



# University of Zurich

Faculty of Law  
Fall Semester 2012

## **Law & Economics** **Economic Analysis of Law**

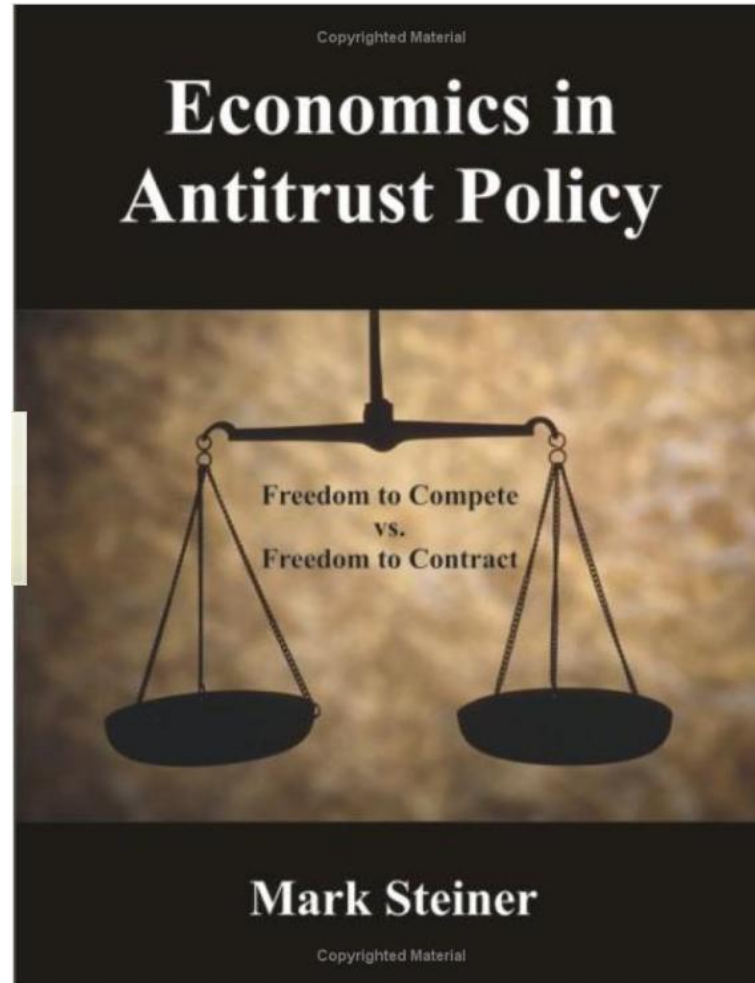
Competition law – Antitrust

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# Book Recommendation



# Contents

## 1. Function of competition

- „Story of the bakery“ & empirical evidence
- Functions of competition

## 2. Restraints of competition

- Forms
- Legal norms against restraints of competition

## 3. Law & economic topics in competition law

- Deterrence and penalties
- Game theoretic behavioural models
- Regulations: „per se“ v. „rule of reason“

## 4. Developments of administrative authorities

# Divergent incentives in competition law were already known to „Classical Scholars“

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- **Adam Smith (1776):**

- “People of the same trade seldom meet together, even for merriment and diversion, but the conversation ends in a conspiracy against the public, or in some contrivance to raise prices.”

- **John Stuart Mill (1848):**

- “A limitation of competition, however partial, may have mischievous effects quite disproportioned to the apparent cause.”

# The story of the two bakeries



Universität Zürich

# The story of two bakeries: Assumptions

- **Village with two bakeries**
- **5'000 inhabitants**
- **Cut of from any other towns**
- **Marginal cost of one bread = 1.00**
  - (Marginal cost includes their rents, salaries, ingredients etc.)
  - Baker A sells bread for 1.50
  - Baker B sells bread for 1.50
  - Both sell 500 breads a day
- **How much profit do they achieve?**
  - Monopolistic profit of 250 each



# More efforts set bakers in competition

## What now?

	Price	Quantity	Profit	Together
<b>Baker A</b>	1.50	500	250	500
<b>Baker B</b>	1.50	500	250	
<b>Baker A</b>	1.40	700	280	455
<b>Baker B</b>	1.50	350	175	
<b>Baker A</b>	1.40	300	160	360
<b>Baker B</b>	1.20	1000	200	



**What would you do if you were baker A or baker B?**



# International cartels

(Source: Table 5.1, Example 5.7, Carlton/Perloff 2000, Modern industrial organization)

Industry	Time period	Price premium	Social Cost (as percentage of industry turnover)
Aluminum	1923-39	38%	42%
Sugar	1931-39	30%	36%
Rubber (synth.)	1929-39	100%	75%
Electric bulbs	1929-39	37%	42%
Copper	1918-39	31%	36%
Cast-iron pipe	1918-39	39%	42%



# International cartels – more recently

- John M. Connor and C. Gustav Helmers; AAI Working Paper No. 07-01; STATISTICS ON MODERN PRIVATE INTERNATIONAL CARTELS, 1990-2005; John M. Connor and C. Gustav Helmers:

This report explains the principal economic and legal features of a unique set of data on **283 modern private international cartels** discovered anywhere in the world from January **1990 to the end of 2005**. Measured in real 2005 money, aggregate cartel **sales and overcharges totaled about \$1.2 trillion and \$300 billion**, respectively. In the early 2000s, about 35 such cartels were discovered each year. We find that global cartels comprise more than half of the sample's affected sales and are larger, longer lasting, and more injurious than other types.

