Cover page

Department of Economics
Examination paper for SØK2012 Behavioral Economics

Examination date: 06/06/2024

Examination time: from 15:00 to 19:00

Permitted examination support material: C
Mathematical manual:
Knut Sydsæter, Arne Strøm og Peter Berck (2006): Matematisk formelsamling for økonomer, 4utg. Gyldendal akademiske.
Knut Sydsæter, Arne Strøm, og Peter Berck(2005): Economists' mathematical manual, Berlin.
Calculator:

- Casio FX-82CW, Casio FC100 V2, Casio fx-82ES PLUS og Casio fx-82EX
- Citizen SR-270X og Citizen SR-270X College
- Hewlett Packard HP30S

Academic contact during examination: Jacopo Magnani
Phone: 46286027

Academic contact present at the exam location: NO

OTHER INFORMATION

Get an overview of the question set before you start answering the questions.

Read the questions carefully and make your own assumptions. If a question is unclear/vague, make your own assumptions and specify them in your answer. The academic person is only contacted in case of errors or insufficiencies in the question set. Address an invigilator if you suspect errors or insufficiencies. Write down the question in advance.

Hand drawings/tablet*: The questions can be answered directly in Inspera and/or on handwritten sheets or tablet.

***Hand drawings:** At the bottom of the question you will find a seven-digit code. Fill in this code in the top left corner of the sheets you wish to submit. We recommend that you do this during the exam. If you require access to the codes after the examination time ends, click "Show submission".

***Tablet:** Save the file on your computer and upload the file in the file-upload task at the end of the exam.

File upload: 15 minutes are added for file upload. The time is included in the time shown at the top left of the test, and the time is reserved for file upload.

Weighting: all questions have the same weight

Notifications: If there is a need to send a message to the candidates during the exam (e.g. if there is an error in the question set), this will be done by sending a notification in Inspera. A dialogue box will appear. You can re-read the notification by clicking the bell icon in the top right-hand corner of the screen.

Withdrawing from the exam: If you become ill or wish to submit a blank test/withdraw from the exam for another reason, go to the menu in the top right-hand corner and click “Submit blank”. This cannot be undone, even if the test is still open.

Access to your answers: After the exam, you can find your answers in the archive in Inspera. Be aware that it may take a working day until any hand-written material is available in the archive.

1 Exam questions

Fill in your answer here

Format

Words: 0

Maximum marks: 10

2 File Upload

Upload you file here if you have used the tablet

Upload your file here. Maximum one file.

All file types are allowed. Maximum file size is **50 GB**

Select file to upload

Maximum marks: 10

Question 1
Attached

Exam

All 8 questions have equal weight

1. Discuss the endowment effect. Define the concept, give an example, and discuss potential explanations.
2. Consider a risky option that yields a monetary outcome x with probability p and 0 otherwise. What factors determine whether people are risk-averse or risk-seeking when facing such an option, according to prospect theory? How does prospect theory explain the effects of these factors?
3. Discuss the concept of commitment in the context of intertemporal choice. Explain why commitment may be useful to people and give an example.
4. Consider the ultimatum game. There are two players: a proposer (Player 1) and a responder (Player 2). The proposer is given \$10. The proposer offers a division of this money (e.g. \$5 for herself and \$5 for player 2) The responder responds with accept (A) or reject (R). If the responder accepts, both get the proposed amounts. If the responder rejects, neither gets anything.
   (a) What is the sub-game perfect equilibrium of this game? Explain why.
   (b) How do people usually behave in this game? What are possible explanations for observed behavior?
5. Option A gives the following utility stream: 0 at $t = 0$, 6 at $t = 1$ and 36 at $t = 2$. Option B gives the following utility stream: 0 at $t = 0$, 18 at $t = 1$ and 0 at $t = 2$. An individual's intertemporal preferences can be described by the beta-delta model with $\beta = \frac{1}{3}$ and $\delta = \frac{1}{2}$.

   Which option does she prefer at $t = 0$? Which option does she prefer at $t = 1$ (before that period utility is realized)? Show your work and briefly explain your result.
6. A gamble pays 100 with probability $\frac{1}{5}$, 25 with probability $\frac{2}{5}$ and 0 with probability $\frac{2}{5}$. A person has utility $u(x) = \sqrt{x}$. Find the certainty equivalent of the gamble and explain why it is different from the expected value of the gamble.
7. A taxi company was involved in a hit-and-run accident at night. There are 130 taxis in your city, and two taxi companies, the Green and the Blue. There are 120 Green taxis and 10 Blue taxis. A witness identified the cab involved in the accident as Blue. The court tested the reliability of the witness under the same circumstances that existed on the night of the accident and concluded that the witness correctly identified each one of the two colors 75 percent of the time and failed 25 percent of the time.
   (a) If the judge is a Bayesian, what is her belief that the taxi involved in the accident was Blue rather than Green?
   (b) How would the judge's belief be affected if she suffered from base-rate neglect?

8. Consider the following game (payoffs are in dollars):

	L	R
U	\$6, \$4	\$2, \$2
D	\$0, \$1	\$2, \$1

Assume players are envious: a player's utility is $u(x, y) = x - y$, where x is the player's own monetary payoff and y is the monetary payoff of the other player. Find the Nash equilibria in pure strategies if there is any.

Useful formulas

$P(A|B) = \frac{P(A \cap B)}{P(B)} = \frac{P(B|A) \cdot P(A)}{P(B)} = \frac{P(B|A) \cdot P(A)}{P(B|A) \cdot P(A) + P(B|A^C) \cdot P(A^C)}$ where $A^C = A$ does not occur