

Evaluating and Understanding a Competition Authority

Joe Harrington (Johns Hopkins University)

"To Enforce and Comply: Incentives Inside Corporations and Agencies"
ACLE - Fifth Annual Competition & Regulation Meeting

March 5-6, 2009

Introduction

What do we want a competition authority to do?

- Cartel policy
 - Desistance - discover and shut down cartels
 - Detection
 - Prosecution
 - Deterrence - discourage cartel formation
 - Penalize cartels
- Merger policy
 - Efficient evaluation of mergers
 - Prevent mergers that reduce welfare.
 - Restructure mergers so that they are not harmful.
 - Evaluation at minimal cost.
 - Welfare-enhancing self-selection
 - Create guidelines and establish a reputation.
 - Achieve transparency and predictability.

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

Introduction

The Case of the Missing Metric

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks



Michael R. Bloomberg
Mayor

Police Department City of New York



Raymond W. Kelly
Police Commissioner

Volume 15 Number 50

CompStat

Citywide

Report Covering the Week of 12/08/2008 Through 12/14/2008

Crime Complaints

| | Week to Date | | | 28 Day | | | Year to Date* | | | 2 Year | 7Year | 15Year |
|---------------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|--------------|--------------|---------------|---------------|
| | 2008 | 2007 | % Change | 2008 | 2007 | % Change | 2008 | 2007 | % Chg | % Chg | % Chg (2001) | % Chg (1993) |
| Murder | 5 | 8 | -37.5 | 35 | 35 | 0.0 | 492 | 464 | 6.0 | -12.1 | -21.7 | -73.1 |
| Rape | 30 | 36 | -16.6 | 99 | 104 | -4.8 | 1,243 | 1,249 | -0.4 | -11.9 | -33.4 | -60.1 |
| Robbery | 445 | 449 | -0.8 | 1,785 | 1,736 | 2.8 | 20,978 | 20,574 | 1.9 | -6.2 | -21.3 | -74.3 |
| Fel. Assault | 268 | 300 | -10.6 | 1,003 | 1,171 | -14.3 | 15,225 | 16,612 | -8.3 | -7.3 | -31.3 | -61.5 |
| Burglary | 417 | 451 | -7.5 | 1,670 | 1,738 | -3.9 | 19,462 | 20,693 | -5.9 | -11.2 | -37.5 | -79.8 |
| Gr. Larceny | 927 | 972 | -4.6 | 3,417 | 3,641 | -6.1 | 41,584 | 42,738 | -2.7 | -6.2 | -5.9 | -49.2 |
| G.L.A. | 234 | 280 | -16.4 | 962 | 1,030 | -6.6 | 11,955 | 12,590 | -5.0 | -20.5 | -57.7 | -88.8 |
| TOTAL | 2,326 | 2,496 | -6.81 | 8,971 | 9,455 | -5.12 | 110,939 | 114,920 | -3.46 | -9.13 | -28.43 | -73.06 |

Introduction

The Case of the Missing Metric

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

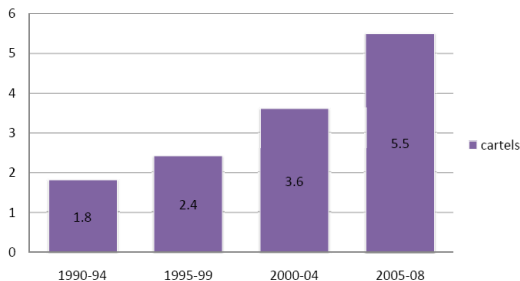
Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

Rates of Discovery by the European Commission Rise Steadily



Source: John Connor, "Cartels and Antitrust Portrayed: Private International Cartels, 1990-2008," December 2008.

Introduction

The Case of the Missing Metric

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

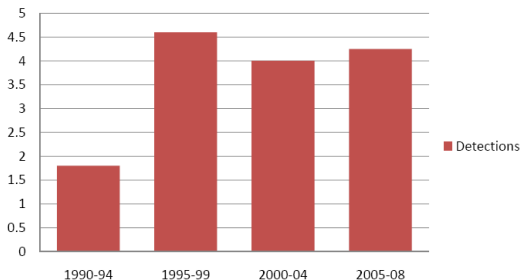
Performance
Rewards
Performance \Rightarrow
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

Cartel Detections by the US and Canada Are Stalled



Source: John Connor, "Cartels and Antitrust Portrayed: Private International Cartels, 1990-2008," December 2008.

