OTTO-VON-GUERICKE-UNIVERSITÄT MAGDEBURG

Faculty of Economics and Management

Economics of Business and Law

Prof. Dr. rer. pol. Roland Kirstein
Vilfredo-Pareto-Building (22/D-003)
Universitätsplatz 2, 39106 Magdeburg
Phone +49-391-67-18729, fax -11764
http://www.ww.uni-magdeburg.de/bizecon
roland.kirstein@ovgu.de

Law and Economics (2847)

Prof. Dr. Roland Kirstein / Dipl.-Kfm. Sidi Koné
Final Exam, Summer Term 2008

Below you will find four problems; each of them is worth up to 40 points. Please answer three of them. If you answer more than three, then the three first answers in your working sheets will be graded (so make sure to clearly cancel out an answer you do not want to be graded). The usage of pocket calculators, lecture notes, textbooks, or handwritten material is neither necessary nor permitted.

Do not give answers on this exercise sheet; feel free to use this sheet for your notes (they will be disregarded during the grading). Please leave a margin for comments. Undecipherable scribbling cannot be graded. Use the terminology and the mathematical models presented during lecture and tutorial; make clear how you derive your results.

Problem 1 (40 points)

A guest ("A") in a small restaurant feels heavily harassed by the permanent smoking of his neighbor ("B"). B enjoys a "smoking utility" of $U_B(c) = 12c - \frac{1}{2}c^2$ while inflicting a "smoking disutility" of $D_A(c) = 2c$ upon A (let c denote the number of cigarettes consumed by B). Assume zero transaction costs.

a) How many cigarettes will be consumed by B if no smoking ban exists and A abstains from complaining? **(4 points)**

b) Determine the socially optimal number of consumed cigarettes. **(4 points)**

c) Illustrate the described situation in a diagram and depict the utility levels of A and B. Derive the utility levels of A and B also algebraically. **(8 points)**

d) Would a smoking prohibition (inalienability rule) increase overall welfare? **(6 points)**

e) What can A do about the situation (according to the Coase Theorem) and how will the result look like? What are the implications for welfare? **(6 points)**

f) Assume a convention that only allows smoking in restaurants if the neighbors agree. Assume further that A and B are the only guests and that increasing the physical distance between A and B is not possible due to the small size of the restaurant. What could the result now look like? **(4 points)**

g) Explain the efficiency result of the Coase Theorem on the basis of our results under e) and f). **(8 points)**

— See over leaf —

Problem 2 (40 points)

a) Explain the concept of primary, secondary, and tertiary costs. **(13 points)**
b) Use examples from the area of tort law to show that the attempt to minimize the three cost types may lead to conflicts between
  i.   primary and secondary cost **(9 points)**
  ii. primary and tertiary cost **(9 points)**
  iii. secondary and tertiary cost **(9 points)**

Problem 3 (40 points)

Consider a potential offender and a potential victim. Both can choose between acting carefully or not. Thus, four possible constellations emerge:

- A (no one is acting carefully),
- B (only the victim acts carefully),
- C (only the offender acts carefully), and
- D (both are acting carefully).

The costs of care amount to 3 for the victim and 4 for the offender. The probability of damage depends on the actual care-constellation:

Constellation	A	B	C	D
Probability of damage	20%	16%	14%	5%

A realized damage causes costs amounting to 100. Derive the equilibrium outcomes (in pure and mixed strategies) and their efficiency implications in case of

a) no liability, **(4 points)**
b) strict liability of the offender, **(4 points)**
c) 50:50 split of the damage costs between both parties, **(8 points)**
d) a negligence rule that relieves the offender in case that he acted carefully, **(6 points)**
e) strict liability with a defense of contributory negligence, **(6 points)**
f) a negligence rule that relieves the offender if no one acted carefully. **(12 points)**

Problem 4 (40 points)

a) Show, using a quantitative model with risk-neutral players, that "resale royalties" may lead to counter-intentional consequences. **(20 points)**
b) Would the introduction of risk-aversion on the part of the artists justify such legislation? **(5 points)**
c) Explain why legislative projects sometimes implement counter-intentional consequences. **(10 points)**
d) Who benefits from the introduction of resale royalties, and why? **(5 points)**