Here we show that the steady-state distribution of permanent income in a small open economy like the one described above.

If $p = log\boldsymbol{p}$ is the log of permanent income and $\gamma = \log \Gamma$ is the growth rate, the process is:

$$\log \boldsymbol{p}_{t+1} = \gamma + \boldsymbol{p}_t + \psi_{t+1} \tag{1}$$

where $\psi \sim \mathcal{N}($

0.1 The Steady-State Distribution of Permanent Income