Financial Institutions Readiness Towards Cryptocurrency Adoption: A Case of Banks in Tanzania

Dickson Pastory¹
Desderius A. Mahwera²
¹,²Department of Accountancy, College of Business Education, Dar Es Salaam, Tanzania.

ARTICLE INFO
ISSN: 2723-1097
Keywords: Cryptocurrency, readiness, adoption, attitude, Tanzania

ABSTRACT
This study assessed readiness of Tanzania’s financial institutions towards adoption of cryptocurrency. Specific objectives included assessing the attitudes of bank staff on cryptocurrency, determining current readiness level of Tanzania’s banks towards adoption of cryptocurrency and examining the relationship between staff attitude and adoption readiness. The study used a mixed-method research design. Purposive and simple random sampling strategies were deployed for selecting 195 participants from both public and private banks located in Dar es Salaam. Data were collected by using structured questionnaires and semi-structured interviews and analyzed through descriptive statistics and content analysis techniques. Findings of the study revealed that staff had negative and positive attitude on perceived usefulness and perceived ease of use of cryptocurrency, respectively. Moreover, overall cryptocurrency adoption readiness was found at low level and, a weak positive significant correlation was found between attitude and adoption readiness. It was concluded in this study that a bank sector is not ready to adopt cryptocurrency. From the findings it was recommended among others that Tanzania’s banks should start to provide trainings on cryptocurrency to staff and, policy and regulations should be formulated to support cryptocurrency usage in the country.

Introduction

Information and Communication Technologies (ICT) has greatly shaped monetary and payment systems worldwide (Foster et al., 2021). A recent growing cryptocurrency phenomenon in financial system has been as well reported to emerge as a result of rapid advancements in ICT (Nadeem et al., 2021). According to Wątorek et al. (2021) cryptocurrency simply refers to digital currency secured with strong cryptographic techniques to facilitate all types of online transactions between its users. The existence of cryptocurrency is mainly powered by an open distributed ledger called blockchain (Zheng et al., 2017). Generally, more than 2000 types of cryptocurrencies exist in the world (Arias-Oliva et al., 2019). However, out of them, Bitcoin, Ripple, Litecoin and Ethereum are the most common ones (Nadeem et al., 2021).

According to Wu et al. (2022) there has been tremendously increase in number of cryptocurrencies users worldwide for the past few years. In the literature several factors have been found to influence cryptocurrencies adoption. For instance, a study by Albayati et al. (2020) demonstrated that among others trust is the main variable influencing adoption of cryptocurrency. Ku-Mahamud et al. (2019) pointed out...
stability and security of cryptocurrencies as main drivers. More recently, a study by Wu et al. (2022) attributed increase in cryptocurrencies users with double-digit inflation, instant payments and cheap transaction of the platform.

Effective implementation of any technological innovation (e.g., cryptocurrency) depends largely on the extent to which intended users are prepared to such technology (Ghaleb et al., 2021). Ren (2019) argued that as adoption of new technology is always uncertain and risk, a match between technology requirements and organization adjustments on such technology must be met to avoid resistance that may results into adoption failure. Furthermore, Ren (2019) pointed out that technology adoption readiness might be also constrained by people’s attitude to such technology.

Worldwide, a considerable variation in readiness status amongst organizations towards adoption of blockchain-based applications exists. For instance, Ozturan et al. (2019) generally observed that banks in Turkey are at initial level of adopting blockchain technology. Johnson et al. (2020) reported that blockchain adoption readiness level of large firms in USA is higher than of the medium and small organizations. In Kenya, Kosgei (2020) reported that adoption of blockchain technology for supply chain traceability in Kenya’s horticultural industry was at low level being largely affected by various factors including poor ICT development, poor ICT skills and lack of policies and laws governing blockchain.

In Tanzania, adoption rate of cryptocurrency was discouraged by a government notice that termed it as illegal tender (Bank of Tanzania, 2019). Following a global trend of cryptocurrency adoption, the Government has recently shown interest on cryptocurrency usage, however, studies addressing financial institutions readiness towards cryptocurrency adoption are missing. Therefore, this study aims to assess readiness level of Tanzania’s bank sector towards adoption of cryptocurrency.

