



Stockholm  
University

Department of Economics

**Course name:** Law and Economics  
**Course code:** EC 2105  
**Type of exam:** RETAKE  
**Examiner:** Lars Vahtrik  
**Number of credits:** 7,5 credits  
**Date of exam:** Saturday 11 April 2015  
**Examination time:** 3 hours [9:00-12:00]

**Write your identification number on each paper and cover sheet (the number stated in the upper right hand corner on your exam cover).**

**Use one cover sheet per question.** Explain notions/concepts and symbols. If you think that a question is vaguely formulated, specify the conditions used for solving it. Only legible exams will be marked. Question 4 is a credit question. If you have handed in assignments during the course you may choose to answer this question anyway if you aim at a higher score. Note that in this case the score on the exam will be counted regardless of your score on the assignments!

**No aids are allowed.**

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The exam consists of 4 questions. Each question is worth 25 points, 100 points in total. For the grade E 45 points are required, for D 50 points, C 60 points, B 75 points and A 90 points.

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Your results will be made available on your "My Studies" account ([www.mitt.su.se](http://www.mitt.su.se)) on Thursday 30 April at the latest.

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**Good luck!**

## Question 1

Consider the company BIKES that is one of several companies on a perfectly competitive market where bikes are produced. The production of bikes imposes external cost on the city where the factory is situated. BIKES does not take into consideration the externality in the production, thus the resulting production is inefficiently high. Assume that there are two production technologies that BIKES can choose between; one is old and gives rise to high externalities and the other is new and gives rise to lower external costs. When using the old technology BIKES profit is \$1,000 per year. If the new technology is used the profit the first year is \$500 since there is a cost involved with installing the new technology. After the first year the yearly profit is \$1,100.

- a) Draw a graph where you indicate the marginal private costs line (MPC) and the two marginal social cost lines (MSC) representing the two technologies. Draw the price line and indicate the quantity produced if BIKES maximize profit and does not internalize the external cost. **(5p)**
- b) Assume that the city goes to court to have damages awarded in order to make BIKES internalize the externality. The court can either award temporary or permanent damages. The court has calculated the value of past and future damage to be \$4,000. Recall that permanent damages are a lump-sum payment, no further payment is necessary. The temporary damages will amount to \$1,000 if the old technology is used and \$800 if the new technology is used. Consider the hypothetical situation where the city, if temporary damages are awarded, will sue for additional temporary damages every year in four years (in total five years). What will BIKES total payoff for the five years (profit – damages) be, assuming that
- permanent damages are awarded
  - temporary damages are awarded,
- under the two technologies? In this specific case, should the court award temporary or permanent damages if the aim is to create incentives for adopting the new technology? Why? **(10p)**
- c) Discuss problems and benefits with both temporary and permanent damages. What types of costs do they impose? Discuss in what situations the two types of damages are efficient? **(5p)**
- d) If the externality imposed by BIKES was private instead of public, what type of remedy would be the most efficient? Why? **(5p)**

## Question 2

Consider Hart and More's example with the chef, the skipper and the tycoon. Explain the setup in the example and discuss the consequences of different allocations of ownership of the yacht for the incentives to make relation specific investments that increase the value of the cruise. **(25 p)**

### Question 3

- a) Intellectual property rights has for many reasons been necessary to protect to ensure that investments are made in research of new inventions. It could, however, be discussed if the society and available technology has changed with the effect that the current laws concerning copyright and patent right no longer is efficient. Please discuss from an economic perspective (i) problems with the current system and (ii) benefits and drawbacks of possible changes that could be made. **(15p)**
- b) Please discuss how insurance may affect the precautions a potential injurer take to avoid damages. Explain how the insurance companies try to mitigate these risks. **(10p)**

### Question 4(Credit Question)

- a) An amoral but rational accountant is contemplating to embezzle money from his employer. A punishment in the form of a fine that is larger than the embezzled amount of money may not be enough to deter him from comitting the crime? Explain why! There may also be counteracting factors that will ensure that the same fine is more than sufficient to deter the accountant from comitting the crime. Name one and explain how it alters the accountants problem. **(6p)**
- b) Assume that our accountant is undeterred by the punishment. How will he decide how much money to embezzle? State the maximization problem and the marginal condition for the optimal amount of embezzlement and draw a graph illustrating the solution. **(7p)**
- c) The solution to the accountant's embezzling problem highlights two policy instruments available to deter crime. Discuss how to use these instruments efficiently. Use your result to explain why the optimal punishment usually includes the maximum fine. **(6p)**
- d) Explain why it may not be a good idea to let the punishment for embezzlement be the maximum punishment possible (fine and imprisonment) even if this is required to deter all embezzlement in society. **(6p)**