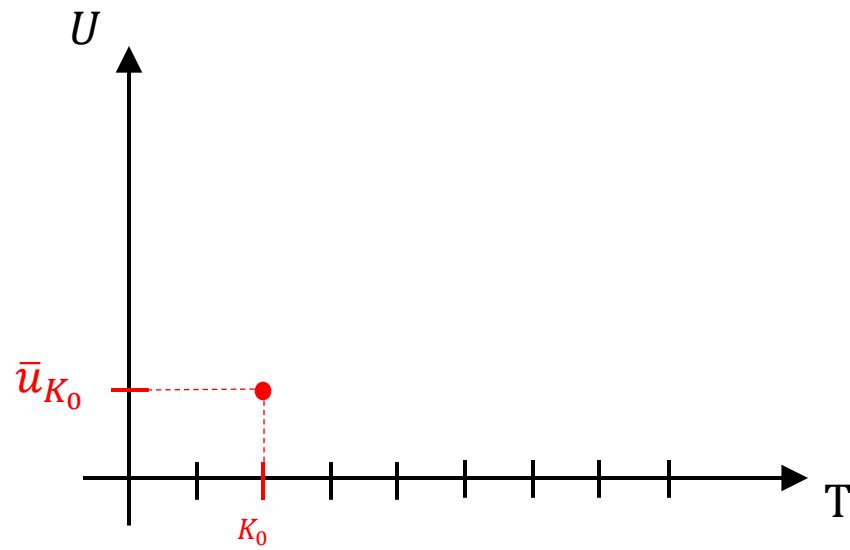


$$u_{[K_0,K[}(\cdot)\colon \mathrm{T}\rightarrow U$$

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

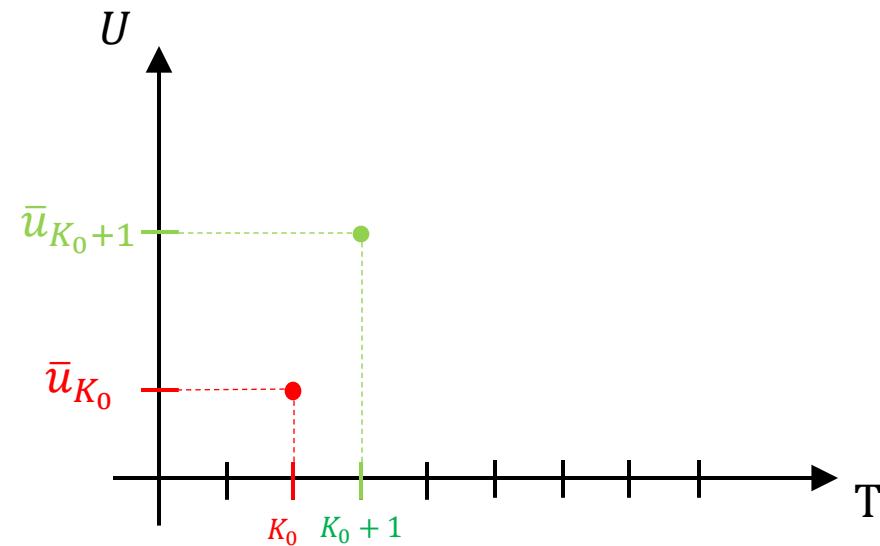
$$K_0 \rightarrow u_{[K_0, K]}(K_0) = \bar{u}_{K_0}$$