Recently, massive global adoption to cryptocurrencies has been witnessed (Wu et al., 2022). Literature shows that this is influenced by a number of factors such as technology trust and low transaction fee (Albayati et al., 2020). However, cryptocurrencies adoption rate has been constrained by its possibility of being used in money laundering, terrorism financing and tax evasion (He et al., 2016). Despite of these hindrances, cryptocurrency is still mentioned as a technology move for financial institutions (Chen et al., 2021). As an effort to cope with future impact of cryptocurrencies and blockchain technology in financial system, in 2021 Tanzania’s Government addressed its intention to adopt cryptocurrencies. However, governor of central bank has been quoted narrating that the country is not yet in position to adopt cryptocurrencies and public members interested should adopt at their own risk (The Citizen, 2021). It wasn’t clarified in governor’s statement if this situation is attributed to poor readiness of financial institutions. This study therefore, aimed to assess the readiness of Tanzania’s bank sector towards adoption of cryptocurrencies as up to date no comprehensive study has been done on the same.

The general objective of this study was to assess cryptocurrency adoption readiness of Tanzania’s financial institutions. Specific objectives were; To assess the attitude of Tanzanians bank staff on cryptocurrencies; To determine current readiness
level of Tanzania’s banks towards adoption of cryptocurrency; To examine the relationship between staff attitude on cryptocurrency and cryptocurrency adoption readiness in Tanzania’s banking sector. Findings of this study will help banking industry and the Government to put in place all necessary measures to ensure successful adoption and implementation of cryptocurrency.

**Literature Review**

**Public Attitude on Cryptocurrencies**

Several researchers have tried to investigate people’s attitude on cryptocurrencies. Laboure and Reid (2020) conducted a survey about cryptocurrencies perceptions among Deustche bank customers from France, United Kingdom (UK), United States (US), Italy and China. Their analysis indicated among others that 48%/51% of the respondents agreed that it is easy to purchase cryptocurrencies, 54%/48% perceived that committing fraud is easy with cryptocurrencies and 56%/38% said that they will never make any investment in cryptocurrencies. In Rwanda, a study by Kesa and Mahoro (2019) established that majority of respondents had positive attitude towards cryptocurrencies. It was found that 60% of the respondents believed that regulated cryptocurrency can promote economic activities in Rwanda. Additionally, 44.4% of the respondents said they are willing to use regulated cryptocurrency. In Tanzania, a study by Kidunda and Pastory (2021) revealed among others that 47%, 50% and 48% of the respondents perceived that cryptocurrency payment is very faster, save time and is free from harassment, respectively. It was also found that 49% of the respondents considered cryptocurrency as a good alternative source of traditional currency. From literature reviewed it is clear that the concept of people’s attitude on cryptocurrency has been well researched across the globe, however, findings on the same topic on Tanzania’s financial institutions is missing.

**Studies on Readiness to Adopt Blockchain-based Systems**

Even though there is a lack of literature discussing directly on financial institutions readiness towards adoption of cryptocurrency, however, few studies have attempted to investigate firms’ readiness to adopt blockchain, a cryptocurrency technology. A study by Ozturan et al. (2019) on assessment of readiness to adoption blockchain technology in Turkish banking sector concluded that majority of banks in Turkey were at initial level of adopting blockchain technology. In US, Johnson et al. (2020) generally found that the large organizations were more ready to adopt blockchain technology than the medium and small organizations. In United Arabs Emirates healthcare sector, a study by Balasubramanian et al. (2021) observed high readiness level of large firms towards adoption of blockchain. However, it was found that absence of clear regulation and laws, privacy and trust of the technology discouraged massive adoption. In Ghana, Broni (2019) found that the Ghanaian government was ready to adopt blockchain technology aiming among others to facilitate transparency and efficiency in the provision of government services to the public. A study by Kosgei (2020) reported a low level of readiness to adopt blockchain technology in Kenya’s horticultural industry. According to Kosgei (2020) the observed readiness level was attributed to poor ICT development, lack of policies and laws
governing blockchain technology and poor ICT skills. From literature reviewed it was observed that no comprehensive study has been done to assess Tanzania’s financial institutions readiness to adopt cryptocurrency and blockchain technology.

**Theoretical Framework**

This study was guided by TAM-TOE model which was developed by Gangwar et al. (2015) integrating Technology Acceptance Model (TAM) and Technology, Organizational and Environmental (TOE) framework. TAM was initially coined by Davis (1989) aiming to understand individuals’ behavior affecting intention to adopt technology. However, Gangwar et al. (2015) argued that constructs of TAM model (perceived usefulness and perceived ease of use) cannot explain all factors influencing technology adoption and always produce inconsistence and unclear results. The TEO framework was proposed by Tornatzky and Fleischer (1990) to describe three main areas (technology, environment and organization) that affect adoption and acceptance of technology by a firm. However, Gangwar et al. (2015) also argued that TOE framework has a limited power to explain technology adoption. Hence, Gangwar et al. (2015) integrated both TAM and TOE framework in a single TAM-TOE model to resolve the limitations of TAM and TOE models. Consequently, TAM-TOE model was deployed in this study to guide the researcher to explore attitude of bank staff towards cryptocurrency and assess readiness level towards adoption of cryptocurrency technology in aspect of technology, environment and organization.