# Price effects of cartels

Summary of Seven Economic Surveys of Cartel Overcharges		
	Number of Firms	Average Overcharge
Cohen and Scheffman (1989)	5-7	7.7-10.8%
Werden (2003)	13	21%
Posner (2001)	12	49%
Levenstein and Suslow (2002)	22	43%
Griffin (1989)	38	46%
OECD (2003)	12	15.75%
<b>Total (weighted average)</b>	<b>102-104</b>	<b>36.7%</b>

# Why competition?

## Functions of competition

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- **Allocation**
  - Transfer to the “most efficient user”
- **Coordination by market**
  - v. cartelistic economy
  - v. planned economy
- **Discovery / research**
  - Hayek: Competition as discovery procedure
- **Selection**
  - Inefficient companies are eliminated

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# Governmental restraints of competition

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- **National governmental restraints of competition**
  - Regulations
    - „Standards“
    - Security, environment
  - Subsidies
  - Governmental enterprises
- **International governmental restraints of competition**
  - Tariffs
  - Quantitative restrictions
  - Measures having an equivalent effect
    - Technical trade barriers
- **Tariffs, controls, etc.**

# „Optimal conditions“ for enterprises

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- **Perfect competition in input markets**
  - Low costs
- **Monopoly position in output markets**
  - Differentiation
  - Innovation
- **„Best solution“**
  - Restrain or eliminate competition

# Private restraints of competition

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- **Agreements**

- Horizontal
- Vertical

- **Mergers**

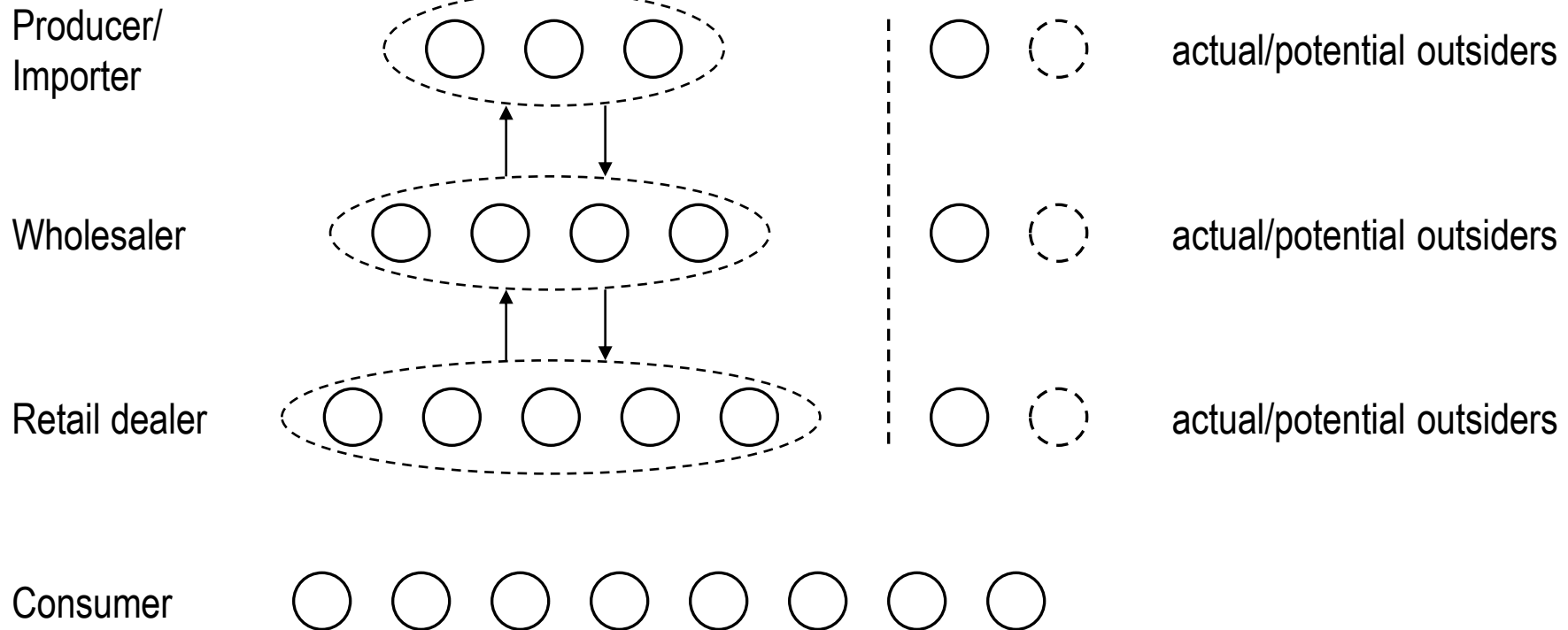
- Market power, monopoly position by fusion or acquisition

