



EE 403

Law & Economics

The Economics of Competition Law II

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Definition of relevant market

- The relevant market combines the **product market** and the **geographic market**, defined as follows:
- **a relevant product market** comprises all those products and/or services which are regarded as interchangeable or substitutable by the consumer by reason of the products' characteristics, their prices and their intended use;
- **a relevant geographic market** comprises the area in which the firms concerned are involved in the supply of products or services and in which the conditions of competition are sufficiently homogeneous.

Definition of relevant market

- assessment of **demand-side substitutability** (i.e. of customers)
 - the question is whether customers for the product in question can switch readily to a similar product in response to a small but permanent price increase (between 5 % and 10 %) → SSNIP-test
- assessment of **supply-side substitutability** (i.e. of suppliers).
 - the question is whether other suppliers can readily switch production to the relevant products and sell them on the relevant market.
- Assessment of potential competition : Entry

Hypothetical Monopolist Test (HMT)

- Hypothetical Monopolist Test (HMT) seeks to find the smallest set of products for which a hypothetical monopolist could increase prices profitably.
- A relevant market is a market worth monopolizing.

Small but significant non-transitory increase in price. (SSNIP Test)

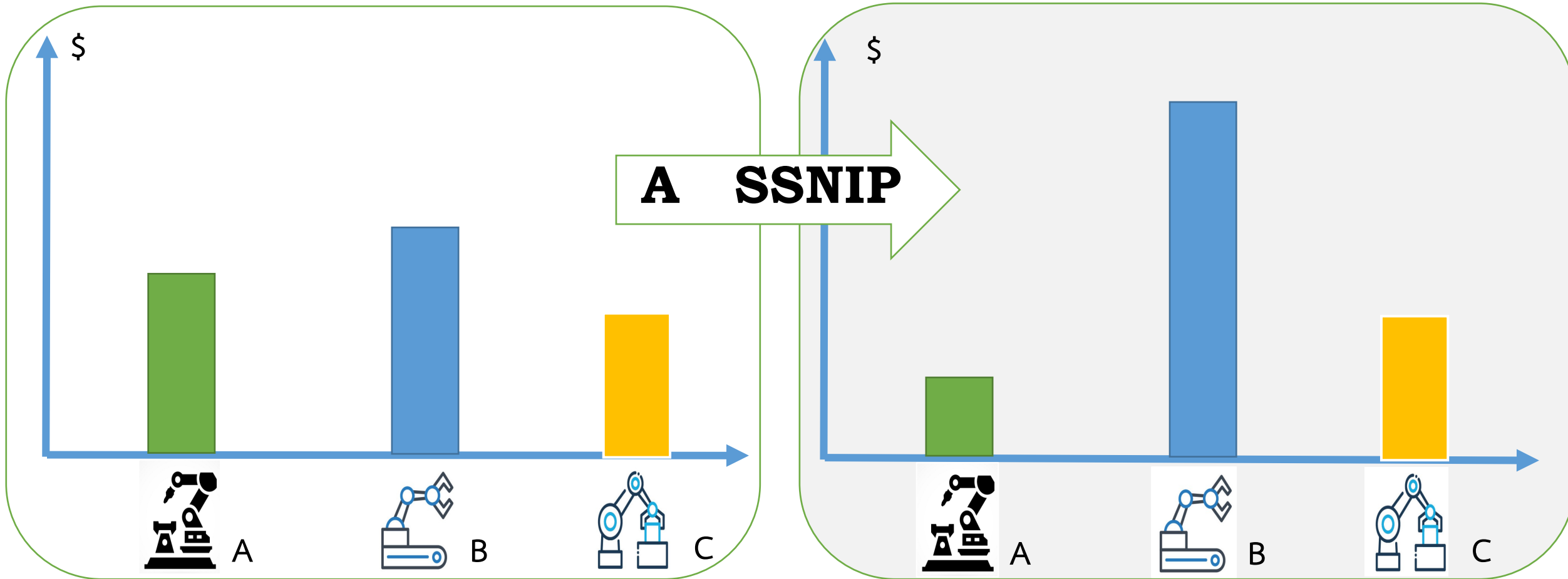
- Suppose that a producer of a hypothetical product (e.g. butter) were to introduce a small but significant non-transitory increase in price.
- Would customers switch their purchases to other producers of butter, or even to producers of another product—margarine, for example— which could serve as a substitute to butter?
- If the answer is yes, this suggests that the producer of butter operates in a market that is wider than just butter—one that comprises not only butter, but also the substitute product, margarine.

