What Business Cycles Cost Us
Part 2

$$U = \log(\tilde{c}_1) + \gamma \log(\tilde{c}_2) + \gamma^2 \log(\tilde{c}_3) + \ldots$$

The Immortal Consumer

$$U = \log(\tilde{c}_1) + \gamma \log(\tilde{c}_2) + \gamma^2 \log(\tilde{c}_3) + \ldots$$

Two Changes

***c* is uncertain, the weights are declining**

$$U = \log(\tilde{c}_1) + \gamma \log(\tilde{c}_2) + \gamma^2 \log(\tilde{c}_3) + \ldots$$

Two Changes

***c* is uncertain, the weights are declining**

$$U = \log(\tilde{c}_1) + \gamma \log(\tilde{c}_2) + \gamma^2 \log(\tilde{c}_3) + \ldots$$

U is uncertain, but we can compute expected utility

Two Changes

***c* is uncertain, the weights are declining**

$$U = \log(\tilde{c}_1) + \gamma \log(\tilde{c}_2) + \gamma^2 \log(\tilde{c}_3) + \ldots$$

U is uncertain, but we can compute expected utility

Lets call that U_{now}

Expected Utility

$$E(U) = E[\log(\tilde{c}_1)] \ldots)] +$$
$$\gamma^2 E[\log(\tilde{c} \ldots$$

Suspose we could avoid business cycles

Expected Utility

$E(U)$ …

$$c_1^* = E(\tilde{c}_1)$$
$$c_2^* = E(\tilde{c}_2)$$
$$c_3^* = E(\tilde{c}_3)$$
$$\ldots$$

Suppose we could avoid business cycles

Expected Utility

$$E(U) = \log(c_1^*) + \gamma \log(c_2^*) +$$
$$\gamma^2 \log(c_3^*) + \ldots$$

Expected Utility

$$E(U) = \log(c_1^*)$$

Lets call that $U_{no\text{-}cycle}$

$$\gamma^2 \log(c_3^*) + \ldots$$

The Question

$$U_{now} < U_{no\text{-}cycle}$$

- How much of an increase in consumption?

How Big an Increase

$$E(U) = E[\log\left((1+\lambda)\tilde{c}_1\right)] + \gamma E[\left((1+\lambda)\tilde{c}_2\right)] +$$
$$\gamma^2 E[\left((1+\lambda)\tilde{c}_3\right)] + \ldots$$

Expected Utility

$$E(U) = E[\log\left((1+\lambda)\tilde{c}_1\right)]$$

Lets call that U_λ

$$)] +$$
$$\gamma^2 E[\left((1+\lambda)\tilde{c}_3\right)] + \ldots$$

The Question

$U_{now} < U_{no\text{-}cycle}$

- And, for some value of λ

$U_\lambda = U_{no\text{-}cycle}$

What Business Cycles Cost Us
Part 2

The Question

This gives us the benefit from eliminating uncertainty

$U_{now} < U_{no\text{-}cycle}$

- And, for some value of λ

$U_\lambda = U_{no\text{-}cycle}$

What Business Cycles Cost Us
Part 2

The Answer

$\lambda \cong 0.015$

What Business Cycles Cost Us
Part 2

The Answer

$\lambda \cong 0.015$

Eliminating business cycles is worth as much as a 1.5% increase in consumption.

What Business Cycles Cost Us
Part 2

The Answer

$\lambda \cong 0.015$

Since C runs about $7,000 billion per year, this is equal to about $105 billion per year.

Eliminating business cycles is worth as much as a 1.5% increase in consumption.

What Business Cycles Cost Us
Part 2

End

What Business Cycles Cost Us
Part 2