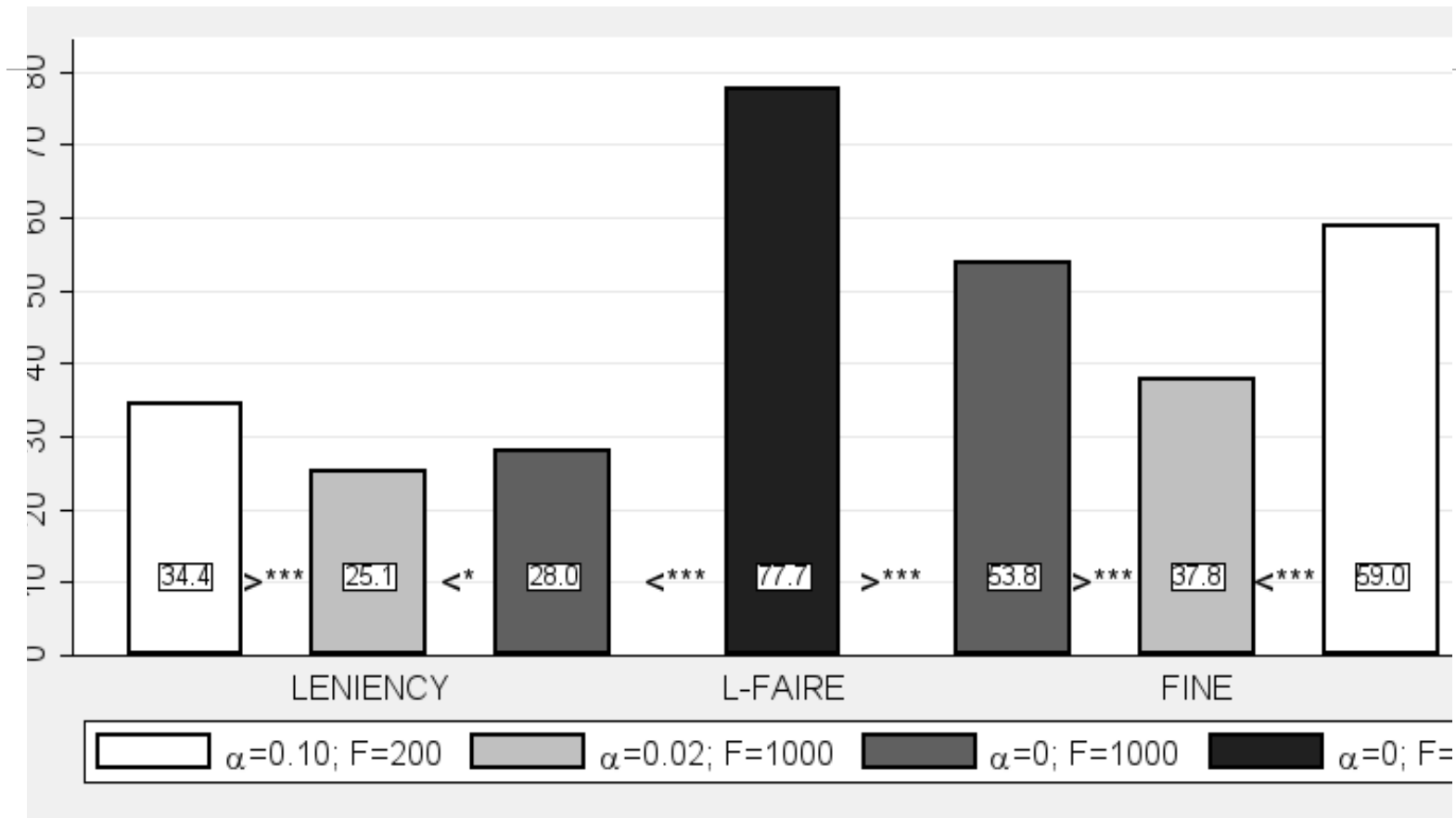
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## Bigoni et al (forthcoming JLEO)

- With LP, fines are much more important than the probability of detection
- Then, deterrence is mainly driven by the “distrust” deterrence channel.

(Chowdhury and Wandschneider (2015) corroborate finding)

# Potential effects of strict LPs



Deterrence with 0 inspection costs.

