

Steady State and Calibration for the US

- In US data, we observe an investment-ratio of 25% and a capital-to-output ratio of 10.4, a capital share of 0.33, and 0.55% output per capita growth g_x and 0.27% population growth
- The LOM for capital in steady state implies:

$$i = (g_x + n + ng_x + \delta) k$$

- This implies:

$$\begin{aligned} \delta &= \frac{i}{k} - g_x - n - ng_x = \frac{i/y}{k/y} - g_x - n - ng_x \\ &= \frac{0.25}{10.4} - 0.55\% - 0.27\% - 0.55\% \times 0.27\% = 1.58\% \end{aligned}$$

- The Euler equation implies for $\sigma = 1$:

$$\begin{aligned} 1 &= \beta \left(\frac{\alpha \frac{y}{k} + (1 - \delta)}{(1 + g_x)(1 + n)} \right) \\ \Rightarrow \beta &= \frac{(1 + 0.55\%)(1 + 0.27\%)}{0.33/10.4 + (1 - 1.58\%)} = 0.9924 \end{aligned}$$