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Space Economy - New models and economic approaches for private space ventures, with an emphasis on the needs of emerging space nations (3)

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SUSTAINING DEVELOPMENT: USING SATELLITES FOR AN ACCESSIBLE AND SECURE BLOCKCHAIN-BASED FINANCIAL SYSTEM

Abstract

Spaced-based services, including financial services, are proving more affordable and accessible to more people than ever before in history. Coupled with the rising acceptance of blockchain-based cryptocurrencies, satellite-hosted financial services can be delivered to people around the world, particularly for the benefit of those sending and receiving remittances and displaced persons. An accessible and secure blockchain-based financial system hosted via a satellite constellation wields strong potential in promoting sustainable development.

This research explores the technical policy and technological considerations that would be necessary to implement such a system. The paper explores the feasibility of such a satellite-hosted financial system and its potential benefits for reducing the transaction costs of remittances sent from developed to developing countries, in addition to its benefits for assisting internationally and internally displaced person to store and access their wealth irrespective of their ultimate settlement location.

The cost for individuals to send and receive money, particularly to developing countries, is among the highest types of transaction costs in the financial industry. This is the case for many countries in Central and South America, Sub-Saharan Africa, and South Asia despite remittances constituting a significant source of development financing compared to official development assistance and foreign direct investment. Moreover, conflict and natural disasters frequently result in internationally and internally displaced persons who are forced to leave behind their property and valuables, forcing them in many cases to build wealth anew. Developing countries are among the most affected in the world in terms of hosting large numbers of displaced persons, despite these governments' already limited financial resources.

This paper explores both the technical policy and technological needs for a satellite-hosted, blockchain-based financial system that would respond to these needs of developing economies. It explores the emerging, terrestrial models of regulation governments are adopting to oversee cryptocurrency transactions, such as those found in Bermuda, Canada, and Venezuela. The research also discusses examples of how cryptocurrencies are being adopted in developing economies, including Ghana.

Moreover, the research outlines the technological approach for such a system, namely through identification of the various space, ground, and user segments and their underlying components. Based on the requirements of such a financial system with regard to developing countries' capabilities, geographies, and low-cost accessibility needs, different orbital constellations were analysed and compatible ground and user segments identified.