With high but finite F, even 1<sup>st</sup> best could in principle be achieved...



# Reality US

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Miller (2009)

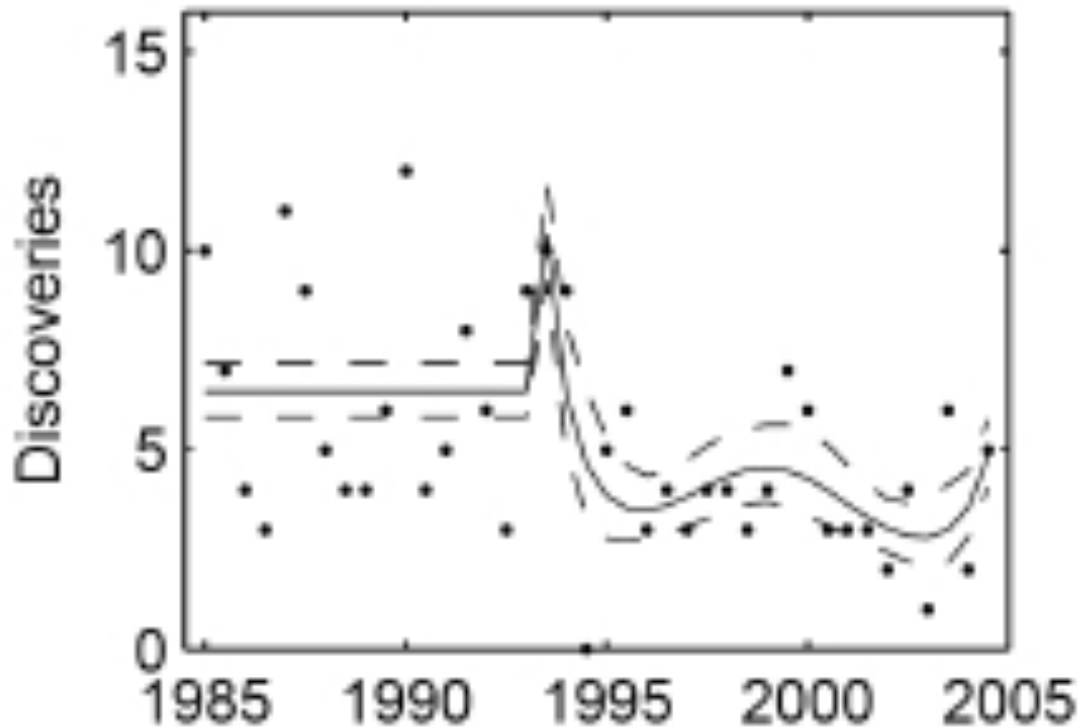
Data: 1985 – 2005

- Hypothesis #1: If the 1993 revision resulted in an increase in the **probability of discovery** then there is an **immediate rise** in the number of discovered cartels.
- Hypothesis #2: If the 1993 revision resulted in a **decrease in the rate of cartel formation** then the number of discovered cartels should adjust to a **lower steady level**.

