UNIVERSIDADE CATÓLICA PORTUGUESA
Faculdade de Ciências Económicas e Empresariais
Economics of Business and Markets
M.Sc. in Business Administration

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Group I

1) a) Numerous studies have shown that there is usually a systematic relationship between concentration and price. What is the relationship? Offer two brief explanations for this relationship.
   b) The relationship described in 1a) does not always appear to hold. What factors, besides the number of firms in the markets, might affect margins?

2) The following are the approximate market shares of different brands of soft drinks during the 1980's: Coke: 40%, Pepsi: 30%; 7-Up: 10%; Dr. Pepper: 10%; all other brands: 10%.
   a. Compute the Herfindahl for the soft drink market. Suppose that Pepsi acquired 7-Up. Compute the post-merger Herfindahl. What assumptions did you make?
   b. Federal antitrust agencies would be concerned to see a Herfindahl of the magnitude you computed in a), and might challenge the merger. Pepsi could respond by offering a different market definition. What market definition might they propose? Why would this change the Herfindahl?

Group II

Suppose that in a certain region there is a single breakfast cereals producer. The consumers of this region have preferences that are uniformly distributed along a (0,3) segment, where 0 represents the sweetest type of cereals and 3 represents the healthiest type of cereals. Due to technological restrictions firms can only introduce products at points {0, 1, 2, and 3} of the segment.
The firms in this market have negligible marginal costs, but significant sunk costs of entering the market that amount to 5 monetary units.
Each consumer buys a single unit and incurs in transportation costs that are equal to $(v-x)^2$, where v is the firm's location in terms of its product variety and x is consumer location in terms of its preferences. The consumers' reservation price is 12.

   a) Suppose that firm A is the only producer in this region and is already located in point 1. Determine its optimal price and profits.
   b) Firm B is thinking about entering the market with a new product and firm A is not anticipating firm B's entrance. Which location should firm B choose for its product? Calculate the optimal prices and profits arising from this new situation.
   c) A consultant has informed Firm A about firm B's potential entrance. Firm A quickly developed a plan for the introduction of a new product in point 2 of the segment. What is the purpose of this strategy? Under which conditions will it be successful? Give a careful and clear explanation without explicitly solving the problem.

Group III

"*Aspartame is a low-calorie, high-intensity sweetener. It was discovered (by accident) by a research scientist at G.D. Searle & Co. who was working on an anti-ulcer drug. Use os aspartame in soft drinks was approved by the US Food and Drug Administration in 1983. Searle extended the original patent to 1987 in Europe and 1992 in the US. In 1985 Monsanto acquired Searle, including the aspartame patent, and began selling the soft-drink version under the brand name "Nutrasweet." The product had an enormous market as the sweetener in Diet Coke and Diet Pepsi, in Europe, Asia, and especially the US (approximately 10 times the size of the European market).*

In 1986, Holland Sweetener Company (HSC) began building an aspartame plant in anticipation of the patent's expiration. Analysts estimated that HSC's capacity was about 5% of the world market. When HSC began selling its own version of aspartame in Europe, Monsanto dropped the price of Nutrasweet from $70 to $22-30 per pound. Since HSC had higher cost (production has a steep learning curve), HSC lost money at the new price and Monsanto had substantially lower profits in Europe. When the US patent expired, Coke and Pepsi signed long-term contracts with Monsanto."

Notes: This case was prepared by David Backus and Luís Cabral

a) Why do you think Monsanto started a price war in Europe? How do you define this price strategy?
b) Do you think this was a good strategy?
c) Who benefited from HSC's entry?

Group IV

"*Word processors and spreadsheets are separate computer software products. During the 1990's, software producers shifted from selling word-processors and spreadsheets separately to selling them as a part of a suite...*
...A recent study has found that 43% of home PC users used both programs, 50% used only one, and 7% used neither. Among business PC users, 63% used both programs, while 37% used only one..."

a) Taking into consideration the evidence described in the text, explain why did software makers changed from selling the products separately to selling them as a bundle.

Suppose that XPTO, a notorious software maker, found that its three biggest client's willingness-to-pay for spreadsheets (S) and word processors (WP) is specified by the following table:

Willingness-to-pay	Spreadsheets(S)	Word processors (WP)
A	14	5
B	10	10
C	3	13

b) If XPTO decides to sale the products separately, which prices should it practice?

c) Imagine that XPTO is set to create a bundle that includes a spreadsheet and a word processor. Which price should it practice in a *pure bundling* situation?

d) Determine the set of optimal prices in a *mixed bundling* situation.

Group V

1)   Cement in Belgium is sold at a uniform delivered price throughout the country, that is, the same price is set for each consumer, including transportation costs, regardless of where the costumer is located. The same practice is also found in the sale of plasterboard in the U.K. Are these cases of price discrimination?

2)   Supermarkets frequently issue coupons that entitle consumers to a discount in selected products. Is this a promotional strategy, or simply a form of price discrimination? Empirical evidence suggests that paper towels are significantly more expensive in markets offering coupons than in markets without coupons. Is this consistent with your interpretation?

Group VI

Empirical evidence suggests that the probability of a household switching to a different brand of breakfast cereal is increasing in the advertising intensity of that brand. However, the effect of advertising is significantly lower for households that have previously tried that brand. What does this suggest about the nature of advertising expenditures (persuasion versus information)?