Introduction

The Case of the Missing Metric

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards

Performance \Rightarrow
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution

Penalization
Evaluation

Concluding
Remarks

- Welfare is not observed.
- The cartel rate is not observed.
 - Is the lack of cartel cases evidence of failure?
 - *Because detection is weak.*
 - Is the lack of cartel cases evidence of success?
 - *Because deterrence is strong.*
- How do you then make a CA accountable?

Introduction

Questions

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

- 1 What is the objective of a competition authority?
- 2 Are there inherent biases due to how performance is measured and rewards are determined?
- 3 What are the implications for detection, prosecution, and penalization?
- 4 How can policy be designed to correct any biases?

Objectives of a Competition Authority

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards

Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution

Penalization
Evaluation

Concluding
Remarks

- 1 How is the performance of a CA measured?
- 2 What form do rewards take?
- 3 How does performance determine rewards?

Objectives of a Competition Authority

Measuring Performance

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks



Thomas Barnett, Assistant Attorney General - Congressional
Testimony (Sept. 25, 2007)

"The Division set a record for the most jail time imposed (almost 30,000 jail days); obtained the second highest amount of fines in the Division's history (over \$630 million); and succeeded in obtaining the longest jail sentence for a foreign national charged with an antitrust offense (14 months)."

Objectives of a Competition Authority

Measuring Performance

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards

Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks



William Kovacic, Federal Trade Commission, Chairman -
Congressional Testimony (May 14, 2008)

"The Commission shares the concerns of lawmakers, businesses, and American consumers about rapidly increasing prices for crude oil, gasoline, diesel fuel, and natural gas, and currently engages in a wide range of activities to prevent improper industry conduct causing such price rises. ... In the past year, we have acted to block acquisitions in the natural gas and petroleum industries that we believed could raise prices to consumers."

Objectives of a Competition Authority

Measuring Performance

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks



Neelie Kroes, European Commissioner for Competition Policy

- Consumers at the Heart of EU Policy (April 22, 2008)

" ... we calculate that the direct future customer savings resulting from our cartel, antitrust, liberalisation and merger cases in 2007 alone, is at least €13.8 billion.

About €30 in the pocket for each of Europe's 500 million citizens. And then there are the obvious deterrent effects we cannot put a price on."

Objectives of a Competition Authority

Measuring Performance

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance

Rewards

Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection

Prosecution

Penalization

Evaluation

Concluding
Remarks



Competition: making markets work better



- In Defence of Competition Policy (October 13, 2008)

"Enforcement may have been lacking in some financial regulators, but never in competition policy. Taking the example of cartels: €6 billion in direct consumer benefits have been delivered in the last four years."

Objectives of a Competition Authority

Measuring Performance

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance \Rightarrow
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

- What is said?
 - EC provides estimates of the gain in consumer welfare.
 - Emphasis on shutting down cartels and penalizing them, not deterring them.
 - Mergers blocked.
 - Achieving milestones - higher fines, longer jail sentences.
- What is not said?
 - How many active cartels are there?
 - How many cartels are not being formed because of competition policy?
 - What is the change in the average price-cost margin due to competition policy?

Objectives of a Competition Authority

Rewards

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance

Rewards

Performance \Rightarrow
Rewards

Behavior of a
Competition
Authority

Detection

Prosecution

Penalization

Evaluation

Concluding
Remarks

- Intrinsic rewards
 - Intrinsic well-being from improving social welfare.
 - Do the more benevolent go to work for the government?
 - Do the more benevolent rise to the top?
- Internal extrinsic rewards
 - Promotion - status, increased authority
 - Larger budget size
 - Larger salary
 - More influence

Objectives of a Competition Authority

Rewards

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance

Rewards

Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection

Prosecution

Penalization

Evaluation

Concluding
Remarks

- External extrinsic rewards
 - CA attorneys hired by law firms.
 - DOJ Deputy Assistant Attorney General James Griffin is now a partner at King & Spalding.
 - DOJ Deputy Assistant Attorney General Gary Spratling is now a partner at Gibson, Dunn & Crutcher.
 - CA economists hired by economic consulting firms.

