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CARTELS & ANTITRUST PORTRAYED:
Private International Cartels from 1990 to 2008

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Introduction

• The **purpose** of the following charts is to illustrate the size and economic impacts of the modern international cartel movement and the enforcement responses of the world’s antitrust authorities and national courts. These illustrations may serve heuristic purposes or show empirical regularities that suggest hypotheses worthy of testing in future research.

• The **data** employed encompass 516 private hard-core cartels that were subject to government or private legal actions (i.e., formal investigations, damages suits, fines, or consent decrees) between January 1990 and December 2008. Each cartel had participants with headquarters in two or more nations.

• All monetary data are expressed in nominal U.S. dollars using exchange rates during the cartel’s life or on the day a legal action was announced.

• A special effort is made to create charts that illustrate **trends** in cartel dimensions and antitrust decisions.
CARTELS & ANTITRUST PORTRAYED:
Numbers, Size, and Location:

PRIVATE INTERNATIONAL CARTELS, 1990-2008

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March 7, 2009
Numbers of Cartels

• Between Jan. 1990 and Nov. 2008, there were **516** “formal official investigations” (raids, grand juries, class actions filed in court, indictments *et sim.*) of suspected international cartels.

• Incomplete information is available on about 20% of these 516 cartels, because no adverse government decisions nor private settlements are yet public.

• Investigations of 32 (6%) cartels were closed without sanctions because of insufficient evidence of a violation; these presumptive “non-cartels” are omitted from almost all the following slides.
Numbers of Corporate Cartelists

• At least 6000 companies alleged or proven members of International cartels
• About 2900 ultimate parent companies known by name and location*
• About 3000 more companies implicated, but are anonymous
• About 2400 parents/groups have been fined*

* Some double counting of recidivists
Numbers of Cartel Executives Fined or Imprisoned

- At least **373** individual, named executives have been penalized
- **Hundreds** more were guilty but immunized
- **Thousands** more guilty but not prosecuted
- (More details in Part 5 below)
Total Known Affected Sales by International Cartels Is $16 Trillion

“EC” is cartels convicted by the Eur. Commission
Counting Global, More than Half of the Cartels Operated within Europe

Number of Cartels

- EU
- Other Europe
- No. America
- Asia
- Latin America
- Africa
- Oceania
- Global

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Huge Increases in Known Affected Sales by International Cartels Convicted by 2008
## Estimated Affected Sales of Some Recent (2005-08) International Cartels

<table>
<thead>
<tr>
<th>Cartel Name and Type</th>
<th>Sales ($ billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airlines, passenger, fuel surcharge, Global</td>
<td>1,164.0</td>
</tr>
<tr>
<td>Diamonds, rough gem quality, Global</td>
<td>303.2</td>
</tr>
<tr>
<td>Bank cards' fees, US</td>
<td>285.0</td>
</tr>
<tr>
<td>Airlines, cargo, fuel surcharge, Global</td>
<td>264.9</td>
</tr>
<tr>
<td>Insurance brokerage fees, US &amp; UK</td>
<td>145.0</td>
</tr>
<tr>
<td>LCDs (Liquid Crystal Displays), TFP type, Global</td>
<td>131.0</td>
</tr>
<tr>
<td>Telecom, mobile services 2, Korea</td>
<td>96.0</td>
</tr>
<tr>
<td>Cleaning products, home and personal, EU</td>
<td>74.1</td>
</tr>
<tr>
<td>Tobacco products, UK</td>
<td>43.5</td>
</tr>
</tbody>
</table>
Most International Cartels Sell

**INDUSTRIAL GOODS**

Number of Cartels

- Consumer goods
- Industrial goods
MOST CARTELS SELL INDUSTRIAL GOODS

• 14 agricultural or mining raw materials
• 208 intermediate industrial materials
• 23 industrial capital goods
• 34 undifferentiated consumer goods
• 40 differentiated consumer goods
• 166 business or consumer services
LEADING CARTEL INDUSTRIES

