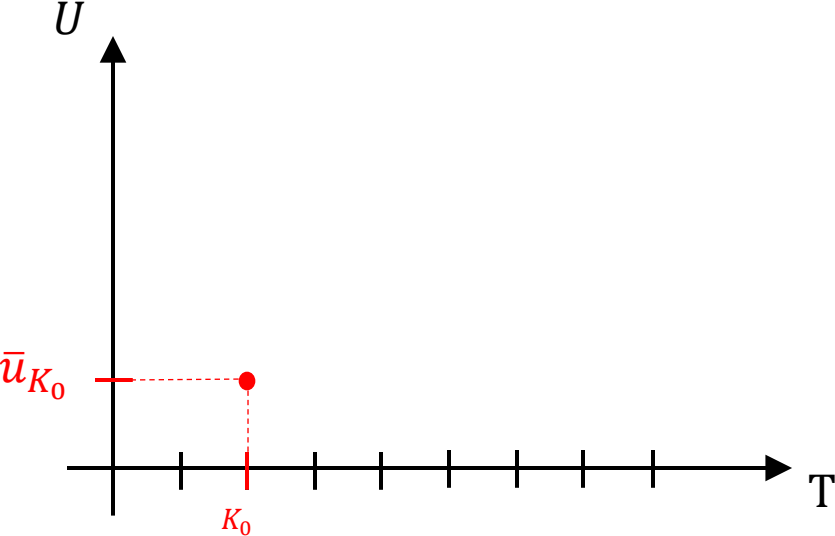


$$u_{[K_0, K[}(\cdot)\colon \mathsf{T} \rightarrow U$$

$u_{[K_0, K[}(\cdot) \colon \mathsf{T} \rightarrow U$

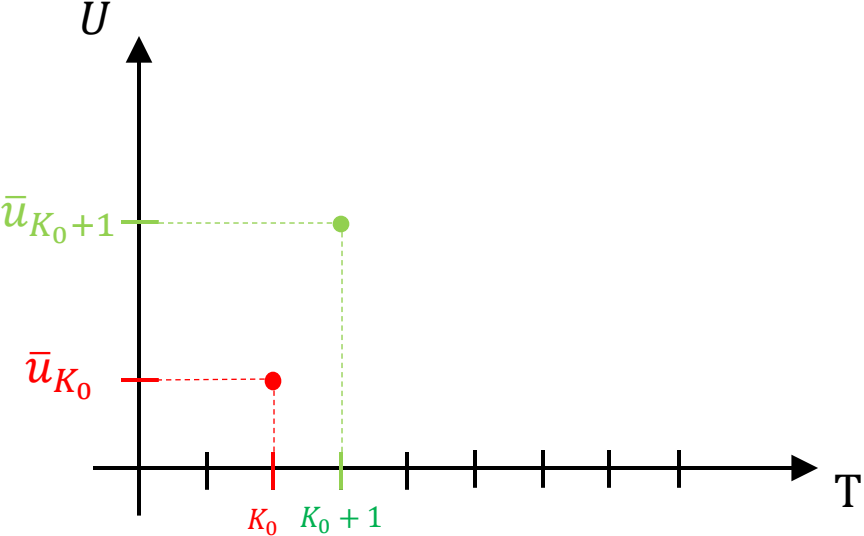
$K_0 \rightarrow u_{[K_0, K[}(K_0) = \bar{u}_{K_0}$



$$u_{[K_0, K[}(\cdot) \colon \mathsf{T} \rightarrow U$$

$$K_0 \rightarrow u_{[K_0, K[}(K_0) = \textcolor{red}{\bar{u}_{K_0}}$$

$$K_0 + 1 \rightarrow u_{[K_0, K[}(K_0 + 1) = \textcolor{green}{\bar{u}_{K_0+1}}$$