# Reality US II

Actual and estimated number of DOJ cartel cases

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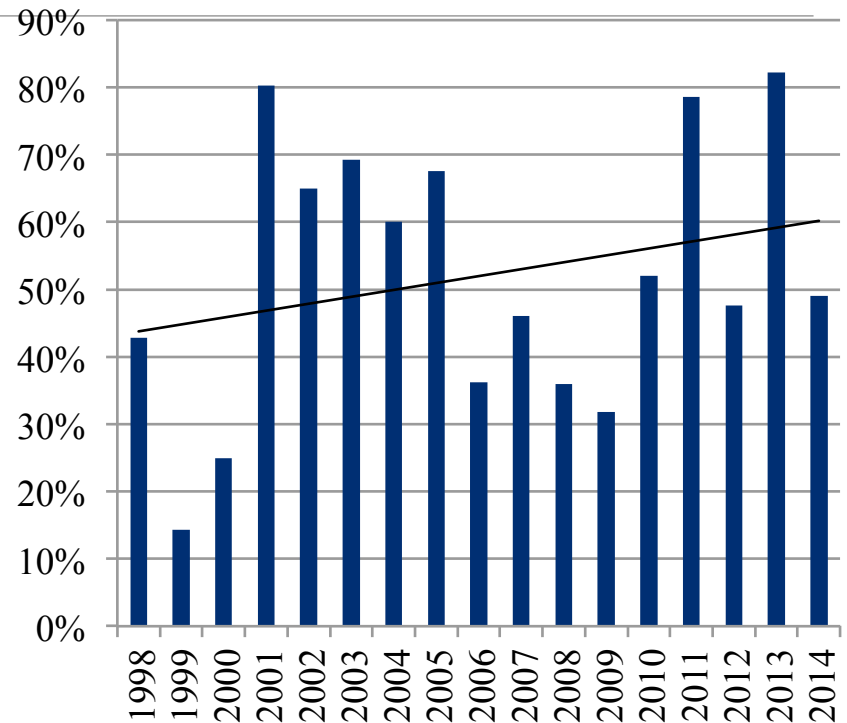
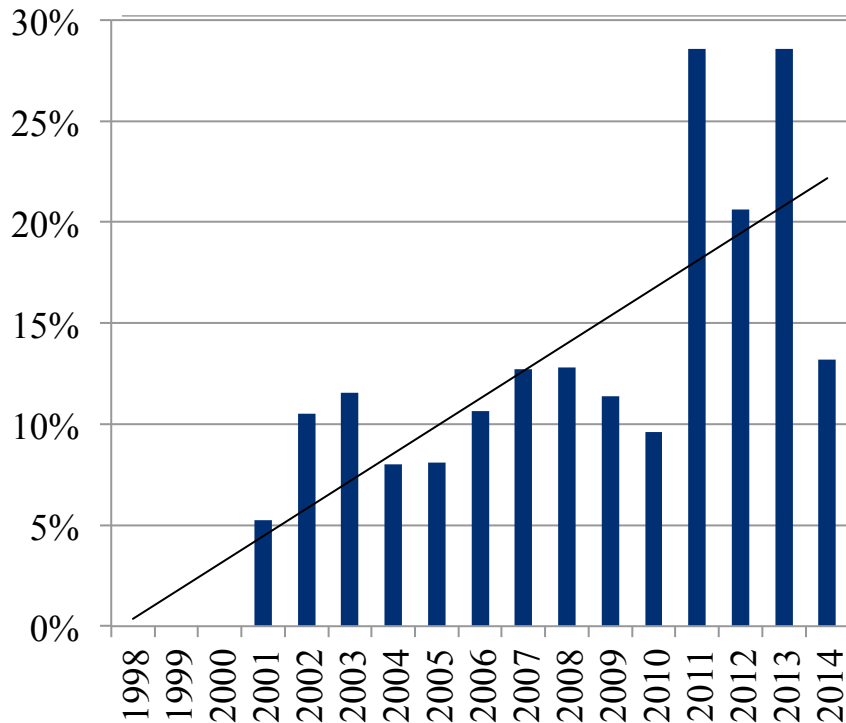
Not super robust, some do not believe it is significant

