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Abuse of Dominance & Cartels

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Competition Policy

- Anticompetitive agreements (ex: cartel)
  - Article 101 TFEU (Treaty of the Functioning of the EU)
  - KL 2 kap. 1 § (Swedish competition act)
- Abuse of dominant position (ex: predatory pricing)
  - Article 102 TFEU
  - KL 2 kap. 7 §
- Mergers that reduce competition
  - EUMR
  - KL 4 kap.
- Public restriction of competition (ex: subsidies)
  - Article 107 TFEU (state aid)
  - KL 3 kap 27 § (konkurrensbegränsande offentlig säljverksamhet)

Google

Google

- European Commission decision (June 27, 2017)
  - Google must pay fine of €2.4 billion
- Reason: abusing dominance
  - Search engine gives **illegal advantage** to own comparison shopping service

Two products:
- Search engines
- Comparison shopping services

Google

- Search engines
  - Provides internet search results to people
  - Google flagship product
    - revolutionized search
    - ranks results according to relevance
  - 90% of Google's revenues = advertising shown to users
  - Google's market share >90% in most European countries

Google

- Comparison shopping
  - Allows consumers compare products and prices
    - Online shops of manufacturers
    - Platforms: Amazon and eBay
  - Business model
    - Do not sell any products
    - Clicks = Revenues
    - Incoming traffic from search engines
  - Network effect
    - More traffic ⇒ more firms list their products ⇒ more attractive to consumers
    - A virtuous circle: a chain of re-enforcing events

Google

- “Google shopping”
  - Started 2004
  - Not able to compete with existing comparison shopping sites

Google

- Google's new strategy 2008
  - Use Google search engine to promote Google shopping
  - Google shopping
    - Top search result
    - Rich format
  - Rival comparison shopping sites
    - Displayed on page 4
    - Simple format
  - Expressed differently
    - Stop using generic algorithm for ranking search results
    - Create a bias

Google

Logga in

Allt | Kartor | Bilder | Shopping | Nyheter | Fler | Inställningar | Verktyg

Ungefär 1 250 000 resultat (0,65 sekunder)

Betyg · Tider

Sapporo Grand Hotel
4,2 ★★★★☆ (492) · Hotell
北1条西4丁目2番地
Badtunna · Passar för barn

Sapporo KANI-YA
4,0 ★★★★☆ (4) · Skalsjursrestaurang
Minami 4 Jonishi, 2 Chome– 1 1
Mysigt · Grupper

Ippudo Sapporo Tanukikoji shop
3,9 ★★★★☆ (122) · Tonkotsu ramen, restaurang
Minami 3 Jonishi, 6 Chome– 8
Mysigt · Fri klädsel · Grupper

Fler platser

The 10 Best Sapporo Restaurants 2017 - TripAdvisor
https://www.tripadvisor.com/Restaurants-g298560-Sapporo_Ho... ▾ Översätt den här sidan
Best **Dining** in **Sapporo**, Hokkaido: See 40707 TripAdvisor traveler reviews of 8785 **Sapporo restaurants** and search by cuisine, price, location, and more.
Restaurants near Odori Park · Restaurants near Susukino · Halal

10 Unmissable Restaurants In Sapporo, Japan - Culture Trip
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The 10 Best Sapporo Restaurants 2017 - TripAdvisor
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Restaurants in Sapporo, Japan - Lonely Planet
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Discover the best **restaurants** in **Sapporo** including Menya Saimi, Sushi-no-uo- masa, Kani-honke.

tsunagu Japan | 20 Must-Go Sushi Restaurants in Sapporo, Hokkaido
https://www.tsunagujapan.com/20-must-go-sushi-restaurants-in-... ▾ Översätt den här sidan
20 Must-Go Sushi **Restaurants** in **Sapporo**, Hokkaido. Hokkaido is surrounded by sea and naturally counts seafood as its speciality. Freshly caught seafood are ...

Sapporo Restaurants: What to Eat in Japan's Delicious North
https://savorjapan.com/.../sapporo-restaurants.../index.html ▾ Översätt den här sidan
Hokkaido has the freshest and most abundant variety of fish and seafood in all of Japan, so it's no surprise that **Sapporo restaurants** offers some of the best sushi ...

Sapporo Gourmet Best 100 _UU-Hokkaido
www.uu-hokkaido.com/sgs/index.html ▾ Översätt den här sidan
Sapporo, Hokkaido is one of the leading gourmet city in Asia to be able to enjoy the food of all over Hokkaido. This is a special edition of popular **restaurant** in ...