Objectives of a Competition Authority

How performance determines rewards

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

- Observable performance
 - Any extrinsic rewards are only sensitive to *observable* measures of performance.
 - CA oversight only partially observes a CA employee's effort, decisions, etc.
 - Broader labor market observes even less than CA oversight.
- What makes a government attorney or economist attractive to a private firm?
 - Talent
 - Knowledge
 - Position

Objectives of a Competition Authority

How performance determines rewards

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards

Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution

Penalization
Evaluation

Concluding
Remarks

- Are rewards linear in performance?
- Is a CA employee overly concerned with avoiding a really bad outcome?
 - With electric power regulation, avoid a blackout!
 - With cartel enforcement,
 - avoid losing a case in court
 - avoid passing on a case, only to see it pursued successfully by another agency or private litigants
- Is a CA employee overly concerned with realizing a really good outcome?
 - Getting a record-setting penalty, sending a Fortune 500 executive to jail
 - Setting a new legal precedent
 - Instituting a new policy.

Behavior of a Competition Authority

Introduction

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

- Actions of a competition authority
 - Detection
 - Prosecution
 - Penalization
 - Evaluation of actions and policies
- Issues
 - Is there a tendency to favor desistance over deterrence?
 - Is there a tendency to focus more on prosecuting rather than discovering cartels?
 - Is there a tendency to avoid cases not involving leniency?
 - Is there a tendency to settle a case rather than pursue the most severe penalty?

Behavior of a Competition Authority

Detection

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

- Does a CA see itself as pursuing cases reported to it, or does it perceive its role as actively discovering cartels?
- Until the leniency program, the DOJ exclusively responded to complaints:

"As a general rule, the [Antitrust] Division follows leads generated by disgruntled employees, unhappy customers, or witnesses from ongoing investigations. As such, it is very much a reactive agency with respect to the search for criminal antitrust violations." (Antitrust Bulletin, 1991)

- Why was it not pro-active in discovering cartels?
 - Lack of resources?
 - Lack of ability to detect?
 - Bias against detection?

Behavior of a Competition Authority

Detection

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards

Performance \Rightarrow
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

- Screening is common with regards to a variety of crimes:
 - insider stock trading
 - tax evasion
 - credit card fraud
- Past attempts at screening for cartels in the U.S. have been mild.

87th Congress }
1st Session }

JOINT COMMITTEE PRINT

PRESS COPY

HOLD FOR RELEASE UNTIL

SEP 21 A.M.

93 LOTS OF BIDS INVOLVING
IDENTICAL BIDS

REPORTED TO THE
DEPARTMENT OF JUSTICE,
BY THE FEDERAL PROCUREMENT
AGENCIES IN THE YEARS
1955-1960

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES.



AUGUST 1961

Behavior of a Competition Authority

Detection

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

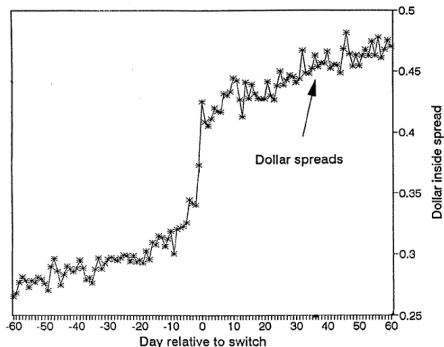
Concluding
Remarks

- Past attempts at screening for cartels in the U.S. have been mild.
 - Identical Bids Units of the DOJ in the 1950s
 - FTC Director Jon Baker used price increases after an industry-specific trough in demand to identify the exercise of market power.
 - FTC Director Luke Froeb made progress in developing a price variance screen.