# Reality EU: Leniency inflation

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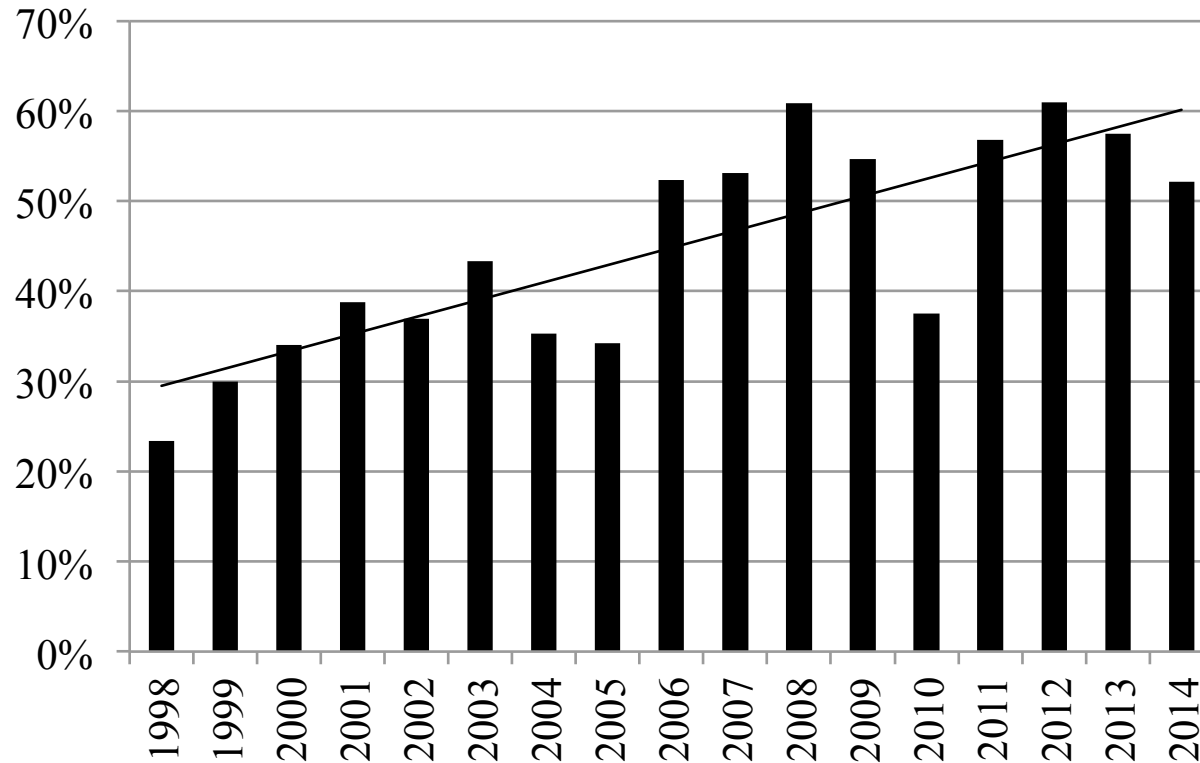
- No correspondent picture...
- ...leniency reductions applied to **52%** of the fines!
  - Average LP reduction = **45%** of the fine
  - On average **6/7 members** → 4 LP reductions
  - 38% cartels convicted in the US → 16 cartels where same firms received immunity in US and EU
  - **Recidivists** get **more** leniency (Marvão 2015)
  - In some cases (e.g. Auto parts), **all** firms get leniency (+settlements!)

# EU Trend: Leniency inflation!



*Share of fines where immunity (left) or a leniency reduction (right) were granted, EC*

# EU Trend (II)



*Average leniency reduction granted, per year, EC*

# EC Fines on the automotive sector (2013-14): **leniency for all!!**

Case	Market	Total fine (M)	Nb. cartel members	Type of collusion	Cartel duration	Leniency Reduction	Settlement Reduction	Other fine reductions
<b>39922 Bearings</b>	Car and truck bearings	€953	6	Price fixing, information exchange	7 years	JTEKT (100%) NSK (40%) NFC (30%) SKF (20%) Schaeffler (20%)	JTEKT (10%) NSK (10%) NFC (10%) SKF (10%) Schaeffler (20%) NTN (10%)	NFC (15%*)  NTN (25-50%**)
<b>39801 Poly-urethane Foam</b>	Foam for mattresses, sofas and car seats	€114	4	Price fixing	5 years	Vita (100%) Recticel (50%) Eurofoam (50%)	Vita (10%) Recticel (10%) Eurofoam (10%) Carpenter (10%)	None
<b>39748 Automotive wire harnesses</b>	Wire harnesses	€141	4	Price fixing, supply allocation, bid-rigging	2 months to 9 years	Sumitomo (100%) Yazaki (30%,50%) Furukawa (40%) SYS (40%, 45%) Leoni (20%)	Sumitomo (10%) Yazaki (10%) Furukawa (10%) SYS (10%) Leoni (10%)	None

# Bad potential consequences

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Way too generous with followers than optimal leniency according to research...

To maximize conviction, give leniency to all...

**Risk: → poor deterrence + lots of cases**

- many cartels (high market distortion)
- many cases (high prosecution/litigation costs)

***worst of all worlds***

# Leniency as plea bargains?

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Perhaps EC uses leniency as a (possibly efficient) substitute for plea bargaining?

