

# **What are the ICT infrastructure factors influencing the potential adoption of cryptocurrency in developing countries?**

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## **Abstract**

Adoption of cryptocurrency has been discussed by researchers since its introduction in 2009, but cryptocurrency remains on the fringe of the monetary system. Many researchers suggest that cryptocurrency has the potential to be adopted in developing countries where it does not have to compete with a strong and established financial system. This research examines the potential adoption for cryptocurrency in developing countries from the perspective of ICT infrastructure, attempting to analyse the connection between cryptocurrency and ICT infrastructure and to investigate ICT related factors that affect the adoption of cryptocurrency providing information on the previously unmapped territory. The research uses a systematic literature review methodology to identify and analyse research papers that provide information on the current state of ICT infrastructure and identify factors affecting the adoption of cryptocurrency. The research analysed 364 research papers and identified 53 research papers to contain relevant information on ICT infrastructure and cryptocurrencies. Quality analysis of research papers was used to extract and analyse information from the research papers. The findings identified four main factors affecting cryptocurrency adoption. Those are, a reliable supply of electricity, penetration of internet, availability of mobile networks and ownership of end-user devices. Analysis of current infrastructure indicates that current electricity penetration rates are still low and many communities do not have a reliable supply of electricity. The research found that mobile networks are the dominant form of network connection with 2G being the dominant technology, penetration of 3G networks that allow for mobile broadband is still low, but this is going to change in the near future due to investments into the infrastructure. Research also identified cryptocurrency attributes, literacy, mobile money competition and government support to be additional factors affecting acceptance of cryptocurrency. These conclusions point the way to further research with a more narrow focus on ICT infrastructure and other cryptocurrencies.