respect to the opportunity cost at the steady state.[9] We see that the reduction in asset holdings comes from two negative shocks to the agents' net worth. First, the lost output Δ directly reduces net worth. Second, the agents experience capital losses on their previous asset holdings because of the decrease in the asset price $\hat{q}_t$. Importantly, the latter effect is scaled up by the factor $R/(R-1) > 1$ since the agents are leveraged. Finally, the overall effect of the reduction in net worth is dampened by the factor $\xi/(1+\xi)$ since the opportunity cost decreases as assets are reallocated to the unproductive agents. In all following periods $t+1, t+2, \dots$ we have

$$\hat{K}_{t+s} = \frac{\xi}{1+\xi} \hat{K}_{t+s-1}, \tag{16}$$

which shows that the persistence of the initial reduction in asset holdings carrying over into reduced asset holdings in the following periods.

Next, the percentage change in asset price $\hat{q}_t$ for given percentage changes in asset holdings $\hat{K}_t, \hat{K}_{t+1}, \dots$ can be derived by log-linearizing (14), the expression of the current asset price as the discounted future marginal products:

$$\hat{q}_t = \frac{1}{\xi} \frac{R-1}{R} \sum_{s=0}^{\infty} \frac{1}{R^s} \hat{K}_{t+s} \tag{17}$$

This expression shows how all future changes in asset holdings feed back into the change of today's asset price.

Combining the expressions (15)–(17) we can solve for the percentage changes $\hat{K}_t, \hat{q}_t$ as a function of the shock size Δ:

$$\begin{aligned} \hat{K}_t &= -\left(1 + \frac{1}{(\xi+1)(R-1)}\right) \Delta \\ \hat{q}_t &= -\frac{1}{\xi} \Delta \end{aligned}$$

We see that in terms of asset holdings, the shock Δ is amplified by a factor greater than one and that this amplification is especially strong for a low elasticity ξ and a low interest rate R. In terms of the asset price, the shock Δ implies a percentage change of the same order of magnitude and again the effect is stronger for a low elasticity ξ.

To distinguish between the static and dynamic multiplier effects, we can decompose

[9] That is $\frac{1}{\xi} = \left. \frac{d \log M(K)}{d \log K} \right|_{K=K^*} = \frac{M'(K^*)K^*}{M(K^*)}$.