US plea: **30-35%** reduction for over 90% of defendants (DOJ)

Average EU LP reduction for subsequent reporters:

- **30%** (296/708 fines)
- **32%** (44/80 fines with settlements) + **10% settlement**

Indeed comparable

(but that is not the ratio of leniency programs, nor the intention of the EU legislator)



# Take-away

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- Fines have increased but cartels still form
- No robust signs of deterrence for EU LPs (Marvão-Spagnolo, 2015)
- No revealed preferences evidence/effects on corporate governance (fired CEOs, CEO's contracts, Directors' contracts...)
- EU Fines are < than US, though US also has jail and treble damages...
- Large distortive effect of non-detering fines
- Leniency inflation
- Experimental evidence says sanctions crucial to LPs

**Tough(er) EU sanctions appear still needed**

**If fines cannot be raised, must re-consider criminalization - [jail](#)**

# **CRIMINAL PENALTIES IN THE U.S.**

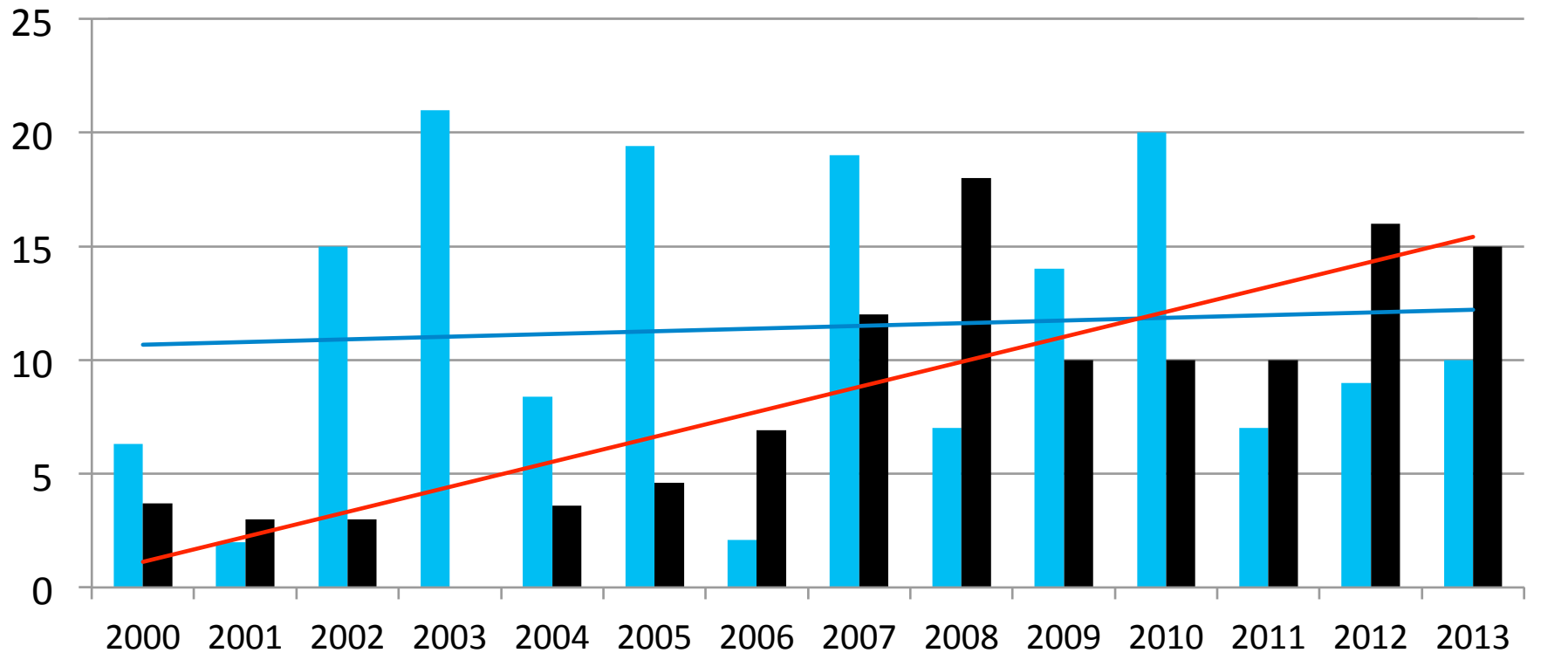
# US implementation

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- Imprisonment incentives since Sherman Act (1890)
- 1<sup>st</sup> conviction in 1921
- 1<sup>st</sup> conviction of non-US citizen in 1999
- 1<sup>st</sup> extradition of non-US citizen in 2005