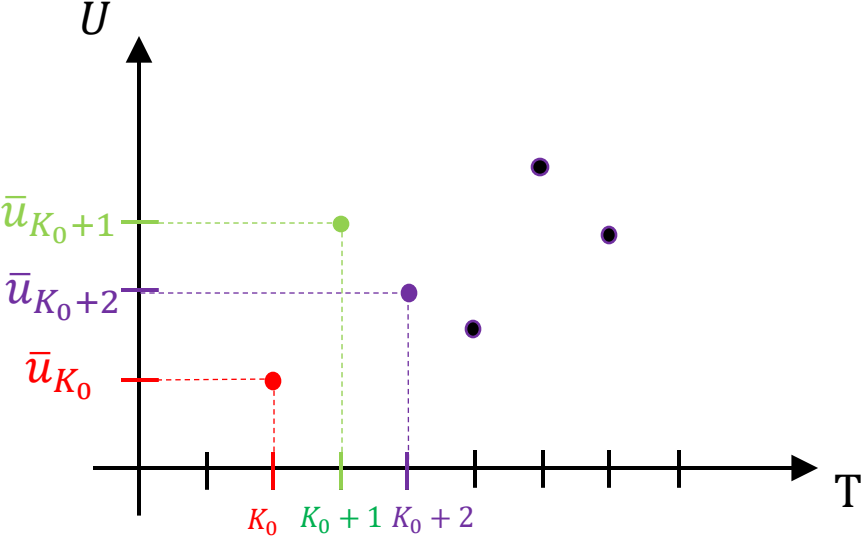


$$u_{[K_0, K[}(\cdot) \colon \mathsf{T} \rightarrow U$$

$$K_0 \rightarrow u_{[K_0, K[}(K_0) = \textcolor{red}{\bar{u}}_{K_0}$$

$$K_0 + 1 \rightarrow u_{[K_0, K[}(K_0 + 1) = \textcolor{green}{\bar{u}}_{K_0 + 1}$$

⋮



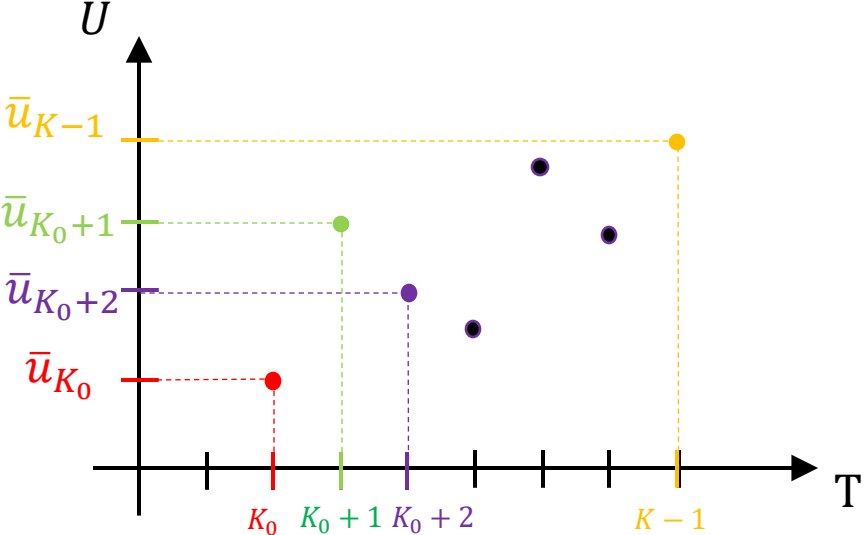
$$u_{[K_0,K[}(\cdot)\colon \mathsf{T} \rightarrow U$$

$$K_0 \rightarrow u_{[K_0,K[}(K_0) = \textcolor{red}{\bar{u}}_{K_0}$$

$$K_0 + 1 \rightarrow u_{[K_0,K[}(K_0 + 1) = \textcolor{green}{\bar{u}}_{K_0+1}$$