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

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

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

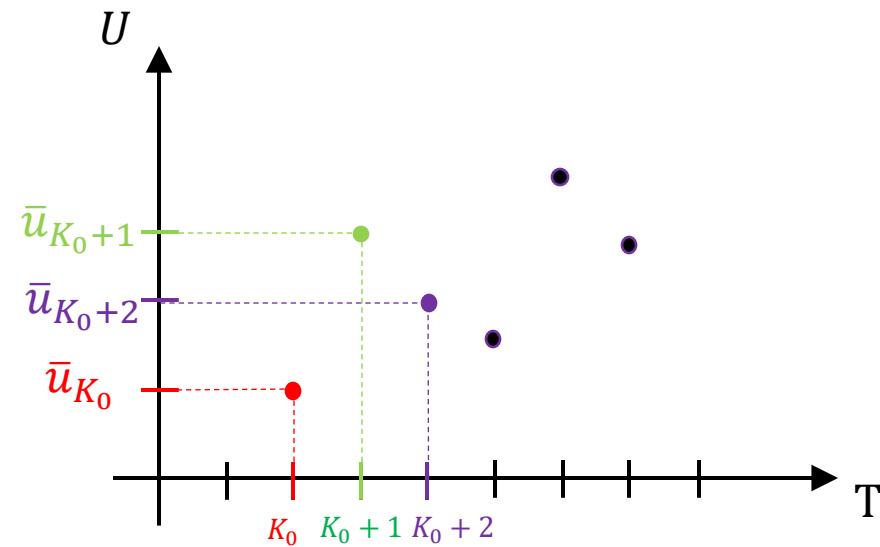


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$$K_0 + 1 \rightarrow u_{[K_0, K]}(K_0 + 1) = \bar{u}_{K_0+1}$$

\vdots



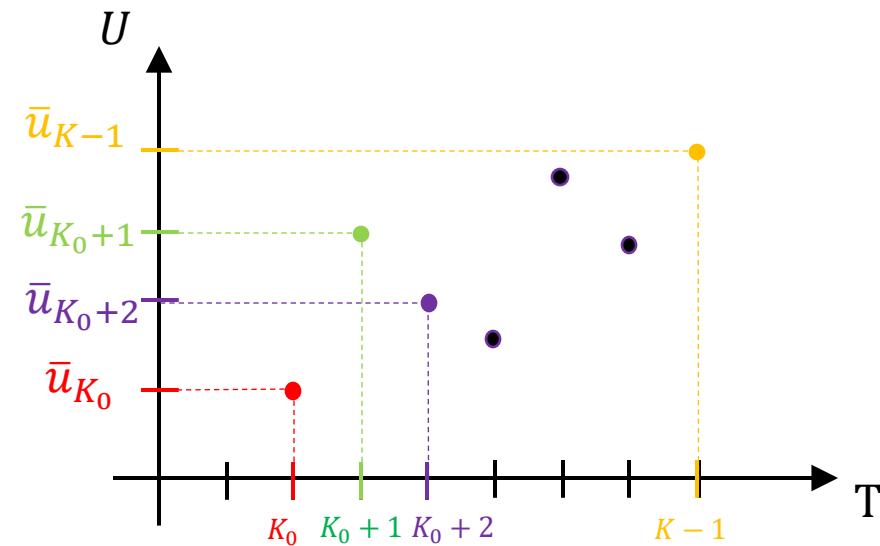
$$u_{[K_0, K]}(\cdot) : T \rightarrow U$$

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

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

⋮

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



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

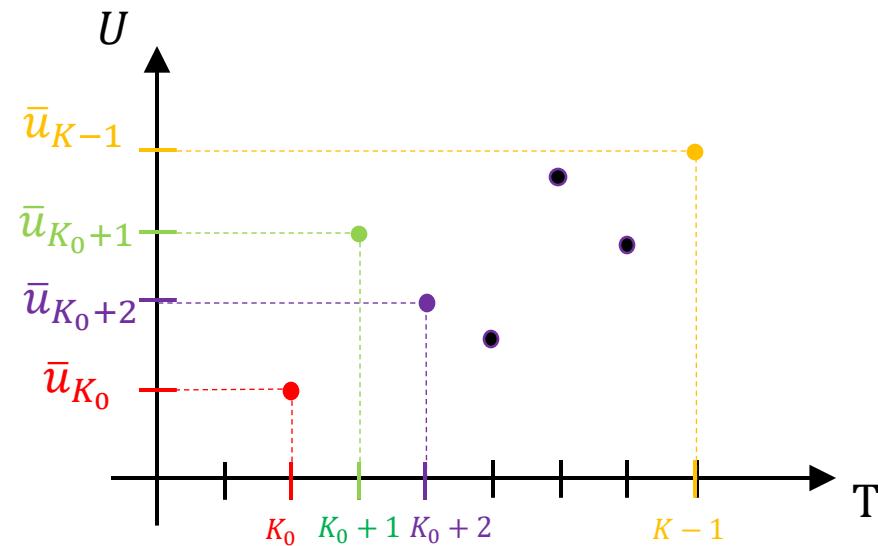
$$K_0 \rightarrow u_{[K_0, K]}(K_0) = \bar{u}_{K_0}$$

