

Problem Set 11
Econ 702, Spring 2005

Problem 1 *In the model with one-side lack of commitment, the value of contract to grandmother is $P(V)$ if she promised V to her granddaughter.*

$$P(V) = \max_{\{c_s, \omega_s\}_{s=1}^S} \sum_s \Pi_s [(y_s - c_s) + \beta P(\omega_s)]$$

subject to

$$\begin{aligned} u(c_s) + \beta \omega_s &\geq u(y_s) + \beta V^A \quad \forall s \\ \sum_s \Pi_s [u(c_s) + \beta \omega_s] &\geq V \end{aligned}$$

Show that there exists a V such that $P(V) > 0$, i.e. there exist gains from trade.

Problem 2 *In model with one-side lack of commitment, when granddaughter gets the best shock y_S , the best autarky value conditional on current shock is*

$$V_{AM} = u(y_S) + \beta V_A$$

Define \bar{c}_S such that

$$V_{AM} = \frac{u(\bar{c}_S)}{1 - \beta}$$

Show $\bar{c}_S < y_S$.

Problem 3 *Consider the two sided lack of commitment problem. Show that both participation constraints cannot bind simultaneously.*