

EXAM

03 May 2001

Time limitation: 4 h

THE ECONOMICS OF STRATEGY

Rune Stenbacka

Answer (in Swedish or English) all the four questions below !

1. (a) Define briefly the following concepts: (1) Lerner-index, (2) network externalities, (3) excess inertia, (4) excess momentum, (5) critical mass of a network, (6) credible strategic commitment, (7) Stackelberg competition, (8) predatory pricing, (9) vertical merger, (10) horizontal merger. (10 p)

(b) Are mergers which increase the degree of concentration within an industry always welfare-reducing? Motivate your answer carefully. In case your answer is negative you should specify plausible conditions under which a concentration-increasing merger could be welfare-enhancing. (5 p)

2. (a) Define and characterize briefly research joint ventures. How does European competition law view research joint ventures and why ? (5 p)

(b) Present and discuss extensively the arguments for as well as against privatization. (Your answer should in particular highlight how the tradeoff between internal efficiency and allocative efficiency is important when evaluating the consequences of a privatization. It is good if you are able to also exemplify your answer.) (10 p)

3. (a) What is the relationship between the number of firms and market performance in the context of an oligopoly engaged in static (one-period) Bertrand competition? (3 p)

(b) Assume now that the Bertrand oligopolists interact repeatedly over a time horizon of infinite length. Will repeated competition of such a character change the outcome of Bertrand competition? Explain and pay particular attention to whether the time horizon is finite or infinite. (4 p)

(c) Consider an n firm homogeneous-good oligopoly with constant marginal cost, the same for all firms. Let δ^* be the minimum value of the discount factor such that it is possible to sustain monopoly prices in a collusive agreement. Show that δ^* is decreasing as a function of n . Interpret the result. (8 p)

(cont !)

4. Consider a market for a popular software *DOORS*. There are 100 support-oriented (type-O) consumers, and 200 support-independent (type-I) consumers, with utility functions given by

$$U^O = \begin{cases} 3q - p & \text{buys the software} \\ q & \text{pirates (steals) the software} \\ 0 & \text{does not use this software} \end{cases}$$

and

$$U^I = \begin{cases} q - p & \text{buys the software} \\ q & \text{pirates (steals) the software} \\ 0 & \text{does not use this software} \end{cases}$$

where q denotes the number of users of this software (which includes the number of buyers and the number of pirates, if piracy takes place). Suppose that the software is costless to produce and costless to protect. Also assume that *DOORS* provides support only to those consumers who buy the software.

(a) Suppose that *DOORS* is not protected, so piracy is an option for every consumer. Calculate the software seller's profit-maximizing price (p). Prove your answer. (5 p)

(b) Suppose that *DOORS* is protected, so that piracy is impossible. Calculate the software seller's profit-maximizing price. Prove your answer. (5 p)

(c) Suppose that the producer of *DOORS* has the option to protect or not to protect the software. Which option yields higher profit? Prove your answer and explain intuitively your result. (5 p)