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

⋮

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

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



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

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

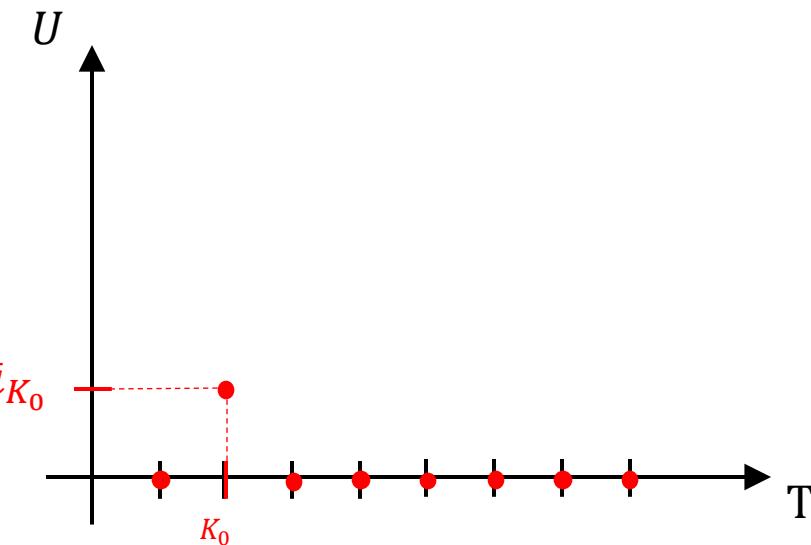
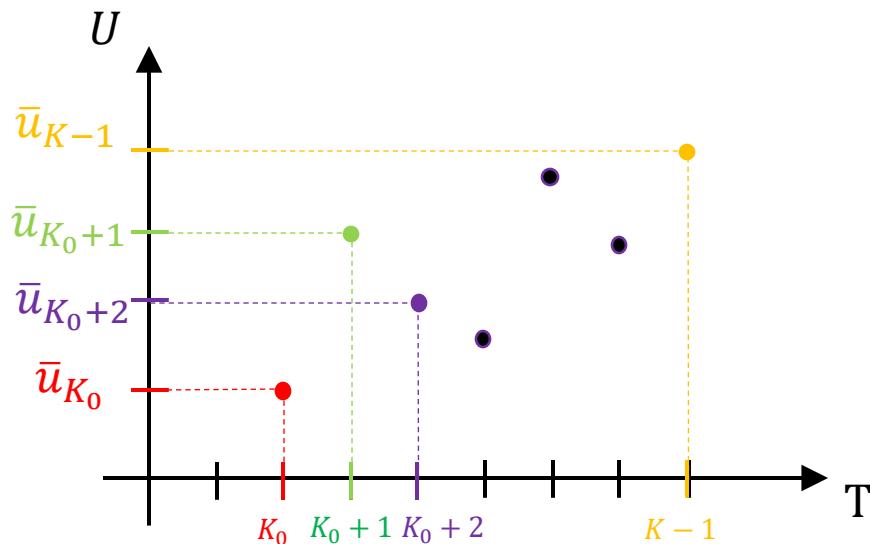
$$K_0 + 1 \rightarrow u_{[K_0, K]}(K_0 + 1) = \bar{u}_{K_0+1}$$