**Conceptual Framework**

![Conceptual Framework Diagram](https://example.com/conceptual_diagram.png)

Figure 1: Proposed Conceptual Framework
From this figure it is conceptualized that the overall cryptocurrency adoption readiness depends on readiness in terms of organizational, technological and environmental contents. However, readiness might be affected by staff attitude (perceived usefulness and perceived ease of use) on cryptocurrency technology.

**Method**

This study utilized a convergent parallel mixed design to help the researcher to collect both qualitative and quantitative data at the same time and compare the findings for deeper understanding of the phenomenon under study (Asenahabi, 2019). This study was carried out at Dar es Salaam region based on the fact that it is considered as a primary hub for majority of financial institutions. A total number of 195 participants were selected from all local banks using purposive and simple random sampling techniques. Determination of sample size was influenced by rules of thumb for sample size determination by VanVoorhis and Morgan (2007) in which no less than 50 respondents are required for study involving correlation analysis. All respondents’ identities were kept confidential. A structured questionnaire and semi-structured interview were used for data collection. Validity of the questionnaire was established through content validity method whereas internal consistency reliability test was opted for measuring reliability. A Cronbach’s alpha value equal or greater than 0.7 (Table 1) was considered sufficient to indicate that the instrument was reliable (Mohajan, 2017).

| Variable                  | Number of items | Cronbach’s alpha value |
|---------------------------|-----------------|------------------------|
| Perceived Usefulness      | 5               | 0.772                  |
| Perceived Ease of Use     | 5               | 0.713                  |
| Technological Readiness   | 4               | 0.801                  |
| Organizational Readiness  | 4               | 0.703                  |
| Environmental Readiness   | 2               | 0.821                  |

Credibility of qualitative data was ensured though independent data analysis by other colleagues and by avoiding personal bias during interview such as asking the same questions several times to influence a specific response (Noble & Smith, 2015). Both content analysis and descriptive statistics were used for data analysis. For assessment of attitude, a mean score of 1.0-2.6, 2.61-3.40 and 3.41-5.0 were classified as negative, neutral and positive, respectively (Chanwaiwit, 2018). The readiness level of bank sector towards adoption of cryptocurrency was attained using a mean score value adopted from Silas (2021) as indicated in Table 2.

| Mean Score | Level     | Interpretation                                      |
|------------|-----------|-----------------------------------------------------|
| 1.00 – 1.80| Very Low  | Not ready at all; a lot of improvement is needed     |
| 1.81 – 2.60| Low       | Not ready; some areas needs to be improved          |
| 2.61 – 3.20| Medium    | Moderately ready; minor to moderate level of         |
### Mean Score, Level, and Interpretation

| Mean Score | Level   | Interpretation                                           |
|------------|---------|---------------------------------------------------------|
| 3.21 – 4.20| High    | Improvement is needed prior adoption of cryptocurrency   |
| 4.21 – 5.00| Very High | Ready but minor improvements are required as a bank sector progresses on using cryptocurrency |
|            |         | Ready to implement; bank sector is not exposed to any adoption risk |

### Discussion

#### Demographic Profiles on the Participants

The demographic profiles of the respondents are presented in Table 3. As shown in the table, 58.74% of the total respondents were male while female occupied 41.26%. Respondents in the age group of 26 to 35 years dominated the study with approximately 59.44% of the total participants. Majority of the respondents 56.64% were bachelor degree holders and approximately 54.55% had 6 to 10 years of working experience.

### Table 3: Demographic Profile of the Respondents, N=143

| Variable          | Category       | Frequency | Percentage (%) |
|-------------------|----------------|-----------|----------------|
| Gender            | Male           | 59        | 41.26          |
|                   | Female         | 84        | 58.74          |
| Age               | 18 to 25 years | 1         | 0.7            |
|                   | 26 to 35 years | 85        | 59.44          |
|                   | 36 to 45 years | 48        | 33.57          |
|                   | Above 45 years | 9         | 6.29           |
| Level of Education| Certificate    | 0         | 0              |
|                   | Diploma        | 3         | 2.1            |
|                   | Bachelor degree| 81        | 56.64          |
|                   | Masters degree | 53        | 37.06          |
|                   | Doctorate degree| 6       | 4.2            |
| Working Experience| Less than 1 year| 4        | 2.8            |
|                   | 1 – 5 years    | 25        | 17.48          |
|                   | 6 – 10 years   | 78        | 54.55          |
|                   | 10 years and above| 36   | 25.17          |

