TİSVA
Türkiye İsrafı Önleme Vakfı
Turkish Foundation for Waste Reduction

Blockchain and Distributed Ledger Technology Policy
Turkish Grameen Microfinance Program

Blockchain technology offers the opportunity to fundamentally improve the ways in which we cooperate, transact, invest and trust. It can help us re-shape economies, industries and civil societies for the better.

The purpose of this policy is to establish the guidelines for Blockchain governance. The solutions discussed in this policy will aim to establish some ground rules, which will allow the organization to establish governance structures that will help them navigate the technological landscape, while understanding some of the most important components of a strategic approach to policy.

Blockchain is the first technological structure to solve the double spend problem and it relies on a massively replicated ledger that is appended by adding transactions in blocks. Each block is cryptographically linked to the previous block with the use of a cryptographic primitive called secure hash.

Distributed Ledger Technology (DLT) is the more general category of solutions that aims to order transactions, but may not use a linked chain of blocks to achieve its goal. Examples of distributed ledgers include Directed Acyclic Graphs (DAGs) and some approaches that aren't clearly structured as replicated chains of blocks but implement a shared transaction order nonetheless.[1]

Blockchain have emerged through the creation of Bitcoin and several other similar techno-economic constructs, like Litecoin, or Monero. These blockchains showed how to implement ownership of digital assets through the use of an immutable history that is secured by an economic model. This model incentivizes using energy to seal the order of blocks in a process called mining with proof of work. The limitation of this model was that the only type of

1 Establishing blockchain policy - pwc.com. (n.d.). Retrieved from https://www.pwc.com/m1/en/publications/documents/establishing-blockchain-policy-pwc.pdf.

transaction supported by the model was a financial transfer from one account to another, which limited the number of applications for the invention.

Fundamental Advantages of Blockchain for Turkish Grameen Microfinance Program (TGMP)

Blockchain has the potential to transform the functioning of an organization.[2] However, there are four fundamental advantages offered by Blockchain that will change the way non-governmental organizations operate, including TGMP;

- Affordability
- Accountability
- Reliability
- Marketability

In order to keep services affordable and maintain high-quality delivery, TGMP needs to reduce transaction costs and make use of economies of scale. TGMP faces challenges in ensuring the continued flow of funds and often have to cross-subsidize their operations. Therefore, advantages offered by Blockchain and DLT have great ability to solve fundamental problems of TGMP. Necessary arrangements to adopt Blockchain and DLT into TGMP will be made by the ones who are responsible for the governance of the organization.

In order to achieve this, MicroCreditCoin (MCC) and e-Marketplace Platform was created based on the core values of the Blockchain technology which include decentralization, transparency and trust. MCC Token uses the ERC 20 technology and e-Marketplace infrastructure was formed to help facilitate the easing of daily operations of TGMP as well as to simplify the access to value added products produced by micro-entrepreneurs and ultimately transferring as well as initiating all microfinance activities on Blockchain.[3] MCC is also designed to provide dividend distribution for investors as well as business and strategic partners in the future.

2 OECD Blockchain Primer. (n.d.). Retrieved from http://www.oecd.org/finance/OECD-Blockchain-Primer.pdf.

3 YENİ NESİL MİKRO KREDİ. (n.d.). Retrieved from http://microcredittoken.com/

Important Factors for Policymakers

Policymakers should strongly support efforts to increase digitization but at the same time be neutral as to the ways technology for which is best suited for any particular application. The key issue that needs to be addressed in order to adequately capture cryptocurrencies and cryptocurrency players, particularly users in legislation is to unveil the anonymity, varying from complete anonymity to pseudo-anonymity that surrounds them.

From a national perspective, each country has its own set of financial laws and regulators, each with varying levels of complexity. One of the primary types of financial regulations that Blockchain-based products and services must abide by is anti-money laundering (AML) compliance. There are multiple federal and state regulators governing legal prohibitions on unfair, deceptive, or abusive practices for Blockchain-based applications. Some of the factors taken into consideration with regard to policy design related to Blockchain are as mentioned below:

1. **Ensure Tech Neutrality**

Policymakers should look to the unique benefits of a technology and the particular challenges of a project when deciding the appropriate technology to adopt. Some projects will require traditional centralized approaches for efficiency, while others may be better suited for distributed, tamper-resistance Blockchains.

2. **Actively Support Blockchain Adoption and Deployment**

Policymakers should actively support government adoption and deployment of Blockchain in different sectors. By becoming early adopters, national, subnational, and local governments ought to promote broader adoption of Blockchain. This would also help reduce risks associated with Blockchain applications and disperse skepticism surrounding Blockchain and encourage others to adopt and invest in this technology.

3. **Support Blockchain Research and Development**

National governments should fund Research and Development (R&D) for Blockchain applications, focusing on underlying technological challenges, such as creating better and more efficient consensus mechanisms, identifying security threats, scalability and more. R&D can also help advance related technologies that could improve Blockchain applications, such as building quantum computers and advanced data servers. Moreover, certain problems such

as intellectual property control management over public Blockchains will require additional research and cooperation from the public and private sectors to ensure suitable enforcement.[4]

4. Work to Establish International Harmonization of Blockchain Regulations Across Sectors

There is a need to align rules and regulations across borders, particularly for public Blockchains. Instead of creating a new international body for regulating Blockchains — such as the International Telecommunications Union for Communications Technologies, efforts should be developed from existing international efforts in particular domains.

Policymakers should ensure rules for Blockchain applications are technology neutral and strive to reduce compliance costs by establishing harmonized regulations. Most importantly, policymakers should strive to protect and support constant innovation in Blockchain systems.

4 McQuinn, A., & Castro, D. (2019, April 30). A Policymaker's Guide to Blockchain. Retrieved from https://itif.org/publications/2019/04/30/policymakers-guide-blockchain.