<table>
<thead>
<tr>
<th>Industry</th>
<th>Number of Cartels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic Chemicals</td>
<td>100</td>
</tr>
<tr>
<td>Food &amp; Tobacco Mfg.</td>
<td>40</td>
</tr>
<tr>
<td>Distribution</td>
<td>30</td>
</tr>
<tr>
<td>Cement, graphite, glass</td>
<td>20</td>
</tr>
<tr>
<td>Transport services</td>
<td>15</td>
</tr>
<tr>
<td>Construction</td>
<td>15</td>
</tr>
<tr>
<td>Other services</td>
<td>15</td>
</tr>
<tr>
<td>Instruments &amp; Misc.</td>
<td>10</td>
</tr>
<tr>
<td>Machinery</td>
<td>10</td>
</tr>
<tr>
<td>Rubber &amp; plastic</td>
<td>10</td>
</tr>
<tr>
<td>Inorganic Chemicals</td>
<td>10</td>
</tr>
<tr>
<td>Metals</td>
<td>10</td>
</tr>
<tr>
<td>Telecom services</td>
<td>10</td>
</tr>
<tr>
<td>Banking &amp; Insurance</td>
<td>10</td>
</tr>
<tr>
<td>Paper &amp; printing</td>
<td>5</td>
</tr>
</tbody>
</table>

Number of cartels discovered 1990-2008

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CARTELS & ANTITRUST
PORTRAYED:
Detection

PRIVATE INTERNATIONAL CARTELS, 1990-2008

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January 23, 2009
Introduction

• The purpose of the following charts is to illustrate the size and economic impacts of the modern international cartel movement and the enforcement responses of the world’s antitrust authorities and national courts.
• The data employed encompass 516 private hard-core cartels that were subject to government or private legal actions (i.e., formal investigations, damages suits, fines, or consent decrees) between January 1990 and December 2008. Each cartel had participants with headquarters in two or more nations.
• All monetary data are expressed in nominal U.S. dollars using exchange rates during the cartel’s life or on the day a legal action was announced.
• A special effort is made to create charts that illustrate trends in cartel dimensions and antitrust decisions.
International Cartels Are Now Being Assaulted on All Fronts

- Indictments in the US and Canada peaked in the late 1990s (the vitamins cartels play a major role), but are up elsewhere.
- The EC’s cases are rising, but without settlements, it is small.
- The EU’s National Competition Authorities (NCAs) are now the biggest prosecutors.
- Asia (mostly Korea) is becoming a cartel tiger.
- Of late, So. Africa and Brazil are active also.
- Although increased detection rates are probably due to more agencies and better policies, the total number of cartels (including hidden ones) could be rising or falling
Rates of Discovery Are Fifteen Times Higher in 2005-08

Number detected per year


Year of Discovery of All International Cartels

52.8

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Rates of Discovery of **Global** Cartels Peaked in 2000-2004

“Global” cartels affected prices in two or more continents
Rates of Discovery by the European Commission Rise Steadily

<table>
<thead>
<tr>
<th>Period</th>
<th>Investigations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before 1994</td>
<td>1.73</td>
</tr>
<tr>
<td>1995-99</td>
<td>6.4</td>
</tr>
<tr>
<td>2000-04</td>
<td>9</td>
</tr>
<tr>
<td>2005-08</td>
<td>10.5</td>
</tr>
</tbody>
</table>
Cartel Detections by the **EU’s NCAs**
Surpass All Others since 2000
Cartel Detections by the US and Canada Are Faltering

![Bar chart showing detections by period]

- Before 1994: 1 detection
- 1995-99: 7 detections
- 2000-04: 8 detections
- 2005-08: 6 detections

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Asian Anti-Cartel Enforcement (Especially Korea) Is Accelerating
Cartel Detections in Africa and Latin America Are Modest but Significant

![Bar chart showing detections by decade: none in 1990-94, 1 in 1995-99, 1 in 2000-04, and 6 in 2005-08.](chart.png)
Despite Heavier International Cartel Penalties, More Companies Are Becoming Cartelists

During 1990-2008, more than 2400 instances of corporate participation have been identified, and at least 1620 have been fined.
Number of Corporate Cartelists Is Rising

![Graph showing the increase in number of corporate cartelists from 1990-94 to 2005-08.](chart.png)
Sources

- John M. Connor. *Private International Cartels: Full Data*. [The PICs spreadsheet, first created about 1998, is continuously updated. As of December 2008, the combined “Full Data” spreadsheet was a file of 6.4MB and consisted of 4700 observations of 512 actual and suspected cartels and 4200 cartelists (companies and individual participants) with 1.1 million cells of data. There are also 13 back-up spreadsheets.]


