Adv. PSE I: Tutorial 07

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January 30, 2013

13   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 dismantle its antitrust law in this model?

c) Systems Competition with Credible Commitments

One of the countries gets the opportunity to dismantle its antitrust laws. It can help its firms to form a cartel and commit to a quantity decision before the others can react. The 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) dismantle 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) What assumption did we make to arrive at the answers to the previous two questions?

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