Google

- Research studies and surveys show:
  - Consumers click far more often on results appearing higher up in search results
- Desktop computers
  - 1 top result gets 35% of clicks
  - 10 top results get 90% of clicks
  - 1 result on page 2 gets 1% of clicks
- Experiments
  - show that this is *not* due to relevance
  - Moving 1'st result to place 3 reduces clicks by 50%
- Mobile devises
  - Effects even larger

Google

- Effect of Google's new strategy
  - Traffic on Google shopping increased
    - 45-fold in UK
    - 35-fold in Germany
    - and so on
  - Sudden drop in traffic on rival sites
    - 80-90% drop
    - Cannot be explained by other factors

Google

- Commission claims:
  - This will be negative for European consumers
  - “denied choice”

Google

- Why illegal?
  - Google has abused a dominant position

Google

- Google has dominant position in "search engine market"
  - Relevant market
    - General Internet search
    - National
  - Market share > 90% in European countries
  - Entry barrier: Network effects
    - More users ⇒ more attractive to advertisers ⇒ higher profits ⇒ can improve product ⇒ more users ⇒ …
    - More users ⇒ better data on consumer behavior ⇒ more attractive to advertisers ⇒ …

Google

- Google has abused its position
  - Dominance is not illegal *per se*
  - But dominant firms have special responsibility
  - Must not take actions reducing competition
  - Google's strategy reduced competition in "comparison shopping market"

Google

- Commission's decision
  - Fine: € 2.4 billion (10% of Google's world wide revenues)
  - Google must change search engine
    - give equal treatment of comparison shopping sites
    - within 90 days
  - Otherwise
    - additional fine every day of up to 5% of the daily worldwide turnover
  - Google's competitors can file for damages

Comments

Google

- Google has appealed
  - The decision is taken by the European Commission itself
    - Commission is both “prosecutor” and “judge”
    - The investigation took 7 years
  - But Google appeals to the General Court (previously Court of First Instance) (next level: European Court of Justice; “points of law”)

Google

- Competition on the Internet
  - On the one hand: Easy for users to switch
    - If not satisfied w
      DuckDuckGo
    - Competition sho
  - On the other ha
    - A service that is
      customers
      - Earns much higher profit
      - Learns about consumer behavior
    - Can improve its services further

Caution:
This particular version of the network effects argument is non-standard

Google

- Whose interests is the Commission protecting?
  - Google offers its services to users for free
  - If 90% of users choose Google, it must be because they have a better product than other services
  - So why punish Google and help inferior firms?

Google

- Commission's objectives
  - Does not protect **individual firms** – but **competitive process** – for the benefit of **consumers**
  - Google denied…
    - other companies the chance to compete on their merits
    - consumers genuine choice
  - Google shopping may not be better than other comparison shopping sites. It was given an unfair advantage.

Google

- Importance of this case
  - Regulators such as European Commission may start to prescribe more detailed rules of conduct
  - General “search neutrality” regulation

Abuse of Dominance

Article 102 TFEU

"Any **abuse** by one or more **undertakings** of a **dominant position** within the internal market or in a substantia
prohibited as i
internal marke
affect trade b
"

Key concepts (to be discussed later)
- undertaking
- affect trade

But, what is "dominance" & "abuse"?

Abu

Dominance = legal term
High level of market power = economic equivalent

1. Define releva
   - Product market (eg: general Internet search services)
   - Geographical market (eg: Sweden)
2. Assess dominance
   - Compute market shares and concentration
   - Compare to thresholds. Example:
     - Market share < 40% ⇒ firm unlikely to be "dominant"
     - Market share > 50% ⇒ firm likely to be "dominant"
   - Consider other factors. Examples:
     - Ease of entry
     - Countervailing buyer power

Abuse of dominance

- Dominance is not illegal *per se*
  - But dominant firms have special responsibility
  - Must not take actions reducing competition even further
- The actions are not illegal *per se*
  - Same action legal if the firm is not dominant
  - Why?
    - Same action might not have anticompetitive effect
    - Reducing competition might not be as problematic

Abuse of dominance

- Exploitative practices
  - Example: charge too high price
  - Obsolete?
- Exclusionary practices
  - Strategies to reduce rival's ability to compete
  - Ex: Predatory pricing
    - Low price → Rival exists → High price

Abuse of dominance

- Predatory pricing
- Non-price strategies
  - Capacity expansion
  - Product proliferation
  - Long-term contracts with customers
  - Tying
  - Refuse rivals access to essential resource
- Effects
  - Deter entry
  - Induce exit
  - Raise rival's cost – to make them less competitive

Do we really need to worry?

- "Suspicious practices"
  - Large firms charge lower prices than smaller competitors
  - Prices especially low in segments with competition
- Is this predation?
  - i.e.: Is the purpose really to harm the competitors?
- Not necessarily
  - Normal business motives for "suspicious practices"
    - Economies of scale
    - Meet the competition
  - Many reasons why predation often not profitable

Do we really need to worry?

- Arguments why predation not profitable
  - Large firms sell more and lose more by cutting price
    - But, selective price cuts
  - The assets may re-enter
    - But, entry is costly
  - They prey could borrow money to survive
    - But, banks may not be willing to
  - Merger is better
    - But, merger may trigger entry. May not be allowed. Predation may reduce acquisition price.