*“The Division’s recent success in prosecuting foreign nationals who violate the U.S. antitrust laws has been aided by the changing attitudes around the world (...) What has changed is the diminishing leverage of foreign executives to avoid prosecution and incarceration.” (Hammond, 2006)*

# Average jail months for US and non-US individuals



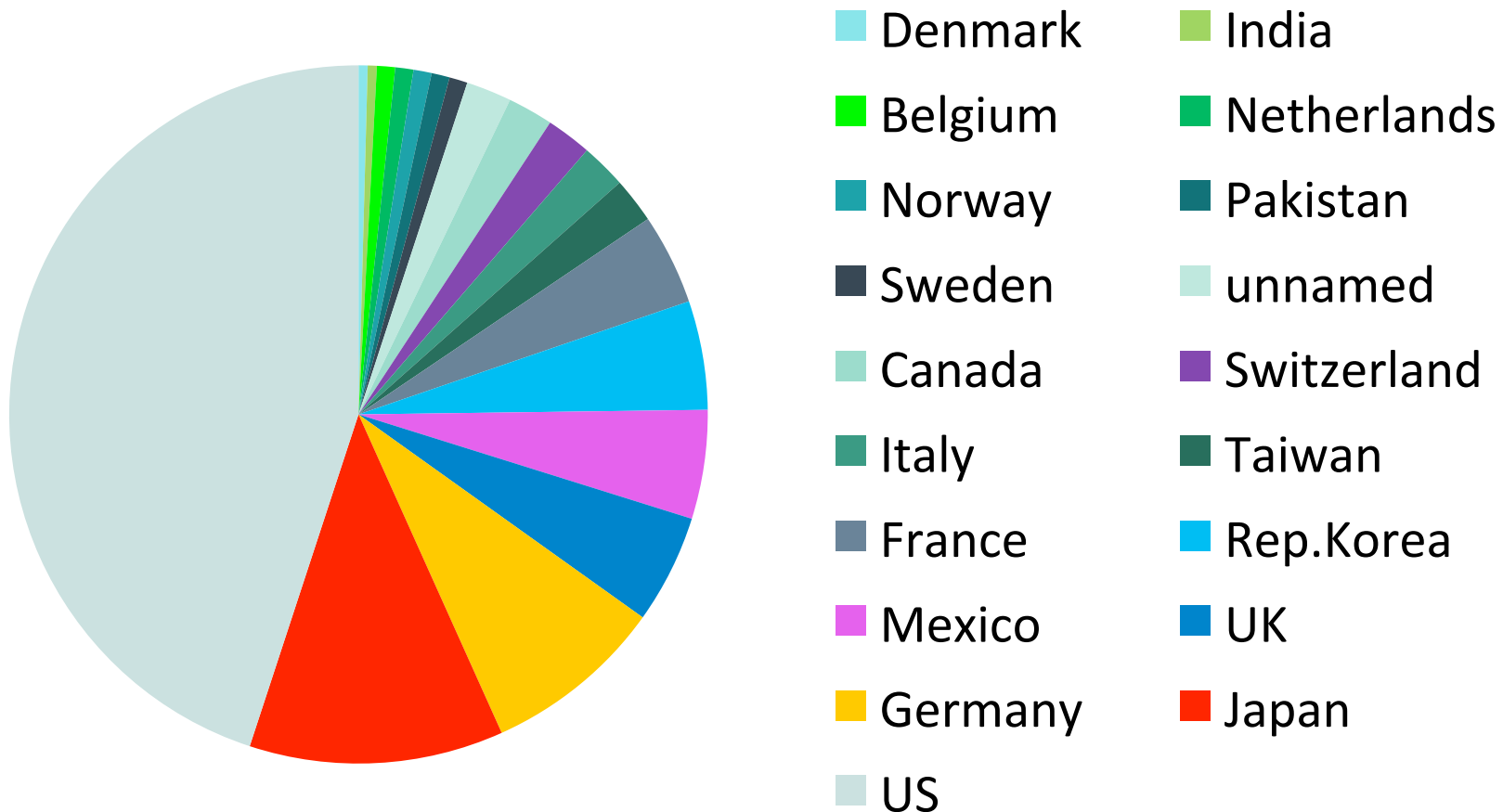
■ Av. Time - US nat.(months)

