2. Investment Mandates and the Wealth Distribution

Let $\mathbb{1}_i(n)$ be an indicator function that is equal to one if asset n is in investor i's investment universe (i.e., $n \in \mathcal{N}_i$). We can trivially rewrite equation (10) for any asset as

$$\frac{w_i(n)}{w_i(0)} = \begin{cases} \mathbb{1}_i(n) \exp\left\{\beta_{0,i}\mathrm{me}(n) + \sum_{k=1}^{K-1} \beta_{k,i} x_k(n) + \beta_{K,i}\right\} \epsilon_i(n) & \text{if } n \in \mathcal{N}_i \\ \mathbb{1}_i(n) = 0 & \text{if } n \notin \mathcal{N}_i. \end{cases}$$

This notation emphasizes that an investor does not hold an asset for two possible reasons. The first reason is that the investor is not allowed to hold the asset because it is not in its investment universe (i.e., $\mathbb{1}_i(n) = 0$). For example, an index fund cannot hold assets that are outside the index. The second reason is that the investor chooses not to hold an asset even though it could (i.e., $\epsilon_i(n) = 0$). For example, an index fund may choose not to hold an asset in the index that is perceived to be overvalued. Thus, $\mathbb{1}_i(n)$ is exogenous under the maintained assumption that the investment universe is exogenous, while $\epsilon_i(n)$ is endogenous through the portfolio choice problem.