CARTELS & ANTITRUST PORTRAYED:
Internal Structure:
PRIVATE INTERNATIONAL CARTELS, 1990-2008

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January 23, 2009
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Internal Structures of Cartels

• The great majority of cartels have fewer than ten members, but bid rigging cartels with few buyers and third-party involvement tend to support more firms.
• The number of corporations is inversely related to the frequency of discovered international cartels.
• Median duration is 57 months, mean 82 months.
• Global cartels last 57% longer than the average cartel.
• Asian cartels are the most fragile (26 months).
• Duration is slowly declining in North America & Europe.
• Duration trend of Global cartels is not falling.
Number of Companies in

All Cartels, 1990-2008 Total

![Bar Chart]

Number of corporate participants per cartel

Percent

0 1 2 3 4 5 6 7 8 9 10 11

2 3 4 5 6

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Trend in **Frequency** of Cartels, by Number of Participants

% Frequency of Cartels

Number of Firms in Cartel
Distribution of Firms per Cartel: Classic Price-Fixing vs. Bid Rigging
Proportion of Cartels that Rigged Bids, by Number of Firms

% Bid Rigging

Natural log of Number of Firms
Average Number of Firms per Cartel by Third-Party Involvement

<table>
<thead>
<tr>
<th>Third-Party Support</th>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16.7</td>
<td>7</td>
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</table>

<table>
<thead>
<tr>
<th>No Known 3rd Party</th>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7.4</td>
<td>4.5</td>
</tr>
</tbody>
</table>
Average Number of Firms per Cartel by Number of Buyers

- **100+ Buyers**
  - Mean: 10.9
  - Median: 5

- **30 or Less Buyers**
  - Mean: 7.25
  - Median: 4
Number of Companies per Cartel Steady over Time

Average Number of corporations/cartel

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1983-94</td>
<td>9</td>
<td>7</td>
<td>10</td>
<td>9</td>
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<tr>
<td>1995-99</td>
<td>8</td>
<td>7</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>2000-04</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>2005-08</td>
<td>9</td>
<td>10</td>
<td>10</td>
<td>9</td>
</tr>
</tbody>
</table>
Duration of All International Cartels also Appears Steady over Time

![Graph showing duration of international cartels over time with months on the y-axis and years on the x-axis]
Duration of Global-Scope International Cartels Is the Longest – and Rising
Duration of Global Cartels Appears to Be Rising
However, **Duration Trend** is sensitive to three recent very durable cartels.

![Graph showing duration trend over years](image-url)

- LnGlobal
- Linear (LnGlobal)
- Poly. (LnGlobal)

**Year Global Cartel Discovered**

- 1992
- 1997
- 2002
- 2007

**MONTHS**

- 0
- 50
- 100
- 150
- 200
- 250
- 300
- 350
- 400
Duration of Western European Cartels Is Relatively High

Year Cartel Discovered

1984-94
1995-99
2000-04
2005-08

Median Months

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Duration of Western European Cartels Is Declining
Duration of North American Cartels Is Relatively Low

![Bar chart showing the duration of North American Cartels from 1983-94, 1995-99, 2000-04, and 2005-08. The duration is measured in median months. The chart shows a decrease in duration from 1983-94 to 2000-04 and a slight increase in 2005-08.]

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Duration of North American Cartels Is Declining
Duration of International Cartels in Asia Is Relatively Short

Year Cartel Discovered

<table>
<thead>
<tr>
<th>Year Cartel Discovered</th>
<th>Median Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-94</td>
<td>15</td>
</tr>
<tr>
<td>1995-99</td>
<td>35</td>
</tr>
<tr>
<td>2000-04</td>
<td>22</td>
</tr>
<tr>
<td>2005-08</td>
<td>40</td>
</tr>
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</table>
Sources

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PRIVATE INTERNATIONAL CARTELS, 1990-2008

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January 23, 2009
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Corporate Penalties

- Cartel fines and private settlements are about equal and exceed $63 billion combined.
- The historical leader in fines – the DOJ – was overtaken by other authorities after 1999.
- EC fines exceeded the DOJ’s after 1999
- Over 4300 companies investigated
- Over 1550 companies penalized, most paid by European firms
Penalties on International Cartels
Total $ 63.3 Billion (1990-2008)
Penalties Are Split Between **Fines** and Private **Settlements**

- **$29 Bil. Settlements**
- **$35 Bil. Fines**
Penalties, by Year of Discovery, Are Surging

Year Cartel *Discovered* (Most 2005-08 cases undecided as of 12/2008).
Penalties, by Year Penalty Imposed, Are Surging
Government Fines Imposed on International Cartels Total $ 35 Billion
Most Fines Are Imposed by EU and US Authorities
**Private Settlements** Total $29 Billion, Most with Direct Buyers in the US
Penalties Are Rising in All Jurisdictions

