The Platformization of Currencies

Project Abstract

Native Web 3.0 platforms face significant challenges when providing services that compete with Web 2.0 platforms, including infrastructure scalability, decentralized protocol organization and ethical monetization models. Tokens are a crucial tool to overcome some of these challenges. Nonetheless, understanding how to design them to face these challenges is a complex task. This research defines a framework for what is here referred to as ‘platformized currency’ with the goal of providing a theoretical model to assist the design of such tokens.

The "multi-sided platform" model has emerged as the winning paradigm of the Web 2.0 era. In this model, platforms serve as intermediaries that facilitate transactions between two or more sides of a market: those who provide a service and those who are willing to pay for the service. In this sense, platforms are empty frameworks that enhance interaction by leveraging frictionless interfaces and efficient matchmaking algorithms.

The Ethereum network itself can be considered a multi-sided platform operating in the market for block-space as it connects those who generate blocks ("space" sellers) with those who seek to have their transactions validated on-chain ("space" buyers). Moreover, thanks to smart contracts, platforms can be built on top of Ethereum - effectively making the Ethereum Network a platform for platforms or, in other words, a platformized infrastructure.

Block-space is valuable for two reasons: first, all of the information stored on-chain inherits the security of the underlying infrastructure, which is secured by the crypto-economic model of the Ethereum blockchain. Second, in order to interact with other entities, be that addresses or smart contracts, the interaction needs to be registered on-chain. Since block space is priced in ‘gwei’ (which is a unit of value representing a small fraction of $ETH), $ETH is the required medium to interact on the platform.

In this sense I recognize $ETH as a “platformized currency” as it derives its value from the usage of the Ethereum platform itself while also being the fundamental coordination mechanism for platform participants. The ERC-20 smart contract standard allows for tokens to run on the Ethereum Network. These tokens inherit all the security and transparency guarantees of the network while being fully programmable currencies. Thus, their scope is not limited by the necessity of being the security mechanism of the network and the medium for the block-space market, opening up the available design space.

I argue that these tokens need to be designed following the same framework of ‘platformized currencies’ as $ETH has. These tokens enable crypto economics to be applied to any platform built on top of Ethereum and are useful at making explicit the incentive system at play: these tokens are the main advantage Web 3.0 has when competing with Web 2.0 platforms. This research provides insights into how Web 3.0 native platforms can more effectively use tokens as a tool for sustainable and market-aligned growth for all platform participants by applying the logic of ‘platformized currency’ to their design. Ultimately, this research aims at making a contribution to the broader discussion on the evolution of digital platforms and the emerging field of crypto-economics.

Objectives

Research Question: What are the key factors that contribute to the successful implementation of tokens in Web 3.0 platforms and how can these be leveraged to enhance platform growth, sustainability and incentives for all platform participants?

The primary objective of this research project is to propose a framework that enhances the understanding of how crypto-economics can be applied to Web 3.0 platforms. This framework, which defines tokens as "platformized currencies," is informed by platform study theory. The goal is to equip token designers and engineers with a theoretical framework for approaching token implementation in Web 3.0 platforms. Success would be defined by the ability of the proposed framework to catalyze new discussions on token use cases within platforms and to provide guidance for token designers and engineers in making more informed decisions for their design.

Outcomes

The Ethereum ecosystem stands to benefit from the successful development of sustainable tokens that align platform participants to the dynamics of the underlying markets that the platforms are trying to capture - a task that is proving to be hard to achieve. This research aims to shed light on the role of tokens in the transition from web2 to web3 platform models. This work aims to serve as a starting point for further research from a platform-studies perspective in the Ethereum space, filling a gap in the current knowledge base and providing valuable insights for the community.

Grant Scope

With this research I seek to investigate the application of tokens as “platformized currencies” within the Web 3.0 space, drawing upon insights from platform studies. The study will compare how the pre-existing Web 2.0 models for digital platforms can be enhanced in the web3 space context through the introduction of tokens. The expected output of this research is a scholarly paper that aims at providing valuable insights for researchers and practitioners alike in the broader discussion about the evolutionary trajectory of digital platforms.

Project Team

I intend to work on this alone and to dedicate 80 hours per month for a period of 6 months.

Giulio Valentini - main researcher

Background

I have attended a research masters at the University of Amsterdam (UVA), faculty of “New Media and Digital Culture”. The faculty has been pioneering the new-media scene with a focus on platform-studies - making it one of the most renowned and highly ranked universities of the field. Before focusing on blockchain related topics I was researching user-data treatment and more broadly on web2 platforms ecosystems. Today I am fully devoted to the blockchain industry by doing research independently and working as a consultant. I am also a contributor at the Token Engineering Academy (https://tokenengineering.net/) where I work as a volunteer by hosting study groups to educate people on the discipline of token engineering / token design.

You can find links to some of my relevant work below.

This first paper analyzes the issues with data treatment in the g-suite package within the Google ecosystem.

Link:
https://github.com/Wafer102/papers/blob/main/Googles-G-Suite-ecosystem-and-lack-of-transparency-in-Data-Handling.-Valentini-12-January-2020.pdf

The second paper analyzes the Google ecosystem more broadly using the ‘three ecologies’ perspective by Guattarì.

Link:
https://github.com/Wafer102/papers/blob/main/Valentini-An-Ecosophy-on-Google.pdf

This last link is instead a previous research I’ve done on a similar topic to the one I am now applying for. My thoughts have developed much further than what is expressed in this paper. Nonetheless it can be seen as the ‘embryo’ of what I'd like to research more thoroughly with this application.

Link:
https://github.com/Wafer102/papers/blob/main/Giulio%20Valentini%20-%20Data-monies%20The%20platformization%20of%20currency.pdf

Methodology

The methodology involves a thorough review of the existing literature on platform studies, token design, web3 platforms, and crypto-economics - fields and authors I am already familiar with. The primary purpose of the research is to develop a theoretical framework that is relevant and applicable to the current web3 context and the debate around the topics discussed. This framework will try to provide insights and recommendations for practitioners with the ultimate aim of contributing to the development of more sustainable and efficient web3 platforms. Moreover, the research will try to identify potential gaps in the literature, which can serve as a basis for future research to build on. By developing a deeper understanding of the role of tokens within the ‘platform-model’, the research hopes to add to

the broader discussion of the evolution of digital platforms and the emerging field of crypto-economics with a focus on the idea of ‘platformized currencies’.

Timeline

I will spend about 20 hours a week on this project. I am willing to provide regular updates on the state of things but producing the final output will require me about 6 months.

Budget

For this research I am asking $5,000.

All the main costs for me to produce this research are already covered, as I have access to the literature, the hardware and the software required.

The funds will be used to pay myself a salary that allows me to focus on this research while reducing time spent on other activities that I would otherwise need to do to provide myself a living wage. By spending 80 hours a month for six months that makes for an hourly salary of 10.41$ or a 833$ monthly salary - to which i have to subtract taxes. I think this is a below average salary and I do not feel it would be right to ask for more than this as I would be very excited to be able to spend my time doing what I love.