Do we really need to worry?

- Perhaps no need for policy
  - Low prices often result of legitimate behavior
  - Predation often not profitable
- Policy may even be harmful
  - Firms may be afraid of lowering prices
  - Firms may falsely charge competitors for predation

Do we really need to worry?

- Explanations why predation may be rational
  1. Long purse story
  2. Signaling story
  3. Reputation story
- Common themes
  - Explain the prey's reduced ability to compete
  - Incomplete information

Long Purse Theory

Long Purse Theory

- Basic idea
  - Different firm have different financial resources
  - Strong firm may start price war
  - Only strong firm can survive

Long Purse Theory

- Objection
  - Weak firm could sign contract with bank
  - Bank promises to grant weak firm loans to cover losses from predation
  - Weak firm equally strong $\Rightarrow$ price war could go on forever
  - Strong firm will not start price war

Long Purse Theory

- Counter-objection
  - Bank can not tell if weak firm's loss is due to predation or bad management
  - Bank only willing to lend firm money in proportion to the owners' own investments
  - Price war erodes the weak firm's financial resources
  - Bank stops lending

Long Purse Theory

- Necessary conditions
  - Different financial strength
  - Information problem in financial market
- Other aspects of dominance could be of secondary importance
  - Market share
  - Cost advantage

Limit Pricing

Limit Pricing

- Basic idea
  - Entrant does not know Incumbent's cost
  - Incumbent sets a low price – Limit pricing
  - Fools Entrant cost is low
  - Entrant does not dare to enter

Implications from Economic Theory

- Key elements of predatory pricing
  1. Short run: Incumbent sacrifices profit
  2. Long run: Incumbent must be able to recoup loss
- Competition authority must prove
  1. Low price is too low
     - Difficult
  2. Incumbent has ability to raise price later
     - "Easy": Dominant firms have ability raise price

Implications from Economic Theory

- How do we know the price is too low?
  - Definition: Price is ***too low*** if it is lower than it would have been if the incumbent competes "normally" i.e. without intent to harm rival.
  - Typically impossible to say

Implications from Economic Theory

- Rule of thumb
  - Price is too low if it is below the incumbent's own cost
  - But no exact legal test
- Areeda-Turner test (modified)
  - **P ≥ ATC** ⇒ Clearly legal.
  - **AVC ≤ P ≤ ATC** ⇒ Suspicious but presumed legal (Competition authority must prove, that there are no "objective reasons")
  - **P ≤ AVC** ⇒ Presumed illegal (Defendant must prove that there exists "objective reasons")

Implications from Economic Theory

- Note
  - Firms sometimes have good reasons to sell below cost, e.g. to promote product

How economics is used

How economics is used

1. Economic theories of harm

- Authorities and courts use economic models to
  - Explain why behavior (e.g. price below cost)
    - reduces competition
    - harms consumers
  - Check conditions that must be fulfilled
    - e.g.: limit pricing only works if there is incomplete information

How economics is used

2. Presumptions based on theory

- Abuse is said to be an "**objective**" concept, which means that
  - It is not necessary to prove that the dominant firm has the **intention** to restrict competition
  - If the strategy has the **effect** of restricting competition, it is illegal

How economics is used

- Sometimes effects can be *presumed*, rather than *proved*

How economics is used

- But, important caveat
  - no presumption that a certain strategy always restricts competition
  - Must consider all **circumstances of the case** – i.e. the characteristics of the market
  - Economic theory helps show what circumstances are important
- Standard of proof:
  - If the strategy "in all likelihood" restricts competition, considering all circumstances of the case, then it is illegal

Weaker than "beyond reasonable doubt"

How economics is used

3. Authorities & courts use economic evidence
   - Market definitions
   - Cost data (often difficult to calculate costs)

How economics is used

- Possible example, if
  - Competition authority shows: $P < AVC$
  - Defendant cannot show: reason for incumbent to promote product
- Then,
  - Presume the price restricts competition

Cartels

Cartels

- Oligopolistic competition
  - Lower prices and profits
- Q: Why not cooperate instead?
  - Common price policy
  - Share the market
- A: Not feasible
  - Incentive to cheat
  - Agreement not enforced by courts

Cartels

- But, cartels do exist
  - Example 1: Lysine cartel
    - YouTube – Cartel meetings where filmed by the FBI
    - Movie “The Informant” with Matt Damon
  - Example 2: Swedish market for generic drugs?