■ Av. Time - foreigners (months)

— Linear (Av. Time - US nat.(months))

— Linear (Av. Time - foreigners (months))

# Distribution of individuals **jailed** by DOJ, 1999-2009 (238 individuals)



# **CRIMINAL PENALTIES IN THE E.U.**

# EU criminal penalties

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- Limited number of successfully prosecuted individuals
- Even smaller number of successfully imprisoned individuals
- **Ireland wins!** 6 cases with jail sentences 2004 - 2010
- **UK:** many unsuccessful convictions due to various reasons
  - guidelines based on US regime (Jones and Williams, 2014)
  - “dishonesty” requirement – difficult to prove (removed in 2013)
  - lack of willingness of judges to impose criminal sanctions (Calvani and Kaethe, 2013)
- **Romania:** unsuccessful prosecutions only (17)
- **Denmark:** unsuccessful prosecutions only

## EU countries with **IMPOSED** criminal sanctions

Country	Case	Date	Individuals Prosecuted	Jailed	time
Ireland	Grain Imports	10/2004	6	0	
	Heating Oil	3/2006-5/2012	9	2	0.5-2 years
	Irish Ford Dealers Assoc.	1/2007	1	1	1 year
	Citroen Dealers Assoc.	5/2008-11/2009	8	8	3-15 months
	Mayo Waste	7/2009	5	0	
	Irish Rail	5/2010	1	0	
UK	Marine Hose	6/2008	3	3	2.5-3 years+DD
	(appeal)	11/2008			20m-2.5 years+DD
	Agricultural Sector	6/2008	n/d	0	(insuff.evidence)
	Airline Fuel surcharge	8/2008	4	0	(insuff.evidence)
	Automotive Sector	10/2011	n/d	0	(insuff.evidence)
	Commercial vehicle manufactures	9/2010	n/d	0	(insuff.evidence)
	Galvanised steel tanks-water storage	open(1/2014)	1		
	Construction product supply	open(3/2015)	7		
Romania <sup>6</sup>	wheat storage cartel	12/2009	1	0	n/d
Denmark <sup>7</sup>	Telemobilia	11/2007	2	0	0
	Miljlaboratorier	2011	2	0	0
	construction cartel	open(6/2014)	1		



**Not terribly exciting...**  
**BUT WHAT ELSE?**

# What else can we do to increase deterrence?

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## (1) Private actions for damages?

- Eliminate liability of first reporting party, disclose all information, multiple/punitive damages
- Part of the EU Directive does not help (Buccirossi, Marvão, Spagnolo, 2015)
  - Single damages
  - Limits disclosure
  - Does not limit enough liability

# What else can we do to increase deterrence?

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## (2) Compliance programs?

Perhaps... but do not credit compliance programs per se!

- If enforcement robust, good compliance programs pay out preventing fines, fake ones do not: **healthy selection**
- If compliance programs rewarded per se, both good and fake ones will pay out, and since fake ones are cheaper... **lemons' market, quality crashes**

Risk that they are used to prevent external whistleblowing

# What else can we do to increase deterrence?

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## (3) Pro-active tools

### *Screens?*

- **Pros:** may be able to identify possible cartels and complement well-run and administered LPs
- **Cons:** cost of human capital, data collection, etc.; many false positives...

### *Whistleblower rewards!*

Spagnolo, 2004; Aubert et al. 2006; Zingales et al. 2011; Bigoni et al. 2012... Harrington 2015, Padilla 2015!!

Becoming mainstream?

# Conclusion

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We still need much tougher sanctions (and less spread leniency) in EU to get our carrot - **deterrence**

If fines can't increase, it may therefore be time to attack the “cons” and go for **criminalization** in EU...

“high individual fines” may be “nuts” relative to company gains, focus on **debarment** and **jail**

only way for Bank cartels, financial stability concerns generate a **too-big-to-fine** problem (Spagnolo 2015)

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**Thank you!**

