Religion and the marginal utility of unemployment benefits.

Why is the replacement rate \( b \) lower in more religious societies?

Governments act to maximise welfare:

\[
uU(\text{Unemployment}) + (1-u)U(\text{Employment}) - C(b).
\]

where \( C(b) \) is the cost of unemployment benefits.

We have:

\[
U(\text{Employment}) = U(w)
\]

\[
U(\text{Unemployment}) = U(b - \psi)
\]

where \( \psi \) is the psychological cost of unemployment.

We suggest that \( d\psi/dR < 0 \), where \( R \) is religiosity.

The government’s problem is then to choose the replacement rate, \( b \), to maximise:
\begin{align*}
u \ U(b - \psi) + (1-u)U(w) - C(b) \tag{1}
\end{align*}

This gives a First-Order Condition of

\begin{align*}
uU'(b - \psi) = C'(b) \tag{2}
\end{align*}

Totally differentiate (2) to obtain:

\begin{align*}
uU''db - uU''\psi'dR = C''db
\end{align*}

Rearranging: \( \frac{db}{dR} = \frac{(uU''\psi')}{(uU''-C'')} \)

The denominator is negative by concavity. As for the numerator: \( U'' < 0 \) as utility functions are concave, and we hypothesise that religion plays a buffering role, so that \( \psi' \). Hence:

\( \frac{db}{dR} < 0 \). Optimal unemployment benefits are lower in more religious countries.