

Advanced Macroeconomics

2014/15 Winter term

Klaus Wälde (lecture) and Jean Roch Donsimoni (tutorial)
www.macro.economics.uni-mainz.de

Tutorial 3: Optimal Consumption

November 25, 2014

1. Compute the Keynes-Ramsey rule for a simple individual's savings problem, using the following intertemporal utility function and budget constraint.

$$U = \int_t^{\infty} e^{-\rho(\tau-t)} u[c(\tau)] d\tau$$

Subject to:

$$\dot{a}(\tau) = r(\tau)a(\tau) + w(\tau) - c(\tau)$$

2. What is the Keynes-Ramsey rule for the following individual, exhibiting the constant risk aversion?.

$$u(c) = \frac{c^{1-\sigma} - 1}{1-\sigma}$$