Macroeconomics II Homework 2

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(a)

An Arrow-Debreu equilibrium (ADE) is given by a price vector $\{p_t\}_{t=0}^{\infty}$ and allocations $\{c_t^1, c_t^2\}_{t=0}^{\infty}$ such that

1. Given prices $\{p_t\}_{t=0}^{\infty}$, for $i = 1, 2$, $\{c_t^i\}_{t=0}^{\infty}$ solve the consumer's problem

$$\max_{\{c_t^i\}_{t=0}^{\infty}} \sum_{t=0}^{\infty} \beta^t \log c_t^i \quad \text{s.t.} \quad \sum_{t=0}^{\infty} p_t c_t^i \leq \sum_{t=0}^{\infty} p_t e_t^i \quad \text{and} \quad c_t^i \geq 0 \quad (\forall t).$$

2. Goods markets clear

$$c_t^1 + c_t^2 = e_t^1 + e_t^2 \quad (\forall t).$$

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2.1 (a)

2.2 (b)

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