- **Market power**

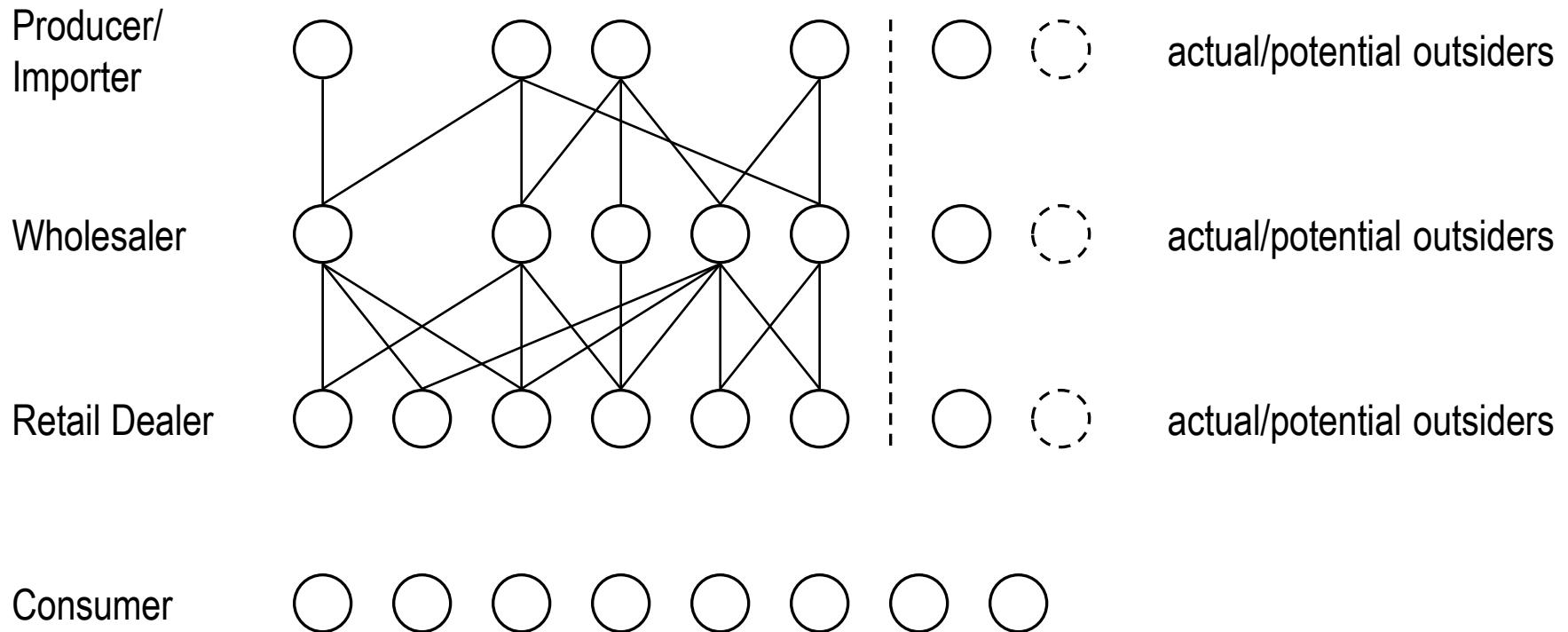
- Monopolies
- Oligopolies
- Dependencies



# Agreements – Horizontal

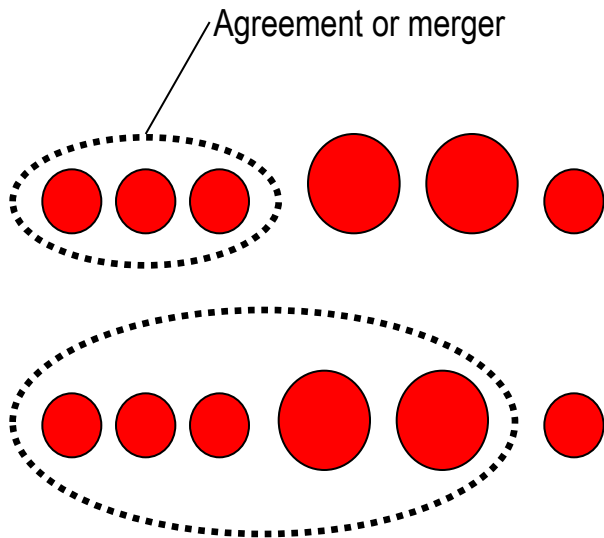


# Agreements – Vertical



# Ambivalence of the market structure

## Company in a market



intensity of competition

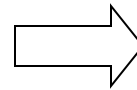
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Cartels/  
Concentration

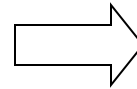
# Regulations against private restraints of competition

- Agreements or gentlemen's agreements



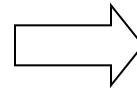
Prohibition of restraints of competition (Art. 101 TFEU, Art. 5 KG)

- Mergers



Merger control (CRMR, Art. 9 und 10 KG)

- Misuse of a dominant position



Prohibition of the misuse of a dominant position (Art. 102 TFEU, Art. 7 KG)

