Written Exam for the M.Sc. in Economics 2010-I

"Behavioral and Experimental Economics"

Final Exam

December 14, 2009

(2 hours, closed book exam)

This exam has 5 questions in total. Answers must be in English.

Good luck.

Question 1: Behavioral economics

a) What is an "anomaly"? Name one example of an "anomaly". (Hint: start by explaining the assumptions of standard economics)

b) Why do "cognitive biases" arise? How have such biases been demonstrated by "first-wave" behavioral economists and psychologists? Why have these demonstrations been criticized by economists?

c) What is the aim of "second wave behavioral economics"? Mention one example of research belonging to the "second wave"

Question 2: Social Preferences

a) Describe the Ultimatum Game (Güth et al., JEBO 1982). What is the subgame-perfect Nash-equilibrium in this game?

b) What are the main stylized facts observed in the Ultimatum Game (UG)

c) Describe the Impunity Game (e.g. Bolton and Zwick GEB 1995)

d) What do the findings from the Dictator game and the Impunity Game suggest for the interpretation of the findings discussed in b)?

Question 3: Cooperation and punishment

a) Describe the standard linear Public Good Game (or, volutary contribution mechanism). (Hint: $\pi_i = c_i + a \Sigma_j g_j = (E_i - g_i) + a \Sigma_j g_j$)

b) What is the standard game theoretic prediction in this game if played once?

c) What constraint do such games impose on a and n?

d) Explain the difference between "partner" and "stranger" matching.

e) Explain how the "strategy method" can be used to elicit cooperation profiles. What are the characteristics of the profile for a free rider and of a conditional cooperator?

f) Describe the "punishment" game by Fehr and Gächter (AER, 2000).

g) What are the standard game-theoretic predictions in Fehr and Gächter (AER, 2000) if the game is played once?

h) What are the main findings in Fehr and Gächter (AER, 2000) with respect to contributions over time and to punishment patterns?

i) Gächter, Herrmann and Thöni (2008, Science) observe substantial variation across countries in the punishment game. How do the authors explain this variation?

Question 4: Guessing game

Consider the standard guessing game with factor $p < 1$. Suppose a share $s < 1$ of the $n > 2$ players is irrational. These players choose a no matter what and a share 1-s is rational (i.e. have rational expectations) and choose a best reply r to what everybody else does.

a) Derive the choices of the rational players in equilibrium as a function of p, s and a

b) Derive the equilibrium average number M^* and decompose the total effect into a direct and the indirect effect of a change in s.

c) Derive the value of μ (the multiplier) in the expression $\partial M^*/\partial s = \mu (a - r)$

d) How does μ depend on the degree of strategic complementarity and the share of irrationals?

e) Calculate (i) the total effect, (ii) the direct effect and (iii) the indirect effect for the values $p = 0.8$, $a = 50$ is s changes from $s_1 = 0.1$, to $s_1 = 0.2$.

Question 5: Labor markets

a) Describe the treatment GEM (stands for gift exchange market) in Fehr, Kirchler, Weichbold and Gächter (JOLE 1998). (Hint: $\pi = (v - w)e$; $U = w - c(e) - 20$; where: $v = 120$)

b) What is the standard game-theoretic prediction in the GEM?

c) How do observations in the GEM compare to the treatment BGE (stands for bilateral gift exchange)? What do the authors conclude from this observation

d) What is the main difference between the GEM and treatment AE in Fehr and Falk (JPE, 1999)?

e) The figure below shows results for treatment AE (with effort choice) in Fehr and Falk (JPE, 1999). What do the dots in the figure show? What does the line show? What is the interpretation of the fact that most dots are below the line? (Hint: refer to gift exchange theory)