

# Adv. PSE I: Tutorial Questions for Chapter 8

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## 11 Competition of Competition Rules (Ch. 8)

### a) Oligopoly Concepts

- i) Briefly describe the setup of a Cournot Oligopoly.
- ii) Briefly describe the setup of a Stackelberg Oligopoly.

### b) Systems Competition Without Credible Commitments

- i) The “model on one page” for chapter 8.1 is a very simple Cournot model. Extend it to incorporate multiple countries and calculate the aggregate quantity.  
*Hint: The answer to this question is the first “model on one page” for chapter 8.2.*
- ii) Why is aggregate quantity such an important measure in this context?
- iii) We find that the aggregate quantity is smaller in the case of many countries than in the case of a single large country. Why?
- iv) Would it be beneficial for a single country to abandon its antitrust laws in this model?

### c) Systems Competition with Credible Commitments

One of the countries gets the opportunity to abandon its antitrust laws. It can help its firms to form a cartel and commit to a quantity decision before the others can react. As a consequence, this country becomes a Stackelberg leader. Firms in the remaining countries become followers and have to take the leader’s quantity decision as given.

*Hint: The answers to the following questions can be found on the second “model on one page” for chapter 8.2.*

- i) Which quantity will the followers choose?
- ii) Which quantity will the leader choose?
- iii) Is it desirable to become the leader from the point of view of the country that has the opportunity to do so?
- iv) Is the Stackelberg situation preferable to the Cournot Oligopoly in terms of overall welfare?

### d) Deregulation Race

You discussed Hans-Werner Sinn’s deregulation race in class. There, countries get the opportunity to become leaders one after another. All countries (except the last one) abandon their antitrust laws and form cartels.

*Hint: No additional calculations are necessary. The results obtained above provide sufficient material to answer the remaining questions.*

- i) Is the outcome of such a race preferable to the Cournot Oligopoly in terms of overall welfare?
- ii) We assumed that companies can only form cartels with other firms from their own country. Is this assumption important? Why?

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