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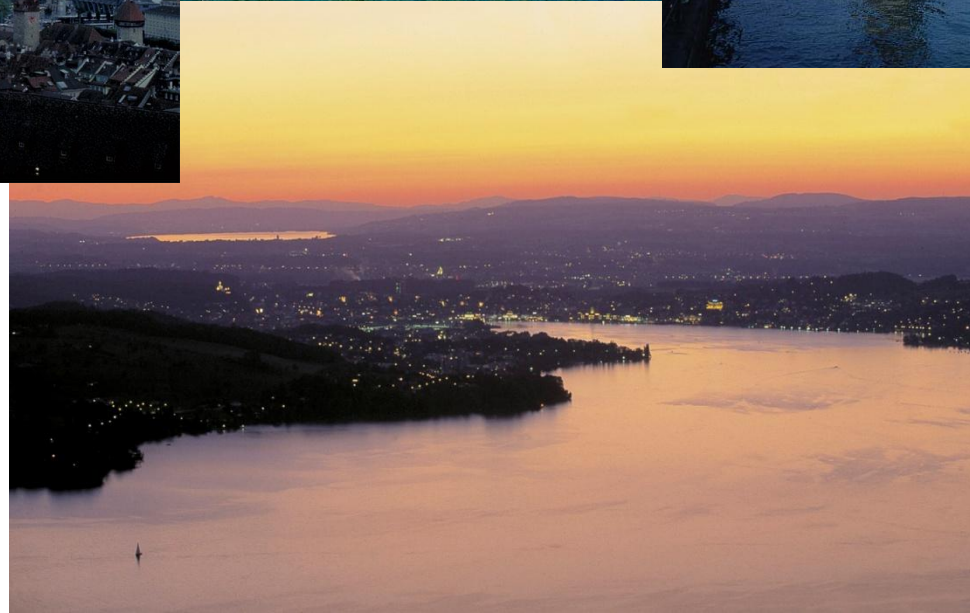
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# Cartels today

## Roche and the case of vitamins (1)

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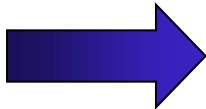


# Cartels Today

## Roche and the case of vitamins (2)

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- **Roche biggest player on vitamins market**
  - Innovation lead to this position
- **Initiates cartel 1989-1999**
  - Agreements on prices and quantities
  - Meetings in Lucerne, Switzerland
  - FBI tapes meetings
- **Antitrust suits in EU and USA**
- **Estimated loss from cartel 2.7 to 5 Billion \$**



**EU: 600 Million dollars fine (Roche)**

**USA: 500 Million dollars fine (Roche)**



# Competition laws: Deterrence (1)

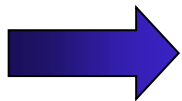
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## United States

- 2x the loss suffered to victims
- Jail for officials
- Private suits, treble damages
- Class action

## European Union

- 10% of Revenue on relevant market
- Private suits, none so far
- Treble damages not possible
- Class action not possible



**Are these fines sufficient to deter anti-competitive practices?**

# Competition laws: Deterrence (2)

- **Companies are rational**
  - Sanction = „Price“ of the competitive restraint
  - Expected sanction = probability of cartel detection
  - Expected sanction < Rent from competitive restraint
- **Definitions**
  - Probability of detection =  $p$
  - Sanction =  $f$
  - Rent from competitive restraint =  $R$
- **Collude if  $R > p \times f$**
- **Optimal fine:  $f > R/p$**

# Competition laws: Roche reexamined

- **The Roche case re-examined**
  - Vitamin Market ~3 Billion \$ per year
  - Roches' Market Share ~33%
- **Cartel to raise prices by (only) 10%** (est. Clarke/Evenett 2003)
  - Ex:  $10\% \times 1 \text{ billion} = 100 \text{ Mio } \$$  per year
  - In 10 years = 1 billion \$ < than 1.1 billion \$ fine
- **Will Roche do it again?**
  - Probability of getting caught = 20%
  - $20\% \times 110 \text{ million (fine per year)} = 22 \text{ million } \$$
  - $22 \text{ million } \$ < 100 \text{ million } \$$
- **Incentives to do it again!**

# Better deterrence

- **Measures to improve deterrence**
  - Leniency programs
    - „Approver “
  - Higher fines
    - Doubling of the fines in case of repetition
  - Civil remedies
    - Civil (group) actions
    - Punitive Damages
  - Other fines
    - Criminal law
    - Publicity

# Law & Economics in Law on Cartels

## Coordinated v. non-coordinated effects

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- **Coordinated effects after merger/in a market structure**
  - Game theory
    - Homogenous products and costs
    - Less competitors
    - Low innovation dynamic
    - “Maturity industry”, stable conditions , experience with agreements
- **Facilitate the co-ordination of enterprises**
  - Parallel behavior
  - Price leadership
  - „Tit-for-Tat“-Pricing

# Law & Economics in Law on Cartels

## Coordinated v. non-coordinated effects

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### ■ Non-coordinated effects

- Example: crunchy and fruity flakes
  - Crunchy and fruity flakes are the most popular cereals
  - Price increase for crunchy => More fruity is sold
  - Both are substitutes

### ■ Crunchy takes over fruity, effects?

- Price increase effect „stays in the own house“
- Indifference about the market shares
- Substitutability is crucial