Behavior of a Competition Authority

Detection

- Is screening too difficult?
- Screening would have probably identified collusion in Nasdaq markets (W. Christie and P. Schultz, 1999)



Behavior of a Competition Authority

Detection

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

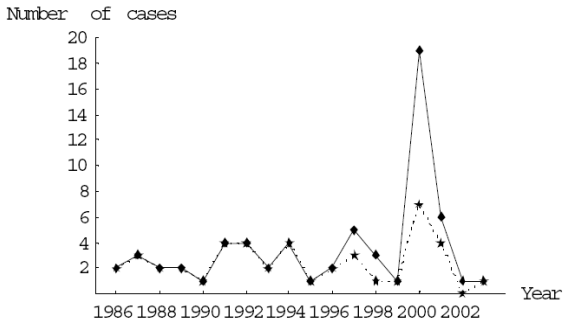
Concluding
Remarks

- Possible reasons for why there may be under-detection
- Bias against screening
 - Cases found through screening may not be "easy".
 - Bureaucratic politics
 - Value of screening is *higher* with a leniency program
- For international cartels, there may be free-riding on detection by other CAs.

Behavior of a Competition Authority

Detection

- Number of EC cartel cases, 1986-2003 (S. Brenner, 2008)
 - Solid line: Number of EC cases.
 - Dashed line: Number of EC cases not triggered by U.S. investigation



Behavior of a Competition Authority

Detection

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

- If a CA doesn't want to engage in screening, should others be encouraged to do so?
- Korea Fair Trade Commission
 - 2005 - launched program
 - Whistleblower received a reward of almost €50,000 for information about a cartel among welding rod makers.
- UK's Office of Fair Trading
 - March 2008 - launched an 18-month pilot program.
 - Rewards of up to £100,000.
- U.S. False Claims Act
 - A non-government employee can file actions for fraud against federal government contractors.
 - Whistleblower is entitled to 15-25% of the government's total recovery.



Department of Justice

WEDNESDAY, JULY 17, 1996 (excerpts)

JUSTICE DEPARTMENT CHARGES 24 MAJOR NASDAQ SECURITIES FIRMS WITH FIXING TRANSACTION COSTS FOR INVESTORS

WASHINGTON, D.C. — The Department of Justice and 24 major Nasdaq securities firms reached a settlement today that will stop the firms from following an industry-wide practice that fixes transaction costs for investors who buy and sell stocks on the Nasdaq market.

The Department's investigation began in the summer of 1994, shortly after the publication of an economic study by Professors William Christie of Vanderbilt University and Paul Schultz of Ohio State University about the Nasdaq market.

You are here: LAT Home > Articles > 1998 > November > 10 > Business

Archive for Tuesday, November 10, 1998

Record Settlement OK'd in Nasdaq Price-Fixing Suit

November 10, 1998 *in print edition C-5*

A federal judge Monday approved a record \$1.03-billion settlement of a class-action lawsuit by investors who accused 37 brokerages of overcharging them for Nasdaq-listed stocks in a price-rigging conspiracy that resulted in a government crackdown.

"There can be no doubt that this class action would be enormously expensive to continue, extraordinarily complex to try and ultimately uncertain of result," U.S. District Judge Robert W. Sweet wrote, estimating the trial alone could last more than a year.

David J. Bershad, the lead settlement negotiator for the plaintiffs, said the lawyers expect to have a plan in place by early next year to distribute the money. He said investors must file claims to be eligible for payouts but that it is hoped that the claims can be filed over the Internet.

The price-fixing allegations, first brought in 1994, caught the interest of the federal government and led to an April 22, 1996, consent decree that forced permanent changes in the operation of Nasdaq, the nation's second-largest stock market.

Behavior of a Competition Authority

Prosecution

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

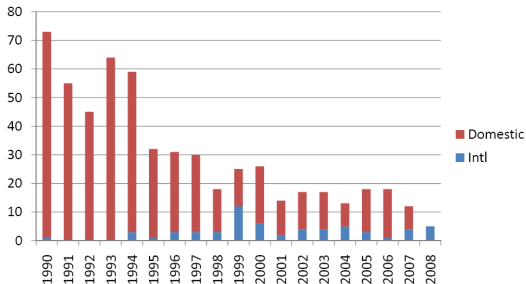
- Which cases to prosecute?
 - Domestic vs. international cartels
 - Industry size
 - Level of executives involved
 - Difficulty of the case - is there an informant?
- Are cases selected on the grounds that they will add to deterrence?
- Is there a bias for or against establishing precedent?
 - Higher chance of failure.
 - If successful, could dramatically add to the CA's reputation.

