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Creating Endogenous Growth: Introducing Community Inclusion Currencies within Rural Communities

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Abstract. Although economic cooperation has significantly enhanced countries' development, the countryside remains an economically underprivileged region in Africa. The scarcity of mainstream financial resources is mentioned as a contributing factor to difficulties experienced by rural communities. This research explores mechanisms for introducing blockchain based community currency in African rural areas to mitigate social and economic challenges. To achieve the objective of the study, extant literature was scoured to distil past studies and expand on a theoretical framework. The results reflect on the intricacies of financial systems in the continent's economies, including the necessity to pinpoint key areas that drive willingness to embrace alternative financial instruments. The study's findings will be invaluable for financial institutions and organizations engaged in economic cooperation and lay a crucial theoretical basis for future research.

Keywords: Blockchain, Diffusion of Innovation, Community Inclusion Currencies, Rural Africa, Digital Divide

1 Introduction

The emergence of contemporary technologies has generated novel innovative financial options for many individuals. Among others, microfinance, crowdfunding and peer-to-peer lending have garnered widespread attention from researchers and practitioners. Nevertheless, the access to financial options has been out of reach for many people in sub-Saharan Africa. Based on some predictions, few households and families in many regions of Africa have access to a bank account, as contrasted with other regions of the world[1, 2]. Recently, the spectrum of affordable financial services in Africa has broadened with increasing Internet access and the widespread acceptance of smartphones in communities[3, 4]. This technological boom has afforded new opportunities for the underserved, who are able to use technology to turn once tedious daily tasks into profitable ones. For instance, mobile money has been one of the technologies enabling peer-to-

peer financial transactions. Mobile financial services (MFS) such as mobile money enabled users to deposit or withdraw money without a bank account [5]. Considering the huge number of unbanked families and households (over 1 billion households), there is strong pent-up demand for alternative financial services such as peer-to-peer transactions [3].

The merits of implementing community inclusion currency through blockchain technology for the "unbanked" are manifold. For instance, it eliminates intermediate operations by encoding information about transactions, thus making the process foolproof [6]. Blockchain technology also enables secure peer-to-peer transactions while boosting the acceptance rate of rural populations [7]. Through blockchain technology, individuals who do not have access to traditional bank accounts can benefit from a range of ownership for any decentralized peer-to-peer payment solution [8].

In this study, we outline an economic and social framework for blockchain-based community currencies that addresses the critical drivers of acceptance within developing countries. We commence with a cursory discussion of the state of the art regarding the use of community currencies and their impact on the national economy. Based on these structural premises, we describe our theoretical framework and the associated hypotheses. The subsequent portions of the paper are allocated to elaborating on our research methodology and presenting the expected managerial and organizational implications of our study.

2 Theoretical Underpinning and Hypotheses

2.1 Related Research on Community Currency

By definition, a community currency is a local currency intended to exchange goods and services to complement the national currency [9]. An institution's objective to set up a local currency can vary—stimulate the local economic growth, increase social cohesion of a rural community, or decrease the constraints related to employment. Besides, community currency can be expressed in convertible community bonds, a mutual credit network, or even a Local Exchange and Trading Systems (LETS) [10].

The idea behind the use of several currencies at different scales was thought of by [11]. The incentive was to design a complementary mechanism to the national currency, which was often not widespread in impoverished rural areas. The model was extensively tested in a study on the economic recession in Argentina in 2009 [12]. The study results pointed out a positive effect of using the local community currency to offset the effects of the national currency shortage triggered by the country's economic turmoil [12]. The adoption of such an alternative system in Argentina due to the financial crisis increased the country's national GDP by 0.6 [12]. In Kenya, Grassroots Economic Foundation has launched Community Currency has introduced a community currency known as Sarafu Credit, with the rural communities [13, 14]. The Sarafu is backed by the Kenyan Shillings and is supported by a local community (backers). Backers can be merchants, farmers, street vendors. In a context where having access to national cur-

rency remains a challenge, and where the rate of bank penetration is low, Sarafu endorsers are leaning more and more on this alternative as a complement to the national currency [13].

In rural communities, community currencies may offer a unique alternative for accessing financial services. The legitimacy of these currencies derives from trust and mutual agreement within communities and from the establishment of monetary agreements between individuals. Such agreements therefore regulate different social contracts [15]. The sustainability of such a system stems from community members' social behaviour, which in turn has a relatively positive impact on the local economy. The strongest argument for the success of such a system is the stimulation of local consumption of goods and services as a result of the local financial system [10]. [15] has documented evidence of the positive effects of community currency for economically vulnerable countries. The evidence implies an increase in financial inclusion and enhanced inter-household connections within a community due to high levels of trust. We contend that community currencies can also play a vital role in sub-Saharan Africa. The area has experienced political, economic and social crises for several years. Offering alternative financial solutions to families and individuals in a community can be crucial for survival, especially in times of economic insecurity. Community currencies could empower communities by enabling financial independence, reinforcing existing local institutions and augmenting local know-how on a solid social basis.

2.2 Core Constructs

This study draws its theoretical foundations from the emerging literature on blockchain acceptance in developing countries and previous work on community currencies in Africa. The study's theoretical foundation derives from several constructs resulting from models of the Diffusion of Innovation theory and the Technology Acceptance Model. The framework is anchored on institutional considerations (regulatory support) as key determinants of community currency acceptance within the Central African Economic and Monetary Community. Thus, we present various constructs of our research framework as follows:

Relative Advantage refers to "the degree to which an innovation is perceived as providing more benefits than its predecessor" [16, 17]

H1: Relative Advantage has a positive influence on Perceived Ease of Use

H2: Relative Advantage has a positive influence on Perceived Usefulness

Compatibility refers to the extent to which a technological system is perceived as harmonious and fair to citizens' local beliefs, attitudes, and past experiences [16].