⋮

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

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

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



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

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

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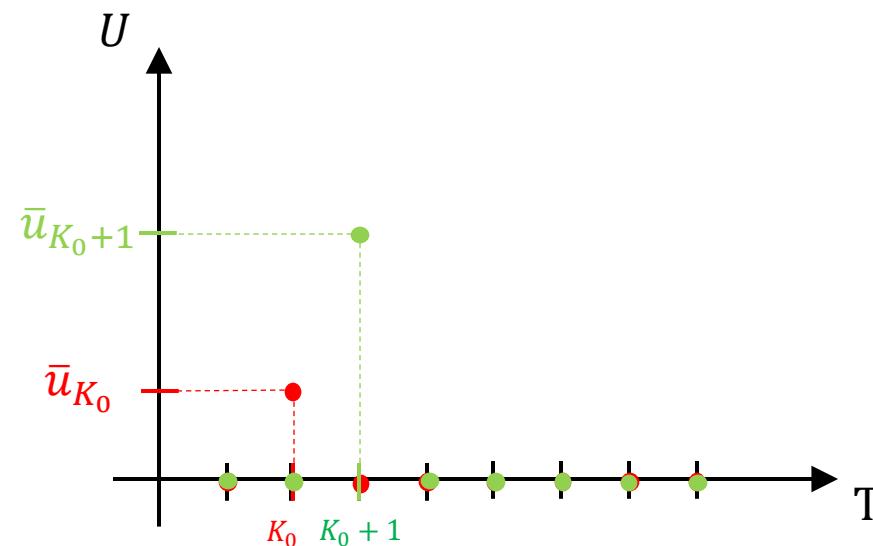
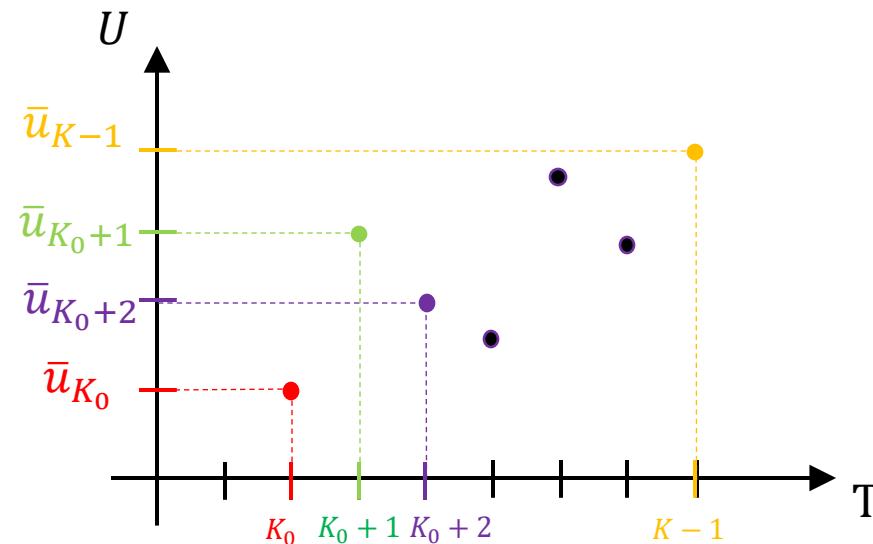
⋮

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

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

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

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



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⋮

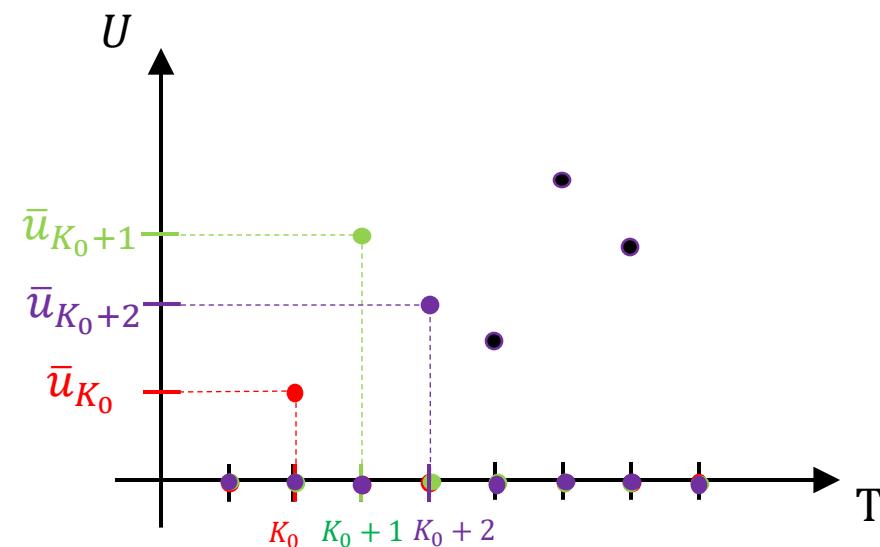
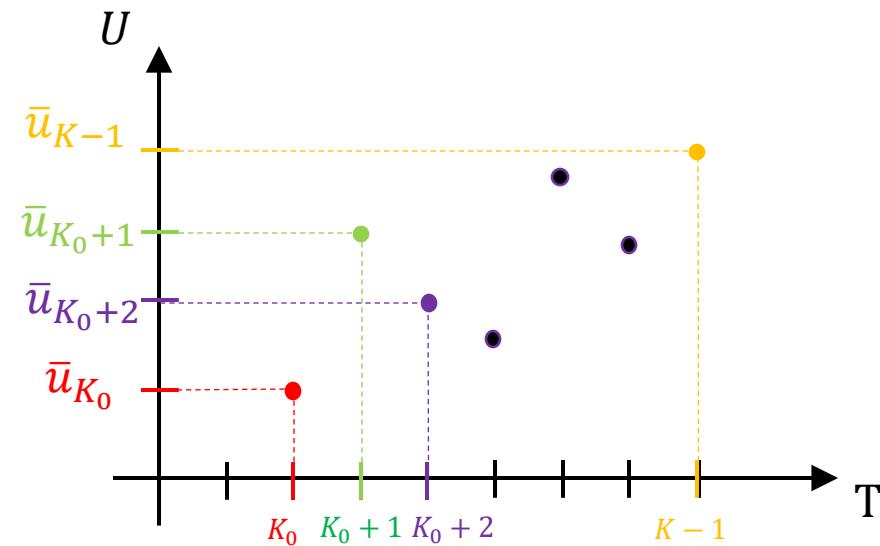
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⋮