Behavior of a Competition Authority

Prosecution

- Domestic vs. international cartels (J. Connor, 2008)
 - What has happened to all of the domestic cartels?
 - Do they no longer exist?
 - Are they no longer prosecuted by the DOJ?

Number of Corporations Fined,
U.S. Dept. of Justice, 1990-2008



Behavior of a Competition Authority

Prosecution

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

- Airline Tariff Publishing Case (ATPCO)
 - Airlines were coordinating by announcing future price increases.
 - In 1994, the DOJ reached a settlement which involved the airlines not using those and other practices for ten years.
 - Without a trial, no legal precedent was set.
- Graphite electrodes
 - Mitsubishi does not manufacture graphite electrodes
 - Had a 50% ownership of manufacturer UCAR
 - Acted as a selling agent for manufacturers
 - All cartel members pled guilty except Mitsubishi.
 - DOJ took Mitsubishi to court

Behavior of a Competition Authority

Prosecution

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance \Rightarrow
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

M. Chang and J. Harrington (2008) - "The Impact of a Corporate Leniency Program on Antitrust Enforcement and Cartelization"

- Cartel birth and death
 - Birth: Firms form a cartel when given the opportunity and collusion is stable.
 - Death: Cartels internally collapse and/or are caught.
- Competition policy
 - Leniency program - optimally used by dying cartels.
 - Fraction of non-lenieny cases that are prosecuted (enforcement policy)
 - CA chooses enforcement policy to maximize the number of successful cases.
 - The bigger is the CA's caseload, the lower is the probability of winning a case.

Behavior of a Competition Authority

Prosecution

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance \Rightarrow
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

Results

- 1 Holding fixed the competition authority's enforcement policy, the introduction of a leniency program reduces the cartel rate.

Behavior of a Competition Authority

Prosecution

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

Results

- 1 Holding fixed the competition authority's enforcement policy, the introduction of a leniency program reduces the cartel rate.
- 2 Generally, the introduction of a leniency program results in the competition authority pursuing a less aggressive enforcement policy.

Behavior of a Competition Authority

Prosecution

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

Results

- 1 Holding fixed the competition authority's enforcement policy, the introduction of a leniency program reduces the cartel rate.
- 2 Generally, the introduction of a leniency program results in the competition authority pursuing a less aggressive enforcement policy.
- 3 The introduction of a leniency program can either lower or raise the cartel rate.

Behavior of a Competition Authority

Prosecution

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance \Rightarrow
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

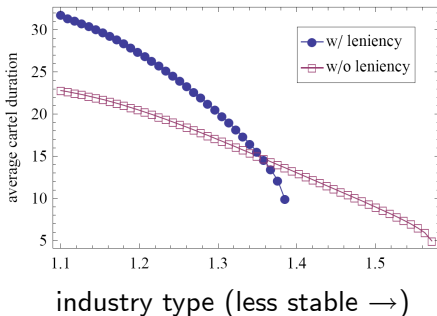
Concluding
Remarks

| ρ | Optimal Enforcement Policy | | Cartel Rate | |
|--------|----------------------------|-------------|--------------|-------------|
| | w/o leniency | w/ leniency | w/o leniency | w/ leniency |
| 1.0 | .9 | .8 | .280756 | .198025 |
| 1.1 | 1. (*) | .9 | .265363 | .173012 |
| 1.2 | .5 | .9 | .240116 | .133414 |
| 1.3 | .6 | .4 | .202972 | .100516 |
| 1.4 | .8 | .3 | .138895 | .0938382 |
| 1.5 | .6 | .3 | .0913201 | .0810545 |
| 1.6 | .5 | .2 | .0870105 | .106969 |
| 1.7 | .4 | .2 | .0986173 | .104659 |
| 1.8 | .4 | .2 | .092889 | .101227 |
| 1.9 | .4 | .2 | .0907345 | .100516 |
| 2.0 | .4 | .2 | .0886194 | .10009 |

Behavior of a Competition Authority

Prosecution

- How can a leniency program raise the cartel rate?
 - Less stable cartels no longer form because of the leniency program.
 - More stable cartels have a smaller chance of detection because non-leniency enforcement is weaker.
- Fewer cartels form but they last longer.



