

Household's Utility Function

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<https://www.pascalmichailat.org/t5.html>



Utility from services $c(t)$:

$$\frac{\xi}{\xi - 1} \cdot c(t)^{\frac{\xi - 1}{\xi}}$$

w/ $\xi > 1$

Utility from real wealth:

- Real wealth : real stock of government bonds
 \downarrow
 $w(t)$
- Average real wealth : $\bar{w}(t)$
- Relative real wealth : $[w(t) - \bar{w}(t)]$
enters utility function
- $\sigma: \mathbb{R} \rightarrow \mathbb{R}$, strictly increasing, strictly concave

$$\sigma(w(t) - \bar{w}(t))$$

Aggregate utility:

$$\int_0^{\infty} e^{-\xi t} \left[\frac{\xi}{\xi - 1} c(t)^{\frac{\xi - 1}{\xi}} + \sigma(w(t) - \bar{w}(t)) \right] dt$$

$\xi > 0$ time discount rate
peris
relative real wealth