$$\vdots$$

$$K - 1 \rightarrow u_{[K_0,K[}(K - 1) = \textcolor{brown}{\bar{u}}_{K-1}$$



$$u_{[K_0,K[}(\cdot)\colon \mathsf{T} \rightarrow U$$

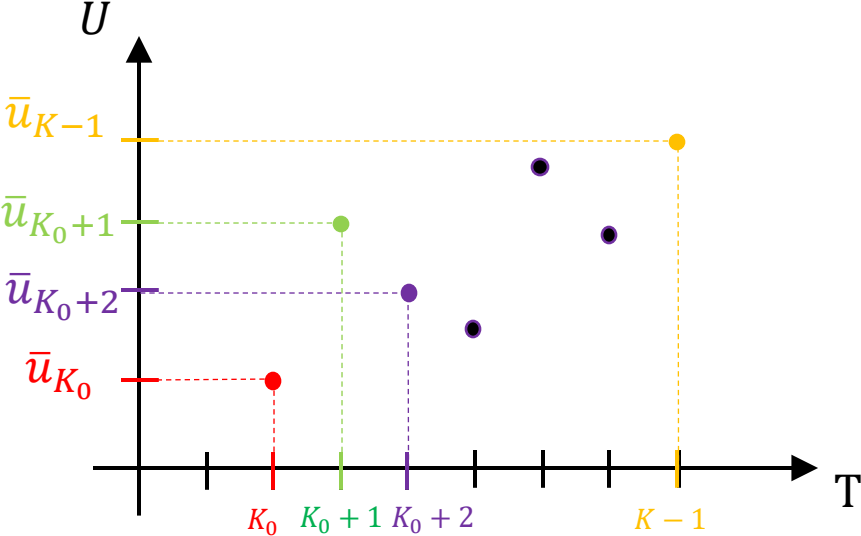
$$K_0 \rightarrow u_{[K_0,K[}(K_0) = \textcolor{red}{\bar{u}}_{K_0}$$

$$K_0 + 1 \rightarrow u_{[K_0,K[}(K_0 + 1) = \textcolor{green}{\bar{u}}_{K_0+1}$$