Generic drugs

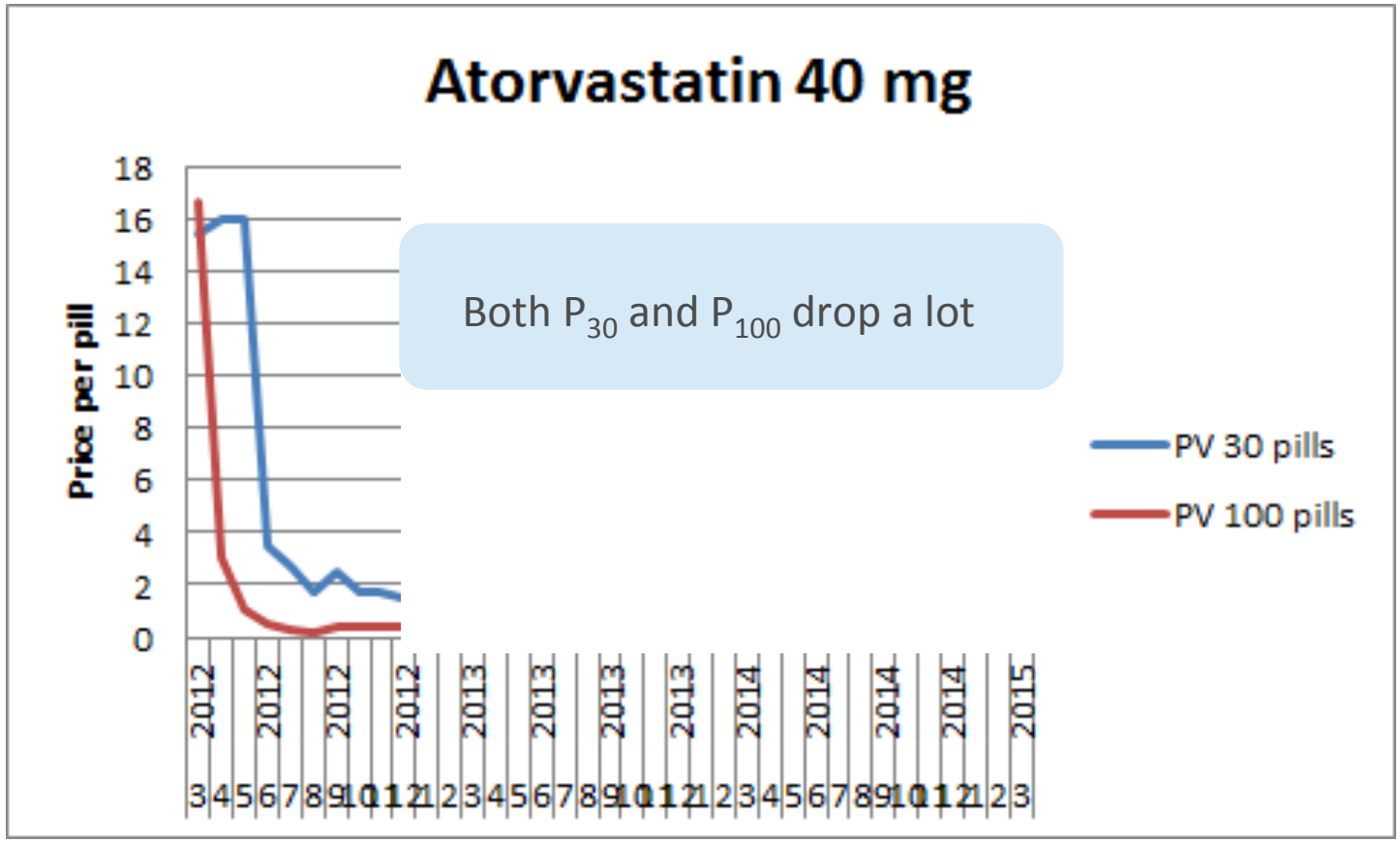
- National auction
  - All drugs without patent
  - Every month
- Idea
  - Lowest price = “product of the month”
  - Large market share
    - Recommended
    - Subsidy does not cover “over-charge”
- But
  - Also “brand name” usually gets market share

Generic drugs

- Example: Atorvastatin
  - Reduces cholesterol
  - Patent expired in 2012
  - Sold in different package sizes, e.g.:
    - 100-pills: large market => many competitors
    - 30-pills: smaller market => fewer competitors

