Albert–Ludwigs–Universität Freiburg WS 2008/2009
Department of Economics
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Second Exam in the Course:

Labor Economics

09 April 2009

You have to provide answers to <u>three</u> of the following four problems. If you answer all problems only the answers to the first three problems 1, 2, and 3 will count.

Your answers have to be in English. If you are a Diploma student, your answers can be in English or in German. In case, please mark at the beginning of the exam, that you are a 'DIPLOMA' student.

The maximum number of credits is 90. To pass the exam you have to obtain 45 credits.

The exam lasts 90 minutes.

You may use a non–programmable calculator.

Please write your name and your immatriculation number ("Matrikelnummer") on top of all answer sheets.

Use a new answer sheet for each problem.

The exam consists of **4** pages including the cover page. Please check the completeness.

This is a closed–book exam.

Good Luck!

Please provide answers to <u>three</u> of the following four problems. On the answer sheets, mark clearly which problems you solve.

1.) Describe and illustrate graphically the static labor supply model. Distinguish between participation and hours worked. What is the reservation wage? How does participation react to an increase in the market wage? What is the response of hours worked? For the latter, distinguish between the substitution and the income effect assuming that leisure is not an inferior good. When you allow for proportional income taxes, which parts of the answer change regarding the response of the worker to an increase of the gross wage?

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[30 credits]

2.) Describe and motivate training as an economic investment problem. Define and explain the concepts of general and specific human capital. What are Gary Becker's predictions regarding the question as to who pays for training? Illustrate the argument using a simple graphical analysis. How does the institution of firm based apprenticeships in Germany fit into these theoretical concepts? What role can a delayed–compensation contract play?
Remark: A delayed–compensation contract involves an upward–sloping age–earnings profile.

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[30 credits]

3.) Consider labor demand.

   a) Suppose the hourly wage is \$10 and the price of each unit of capital is \$25. The price of output is constant at \$50 per unit. The production function is $q = E^{1/2}K^{1/2}$ and the marginal product of labor is $MP_E = 0.5(K/E)^{1/2}$. If the current capital stock is fixed at 1,600 units, how much labor should the firm employ in the short run? How múch profit will the firm make? [12 credits]

   b) Spitz (2006) distinguishes five groups of tasks that workers perform at the workplace: non-routine analytic, non-routine interactive, routine cognitive, routine manual and non-routine manual. What is the relation between increased computer use at work and these tasks? Explain this using examples. The skill groups differentiated in this paper are: low skilled, medium skilled, and high skilled workers. Which task groups are especially important for the work of which skill group? How do these findings relate to the hypothesis of skill biased technological change? [18 credits]

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[30 credits]

4.) Consider incentive pay and unemployment.

a) The employees of firm A create web pages for small companies. The employees of firm B sell insurances, visiting potential clients at home. Discuss which firm is more likely to pay its employees at a piece rate and which at a time rate. [14 credits]
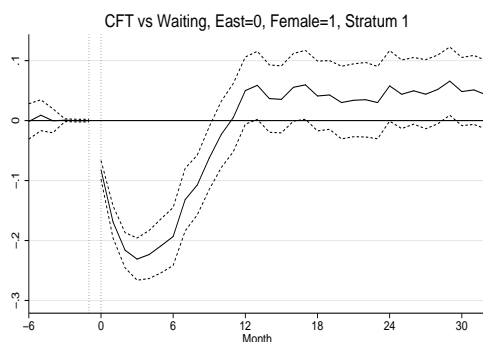
b) Training for the unemployed is an important part of active labor market policies in Germany. What is the objective of these programs? For women in West Germany, figure 1 shows the effect of participating in a program called classroom further training (CFT) instead of not participating in a program on the probability to be employed in each month following the start of the program (month 0). It shows the estimated Average Treatment Effect on the Treated (ATT). The particular program is called Classroom Further Training (CFT). This program is a full time course in class and lasts about 8 months. Interpret the figure. Is there a "lock-in effect" and what does this mean? From which month on does the program have a positive effect on employment? Of which size? Is the program effect significant?

Remark: To be precise, figure 1 shows the effect of participating against "waiting" for women who just became unemployed (stratum 1), but you may ignore these aspects of dynamic program evaluation for your answer. [16 credits]

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[30 credits]

Figure 1: Effect of participating in CFT versus not participating in a program

CFT vs Waiting, East=0, Female=1, Stratum 1

END OF EXAM

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