![Graph showing penalties rising in various jurisdictions from 1990-2008.](image-url)
Number of Corporations Fined, U.S. Dept. of Justice, 1990-2008

Federal Fiscal Year

579 Firms

Domestic
Intl
Proportion of Fined Cartelists by DOJ that Are **Non-U.S.**

% Non-US

Federal Fiscal Year
Proportion of Large DOJ Corporate Fines that Are **Non-U.S.**

**% Non-US among $10-million-plus fines**

Federal Fiscal Year

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Total $7.6 billion

<table>
<thead>
<tr>
<th>Calendar Year First Member of Cartel Is Fined</th>
<th>$ Billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>0.5</td>
</tr>
<tr>
<td>1991</td>
<td>0.2</td>
</tr>
<tr>
<td>1992</td>
<td>0.1</td>
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<td>1993</td>
<td>0.1</td>
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<td>2005</td>
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<td>2006</td>
<td>0.1</td>
</tr>
<tr>
<td>2007</td>
<td>1.5</td>
</tr>
<tr>
<td>2008</td>
<td>2.5</td>
</tr>
</tbody>
</table>

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Fiscal years (DOJ) and calendar years (Intl.) do not match.
Number of **Cartel Decisions with Fines**, European Commission, 1990-2008

Total 89
Number of Companies in European Commission Decisions, 1990-2008

Total 598 Firms
Number of Adverse Decisions about Intl. Cartels, **EC** and **DOJ** Compared

Total $15.4 billion

Year of Decision

$ Mil.
International Cartel Fines Collected, EC and DOJ Compared, 1990-2008

![Bar chart showing international cartel fines collected by EC and DOJ, 1990-2008.](chart.png)
Intl. Cartel Fines Collected by NCAs
(EU’s National Authorities) 1990-2008

Total $7.4 billion

Year of Decision

$ Mil.
All EU Intl. Cartel Fines Surpassed the DOJ’s in Every Year after 1999
Other Government Fines on International Cartels Exceed $5 Billion

$ Million

US AGs | Korea | Africa | Latin America | Other Asia | Oceania

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International Cartel Settlements in the US

Total $26.4 billion

Year of Major Settlement

$ Mil.

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In Total Cartel Penalties the **U.S.** is Ahead of the **EU** in Most Years

**US** total $32 billion

**EU** total $22 billion
Over 4300 Companies Investigated

![Bar Chart]

- 1990-94: 500
- 1995-99: 700
- 2000-04: 2000
- 2005-08: 2000

- Number of Companies
At Least 135 Corporate Amnesties Granted for International Collusion

<table>
<thead>
<tr>
<th></th>
<th>Number of Amnesties</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>43</td>
</tr>
<tr>
<td>EC</td>
<td>43</td>
</tr>
<tr>
<td>Canada</td>
<td>17</td>
</tr>
<tr>
<td>EU NCAs</td>
<td>16</td>
</tr>
<tr>
<td>Other</td>
<td>16</td>
</tr>
</tbody>
</table>

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Corporate Cartelists Are from 57 **Nations** All over the Globe

- W. Europe
- Asia
- E. Europe
- Lat. America
- Oceanea
- Africa
- US & Canada

NUMBER OF NATIONS
Corporate Penalties Are Mostly Paid by European Companies

- Europe: $39.1 Billion
- US & Canada: $11.3 Billion
- Asia: $6.69 Billion
- Africa: $0.82 Billion
- Lat. America: $0.2 Billion
- Australia: $0.126 Billion

Note: European international cartelists account for 67% of the total.
Most **Penalized Corporations Are Headquartered in Western Europe**

- US
- German
- French
- Italian
- Japanese
- Dutch
- British
- Korean
- Swiss
- Belgian
- Spanish
- Hungarian
- Swedish

NB: Western European cartelists account for 61.8% of the total of 1550.
### Corporate Headquarters of Non-European Penalized Firms

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>US &amp; Canada</td>
<td>251</td>
</tr>
<tr>
<td>Asia</td>
<td>217</td>
</tr>
<tr>
<td>E. Europe</td>
<td>44</td>
</tr>
<tr>
<td>Lat. America</td>
<td>50</td>
</tr>
<tr>
<td>Africa</td>
<td>18</td>
</tr>
<tr>
<td>Australia</td>
<td>16</td>
</tr>
</tbody>
</table>

NB: Non-Western European cartelists account for 38.2% of the total of 1550.
CARTELS & ANTITRUST PORTRAYED: Individual Penalties

PRIVATE INTERNATIONAL CARTELS, 1990-2008

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April 29, 2009
Introduction

• The purpose of the following charts is to illustrate the size and economic impacts of the modern international cartel movement and the enforcement responses of the world’s antitrust authorities and national courts.

