

Preliminary Insights Into the Adoption of Bitcoin in a Developing Economy: The Case of Ghana

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INTRODUCTION

In this technological age, there exist different innovative money payment systems through which financial transactions are made possible and many of these money payment systems are built to run on platforms such as the Web and smartphones (Nian, Lee, & Chuen, 2015). These money payment gateways have enjoyed a continued growth, from the likes of SlydePay, ZeePay, Skrill, BitPesa, Apple Pay, Google Wallet, M-Pesa, BitPay and PayPal (Nian et al., 2015). In ensuring secured transactions on these platforms, the phenomenon of cryptocurrency is emerging. According to Nakamoto (2008), transactions on the web has come to depend exclusively on Financial organizations filling in as trusted third parties to process electronic installments. In spite of the fact that these frameworks work well for most electronic exchanges, it keeps on suffering from the genetic shortcomings of the trust-based model which are also known as “third-party based” payment processing systems. Contracts entered by trading parties are not enforced by these “trust-based” or “third-party-based” payment processing systems (Master Card, PayPal, American Express, SlydePay, and so on). Since contracts entered are not enforced by these trusted third-party payment processor, additional costs are being incurred by trading parties in their quest to ensure that the trade executed is based on the terms of the contract (Knott, 2013).

A Cryptocurrency is a digital or virtual currency that uses cryptography which changes data into a mystery code for transmission over an open system for security and was the first truly decentralized and digitized modern money (Nakamoto, 2008). With the use of special cryptographic techniques, signatures and also an incredible rewarding system, one can say that cryptocurrency is unlike any currency in the world. It requires no third parties such as the banks, credit card companies and others, just a peer-to-peer transaction which means from the sender directly to the receiver (Lee, 2013). Bitcoin is one of the cryptocurrencies in the world. It first appeared online in January 2009. The creator was a computer programmer under the name Satoshi Nakamoto. His open source invention was peer-to-peer which meant transactions did not require an intermediary like Skrill or PayPal to function but rather be electronic with absolutely no physical involvement. Unlike traditional money, Bitcoins exist only online, and they are

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not considered as legal tender. Also, Bitcoins are not backed by any government or any legal entity, and their flow is not controlled by a central bank. With no third parties involved in transactions, the Bitcoin system is a very private one (Elwell, Murphy & Seitzinger, 2013).

This new mode of online financial transactions with bitcoins has transformed the perception of money in the form of traditional money as paper, coins, cheques, treasury bills, and so on, into seeing it in the form of mathematical money as digital ones and zeros or bits (Antonopoulos, 2015). In April 2016, the highest interest shown by African countries in bitcoins was Ghana. Ghana was ranked at number one with 100% interest in Africa (Scott, 2016). The creators of Dogecoin (a cryptocurrency) donated \$342 USD to the Ghana Medical Help (2016) to purchase medical equipment. They also created a Cryptocurrency Endowment Fund to accept donations from donors using cryptocurrencies (Ghana Medical Help, 2016).

Kubát (2015), hailing the innovativeness of Bitcoin, revealed that, judging from the opinions of the respondents, majority considered Bitcoin as a positive mode of transaction. They were optimistic that Bitcoin would represent a decentralized and a virtual new currency that would be out of the control of any governmental agency. Bitcoin is therefore a cheaper way to spend money even across national borders. Majority of e-commerce sites accept Bitcoins. In addition, many Bitcoin ATMs have been opened and one can even pay for college tuition fees with it. Bitcoin is like gold, but in a virtual environment (Rogojanu & Badea, 2014).

Bitcoin offers a secured mode of transaction. For instance, only owners of Bitcoin wallets can change their Bitcoin address. No hacker can illegally get access to Bitcoins unless they have direct access to the user's computer. Again, the Bitcoin system requires physical access unlike traditional currency where only a few verification steps are required to gain access to the account, which makes it almost impossible to hack (Dwyer, 2015).

With the fast growth of Bitcoin transactions, initial literature reviewed espoused that Bitcoin usage and its activities have gained considerable traction in developed countries and also that it is gaining grounds in some developing countries in Africa, Ghana included (Scott, 2016). The proposed research will therefore attempt to explore the adoption and usage of the Bitcoin technology among citizens of a developing country such as Ghana.

Over the years, users of fund transfer services and payment services have had to contend with unfavourable circumstances in the hands of middlemen (such as bank, a credit card company, and the telecommunications companies (Telco's) via m-payment systems) who hide behind these virtual services during business transactions. Sending funds to another person attracts high transactional fees and the total amount sent to the receiver is decreased on arrival (Dwyer, 2015). Elwell et al. (2013) concluded that Bitcoin transactions are to be significantly less expensive for users as compared to other traditional payment systems. Banks and Credit card companies for instance will charge merchants significant fees for their role as a trusted third-party intermediary in validation of an electronic transaction. Again, Njuguna (2014) found out that BitPesa is one of Africa's first Bitcoin startup that is making transfer of money from Kenyans living in UK to their loved ones in Kenya more efficient and possible. Extant studies (Kubat, 2015; Bonneau et al., 2015; Elwell et al., 2013; Dwyer, 2015; Singhal & Rafiuddin, 2014) have also looked at how cryptocurrencies have digitized and decentralized the modern currency system. Again, studies (Nakamoto, 2008; Nian et al., 2015; Njuguna, 2014) have looked at how Bitcoins are made and used, how beneficial it is to its users, and how its adoption has helped eased transactions locally and internationally? However, while there is a significant amount of evidence that Bitcoin actually cuts down on the cost of funds transfer across the world, arguably, there exists little or no comprehensive data on its existence, adoption, usage and its cost advantage from a developing country perspective.

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