\vdots

$$K - 1 \rightarrow u_{[K_0,K[}(K - 1) = \textcolor{orange}{\bar{u}}_{K-1}$$

$$u_{[K_0,K[}(\cdot) = \sum_{j=K_0}^{K-1} u_j(\cdot)$$



$$u_{[K_0,K[}(\cdot)\colon \mathsf{T} \rightarrow U$$

$$K_0 \rightarrow u_{[K_0,K[}(K_0) = \bar{u}_{K_0}$$

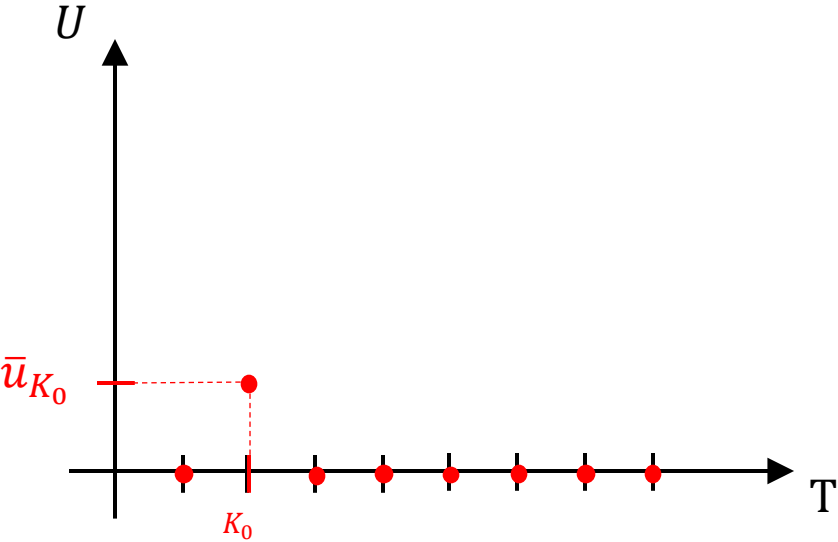
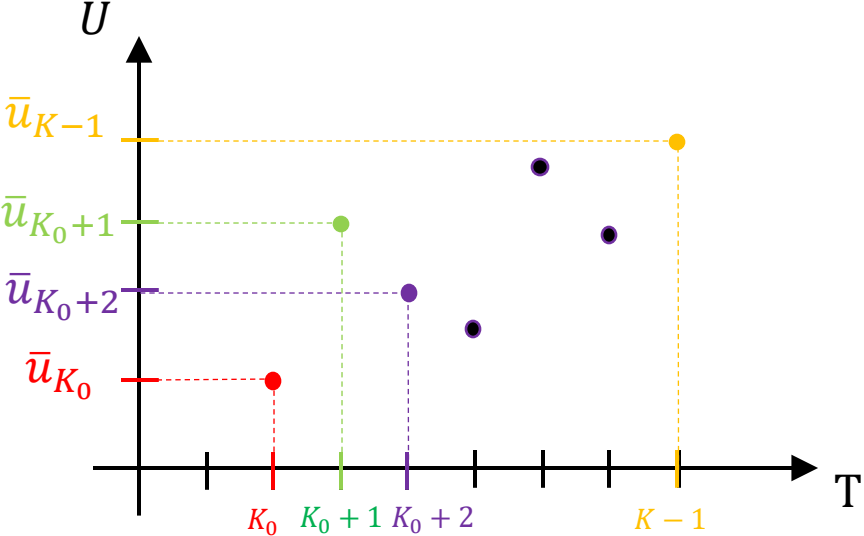
$$K_0 + 1 \rightarrow u_{[K_0,K[}(K_0 + 1) = \bar{u}_{K_0+1}$$

⋮

$$K - 1 \rightarrow u_{[K_0,K[}(K - 1) = \bar{u}_{K-1}$$

$$u_{[K_0,K[}(\cdot) = \sum_{j=K_0}^{K-1} u_j(\cdot)$$

$$u_{K_0}(k) = \begin{cases} \bar{u}_{K_0} & \text{se } k = K_0 \\ 0 & \text{altrimenti} \end{cases}$$



$$u_{[K_0,K[}(\cdot)\colon \mathsf{T} \rightarrow U$$

$$K_0 \rightarrow u_{[K_0,K[}(K_0) = \textcolor{red}{\bar{u}_{K_0}}$$

$$K_0 + 1 \rightarrow u_{[K_0,K[}(K_0 + 1) = \textcolor{green}{\bar{u}_{K_0+1}}$$

