

Blockchain and Aadhaar: Unlocking Capital in India

Generally, people understand the blockchain (BC) technology to be the one driving the cryptocurrency which is widely used for various illegal activities, so they have a common misconception of blockchain being an equivalent of cryptocurrency. But, in reality though blockchain is the core of crypto currency it has got much better use cases than cryptocurrency and these use cases can in fact drive towards a positive impact on the society. Blaming the blockchain for use of crypto in illegal activities is like blaming the dyeing process used in printing of money for corruption. Before we discuss about the use cases of blockchain technology let us first understand what blockchain is about!

Blockchain at its core is an open book written in indelible ink. The Blockchain is a technology as well as or more importantly an economic disruption. It is a culmination of a range of general-purpose technologies to exchange information and transact digital assets in distributed networks for companies and governments to support information exchange and transactions that require authentication and trust.

Now that we have a basic understanding about blockchain let us discuss its use cases. It offers novel tools to any problem domain where there exists a need for a reliable record of transactions in a decentralized environment in which not all parties, whether humans or machines, can be fully trusted. One of the most promising yet most complex use case of BC is the physical asset management system on blockchain. To understand the problems with the existing model of physical asset management let us consider the use case of property transfer system in India.

Today, in India, land ownership is loosely defined, leading to anaemic capital and disempowerment of millions of small landholders. Only 5% of Indian land is leveraged as capital i.e. via mortgage which then fuels the economy. Contrast this with nearly 40% of all US land which alone contributes to 25% of economy. In India, moving to a reliable land record, trading and inheritance system would unlock more than \$3.5 Trillion in capital, catapulting India to a \$10 Trillion economy in a decade. The poor suffer most when land ownership is inconclusive, opaque and in the hands of arbitrary powers vested in local officials. Suffering, they blame politicians and the ruling administration, even though the root cause is a broken system. For almost a millennium, since the time of Akbar, this arbitrary system conceived in a darker, feudal age has kept people of India oppressed. The symptom is that banks refuse to use land as collateral, and a single registration record is not enough to establish conclusive, incontrovertible ownership or the right to sell.

Closest anyone can get to true ownership of land in India is a Supreme Court ruling:

- Land is not collateralizable, all sales are risky, banks cannot bank on it
- Land, Property owners get caught in runaway debt traps stoked by 24-60% interest rates. No revenue model for farming or micro entrepreneurs in India has ROI on capital of more than 15%, let alone 24-60%. This means that every farmer or small entrepreneur whoever takes such a loan is systematically falling into a debt trap.
- Due to these effects, land is a significant source of law and order issue in both rural and urban India
- An estimated \$8+ Trillion of capital remains untapped in India, of which \$3.5 Trillion low cost capital can easily get unlocked rapidly with a reliable system of asset transfer and registration.

The government similarly has more than \$1 Trillion of uncapped land which could unlock bulk of the money needed for accelerated infrastructure development. Ironically, the lack of conclusive title is

affecting well run parts of the government in the same way as poor farmers or the wealthy, where to raise capital, well run government systems must give away future revenue, sell its assets or compromise on growth.

Past efforts at moving to a system of conclusive titling have essentially been exercises in digitising land records. While this is a worthy policy objective, it is distinct from a genuine move to unlock the economic potential of land ownership. As part of the Digital India Land Records Modernization Programme ('DILRMP') only four states have achieved the final stage of the program, namely Tripura, Gujarat, Haryana, and Karnataka. However, during the implementation of such schemes, mere digitisation of records is passed off as a parameter for success. This hinders a clear assessment of the success of the scheme. Any attempt at conclusiveness must factor in the serious challenge posed by legacy issues. At present, many land parcels and properties seem to have unclear titles and may be subject to pending litigation in courts. Resolving legacy issues involves a thorough resurvey of land parcels which would not only be exceedingly cost intensive, it would entail making citizens undergo the process of settlement of disputes and clarification of boundaries. This may create disputes of its own accord.

Though a blockchain based solution would not be able to resolve the present disputes in ownership of land, it is probably the best suited and efficient solution for preventing future land ownership disputes and a reliable wheel to drive India to unlock a capital of \$1 trillion.