H3: Compatibility has a positive influence on Perceived Ease of Use

H4: Compatibility has a positive influence on Perceived Usefulness

Complexity refers to the degree to which technological innovation is deemed difficult to understand and use [16, 18].

H5: Complexity has a negative influence on Perceived Ease of Use

H6: Complexity has a negative influence on Perceived Usefulness

Trialability refers to the degree of technological innovation experimentation on a benchmark limited in time [18].

H7: Trialability has a positive influence on Perceived Ease of Use

H8: Trialability has a positive influence on Perceived Usefulness

Observability refers to the degree of visibility of technological innovation outputs by different actors [18].

H9: Observability has a positive influence on Perceived Ease of Use

H10: Observability has a positive influence on Perceived Usefulness

Perceived Ease of Use refers to the degree of a citizen's belief in increasing his work performance through the use of technological innovation [19].

H11: Perceived Ease of Use has a positive influence on Perceived Usefulness

H12: Perceived Ease of Use has a positive influence on Attitude

Perceived Usefulness refers to the belief of a citizen that the use of technological innovation would be effortless [19].

H13: Perceived Usefulness has a positive influence on Attitude

Perceived Risk refers to the degree of prudence and uncertainty (positive and/or negative) associated with technological innovation's potential use [20].

H14: Perceived Risk has a positive influence on Attitude

Perceived Knowledge refers to the self-assessment provisions of citizens' understanding of local community currency and blockchain technology [21].

H15: Perceived Knowledge has a positive influence on Attitude

Social Influence refers to the degree of acceptance and use of technological innovation based on the influence of leaders' opinion in its community [22].

H16: Social Influence has a positive influence on Attitude

Regulatory Support refers to the implementation of a regulatory and institutional framework as a prelude to the introduction of technological innovation [23].

H17: Regulatory Support moderates the impact of Attitude on Community Currency acceptance

Attitude refers to the attitudinal assessment (positive or negative) of technological innovation [24].

H18: Attitude has a positive influence on Community Currency Acceptance

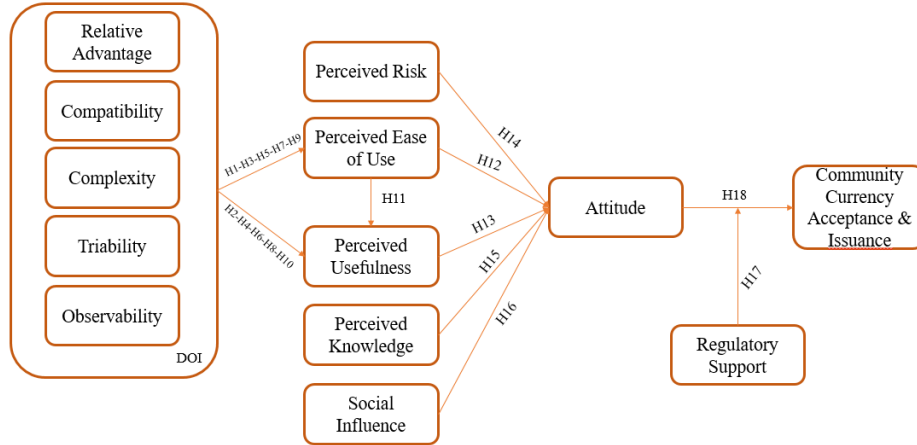


Fig. 1. Research Framework

3 Methodology

To test the measurement items of our theoretical framework, we opted for a mixed methodology. [25] recognizes the mixed-method approach's complementary nature overcoming the shortcomings of studies where the qualitative and quantitative methodologies were applied separately. Thus, the present research begins with a qualitative study to justify the results of our quantitative analysis. Interviews and focus group discussions were conducted in the traditional chiefdoms of Batoufam, Bameka, and Fondjomekwet. These are the selected sites for the deployment of the community currency project based on blockchain technology. The purpose of the interviews was to gauge the level of understanding and acceptance of such technology in an environment particularly known to be resistant to new technologies. Subsequently, we developed a survey questionnaire based on our research model. For a better understanding of our measurement elements, the questionnaire developed was translated into local dialect as follows: Ngemba (for the kingdom of Bameka), Ndanda (for the kingdom of Batoufam), Ghomala' (For the kingdom of Fondjomekwet) [26]. To make sure our informants understood our study, we hired three interpreters for the kingdoms where the study took place. The interpreters possessed the expertise to better explain our study's objective as they are familiar with the local pronunciation, expressions, and terms. Besides, caution was taken to ensure that the intonation of the local language is respected. We opted for on-site data collection approaching rural communities and collecting the first-hand information necessary for our study. This proximity to the communities is essential for us as we formulate technological and administrative recommendations. We will use the Partial Least Square Structural Equation Modelling (PLS-SEM) approach for the structural analysis of our theoretical representation, and the SmartPLS software version 3.2.8 will be used.

4 Outlook

This research explores the extent to which the introduction of community currency will impact on rural communities that might not be ready to embrace technological change. One aim is to capture key elements of the acceptance of such a technological innovation for the sake of local economic development, and endogenous and social growth. We opted first for a mixed methodology to overcome the shortcomings observed in previous studies applying qualitative or quantitative methodologies separately. The findings of our study contribute to the existing literature on community currency and its importance in the African social and economic landscape. The study also has practical and managerial contributions. Institutional actors and technology organizations will find the results of our study invaluable in refining their technology implementation strategies based on a human-centered design approach.

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