Characteristics-based demand easily captures an index fund. If $\beta_{0,i,t} = 1$, $\beta_{k,i,t} = 0$ for $k = 1, \ldots, K-1$, and $\epsilon_{i,t}(n) = 1$ for all assets $n \in \mathcal{N}_{i,t}$, equation (11) simplifies to

$$w_{i,t}(n) = \frac{\mathrm{ME}_t(n)}{\exp\{-\beta_{K,i,t}\} + \sum_{m \in \mathcal{N}_{i,t}} \mathrm{ME}_t(m)}. \tag{13}$$

This investor is an index fund whose portfolio weights are proportional to market equity, and the intercept $\beta_{K,i,t}$ determines the weight on the outside asset (e.g., cash).