SSNIP-Test

- A wider market makes it less likely that a merger of butter suppliers would reduce competition and raise prices.
- The presence of margarine suppliers will competitively constrain the price of butter even after such a merger.

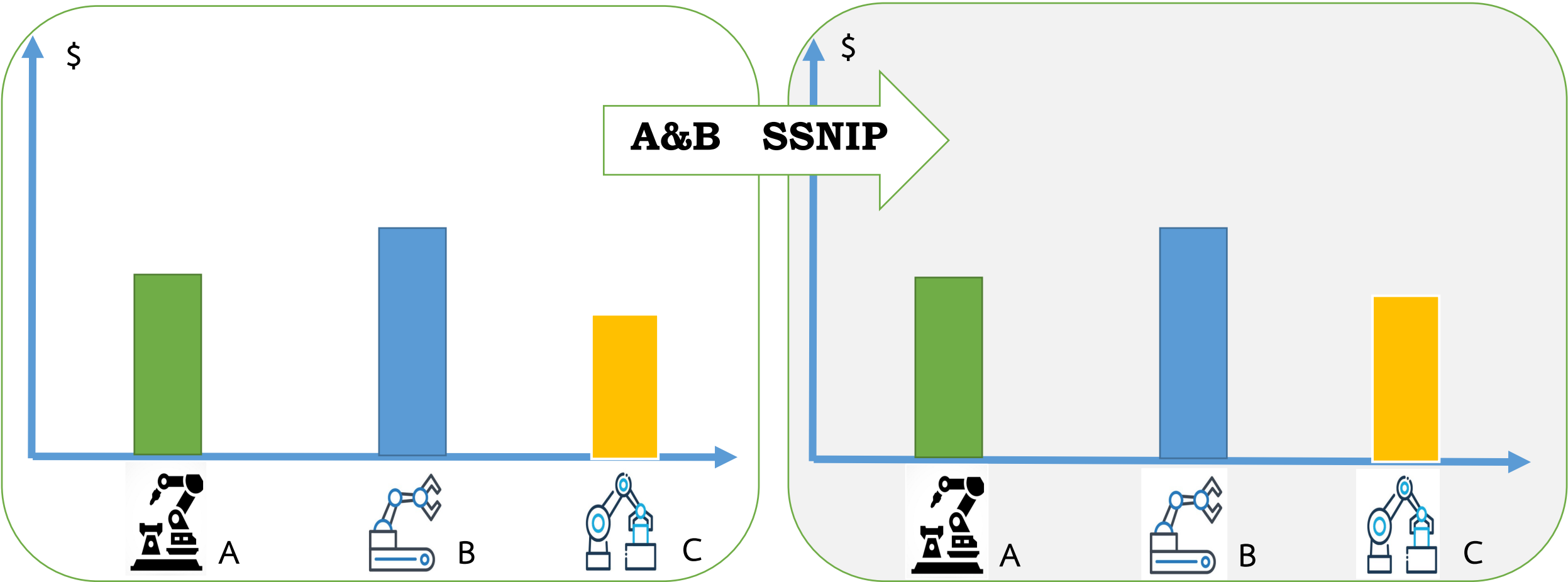


SSNIP



Not profitable in this case → consider market A & B

SSNIP

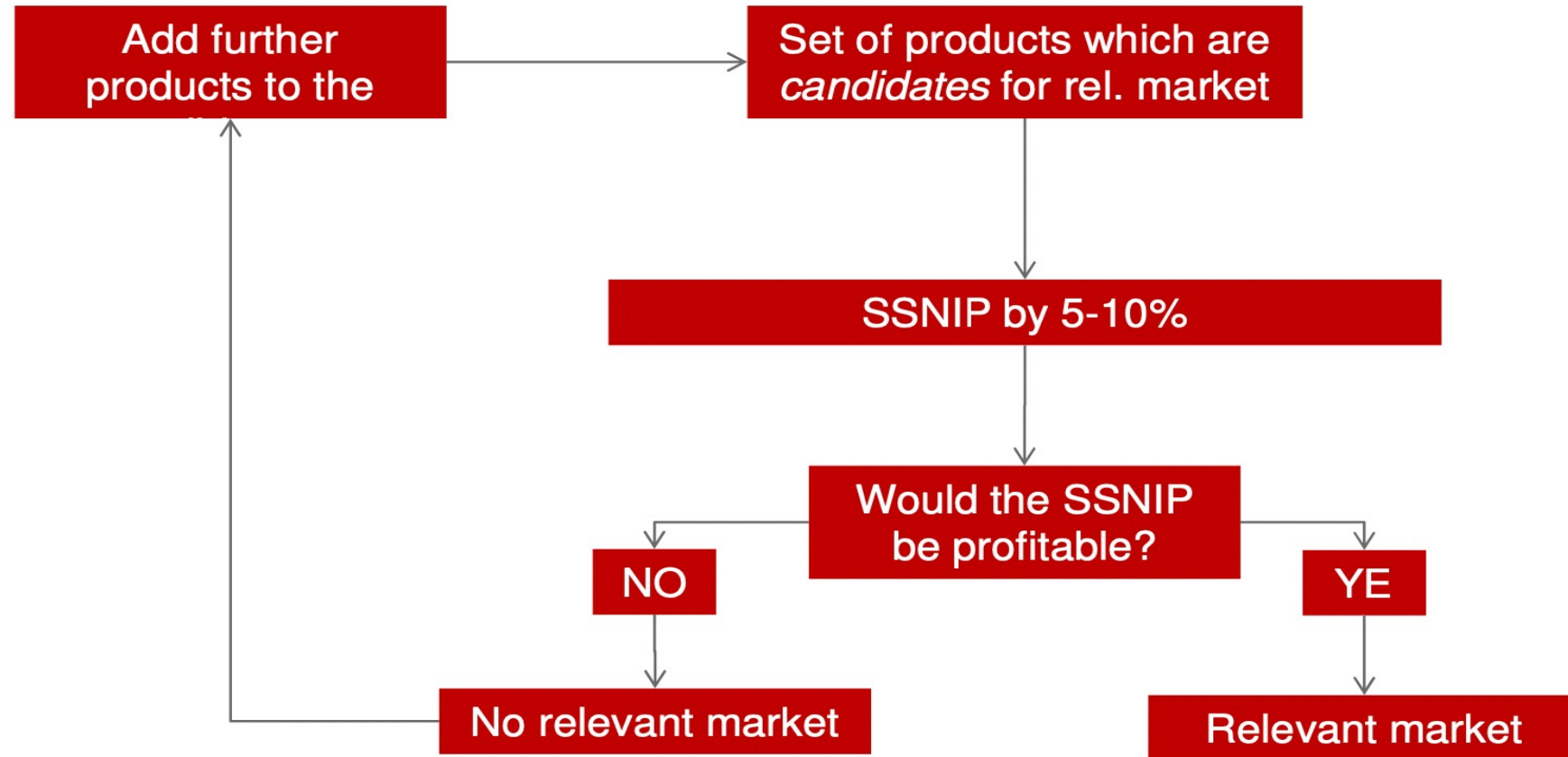


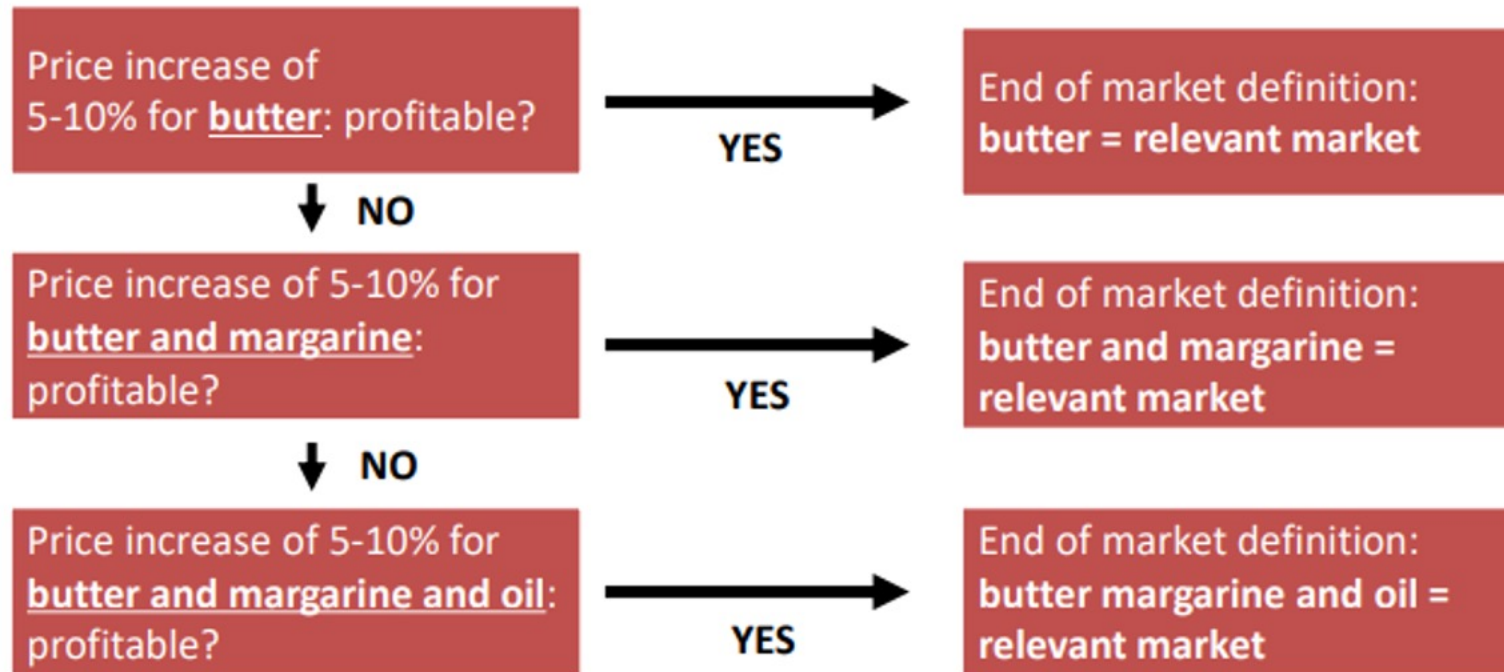
profitable → A&B is relevant market

SSNIP-Test

- The goal of SSNIP test is to identify the smallest relevant market within which hypothetical monopolist or cartel could impose a profitable significant increase in price.
- SSNIP - small but significant non-transitory increase in price (e.g. 5-10 %-test)
- Idea: “A relevant market is a market worth monopolizing”
- Would a hypothetical monopolist be able to profitably increase prices by 5 or 10%?“
- If so: There would be no good alternatives for customers to turn to, price increase would be profitable.
