

Appendix

Proof of Proposition 1. Because $u(\cdot)$ is continuous, twice differentiable, and concave and the budget constraint is linear in c and c^* , there exists continuous functions $c(p, e, \bar{p}, \theta, y)$ and $c^*(p, e, \bar{p}, \theta, y)$ that satisfy (2), (5) and (6). Furthermore,

$$\frac{\partial c(\cdot)}{\partial p} < 0, \quad \frac{\partial c(\cdot)}{\partial [E(p^*)e]} > 0 \quad \text{and} \quad \frac{\partial c^*(\cdot)}{\partial p} > 0, \quad \frac{\partial c^*(\cdot)}{\partial [E(p^*)e]} < 0 .$$

If $g(c/c^*) \equiv c(\cdot)/c^*(\cdot)$, then

$$\frac{\partial g(\cdot)}{\partial [E(p^*)e]} = \frac{\left[\frac{\partial c(\cdot)}{\partial [E(p^*)e]} c^*(\cdot) \right] - \left[\frac{\partial c^*(\cdot)}{\partial [E(p^*)e]} c(\cdot) \right]}{\left[\frac{\partial c^*(\cdot)}{\partial [E(p^*)e]} \right]^2} > 0 .$$

Thus, $g(\cdot)$ is increasing in $E(p^*)e$ as maintained in part a.

Differentiating $g(\cdot)$ with respect to p yields

$$\frac{\partial g(\cdot)}{\partial p} = \frac{\left[\frac{\partial c(\cdot)}{\partial p} c^*(\cdot) \right] - \left[\frac{\partial c^*(\cdot)}{\partial p} c(\cdot) \right]}{\left[\frac{\partial c^*(\cdot)}{\partial p} \right]^2} < 0 .$$

Therefore, $g(\cdot)$ is decreasing in p as maintained in part b.

Proof of Proposition 2. Uncertainty influences $c(\cdot)$ and $c^*(\cdot)$ by its effects on $E(p^*)$.

Specifically,

$$\frac{\partial c(\cdot)}{\partial j} = \frac{\partial c(\cdot)}{\partial E(p^*)} \frac{\partial E(p^*)}{\partial \theta} \frac{\partial \theta}{\partial j} .$$

and