Generic drugs

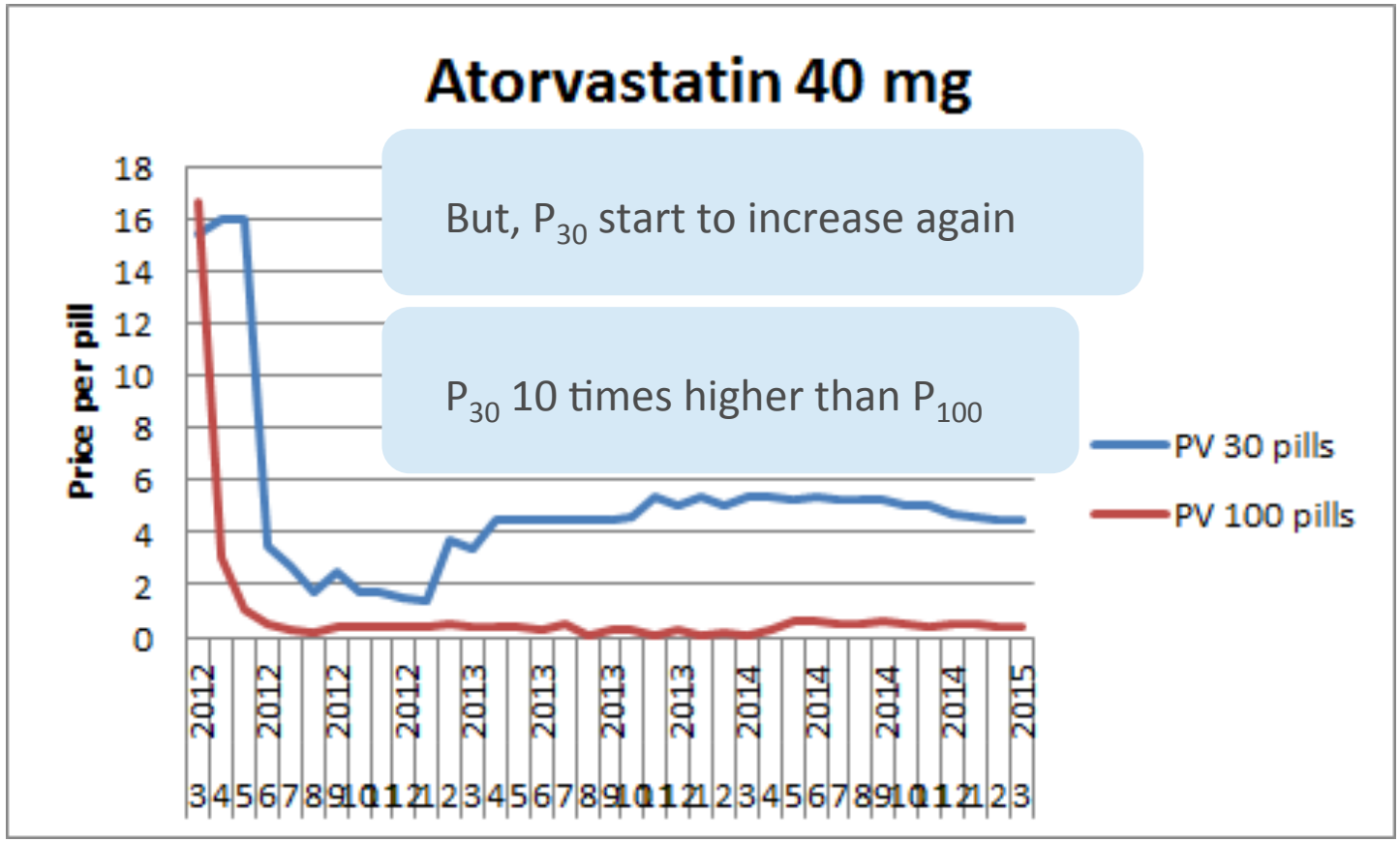
Price of the product of the month



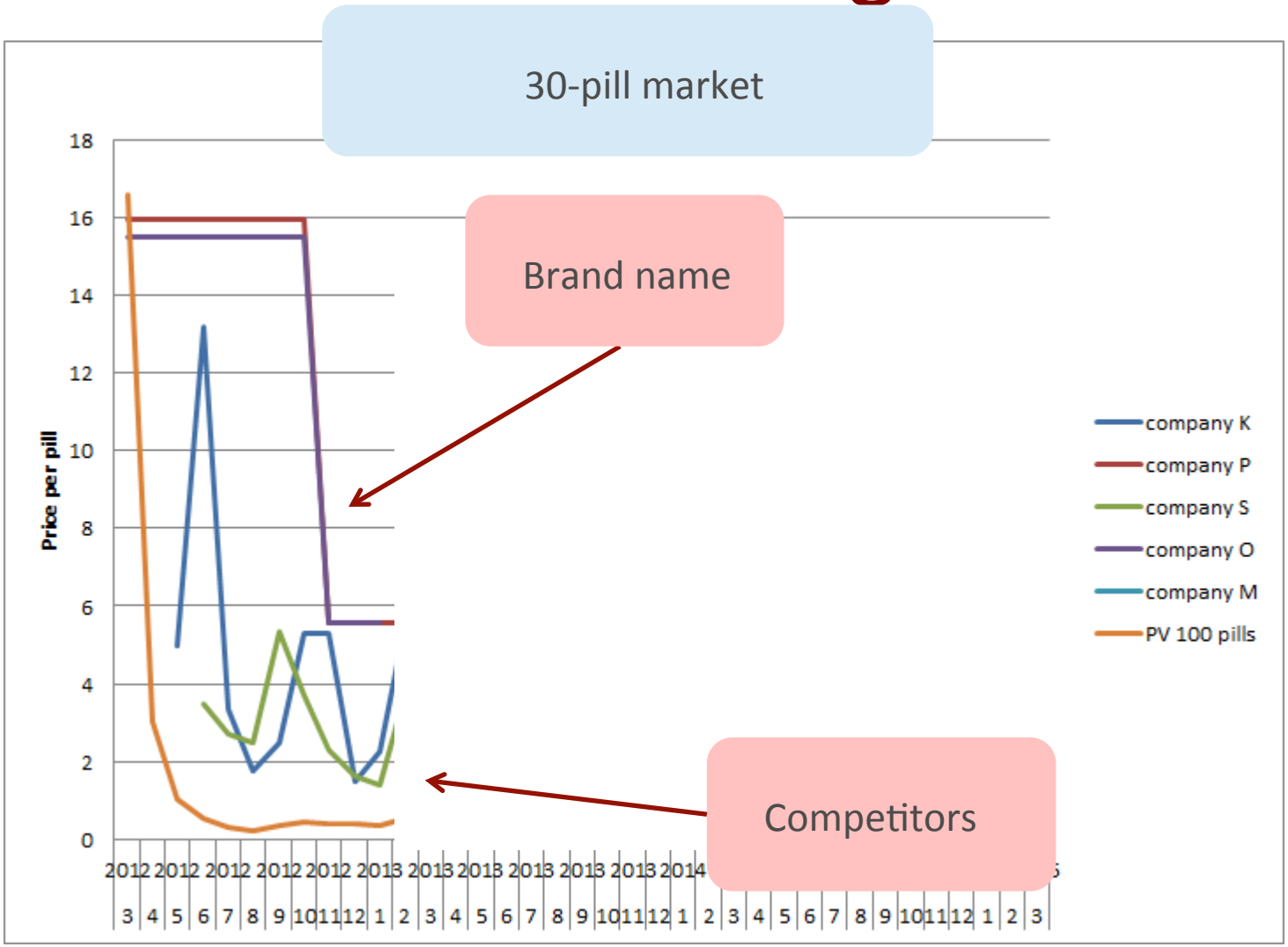
Both P_{30} and P_{100} drop a lot

Generic drugs

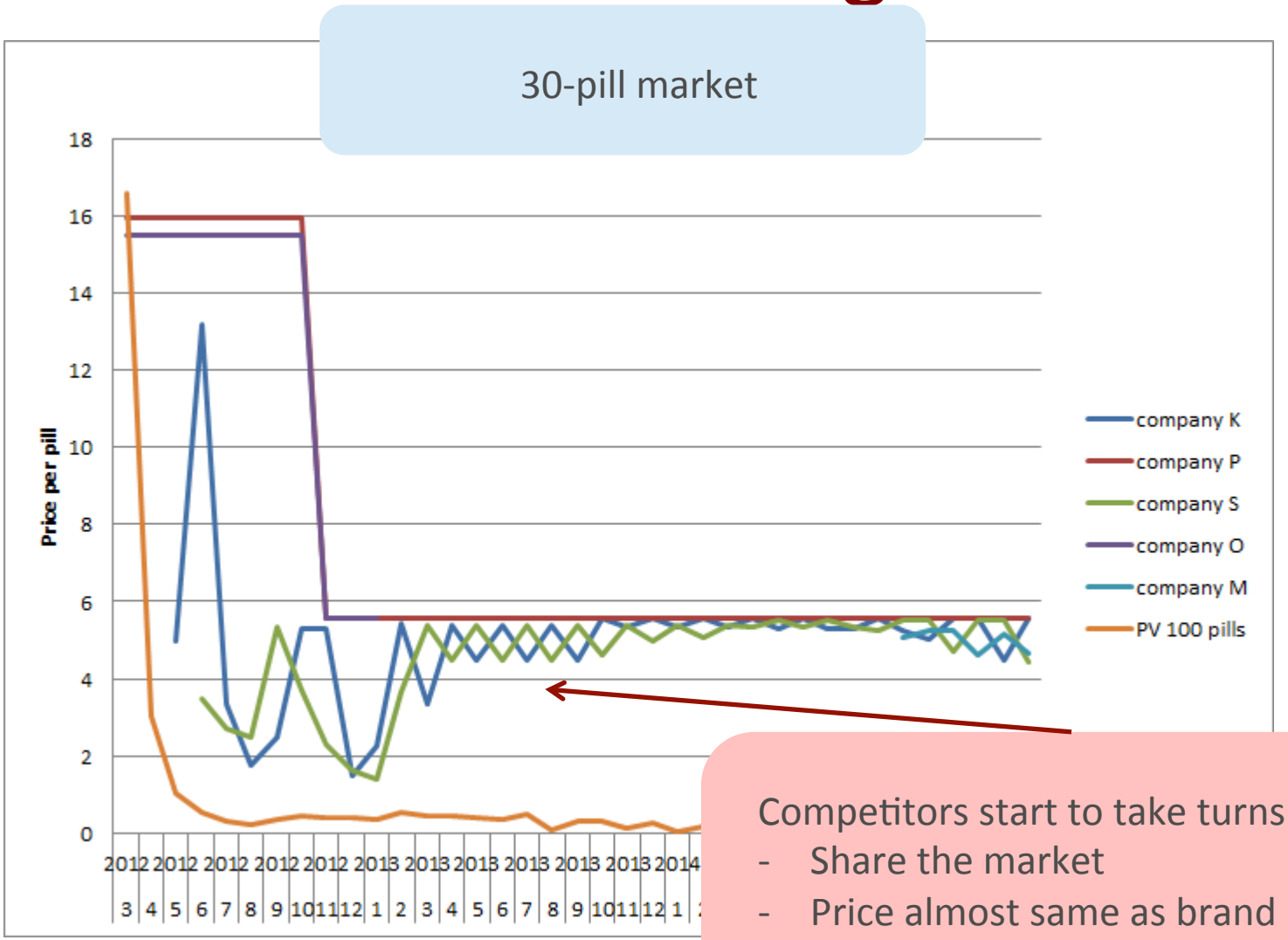
Price of the product of the month



Generic drugs



Generic drugs



Competitors start to take turns

- Share the market
- Price almost same as brand name
- They seem to collaborate !

Cartels

- Q: Collaboration - What do we miss?
  - Markets are long lived
  - Changes the situation dramatically

Agenda

- Issues
  - How can cartels enforce their agreements?
  - What markets are at risk?
  - How can we fight cartels?

First a little bit of game-theory…

“The Folk Theorem”

Folk theorem

- Repeated game theory
  - Model to explain how people can cooperate

Folk theorem

- Recall "prisoners' dilemma"
  - Two players
  - Two strategies: Cooperate and Cheat
  - Payoff matrix:

	Cooperate	Cheat
Cooperate	10, 10	-1, 18
Cheat	18, -1	0, 0

Folk theorem

- Unique Nash equilibrium: both cheat

	Cooperate	Cheat
Cooperate	10, 10	-1, 18
Cheat	18, -1	0, 0

  – In fact: cheat is dominating strategy

Folk theorem

- Now repeat PD game infinitely many times
