Historia:
Blockchain Governance Models

Outline

1. Abstract
2. Introduction
    a. Research Question
    b. Type of research
3. Outline
4. Literature Review
5. Framework Design
6. Discussion
7. Further Research & Constraints
8. Conclusion
9. Exhibits

Motivation for Research

Distributed Governance research is an under-develoepd research area in the blockchain space, as compared to cryptocurrencies and decentralized finance (DeFi). Because cryptocurrencies such as Bitcoin were the first use case for blockchain, there is more research dedicated to this area.

However, the growing need to understand and tackle issues in blockchain communities has led to greater interest in distributed governance research. DGov research developed within the blockchain space does not have the breadth required to truly understand these communities, and thus, there is a major need to incorporate/discuss the DGov-related literature outside of the blockchain space/ developed in the scholarly community to further illuminate these communities/issues.

Our motivation for this research were the following questions:

1) Are there pre-established governance frameworks applicable to the blockchain space/ blockchain communities?
2) Which, if any, governance typologies are applicable to blockchain communities?
3) What governance frameworks or typologies have been developed by governance-oriented blockchain communities such as Decred, Aragon, and Dash?
4) How many different ways can you describe a blockchain community?
5) What are the developments in the research literature?

This research is primarily theory-based. We do not expect to create an artifact from this research, rather something similar to a meta-analysis.

We expect to finalize our findings into a research report once our research is done.

I. Current State of Research

Currently, the research is still in the preliminary stages.

We need to conduct a literature review of governance typologies that are applicable to blockchain communities.

We have found approximately thirteen (13) governance frameworks (which will form the basis of the blockchain governance typology) that we believe are applicable to blockchain communities (we still need to review all thirteen and discuss which frameworks to include):

1) Multi-factor Governance Analysis based on Wassim Alsindi and @RichardRed0x's work
    a) Wassim Alsindi, *Ethereum Classic: The Ungoverned Blockchain?*, Parallel Industries (Mar. 16, 2019), http://www.pllel.com/industries/ethereum-classic-the-ungoverned-blockchain/.
2) Elinor Ostrom's 8 Principles for Commons Management
    a) https://medium.com/@daviddao/decentralized-sustainability-9a53223d3001
    b) https://www.digitalvalue.com.au/single-post/2018/10/08/Towards-blockchain-30-%E2%80%93-Codifying-Ostrom-principles-on-blockchain-to-end-the-tragedy-of-the-commons
3) Agent-based Modeling
    a) https://ccl.northwestern.edu/netlogo/docs/
    b) https://link.springer.com/chapter/10.1007/978-3-319-94580-4_9
    c) https://arxiv.org/pdf/1904.12924.pdf
    d) https://link.springer.com/chapter/10.1007/978-3-319-94779-2_14
    e) https://dl.acm.org/citation.cfm?id=3320643
    f) https://dl.acm.org/citation.cfm?id=3213046
    g) https://en.wikipedia.org/wiki/Agent-based_model#Framework
    h) https://en.wikipedia.org/wiki/Comparison_of_agent-based_modeling_software
    i) https://www.investopedia.com/terms/n/nash-equilibrium.asp
    j) https://www.pnas.org/content/99/suppl_3/7280.short
4) Government Typologies
    a) Representative Democracy
        i) https://medium.com/outlier-ventures-io/there-is-no-such-thing-as-decentralised-governance-3b31a65a3dff
        ii) https://medium.com/@mariolaul/blockchains-are-bureaucracies-par-excellence-db39cfda7ea9
    b) In general
        i) https://coinmetrics.io/papers/dissertation.pdf
5) Stakeholder Analysis
    a) Social Network Analysis

i) https://www.sciencedirect.com/science/article/pii/S1877042816308874

b) Stakeholder Analysis

i) https://www.researchgate.net/profile/John_Bryson4/publication/200465469_What_to_Do_When_Stakeholders_Matter/links/57bf4acc08aed246b0f7c74e/What-to-Do-When-Stakeholders-Matter.pdf

ii) https://www.sciencedirect.com/science/article/abs/pii/S2211464516302676

iii) https://www.sciencedirect.com/science/article/pii/S2212041617304989

6) Online collaboration/communities or Self-organization
   a) https://journals.sagepub.com/doi/pdf/10.1057/jit.2014.37
   b) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3288477
   c) https://pure.itu.dk/portal/files/83566552/ICIS_revision_2017.pdf
7) Information Technology Governance
   a) https://aisel.aisnet.org/cgi/viewcontent.cgi?article=1835&context=jais
8) Governance IdealTypes
   a) https://www.sciencedirect.com/science/article/pii/S2212041617304989
9) Monetary Governance
   a) https://www.p2pfisy.com/wp-content/uploads/2017/04/paper_11-min.pdf
10) Civic or Social Needs
   a) https://researchportal.northumbria.ac.uk/files/19190956/Making_the_blockchain_civic_Interactions.pdf
11) Platform Governance
   a) https://research.vu.nl/ws/portalfiles/portal/78136241/Blockchain_TFSC_for_Uni_Open_Archiving.pdf
12) Peer Production Community (2 layers: Infrastructure (on-chain) and Architects (off-chain))
   a) https://hal.archives-ouvertes.fr/hal-01382007/document
13) Meta-organization
   a) https://onlinelibrary.wiley.com/doi/abs/10.1111/emre.12076
   b) https://link.springer.com/chapter/10.1007/978-3-642-37317-6_13
   c) https://s3.amazonaws.com/academia.edu.documents/32336662/MetaOrganization.pdf?response-content-disposition=inline%3B%20filename%3DMETA-ORGANIZATION_THE_FUTURE_FOR_THE_LEA.pdf&X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIWOWYYGZ2Y53UL3A%2F20190907%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20190907T055438Z&X-Amz-Expires=3600&X-Amz-SignedHeaders=host&X-Amz-Signature=86d94611ea1f40d787d1f1a1e514cc4c151caeca5b8916ee5ef6ad48c3cd0566

We believe a literature review is needed because in our initial attempts to categorize blockchain communities, we ran into extreme difficulty determining which governance framework(s) to apply, or even which ones are appropriate, to a blockchain community.

Which of course begs the question, what is a blockchain community? This is something we need to define as well.

In our early discussions, we discussed how a blockchain community can be defined based on:

- the aim or intention of the project or project creator,
- the blockchain or decentralized application's use case,
- the views of community members,
- the view of the project creator,
- the government style most similar to the community,
- the approach to adopting modifications to the blockchain [client's] software,
- their support of open source software principles and practices
- the stakeholders in the community, or
- the views of third parties/ non-members of the community.

This is the progress we have made so far on blockchain governance models. If you would like to take this research further, please notify @char at ledgerback@gmail.com or hello@ledgerback.coop of your intention to do so.