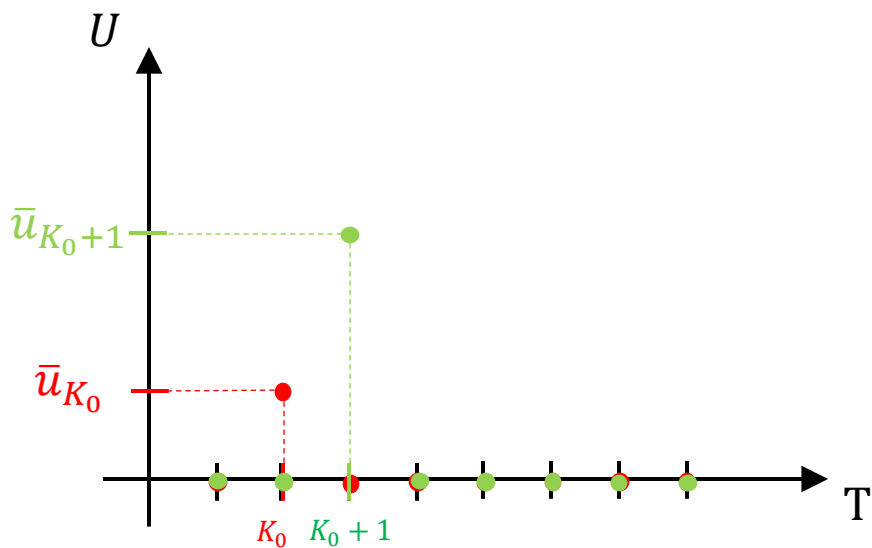
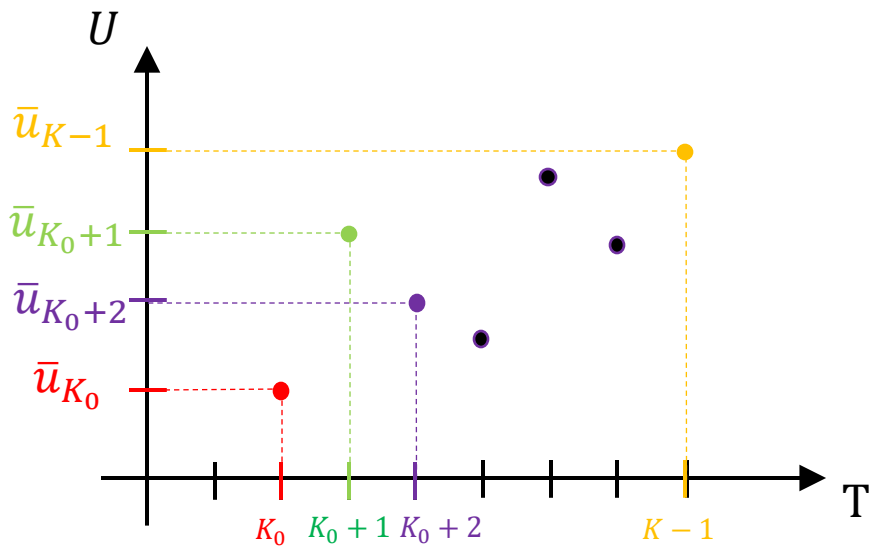
\vdots

$$K - 1 \rightarrow u_{[K_0,K[}(K - 1) = \textcolor{brown}{\bar{u}_{K-1}}$$

$$u_{[K_0,K[}(\cdot) = \sum_{j=K_0}^{K-1} u_j(\cdot)$$

$$u_{K_0}(k) = \begin{cases} \textcolor{red}{\bar{u}_{K_0}} & \textit{se } k = K_0 \\ 0 & \textit{altrimenti} \end{cases}$$

$$u_{K_0+1}(k) = \begin{cases} \textcolor{green}{\bar{u}_{K_0+1}} & \textit{se } k = K_0 + 1 \\ 0 & \textit{altrimenti} \end{cases}$$