### ■ Other examples

- Ferrari/Lamborghini
- Gillette/Wilkinson

# Coordinated v. non-coordinated effects

## “More Economic Approach“ provides Benefits

- **Art. 4 par. 1 Law on cartels:**
  - Definition: Agreements affecting competition are binding or non-binding agreements and concerted practices between undertakings operating at the same or at different levels of production which have a restraint of competition as their object or effect. .
- **Coordinated effects covered**
- **What about non-coordinated effects?**
  - Effects without any coordination
  - No „agreement“
  - No „concerted practices“

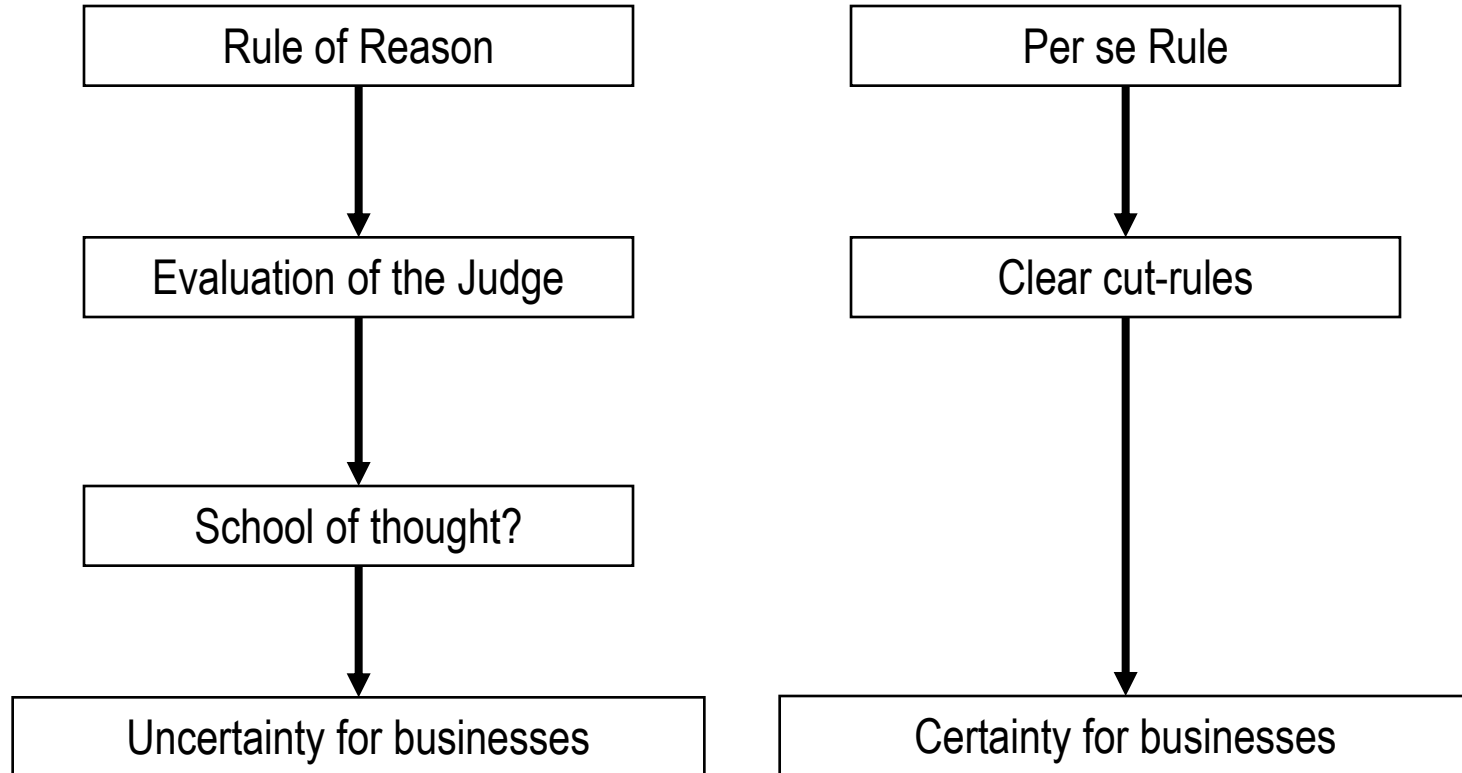


**„More economic approach“**



# Antitrust Rules

## Problem of Uncertainty



# Application of per se vs. Rule of Reason

## Costs of different Rules

		Effect on welfare	
		Negative	Positive
Courts or competition authority's decision	Legal	<b>Type I Error Direct welfare loss</b>	Correct decision
	Illegal	Correct decision	<b>Type II Error unused efficiencies</b>

### ■ Definitions

- Type 1 error costs = T1C
- Type 2 error costs = T2C
- Administrative costs of rule of reason enforcement = AEC
- Costs of legal uncertainty for businesses = UC

### ■ Use per se rule if: $AEC + UC > T2C - T1C$

# Recent Developments: More Economics to improve Rule of Reason

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- **Rule of reason**
  - Economics analysis
  - Lower uncertainty
  - Lower administrative costs?
- **Costs of restraint of trade v. efficiencies**
  - Economic Models
  - Forecasts based on past data
- **Competition defined in consumer welfare or efficiencies**

# Purpose of Competition Law

## Different Concepts

**Traditional concept**



**Ensuring commercial freedom  
for companies (purpose of law).**  
commercial freedom leads to



**Competition**  
competition leads to



**Economic and social welfare**

**Concept of the  
„more economic approach“**



**Ensuring economic and social  
welfare**  
(= consumer welfare, economic  
efficiency)

# Example of different Approaches: Resale Price Maintenance

The competition authority or court (FTC, DOJ) must evaluate:

**Traditional  
concept**



Will RPM (in this case) lead to a restriction of the dealers commercial freedom?

