1 Balanced Growth in $\boldsymbol{\mathfrak{c}}$ and $\mathrm{cov}(c, \mathbf{p})$

Section 4.2 demonstrates some propositions under the assumption that, when an economy satisfies the GIC, there will be constant growth factors $\Omega_{\boldsymbol{\mathfrak{c}}}$ and Ω_{cov} respectively for $\boldsymbol{\mathfrak{c}}$ (the average value of the consumption ratio) and $\mathrm{cov}(c, \mathbf{p})$. In the case of a Szeidl-invariant economy, the main text shows that these are $\Omega_{\boldsymbol{\mathfrak{c}}} = 1$ and $\Omega_{\mathrm{cov}} = \boldsymbol{\Phi}$. If the economy is Harmenberg- but not Szeidl-invariant, no proof is offered that these growth factors will be constant.

1.1 $\log c$ and $\log\left(\mathrm{cov}(c, \mathbf{p})\right)$ Grow Linearly

Figures 1 and 2 plot the results of simulations of an economy that satisfies Harmenberg- but not Szeidl-invariance with a population of 4 million agents over the last 1000 periods (of a 2000 period simulation). The first figure shows that $\log \boldsymbol{\mathfrak{c}}$ increases apparently linearly. The second figure shows that $\log(-\mathrm{cov}(c, \mathbf{p}))$ also increases apparently linearly. (These results are produced by the notebook `ApndxBalancedGrowthcNrmAndCov.ipynb`).
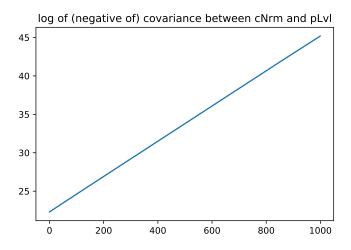
Figure 1 log $\mathbf{c}$ Appears to Grow Linearly

Figure 2 log $(-\operatorname{cov}(c, \mathbf{p}))$ Appears to Grow Linearly