  - t = 1, 2, 3, …..
  - Payoff = discounted sum of period payoffs
- Definition: <u>Strategy</u>
  - A complete contingency plan
    - Tells you what to do
    - Every day in the future
    - Depending on what has happened previously

Folk theorem

- Define: Trigger strategy
  - Period 1: Cooperate
  - Period t = 2, 3, ….
    - Cooperate, if <u>both</u> have cooperated <u>all</u> previous periods
    - Cheat, otherwise
- Note
  - This is only a definition – a possible way to behave
  - If both follow TS, then cooperation (at every t)
  - Question: when would players behave like this?

Folk theorem

- Need to study
  - If player A (B) wants to to use TS,
  - assuming that B (A) uses TS
  - In other words: is this an equilibrium?

Folk theorem

- Assume: nobody has cheated in the past

Folk theorem

- Assume: nobody has cheated in the past

Follow TS

$$U^{cooperate} = 10 + \delta \cdot 10 + \delta^2 \cdot 10 + \delta^3 \cdot 10 + ... = 10 \cdot \frac{1}{1-\delta} \qquad (\delta < 1)$$

Folk theorem

- Assume: nobody has cheated in the past

Follow TS

$$U^{cooperate} = 10 + \delta \cdot 10 + \delta^2 \cdot 10 + \delta^3 \cdot 10 + ... = 10 \cdot \frac{1}{1-\delta} \qquad (\delta < 1)$$