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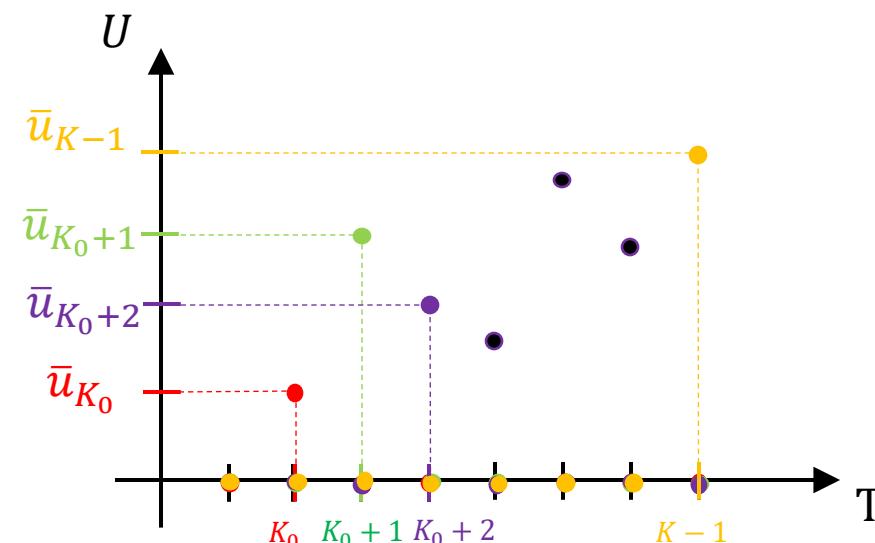
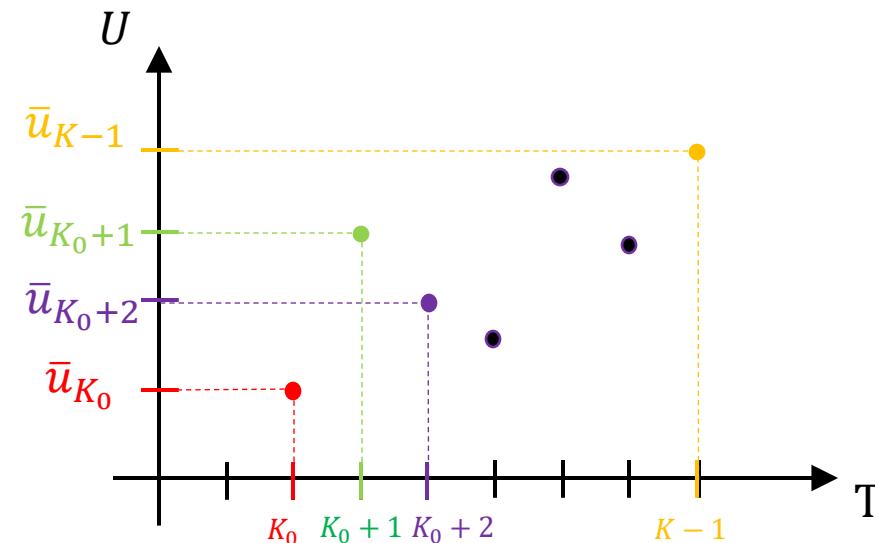
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⋮

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



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

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

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

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

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