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Individual Cartel Sanctions

• Americans account for one-third of the executives sanctioned in world
• Numbers charged in U.S. generally falling
• The U.S. is almost unique in imprisoning cartel managers* and sentences are becoming more common and more severe since mid 1990s
• Fugitives are a growing problem for the DOJ
• U.S. fines on executives are insignificant: Median is $100,000

* Israel is the only other jurisdiction of significance; Egypt sentenced several recently, but none yet serving
Number of Executives Penalized Worldwide by Nationality, International Cartels Only

- US
- Germany
- Australia
- Japan
- Egypt
- UK
- France
- Israel
- Canada
- So. Korea
- Netherlands

Note: Totals 435, including a few anonymous executives.

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Total Number of Executives Charged and Penalized by the DOJ per Year

Of 989 executives charged, more than half sanctioned
Number of Non-US Executives Fined by the DOJ Is Quite Variable
Number of Non-US Executives Imprisoned by the DOJ
Disposition of Executives Charged by the DOJ for International Price-Fixing

Guilty Pleas
Guilty at Trial
Acquitted at Trial
Fugitives
Undetermined

Note: Totals 216 executives from 1/1990 to 11/2008.
Proportion of Charged Persons 
**Fined** or **Imprisoned** by DOJ

![Graph showing the proportion of charged persons fined or imprisoned by DOJ from 1990 to 2008.](image-url)
Proportion of Charged Individual Price Fixers that Are **Fined** in US, 1990-2008

Proportion of Charged Individual Price Fixers that Are *Imprisoned* in US, 1990-2008

![Graph showing proportion of charged individual price fixers that are imprisoned in the US, 1990-2008.](image-url)
Mean Length US *Prison Sentences*,
All Price Fixers, 1990-2008

(Months per Person)

- 1990s Avg.
- 2000
- 2001
- 2002
- 2003
- 2004
- 2005
- 2006
- 2007
- 2008

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Trend in Mean Length, US Prison Sentences for All Price Fixers
**Trend** in Mean Length, US Prison Sentences for International Price Fixers

- **X-axis:** Years (1990-2008)
- **Y-axis:** Months per Person (0-45)

NB: The median of 108 executives is 9.6 months

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Trend in Mean Length, US Prison Sentences for International Price Fixers

NB: Excludes “outlier” 1990
Average US Fines/Person for **All** and **Intl.**
Price Fixers, 1990-2008

[Bar chart showing average US fines/person for all and international price fixers from 1990 to 2008.]
Mean US Fines/Person Higher for International Price Fixers

Note: The median 1990-2008 international fine is $100,000
Mean US Prison Days/Person Higher for **International** Price Fixers in 1990-2004, but not in 2005-2008

![Bar chart showing the comparison of mean prison days per person for all cartels and international price fixers across different time periods: 1990-94, 1995-99, 2000-04, and 2005-08.](chart.png)
CARTELS & ANTITRUST PORTRAYED: Market Effects

PRIVATE INTERNATIONAL CARTELS, 1990-2008

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Introduction

• The purpose of the following charts is to illustrate the size and economic impacts of the modern international cartel movement and the enforcement responses of the world’s antitrust authorities and national courts.

• The data employed encompass 516 private hard-core cartels that were subject to government or private legal actions (i.e., formal investigations, damages suits, fines, or consent decrees) between January 1990 and December 2008. Each cartel had participants with headquarters in two or more nations.

• All monetary data are expressed in nominal U.S. dollars using exchange rates during the cartel’s life or on the day a legal action was announced.

