How do private digital currencies affect government policy?
By Raskin, Saleh, Yermack

Discussion by Gur Huberman
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Agenda

• The model’s background vision & relevance
• Digital currency governance & its implications
  • Single/streamlined control
  Vs
  Protocol guided/controlled
• The model’s main findings
Context

• A corrupt regime
• Presumably W/O much credibility

Creates (?)
Welcomes (?)
Tolerates (?)

PRIVATE DIGITAL CURRENCY
Territory, Time Frames

- Single period
- Territorially, political & monetary regimes identical
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## Typology

<table>
<thead>
<tr>
<th>Private Decentralized Digital Currency</th>
<th>Private Centralized Digital Currency</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="https://via.placeholder.com/150" alt="Bitcoin logo" /></td>
<td><img src="https://via.placeholder.com/150" alt="Gemini logo" /></td>
</tr>
<tr>
<td>Public Decentralized Digital Currency</td>
<td>Public Centralized Digital Currency</td>
</tr>
<tr>
<td><img src="https://via.placeholder.com/150" alt="Ban icon" /></td>
<td><img src="https://via.placeholder.com/150" alt="Petro logo" /></td>
</tr>
</tbody>
</table>
Private Digital Currencies

• Control? Regulation?
  • Who controls balances/transfers? Identities? Disputes?
• Territorial relevance? Is it an international currency?
• Temporal relevance?
  • How do you start the digital currency?
  • How do you stop it?
• If used to evade capital controls, is it welfare enhancing?
• The mechanism that confers credibility & value on the digital currency?

• Bitcoin is one model.
If a Trusted Party is Necessary...

• It has some control/discretion

=>

• Can extract rents

• Can adapt to changing circumstances
Economics of the Bitcoin Payment System

Gur Huberman, Columbia Business School
Jacob D. Leshno, Chicago Booth
Ciamac Moallemi, Columbia Business School
Cryptocurrencies

• Decentralized Electronic payment systems
  • Bitcoin being the first, many other followed and offer different functions

• Decentralized, two-sided markets
  • Users receive similar services to PayPal, Fedwire; Miners provide infrastructure
  • Security and Market design enabled by blockchain protocol

• Novel economic structure
  • Owned by no one
  • Rules fixed by a protocol
  • Participants are price-takers
# Traditional Payment Systems vs. Bitcoin

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<tr>
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<th>Traditional Payment Systems</th>
<th>Bitcoin</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rules</strong></td>
<td>Set by firm/org</td>
<td>Fixed by protocol</td>
</tr>
<tr>
<td><strong>Infrastructure</strong></td>
<td>Procured by firm/org</td>
<td>Revenue, entry/exit</td>
</tr>
<tr>
<td><strong>Revenue</strong></td>
<td>Fees set by firm/org</td>
<td>Equilibrium congestion pricing, all agents served</td>
</tr>
</tbody>
</table>
Protocol Rules, No Policy Discretion

• Even when circumstances change
Two & a Half Constituencies

• Users – send TXs
• Miners – provide computing infrastructure
• TX recipients – confer value on the coin
Miners are Crucial

• Must be compensated – in native coin
• Native coin loses value => miners quit => system collapses
• Should the model incorporate this possibility?
No Trusted Party
=> Crypto, or Protocol-governed

• =>
• Commitment to rules
• Rules are hard to change even when circumstances change
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Main Finding 1:
Digital currencies enhance citizen welfare

- **Risk Reduction**
  Non-positive correlation with local economic risks provides investors with a diversification opportunity
  - Who is supplying the digital currency & is on the other side of the diversification position?
  - Is the digital currency the issuer’s liability?

- **Restrained Monetary Policy**
The difficulty of excluding digital currencies from the market reduces gains from seigniorage, thereby inducing lower inflation
  - Difficulty of exclusion?
  - E.g., Outlaw wiring money into/from exchanges
Main Finding 2:
Digital currencies encourage local investment

• **Diversification**
  Digital currencies serve as a hedge asset, thereby facilitating investment in high-risk economies

• **In what sense are currencies an asset? If we make more, are we wealthier?**

• **Credible Commitment**
  Digital currencies facilitate a credible commitment to disciplined monetary policy, thereby enhancing expected returns from local investment

• **Can terms of digital currencies adapt as circumstances change?**
Main Finding 3:
Digital currencies may be desirable for corrupt sovereigns
Desirable also for non-corrupt sovereigns? Who is corrupt? Who is to say who is corrupt? Where’s corruption in the model?

• Local Investment
  Increased local investment yields higher tax revenue (holding tax rates constant)
• Higher revenue to the corrupt is good?

• Welfare Gains
  Digital & original money side by side? Foregone network benefits of a single money?
Model: Assets

- **Local productive capital**
  - Taxable
  - Proxy for local investment

- **Private digital currency**
  - Untaxable (reflects enforcement difficulty)
  - Non-positively correlated with local economy

  Source of (negative) correlation?
  Source of value fluctuations?

- **Unproductive capital**
  - Zero real return
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The Stuff Dreams Are Made Of

• A small sliver of the population understands blockchain technology well enough to engage in fierce, esoteric debate over the meaning and relative importance of various ideas and terms.

• At the highest levels, everyone practices a kind of obscurantism, unwitting or otherwise.

• Elsewhere, people fake it.