Izmir University of Economics
Department of Economics
Econ 533: Quantitative Methods and Econometrics
Mid-term Exam 2

This take-home exam is due on Thursday, January 2 at the beginning of class. You MUST answer the questions on your own. Cheating will have serious repercussions.

1. Give an economic interpretation of the Euler equation:

$$u^{'}(c_t) = \beta(1 + r_{t+1})u^{'}(c_{t+1}).$$

   What happens to consumption over time when $\beta = 1 + r_{t+1}$? Elaborate.

2. What is the difference between a stochastic world and a deterministic one? Where does this difference reveal itself in a stochastic model? Explain the sequence of events in a simple stochastic model. Who bears the risk? The households or the firms?

3. Refer to the Book Applied Intertemporal Optimization by Klaus Walde to answer this question. Elaborate equation (8.1.8). What is this equation called? Explain the difference between this equation and the one in Question 1 by giving reference to ex-post and ex-ante behaviour. Which behaviour is optimal?

4. Refer to the Book Applied Intertemporal Optimization by Klaus Walde to solve Exercise 5 on page 42 at the end of Chapter 2.

5. Refer to the Book Applied Intertemporal Optimization by Klaus Walde to solve Exercise 10 on pages 73-74 at the end of Chapter 3.