Cheat

$$U^{cheat} = 18 + \delta \cdot 0 + \delta^2 \cdot 0 + \delta^3 \cdot 0 + ... = 18$$

Folk theorem

- Assume: nobody has cheated in the past

Follow TS

$$U^{cooperate} = 10 + \delta \cdot 10 + \delta^2 \cdot 10 + \delta^3 \cdot 10 + ... = 10 \cdot \frac{1}{1-\delta} \qquad (\delta < 1)$$

Cheat

$$U^{cheat} = 18 + \delta \cdot 0 + \delta^2 \cdot 0 + \delta^3 \cdot 0 + ... = 18$$

No deviation if

$$U^{cooperate} \geq U^{cheat} \Leftrightarrow \qquad 10 \cdot \frac{1}{1-\delta} \geq 18 \Leftrightarrow \qquad \delta \geq \frac{4}{9}$$

Folk theorem

- Folk theorem
  - IF,
    - a game (e.g. prisoners' dilemma) is **repeated** infinitely many times, and
    - the players are **sufficiently patient**,
  - THEN,
    - they can enforce **cooperative** outcomes,
    - simply by threating not to cooperate anymore if somebody cheats.

Folk theorem

- But, multiple equilibria
  - Also the strategy "Always cheat" is a subgame-perfect equilibrium
- Conclusion
  - Folk-theorem shows conditions under which cooperation **might** arise, not that it must arise

How cartels work

How can they enforce their agreements?