- If not: Customers would switch away from the hyp. Monopolist’s products to other alternatives, making the price increase unprofitable.

SSNIP Test: how is it applied?





- Two companies , both are producing only butter
- Can butter be considered to be the relevant market for the assessment of the merger

Critical Elasticity of Demand

- To answer question could a hypothetical monopolist impose a 5% price increase, need to ask whether such a price increase would be profitable.
- Issue is whether selling a smaller quantity at a higher price would be more profitable than selling a larger quantity at a lower price. This will depend on how sensitive demand is to changes in price, i.e. on the elasticity of demand.
- Critical elasticity of demand (***e***) is the value of elasticity of demand necessary to leave profits unchanged following price increase.

$$\mathbf{e = 1/(m+t)}$$

- ***m*** is the pre merger price cost margin (defined as the gap between price and marginal cost) and ***t*** is the minimum price increase considered significant, i.e. usually 5%

Calculating Critical Elasticity of Demand - Example

- Price Cost Margin $m = 40\%$. Want to see if 5% price increase profitable
- $e = 1/ (.4+.05) = 2.22$
- All that is required to calculate critical elasticity of demand is data on firms' price-cost margins.
- If firm's own elasticity of demand is less than critical elasticity, price increase would be profitable and market is defined.

Critical Loss

- Alternative method for applying SSNIP test when demand elasticities cannot be estimated.
- Critical loss (**y**) defined as the maximum loss in sales resulting from a price increase that would still make the price increase profitable.

$$y = t/(m+t)$$

- **m** is the price cost margin and **t** is the minimum price increase considered significant.
- If likely loss of sales is less than the critical loss, then a 5% price increase would be profitable and the market would be defined.