**Concept of the  
„more economic approach“**



Will RPM (in this case) lead to an increase or a decrease of economic or social welfare?  
(= consumer welfare, economic efficiency)

# Practice of the more Economic Approach

- **„Efficiencies defense“**
  - Horizontal guidelines
    - U.S., 1992, revised 1997
    - EU 2002-2004
  - Vertical Restraints
    - Guidelines (U.S. And EU)
    - U.S.: Rule of reason (except price fixing)
    - EU: Legal exemption (except core restrictions)
  - Conduct of dominant firms
- **Economicst: Treat cartels like mergers**
  - Burden of proof for „efficiencies“ on colluders

# Costs of the „More Economic Approach“ (1)

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- Disregards the *constitutionally protected commercial freedom* (Art. 27, 94 Swiss Constitution)
- Consumer welfare is an *insufficiently definable legal term*
  - Violates legal doctrine of definable legal terms
- Raises *businesses uncertainty* (especially strong effect to small businesses)
- Raises enforcement costs
  - Budgets and expenditures of FTC and DOJ, as well as antitrust lawyers increased rapidly since 80's

# Costs of the „More Economic Approach“ (2)

- Demand for economists' models
  - Judge Gesell, *F.T.C. V. Coca-cola Co.* 641 F. Supp. 1128 (1986):  
„At the preliminary injunction hearing economists, [...], flatly disagreed as to the significance of the proposed acquisition upon competition in the market.“  
„Section 7 of the Clayton Act was not designed to support a particular economic theory;...“
  - 60-80% ex ante merger efficiencies predictions wrong (Hartman 1996)
- Assumption that a *Government Authority or Court can forecast and evaluate future economic outcomes*



