Budget Options for the U.S.
The Initiative on Global Markets: Myron Scholes Forum

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The Labor Tax Laffer Curve (USA)

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\[ \max u(c, n) \quad \text{s.t.} \quad c = (1 - \tau)wn \]

where: \( c \) cons., \( n \) labor, \( \tau \) tax rate, \( w \) wage.

- Long-run growth: income=substitution effect. Example: 
  \[ u(c, n) = \log(c) - v(n). \]
- Therefore: \( \tau \) has no effect on \( n \)!

\[ \max u(c, n) \quad \text{s.t.} \quad c = (1 - \tau)wn + s \]

where \( s > 0 \) are transfers.
- Transfers are key to the shape of the Laffer curve!
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Tax Revenues as Percentage of GDP

How much debt can be sustained?

- Suppose, at most 10% of GDP to cover “debt service”,

\[ Debt_t = (1 + r)Debt_{t-1} - 0.1 GDP_t \]

or

\[ \frac{Debt_t}{GDP_t} = \frac{(1 + r)}{(1 + g)} \frac{Debt_{t-1}}{GDP_{t-1}} - 0.1 \]

\( r \): nom. interest rate, \( g \) nom. growth rate of GDP.

- Keep Debt-GDP ratio constant at some \( Q \). Then:

\[ (r - g)Q \approx 0.1 \]

- For \( (r - g) = 2\% = 0.02 \), get \( Q = 5 = 500\% \).
  - For 3-mo T-Bills: \(-1.8\%\), negative!
  - For 10-yr T-Bonds: \(-0.04\%\) or \(-0.01\%. Still negative!
  - “Grow out of debt”, roll over debt forever!
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The gap between interest rates and growth rates

Source: Data per Federal Reserve Bank of St. Louis, own calculations.

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