% Margin	e	y
50	1.82	9.10
45	2.00	10.00
40	2.22	11.10
35	2.50	12.50
30	2.86	14.30
25	3.33	16.70
20	4.00	20.00
15	5.00	25.00
10	6.67	33.30

Calculating Critical Loss

- Again take a price cost margin of 40% and ask if 5% price increase profitable.
- $y = .05/ (.4+.05) = 11.1$
- States that firm could suffer drop in sales volumes of up to 11.1% as a result of 5% price increase and still increase its profits.

Price correlation test

- How price series of different products evolve over time.
- If two products belong to the same market, their prices will tend to move in the same way over time.
- Suppose for instance that a shock increase the price of product A. If product B is in the same market (that is, it is good enough substitute of product A), then its demand will increase, leading to an increase in its price too.

Price correlation test

In the *Nestlé-Perrier* case, the EC found that the correlation coefficients between price of mineral water and price of soft drinks were either very low or negative: in the five years before the investigation started, mineral water prices tended to increase whereas soft drinks prices tended to decrease. This led (correctly) the EC to exclude that soft drinks exercised a competitive constraint on mineral waters. Similarly, in *DuPont/ICI*, low correlation over time between the average prices of nylon fibres and polypropylene fibres suggested that these two products were not in the same market.

Supply substitutability

- Price rise attracts producers that are currently selling some other products
- Producers may possess those skills and assets that make it possible to switch production in a short period of time if price rise occurs.
- Consider a merger between 2 only providers of bus services between city A and city B. [assume that train is not a good substitute because it takes too long] → bus services between A and B is the relevant market.
- There are other bus company operating other routes, says C and D [with spare capacity + not difficult to obtain a license to operate route A and B]
- Market can be defined more widely (say bus services in cities A,B,C,D)

Supply substitutability

In the *Torras/Sarrio* case, the EC found that under demand substitutability alone separate markets should have been defined, each corresponding to a different degree of quality paper (for instance, art books need high quality paper, and low coating paper would not be a good substitute for art publishers). However, paper manufacturers can easily and immediately change the degree of coating in the production, to make paper of a higher or lower quality, so that a wider product market was defined taking into consideration supply substitutability.

Potential competition

- Barriers to entry → less potential competition.

For instance, market for civil air transport services in the EU are usually defined route by route,⁵ say Brussels-Milan, Brussels-Munich, and so on. Supply substitutability cannot be invoked to widen the market in such cases, because most airports are congested and obtaining landing and take-off slots is a lengthy and sometimes impossible process. Likewise, the market for cola drinks cannot be widened by using supply substitutability arguments: although the technology of producing a cola is simple and some firms operating in other markets (say, producers of mineral water, and those of other carbonated drinks) might have the necessary technology (bottling plants and distribution networks), important advertising campaigns are crucial to determine the success in the cola market, and these entail huge fixed sunk costs that make entry difficult and risky. In the *Nestlé-Perrier* case, for instance, the EC found that producers of soft drinks could have in principle started to produce and sell immediately purified tap water. However, for such a product to compete with spring mineral waters, producers should have incurred huge advertising outlays, so that supply substitutability could not be invoked to include soft drinks in the same market as mineral waters.⁶

A problem in non-merger cases: Cellophane Fallacy

- A monopolist may already be charging a monopoly price. If it raises its price further, its customers may switch to alternative products.
- In this situation, the monopolist's "own-price elasticity"—the extent to which consumers switch from its products in response to a price increase—is high.
- If a SSNIP test is applied between the monopolized product and another product, it might suggest a high degree of substitutability, since consumers are already at the point where they will cease to buy from the monopolist.



Cellophane Fallacy

- The test would therefore exaggerate the breadth of the market. This error was committed by the US Supreme Court in *United States vs. E.I. du Pont de Nemours and Co.*
- In this case, Du Pont (a cellophane producer) argued that cellophane was not a separate relevant market since it competed with flexible packaging materials such as aluminum foil, wax paper and polyethylene.
- The problem was that Du Pont, being the sole producer of cellophane, had set prices at the monopoly level, and it was at this level that consumers viewed those other products as substitutes.

Cellophane Fallacy

- Instead, at the competitive level, consumers viewed cellophane as a unique relevant market (a small but significant increase in prices would not have them switching to goods like wax or the others).
- In the case, the US Supreme Court failed to recognize that a high own-price elasticity may mean that a firm is already exercising monopoly power

SSNIP : Dominance vs Merger case

- **SSNIP for Dominance :**
 - consider SSNIP at competitive price
- **SSNIP test for Merger :**
 - consider SSNIP at current price