UNIVERSIDADE CATÓLICA PORTUGUESA — FACULDADE DE CIÊNCIAS ECONÓMICAS E EMPRESARIAIS

International Master of Science in Business Economics

Economics of Business and Markets

Problem Set 2

Fátima Barros *To be delivered until December 30*, 2009

Exercise 1

Consider that a new electronic store, MP3-4U, enters the market. It is specialized in selling two products: MP3 players (M) and high quality headphones (H). After consulting a market analyst, the store MP3-4U found out the reservation prices for each type of consumers (in euros):

	M	H
A	150	40
B	130	80
C	110	100
D	50	140

Furthermore, the company knows that 40% of its clients are of the type A, 30% of the type B 20% of the type C and the remaining part of type D. The firm also knows that each consumer is willing to buy at most one MP3 player and one set of headphones.
Knowing that the retail store buys the MP3 players at a constant price of 40€ and the headphones at 30€, compute the profits of the store MP3-4U for each of the following situations (identify in each case the consumers that are going to buy the product(s)):

a) If the store can only apply individual prices to its products.

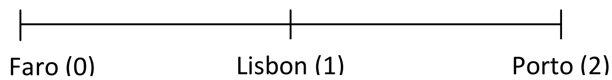
b) If the store starts selling its products in a bundle, with one MP3 player and one set of headphones.

c) If the store applies a mixed bundling price scheme, with individual prices and a price for the bundle.

Exercise 2

Consider the market for smart phones in Portugal. The firms that want to enter the market plan to construct a warehouse from where they distribute the smart phones to the customers. Once all the customers have bought one smart phone, they will keep that device for the rest of their life. For the purpose of the exercise, consider that the cost with the smart phones to the companies is insignificant.

There are three possible equidistant locations for the warehouses of firms operating in this sector, namely Faro, Lisbon and Porto. The Portuguese market for this product has N customers uniformly distributed along the range [0, 2].



These customers decide to buy from the warehouse that minimizes their total cost, that is, the price charged by the firm plus transportation costs. Those transportation costs are equal to $(v - x)^2$, where "v" is the location of the firm and "x" the location of the customer. The consumers will only buy the product if that total cost is not bigger than their reservation price, equal to 10 €.

Imagine that the company Alca-Tell wants to enter the market, and that the firm expects to be the only operating firm.

a) Where should Alca-Tell build its warehouse? What will be its profit, if building the warehouse is costless to Alca-Tell?

Imagine that Alca-Tell has chosen the best location but that it was surprised by the entrance of a new competitor (Sam-Sing) that decides to build one warehouse.

b) Where should Sam-Sing build its warehouse? Compute the profits for both firms, assuming that building the warehouse is costless to Sam-Sing.

Before both firms are allowed to sell the smart phones in Portugal, Sam-Sing is studying the opportunity to open a second warehouse in the remaining location, in order to gain a bigger market share.

c) Compute the profits in this new case. How would Sam-Sing´s market share change with this decision? Is it a good decision to open the second warehouse?

d) If, before entering the market, Alca-Tell had known that Sam-Sing could enter with one or two warehouses, where would be the equilibrium? Compute the profits in this case and explain the reason for this result.

Exercise 3

A. "France Telecom SA has lost only a mere 3% of its home market in the first year since the industry was open to competition (1998). (…) France Telecom was probably the incumbent that did the best job at preparing for the arrival of competitors. Already in 1997, they decreased prices by 40%. Later, when entry actually took place, France Telecom made an effort to protect its best costumers, often matching the new entrants' lower prices.

France Telecom’s strategy really desmotivated a lot of competitors.”

a) Identify and explain France Telecom strategies.

b) Are those strategies always credible? Why?

B. *The ReaLemon brand, made by Borden, Inc., dominated the market for many years. When a rival firm, Golden Crown, entered the market with its own lemon juice product it found itself at a real disadvantage relative to ReaLemon, which had advertised heavily during the previous ten years. Even though Golden Crown’s product was chemically identical, Golden Crown had to sell at a 15 to 25 percent discount relative to ReaLemon’s price. When it did this, substantial price competition broke out between the two firms. As a result, ReaLemon lowered its price. In turn, this forced Golden Crown to reduce its price even further in order to maintain the relative discount necessary for Golden Crown to win any significant market share. After a few further rounds of such price cuts, Golden Crown found that it could barely break even. Were it not for the decision of the courts, Golden Crown would have been forced out altogether. Yet even with Golden Crown in the market, the degree of concentration remained quite high.*

a) Explain carefully the rationale for the Golden Crown’s strategy.

b) How can you explain the high degree of concentration in the market?

<u>Exercise 4</u>

1. It has been estimated that McDonalds’s advertising-to-sales ratio is 0.222. Assume McDonald’s can expect an advertising elasticity of demand of 0.20. Using the Dorfman-Steiner model, what does its behaviour imply about the value of McDonald’s elasticity of demand? What do you advise McDonald’s to do? Why?

2. Do you think that advertising is a barrier to entry? Explain your answer and give some examples that sustain your opinion. Find at least one example against that does not sustain your argument.

<u>Exercise 5</u>

1. In an industry with no cost advantage for incumbent firms, would limit pricing become more or less viable as economies of scale become more significant? Explain, using one or more graphs.

2. The Federal Aviation Administration (FAA) sets safety standards for commercial airlines in the United States. Would you expect the most profitable carriers, such as Southwest and Jet Blue, to fight the FAA’a attempts to require costly additional safety features on commercial aircraft? Explain your reasoning.

3. Identify three markets in which product proliferation appears to be important. Would you categorize concentration in these markets as low, moderate or high? What does this suggest about the effect of product proliferation?