• A special effort is made to create charts that illustrate trends in cartel dimensions and antitrust decisions.
Market Effects and Damages

- Data on price effects are available for 177 cartels.
- Median overcharges vary from 17% to 21% of sales.
- Median penalties are lower -- 2 to 12% of sales.
- Severity of fines for localized cartels is rising.
- Severity of fines for global cartels fell in the late 2000s, though severity of private settlements trended upward.
Median Intensity of Damages Varies Little by Jurisdiction

Note: Penalties are skewed, so the median is better than the mean.
Median Percentage Overcharges Seem to Decline with Cartel Control

Note: Concentration data are often estimated
Median Percentage Overcharges Varies by Industry Type
Trend in Median Overcharges, All Cartels by Year Discovered

NB. Excludes zero overcharges. Peak period correspond to vitamins’ penalties.
**Trends** in Median Overcharges, by Jurisdiction, Year Discovered

NB. Excludes zero overcharges. Peak period correspond to vitamins’ penalties.

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Average Penalties on Intl. Cartels, Relative to Affected Sales, 1990-2008

Note: Penalties are skewed, so the median is the more meaningful measure.
**Median Penalties** on Global Cartels Are Higher than Other Types

Note: Penalties are skewed, so the median is the more meaningful measure.
Trends in Severity of Median Penalties, By Jurisdiction, 1990-2008

NB. Excludes zero dollar penalties. Peak periods correspond to vitamins’ penalties.
Trends in Severity of Median Penalties, Global Cartels

NB. Excludes zero dollar penalties
Severity of Mean Private Settlements on Global Cartels is Rising

NB. Settlements tend to lag US fines on same cartels by 3 to 6 years
Severity of Total Penalties by Type of Buyer

Govt. Major Buyer: Mean 81.9, Median 5.9
Private Buyers: Mean 20.3, Median 5.9
Severity of U.S. Fines by Type of Buyer

- **U.S. Govt. Major Buyer**
  - Mean: 39
  - Median: 46.1
- **Private Buyers**
  - Mean: 40
  - Median: 5.3

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Severity of Canadian Fines by Type of Buyer

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
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<tbody>
<tr>
<td>Canada Govt. Major Buyer</td>
<td>48.85</td>
<td>48.85</td>
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<tr>
<td>Private Buyers</td>
<td>16.9</td>
<td>11.1</td>
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</tbody>
</table>
Severity of EC Fines by Type of Buyer

- EU Govt. Major Buyer:
  - Mean: 9.77
  - Median: 8.4

- Private Buyers:
  - Mean: 11.3
  - Median: 6.37
Severity of EU NCA Fines by Type of Buyer

- **EU NCA Major Buyer**: Mean = 118.3, Median = 4.9
- **Private Buyers**: Mean = 4.16, Median = 1.5
Severity of Other Nations’ Fines by Type of Buyer

Government a Major Buyer
- Mean: 6.74
- Median: 1.25

Private Buyers
- Mean: 5.12
- Median: 1.07
Severity of Private Settlements by Type of Buyer

Government a Major Buyer
- Mean: 20.4
- Median: 15.7

Private Buyers
- Mean: 37.9
- Median: 5.42

Graph showing the severity of private settlements by type of buyer.
Severity of Total Penalties by Type of Pricing Conduct

<table>
<thead>
<tr>
<th>Conduct</th>
<th>Mean</th>
<th>Median</th>
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</thead>
<tbody>
<tr>
<td>Bid Rigging</td>
<td>43.9</td>
<td>4.93</td>
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<tr>
<td>Bid Rigging with 3rd Party</td>
<td>24.5</td>
<td>6.24</td>
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<tr>
<td>Classic Price Fixing</td>
<td>22.7</td>
<td>2.16</td>
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<tr>
<td>Classic with 3rd Party</td>
<td>30.2</td>
<td>1.05</td>
</tr>
</tbody>
</table>

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MEDIAN LENGTH of Investigations of All International Cartels, 1990-2008

Excludes secret investigations
MEDIAN LENGTH of Investigations of Global Cartels, 1990-2008

Excludes secret investigations

US DOJ: 18.98 months
Canada: 37.75 months
EC: 32.58 months
Other Govt.: 23.76 months
TREND in LENGTH of Median Investigation, US DOJ, 1990-2008

Understates length because termination is year the first cartelist was fined
**Transparency** of International Cartel Investigations, 1990-2008

- **U.S. DOJ**: 61%
- **Canada**: 57%
- **EC**: 73%
- **Other Europe**: 68%
Sources

• John M. Connor. *Private International Cartels: Full Data.* [The PICs spreadsheet, first created about 1998, is continuously updated. As of December 2008, the combined “Full Data” spreadsheet was a file of 6.4MB and consisted of 4700 observations of 512 actual and suspected cartels and 4200 cartelists (companies and individual participants) with 1.1 million cells of data. There are also 13 back-up spreadsheets.]