$$u_{[K_0,K[}(\cdot)\colon \mathsf{T} \rightarrow U$$

$$K_0 \rightarrow u_{[K_0,K[}(K_0) = \bar{u}_{K_0}$$

$$K_0 + 1 \rightarrow u_{[K_0,K[}(K_0 + 1) = \bar{u}_{K_0+1}$$

⋮

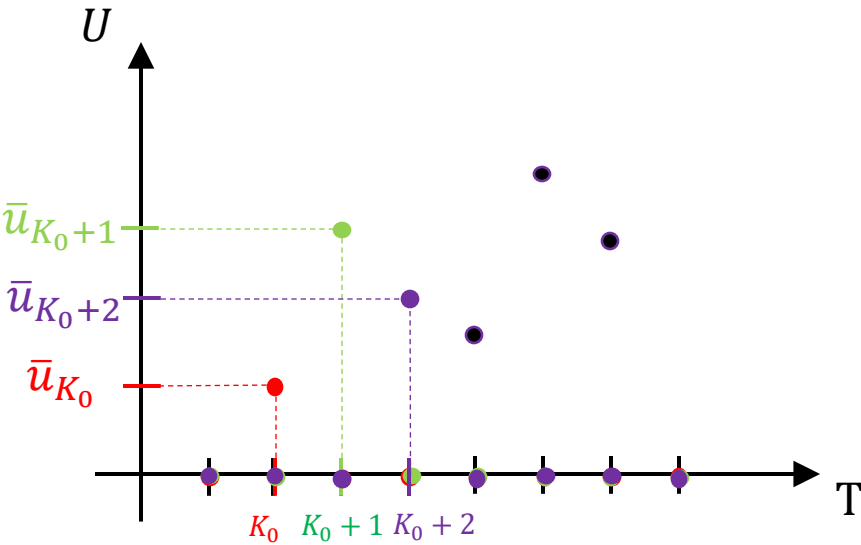
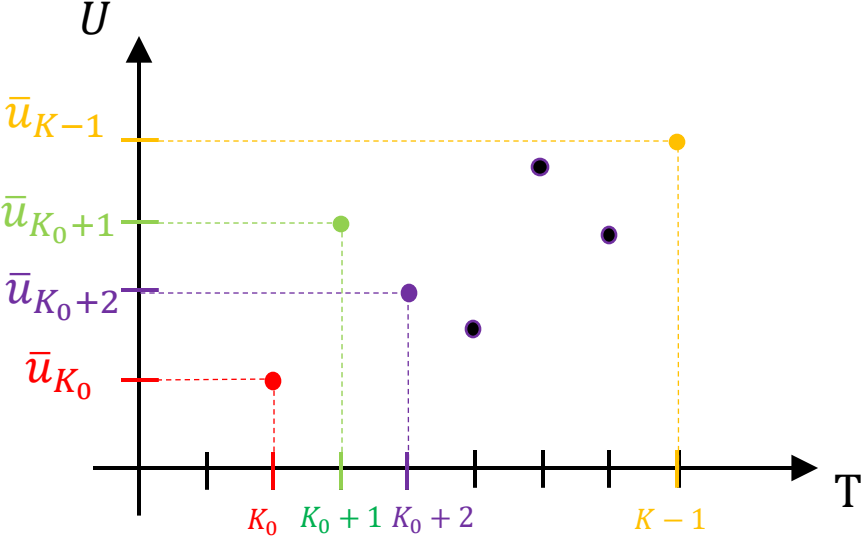
$$K - 1 \rightarrow u_{[K_0,K[}(K - 1) = \bar{u}_{K-1}$$

$$u_{[K_0,K[}(\cdot) = \sum_{j=K_0}^{K-1} u_j(\cdot)$$

$$u_{K_0}(k) = \begin{cases} \bar{u}_{K_0} & \text{se } k = K_0 \\ 0 & \text{altrimenti} \end{cases}$$

$$u_{K_0+1}(k) = \begin{cases} \bar{u}_{K_0+1} & \text{se } k = K_0 + 1 \\ 0 & \text{altrimenti} \end{cases}$$

