The Monopolies Behind the Wicked Problems: Decentralizing Institutions for Equality

This study will focus on unpacking and presenting solutions to the five most enduring, cross-boundary issues of coordination and cooperation; fundamental problems that institutions are meant to overcome but have yet to succeed in doing so. These problems are: (a) the Redistribution of Wealth, (b) the Principal-Agent Problem, (c) Property Rights, (d) Collective Action, and (e) Collective Choice. For each of these classic social problems, born of perverse incentives and misalignment of interests, this work suggests a novel reading of the problem, that is, the identification of the shared core of these problems, in an attempt to address them at their root – the monopoly.

Monopoly conditions impact consumers and stakeholders both directly and indirectly through a number of different mechanisms in the modern economy. Some of these mechanisms work to transfer value directly between actors in a zero-sum way, while others work to protect increasing inequality and to prevent the transferred value from being moved again. Monopolies rob consumers directly via inflated price and decreased quality, and they are incentivized to transfer those savings or added profits directly to their shareholders in the form of shareholder value or dividends rather than passing on these savings to the customer in the form of lower prices, or to employees via higher wages. In effect, this works as a direct transfer of value from consumers to corporate shareholders. Economists refer to this as allocative inefficiency, which takes two primary forms outlined above – the direct transfer of consumer surplus to producer surplus, and the dead weight loss to society.

![Figure 3.2.1](image1.png)  
**Figure 3.2.1**  
Consumer Surplus Loss in Monopoly Market

![Figure 3.2.2](image2.png)  
**Figure 3.2.2**  
Producer Surplus Gain in Monopoly Market

In addition to paying higher prices for lower quality goods, the public also experiences industrial stasis as the lack of competition decreases incentives for
innovation. This contributes a qualitative loss of mismatched incentives that stifle innovation and competition.

Monopolies also use accumulated wealth to protect monopoly status, further exacerbating inequality and indirectly robbing society in the long run. This is done by extorting authorities and citizens using information asymmetries and perverse incentives to conduct an indirect transfer of public welfare away from consumers and toward corporate shareholders. There are many mechanisms for this type of indirect value transfer in monopoly markets, and each mechanism is specifically suited to exploit some loophole or pursue some information asymmetry using hierarchal power. Some of these trends are already well defined by scholars, while many more have yet to be fleshed out. The nature of these institutional loopholes is that they are ever changing in the dynamic modern financial economy.

While much of the analytical approach to the wicked problems has focused on information asymmetries and attempts to equalize access to information, these endeavors are futile under the modern conditions of a nearly infinite information economy. The issue at hand, therefore, is not one of inequality of access, but rather inequality of use and ownership. The dangers of monopoly power are not in the asymmetry of access to infinite information, but rather in the underlying centralized infrastructure that protects and manipulates those asymmetries, facilitating direct loss of value to consumers and indirect loss of value to society as a whole.

**Methods and Cases**

Platforms built on public or open source DLTs and blockchains are inherently immune to monopoly power because of their underlying digital architecture and design principles. This study intends to identify four distinct blockchain-based platforms or
applications, each attempting to solve one of the monopoly issues described above (collective choice case is beyond the scope of this paper), and for each case will apply a statistical analysis on transaction data in order to show that decreasing monopoly market power will also result in decreasing consumer surplus loss to the individual and decreasing dead weight loss to society. The pilots in question each present a decentralized digital alternative to the traditional models of centralized hierarchy that characterize our current institutions.

Each of the four cases presented will be evaluated using the same basic theoretical statistical model, intended to evaluate the impact of monopoly control on consumer surplus loss and dead weight loss.

The coming months will be spent identifying an appropriate statistical approach, well suited to the type of data intended for collection, and consistent with modern statistical approaches using advanced technologies like machine learning and artificial intelligence.

Using proxy variables for (1) a measure of increased societal good (the opposite of dead weight loss) and (2) a measure of consumer surplus each unique case will evaluate the role of declining monopoly power on both direct and indirect value transfers to consumers and society. For each of the four wicked problems described above, the central issue is the same – centralization of value ownership and/or decision-making ability – over monetary policy, tax regimes, natural resource management or intellectual property regimes based on forced scarcity. In each of these cases the hypothesis is the same – decentralization of value or hierarchy will decrease dead weight loss to society and increase individual consumer surplus.