Forbidden Fruits: The Political Economy of Science, Religion and Growth
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... is linked by others with related measures of free expression and individuality

... that are also correlated with tech/innovation across countries
Aggregate State Variables in Macro

- Capital
  - Physical, Human
- Technology
- Next? Norms
  - Becker-Murphy state variables in prefs
  - Other regarding / moralistic
  - Socially determined

Key Assumptions: Preferences

\[ U(c, G | b_t) = c + b_t G \]

The model here uses a preference state variable as in addition models, but it does not explicitly invoke moralistic behavior on the part of the agents in the model.

Aside: Sanctuaries are not a public good, even if they provided by the state.

\[ b_t \] - religiosity state variable

\[ c \] - food

\[ G \] - sanctuaries
Key Assumptions: Dynamics

\[ c + G + I = a_t \]
\[ a_t = (1 + \gamma)^s \text{ for some } s \leq t \]
\[ \Delta b = F(\Delta a, I) \]

Augmented Dynamics

\[ a_t = a_{s}^{BR} a_{t}^{BN} \]
\[ = (1 + \gamma)^s (1 + g)^t \text{ for } s \leq t \]
\[ \Delta b = F(\Delta a^{BR}, I; b_t) + \varepsilon \]
Secular Publicly Provided Good $T$

$$U(c,G,T \mid b) = c + bG + \nu T$$

$$c = (1 - \tau) a_t$$

$$G + T = R(\tau) a_t$$

Like many economic models, this limits scope for policy to change culture/norms

1. Vertical transmission of culture / state variables - parent to child

2. Given, unchanging types

$$U(c,G \mid b_t) = c + \beta^i b_t G$$

$$\beta^i \in \{0,1\}$$

Crime is an application where assuming adults never change norms (or type) has huge policy implications - can be used to justify a moralistic policy of “lock em up and throw away the key” instead of getting back to 1950s equilibrium

Data from NY show that the right incentives can change behavior, in this case by deterring crime. Changes in norms may be part of this dynamic

Homicide and Total Incarceration Rate for the United States
(Per 100,000 Residents)

Homicide and State Level Incarceration, NY and Other States
(Per 100,000 Residents)
Related literatures
- Psychology - Nisbett, Haidt
- Cultural Evolution - Boyd, Richerson, Henrich
- Biology - Sloan-Wilson

Much evidence that norms do change over a person's life and are strongly influenced by interactions with others.

Words and Math
- Math is good because it keeps us from invoking emotions (particularly anger) in our scholarly discourse. Doing so will help us work toward agreement on the science.
- When we use words, it would be better if we used them precisely, in parallel with the math; hence, don't use “public good” to refer to a building like a sanctuary that rival and excludable.
- More generally, we should avoid words that activate moralistic norms in our colleagues, even as we consider the logic and evidence concerning how norms affect behavior.
- So avoid quotes like ...

The United States
- Rep. Paul Broun (R-Ga.) also an M.D., June 2012

“All that stuff I was taught about evolution and embryology and the big bang theory, all that is lies straight from the pit of Hell...
It’s lies to try to keep me and all the folks who were taught that from understanding that they need a savior...
You see, there are a lot of scientific data that I’ve found out as a scientist that actually show that this is really a young Earth. I don’t believe that the earth’s but about 9,000 years old. I believe it was created in six days as we know them. That’s what the Bible says.”

- Rep. Broun sits on U.S. House Committee on Science, Space & Technology