⋮



$$u_{[K_0, K[}(\cdot): \mathbb{T} \rightarrow U$$

$$K_0 \rightarrow u_{[K_0, K[}(K_0) = \bar{u}_{K_0}$$

$$K_0 + 1 \rightarrow u_{[K_0, K[}(K_0 + 1) = \bar{u}_{K_0+1}$$

\vdots

$$K - 1 \rightarrow u_{[K_0, K[}(K - 1) = \bar{u}_{K-1}$$

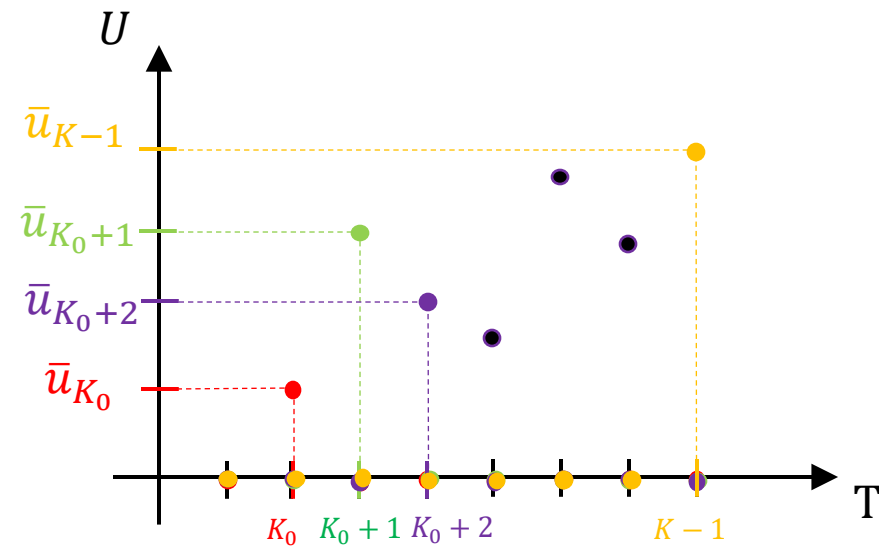
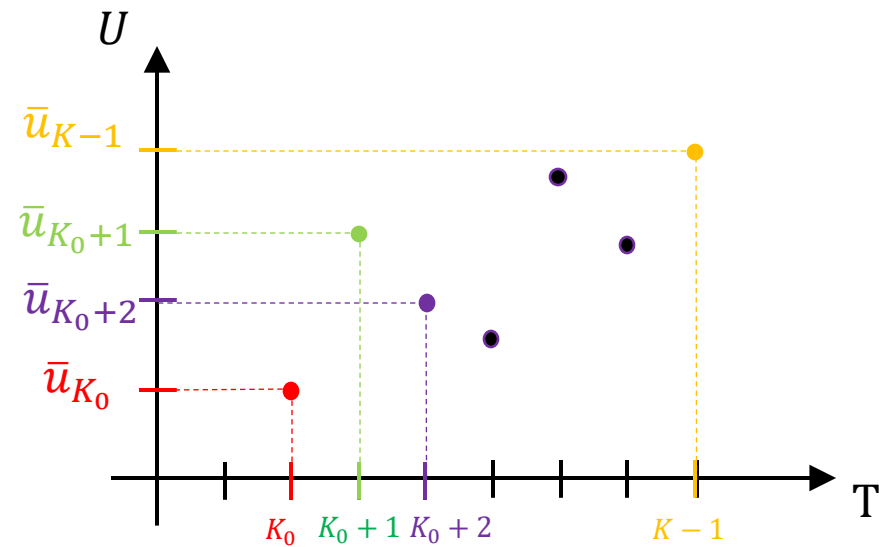
$$u_{[K_0, K[}(\cdot) = \sum_{j=K_0}^{K-1} u_j(\cdot)$$

$$u_{K_0}(k) = \begin{cases} \bar{u}_{K_0} & \text{se } k = K_0 \\ 0 & \text{altrimenti} \end{cases}$$

$$u_{K_0+1}(k) = \begin{cases} \bar{u}_{K_0+1} & \text{se } k = K_0 + 1 \\ 0 & \text{altrimenti} \end{cases}$$

\vdots

$$u_{K-1}(k) = \begin{cases} \bar{u}_{K-1} & \text{se } k = K - 1 \\ 0 & \text{altrimenti} \end{cases}$$



$$u_{[K_0, K]}(\cdot) = \sum_{j=K_0}^{K-1} u_j(\cdot)$$

$$\phi_f(K, K_0, u(\cdot)) = \sum_{j=K_0}^{K-1} \phi_f(K, K_0, u_j(\cdot)) = \sum_{j=K_0}^{K-1} \phi_f(K, j, u_j(\cdot)) =$$

$$\sum_{j=K_0}^{K-1} \phi_f(K, j, \bar{u}_j) = \sum_{j=K_0}^{K-1} H(K, j) \bar{u}_j = \sum_{j=K_0}^{K-1} H(K, j) u(j)$$

$\bar{u}_j \in U!$

$$x(K) = \Phi(K, K_0)x(K_0) + \sum_{j=K_0}^{K-1} H(K, j)u(j)$$

