This appendix contains the proof of Proposition 1 in "Expropriation Dynamics" (*American Economic Review: Papers & Proceedings* 2009).

Proposition 1. *There exists a $\beta^* \in (0,1)$ such that for all $\beta \geq \beta^*$ the full commitment solution is sustainable, and it is not sustainable for $\beta \in [0, \beta^*)$. In particular, if $\beta \geq \beta^*$, then restricting the government to a balanced budget achieves the first best level of capital, $k^\star$, and constant consumption.*

Proof. Note that the full commitment and the deviation allocations are independent of the value of β. Let c^* denote consumption under commitment: $c^* = \mathbb{E}[F(z, k^*) - (r + \delta)k^*]$. Define the difference in the present discounted value of utility under the commitment allocation and autarky as $\Delta(\beta)$:

$$\Delta(\beta) \equiv \mathbb{E} \sum_{s=0}^{\infty} \beta^{s+1} [u(c^*) - u(F(z, 0))] = \tag{1}$$
$$\frac{\beta(u(c^*) - \mathbb{E}u(F(z, 0)))}{1 - \beta}.$$

Note that $u(c^*) > \mathbb{E}u(F(z, 0))$, as $k^* > 0$ and c^* is the optimal plan. Therefore, the value in the numerator is strictly positive. This implies that $\Delta(\beta)$ is strictly increasing in β, is equal to zero when $\beta = 0$, and approaches infinity as β approaches one. We can write the participation constraints at the commitment allocation as

$$u(c^*) - u(F(z, k^*)) \geq -\Delta(\beta). \tag{2}$$

As the right-hand side of (2) is strictly decreasing in β, and the left-hand side does not vary with β, if this constraint is satisfied at β, then it is satisfied at any $\beta' > \beta$. When $\beta = 0$, the right-hand side of (2) is zero and the constraint will not hold for some z. When $\beta \to 1$, the right-hand side of (2) approaches minus infinity, implying there is a $\beta^* < 1$ for which all the participation constraints are satisfied at the full commitment allocation for $\beta \geq \beta^*$, and at least one constraint is violated at the full commitment allocation for $\beta < \beta^*$. $\square$