How cartels work

- Cut the story short
  - Cartels are very similar to repeated prisoners' dilemma
  - All firms charge high price, but
  - If somebody cheats, they will punish the cheater, perhaps with a price war
- But, this can only happen under certain conditions

What Markets have High Risk of Cartels?

Which Markets?

- Factors facilitating collusion
  - Discount factor (interest rate)
  - **Concentration**
  - Entry barriers
  - Frequency of interaction
  - Transparency
  - Business cycles and fluctuations
  - Firm differences
- How to use the list
  - Identify potentially problematic industries
  - In cases, analyze if allegations plausible

Which Markets?

Concentration

- If a duopoly firm cheats
  - » Gain (first period): $\pi^m/2 = \pi^m - \pi^m/2$
- If a triopoly firm cheats
  - » Gain (first period): $2\pi^m/3 = \pi^m - \pi^m/3$
- Prediction
  - – Low concentration → more tempting to cheat → cartels less stable

Cartel Deterrence

Richard Whish & David Bailey: Competition Law, Seventh Edition, Oxford University Press, 2012.

Article 101 TFEU

1. The following shall be prohibited as incompatible with the internal market: all **agreements** between **undertakings**, decisions by associations of undertakings and **concerted practices** which may **affect trade** between Member States and which have as their **object or effect** the prevention, restriction or distortion of competition within the internal market, and in particular those which:

(a) directly or indirectly fix purchase or selling prices or any other trading conditions;

(b) limit or control production, markets, technical development, or investment;

(c) share markets or sources of supply; …

Article 101 TFEU

2. Any agreements or decisions prohibited pursuant to this Article shall be automatically **void**.

Article 101 TFEU

3. The provisions of paragraph 1 may, however, be declared inapplicable in the case of

[… agreements …]

which **contributes** to improving the production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit, and which does not:

(a) impose on the undertakings concerned restrictions which are not indispensable to the attainment of these objectives;

(b) afford such undertakings the possibility of eliminating competition in respect of a substantial part of the products in question.

“Undertakings”

- Included
  - Private (for-profit) firms
  - Trade associations
  - Cooperatives
  - Football clubs
  - Public authorities (when doing “**economic activities**”)
- Excluded
  - Goods and services provided on the basis of **solidarity**
  - Example: Schools
  - Motivation:
    - Payments according to income
    - Consumption based on “need”

Types of agreements

- Horizontal
  - Price cartels
  - R&D collaboration
- Vertical
  - Resale price maintenance
  - Exclusive territories

Agreements and concerted practices

- Included
  - Contracts
  - Partial agreement during negotiation process
  - Also if only one party reveals its intentions
  - Recommendation by trade association
  - Exchange of information, also about e.g. past prices
- Excluded
  - Tacit collusion = when firms act without contact

Burden of proof

- Commission
  - But there are presumptions that e.g. agreements over prices limit competition
  - Then firms must prove no effect

"*Object* or *Effect* of restricting competition"

- If <u>object</u> of restricting competition
  - Then, commission needs not prove effect
  - Sufficient to prove:
    - *potential* negative impact
    - given the economic context (= market characteristics)
  - Thus
    - Object = theoretical prediction

Examples

- Horizontal
  - Price cartels typically reduce competition
  - Sufficient to prove that firms met and talked about prices
  - Need not show that prices actually higher
- Vertical
  - Minimum resale prices
  - Bans to export to other member states

Counterfactual

- When proving “effect”
  - Necessary to show what would have happened absent the agreement
  - Need economic theory

De Minimis doctrine

- (Potential) effects must be appreciable
  - Effect on competition
  - Effect on trade
- Example
  - Two firms with 5% market shares => probably no effect on competition
  - Except possibly hard-core cartels

Effect on trade between Member States

- Defines boundary between
  - EU law
  - National competition law

Exceptions 101(3)

- 4 requirements
  - Agreement creates “efficiencies”
  - Consumers gain
  - No unnecessary restrictions on competition
  - Unless competition affected “too much”
- Burden of proof
  - Firms
- Example
  - Price cartel – extremely unlikely to be okay
  - Exclusive territories may be okay
  - Block exemptions = classes of agreements that are okay (if market shares low)

Decision making

- EU
  - Commission decides
  - Firms may appeal to courts
- Sweden
  - KKV = “prosecutor”
  - Courts decide

Sanctions

- Fines
  - Up to 10 % of world wide turnover
  - Total yearly fines ≈ € 2-3 billion
- Damages
  - Those who loose may prove harm in court
- Criminal
  - US, UK: Top executives may go to jail for hard core cartels

Importance of economic analysis in case work

- Examples
  - **Object** of restricting competition = use of economic theory
  - **Counterfactual** = use of economic theory
  - Economic **evidence** to support "theory of harm"
  - Article 101(3) = **balance** anticompetitive effects and efficiencies
  - Compute **damages**