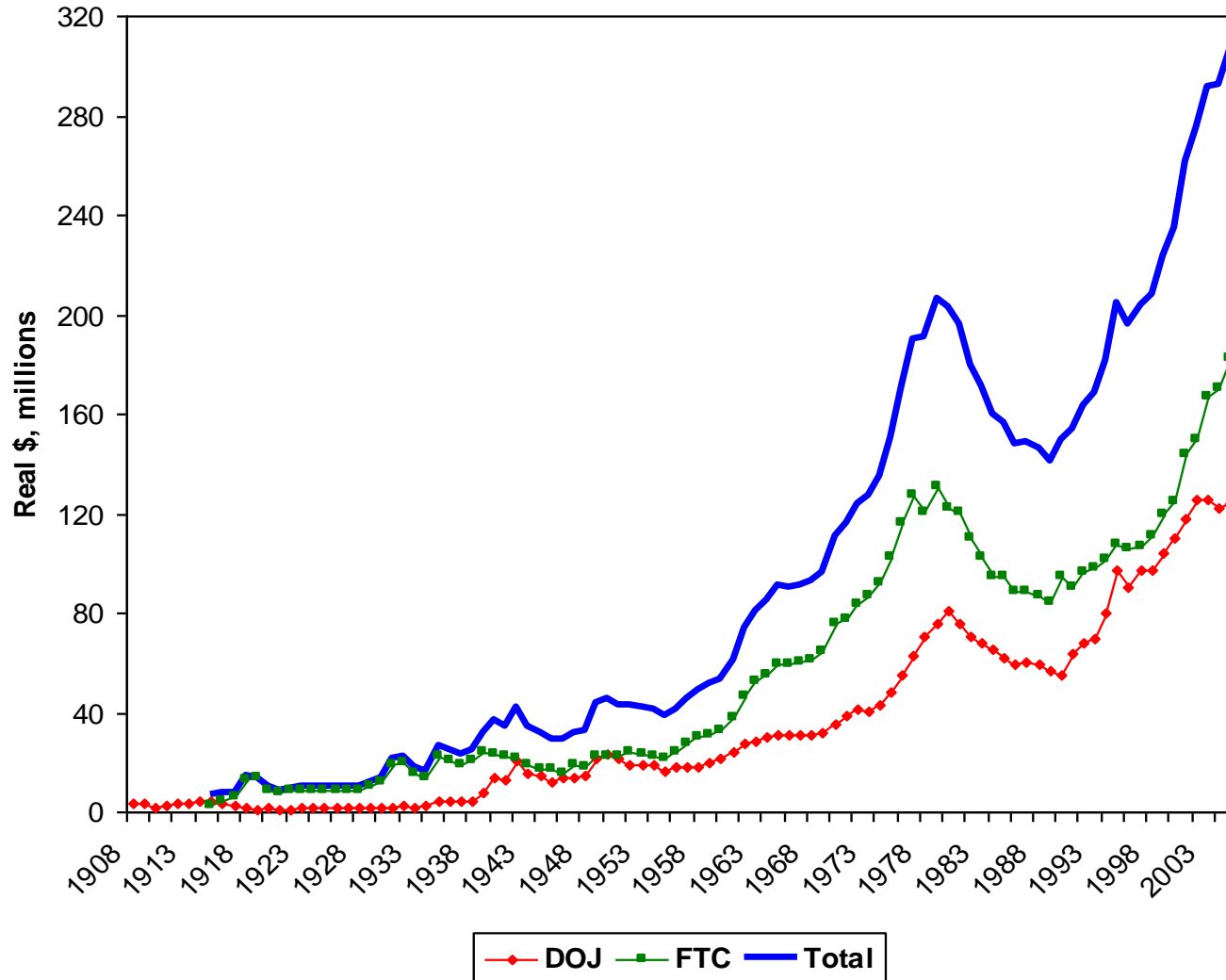
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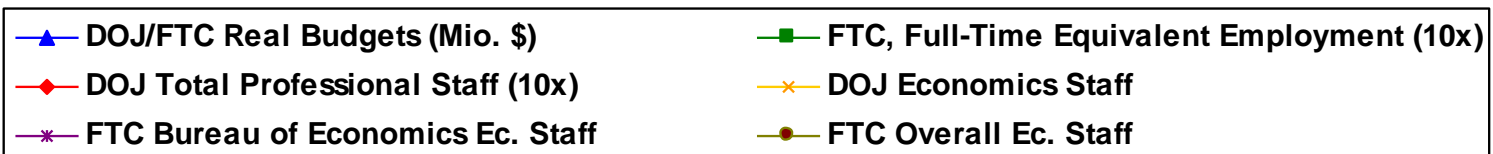
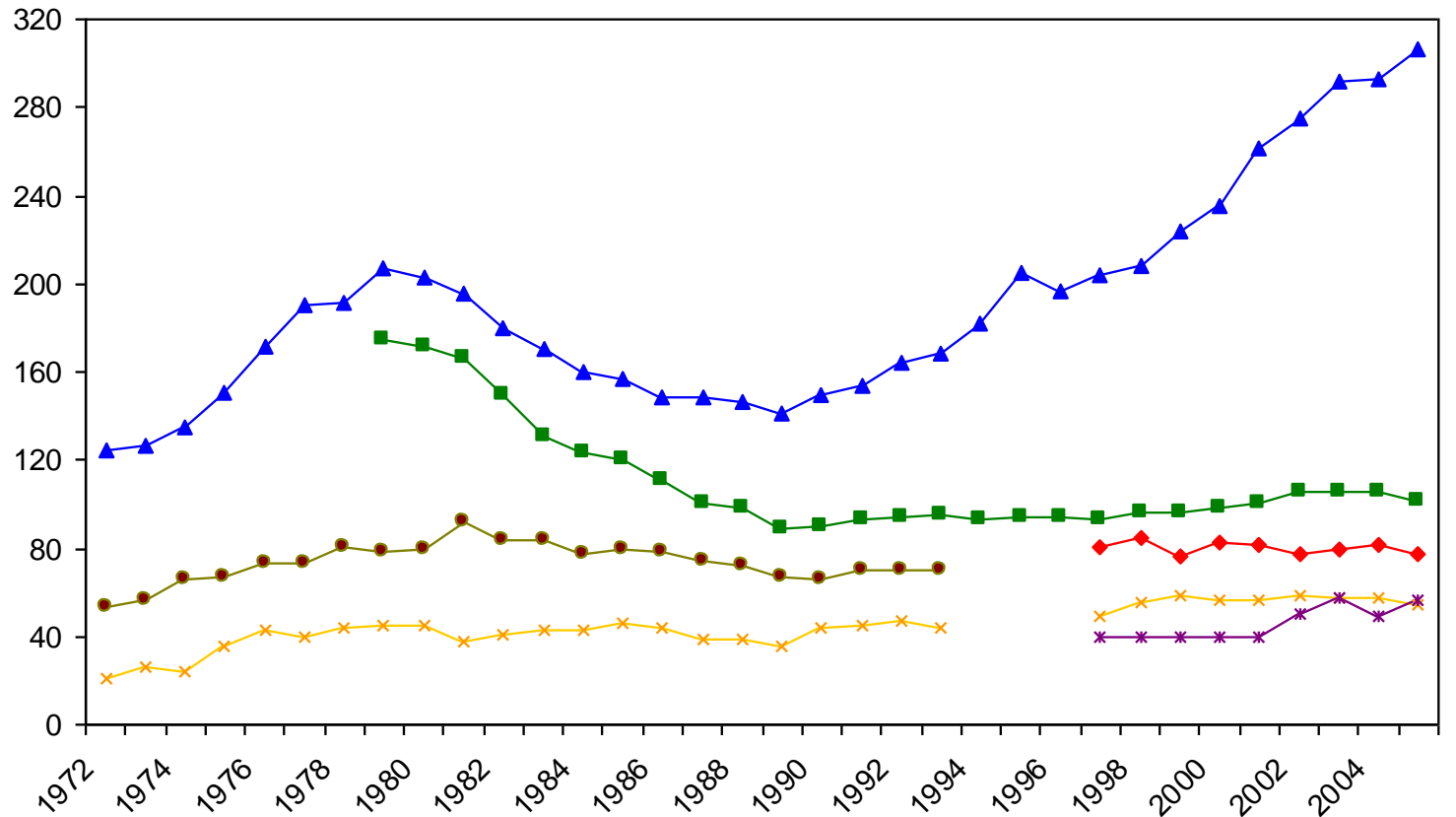
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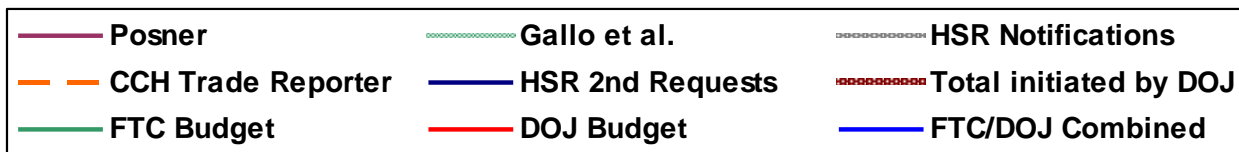
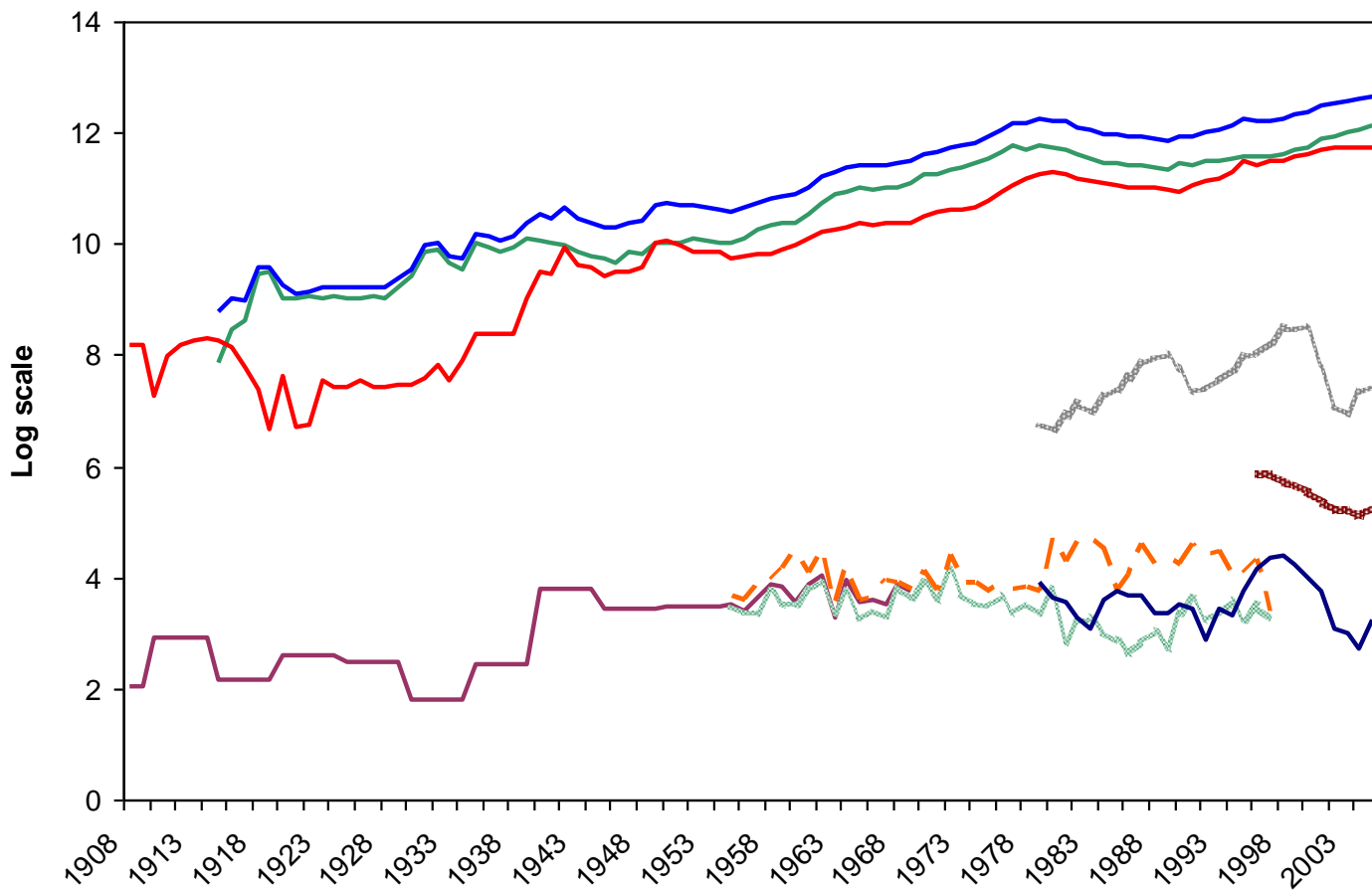
# Department of Justice Antitrust Division and FTC Budgets, 1908-2005



# Employment and combined Real Budgets at FTC and DOJ, 1972-2005



# Growth in Budgets and Caseloads, 1908-2005



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# EU Case Statistics on Articles 81, 82 and Merger Investigations