Behavior of a Competition Authority

Penalization

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards

Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution

Penalization
Evaluation

Concluding
Remarks

- Frank Easterbrook: "Deterrence is the first, and probably the only goal of antitrust penalties." (*University of Chicago Law Review*, 1981)
- Decisions
 - Plea bargaining in the US - settle or hold out for a harsher penalty?
 - How much evidence to require before awarding leniency?
- Is there an incentive to settle for penalties that are too low?
 - If penalties are high enough then the case earns three points for a win.
 - But higher penalties promote deterrence.

Behavior of a Competition Authority

Penalization

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution

Penalization
Evaluation

Concluding
Remarks

- Vitamins case: Hoffman LaRoche
 - DOJ penalty guidelines: US\$1.3 to \$2.6 billion.
 - Actual fine: \$500 million.
- What was behind the penalty decision?
 - Was the DOJ content to have the largest fine in history?
 - Did the DOJ inadequately value deterrence?
 - Was avoiding a court case the proper use of limited DOJ resources?

Behavior of a Competition Authority

Evaluation: Cartel Policy

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance \Rightarrow
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

- What are the incentives for a CA to assess the performance of its policies?
- How can we tell that an increase in penalties has reduced the cartel rate?
- How can we tell when a leniency program is working?

Behavior of a Competition Authority

Evaluation: Cartel Policy

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

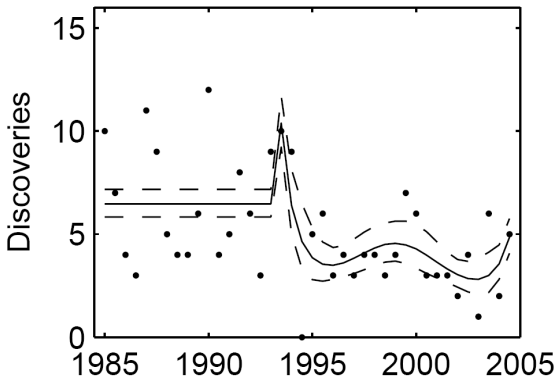
Concluding
Remarks

- N. Miller, “Strategic Leniency and Cartel Enforcement” (*American Economic Review*, forthcoming)
 - 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.*

Behavior of a Competition Authority

Evaluation: Cartel Policy

- Actual and estimated number of DOJ cartel cases (over a six-month interval).



Behavior of a Competition Authority

Evaluation: Merger Policy

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards
Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution
Penalization
Evaluation

Concluding
Remarks

- Evaluation of decisions regarding individual merger cases and merger policy (e.g., guidelines, use of market definition).
- Is the CA effective in predicting the effects of a merger?
 - Are CAs biased against post mortems?
 - Should the merged firm be required to conduct a post mortem?
- Is there a general reluctance for the government to engage in ex post evaluation?
 - Absence of many post-approval studies by the Food & Drug Administration.
 - Is it that officials are concerned about learning bad news?
 - Is it about process not outcomes?

Concluding Remarks

Research and Policy Agenda

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance

Rewards

Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection

Prosecution

Penalization

Evaluation

Concluding
Remarks

- Measuring performance
 - Develop methods for estimating the cartel rate.
 - Develop methods for estimating the impact of a policy change on the cartel rate
 - Leniency program
 - Higher financial penalties
 - Incarceration
 - Increased budget
 - Requires cooperation of competition authorities and academic economists.

Concluding Remarks

Research and Policy Agenda

Inside a
Competition
Authority

Joe
Harrington

Introduction

Objectives of
a Competition
Authority

Performance
Rewards

Performance ⇒
Rewards

Behavior of a
Competition
Authority

Detection
Prosecution

Penalization
Evaluation

Concluding
Remarks

- Detection
 - Explore screening methods
 - Measure the impact of leniency on detection (distinct from prosecution)
 - Offer rewards to those who provide information on cartels.
- Prosecution
 - Explore impact of leniency program on enforcement.
 - What are the traits of cartels that use leniency?
 - Dying cartels?
 - Shorter duration?
- Penalization
 - Explore the value of discretion (plea bargaining), partial leniency.