#### Attitude of Bank Staff on Cryptocurrency Technology

##### Perceived Usefulness

Table 4 present findings for perceived usefulness of cryptocurrency. Generally, findings of the study shows that respondents had negative perception on perceived usefulness of cryptocurrency. Specifically, a negative attitude was recorded regarding the usefulness of cryptocurrencies in reducing financial fraud. These findings are in line with those by Laboure and Reid (2020). Findings of the study also revealed that...
respondents did not recommend cryptocurrencies as an alternative source of currency. This information agreed with interview findings whereby one of the respondents narrated that “…I think the government should not legalize cryptocurrencies usage in place of traditional money. They are highly prone to online hackers…” Respondent 2, 16 March 2022. These findings are more similar to those reported by Gagarina et al. (2019) in which less number (37%) of the respondents were found interested in cryptocurrencies. A negative attitude observed in this study with respect to a desire of using cryptocurrencies than traditional money because of the anonymity of its users was opposite to those by Smutny et al. (2021) in which anonymity feature of cryptocurrencies was found to motivate both men and women into cryptocurrencies trading activities. Regarding, usefulness of cryptocurrencies payment in lowering transaction fee, findings of this study are in line with study by Doblas (2019) in which a negative attitude was revealed among the respondents regarding the potential of cryptocurrencies in reducing transaction costs.

Table 4: Perceived Usefulness of Cryptocurrency

| Construct                                                                 | Mean       | Classification |
|--------------------------------------------------------------------------|------------|----------------|
| I believe that cryptocurrencies will help to reduce financial fraud      | 1.52±0.855 | Negative       |
| I recommend the use of cryptocurrencies as an alternative source of currency | 1.43±0.676 | Negative       |
| Using cryptocurrencies is more desirable than traditional money because of the anonymity of its users | 1.66±0.865 | Negative       |
| Cryptocurrencies payment will allow lower transaction fee than other modes of payment. | 2.56±1.402 | Negative       |
| I think that using the cryptocurrencies will save time and helps customers to complete transactions more quickly | 3.27±1.354 | Neutral        |
| Average                                                                  | 2.09±0.800 | Negative       |

Perceived Ease of Use

Table 5 shows results for perceived ease of use of cryptocurrency. As shown in the table, a positive perception was recorded concerning learning and remembering of functioning of cryptocurrency technology while a neutral perception was revealed regarding ease to use and user-friendly interaction with cryptocurrencies transactions. Generally, findings of this study show that a positive attitude was observed in terms of perceived ease of use of cryptocurrency. This might be attributed by excellent ICT skills on implementing different financial systems amongst the respondents. Findings of this study concur with those by Kidunda and Pastory (2021) who also revealed positive attitude for most of the constructs assessed in this study regarding perceived ease of use of cryptocurrency.
Table 5: Perceived Ease of Use of Cryptocurrency

| Construct                                                                 | Mean       | Classification |
|---------------------------------------------------------------------------|------------|----------------|
| I’m not stressed when I think about the use of cryptocurrencies technology in banking system | 3.66±0.943 | Positive       |
| I think that learning how cryptocurrency technology work would be easy     | 3.48±1.067 | Positive       |
| I believe that remembering how cryptocurrency technology work would be easy| 3.48±1.168 | Positive       |
| I believe that cryptocurrencies technology will be easy to use             | 3.29±1.362 | Neutral        |
| I perceive that interaction with cryptocurrencies transactions would be user-friendly and free of effort | 3.34±1.359 | Neutral        |
| Average                                                                   | 3.45±0.145 | Positive       |

Readiness Status on Cryptocurrency Adoption

Technological Readiness

The readiness level of technology dimension is presented in Table 6.

Table 6: Technological Readiness

| Statement                                                                 | Mean       | Level   |
|---------------------------------------------------------------------------|------------|---------|
| Available ICT systems is not prone to security risk with adoption of cryptocurrency | 3.54±1.033 | High    |
| Available ICT personnel will be able to handle challenges associated with cryptocurrency implementation | 3.45±1.086 | High    |
| The use of cryptocurrency technology will be compatible with our current ICT systems | 2.50±0.838 | Low     |
| Existing ICT infrastructures will be adequate to support cryptocurrency technology | 3.18±1.314 | Medium  |
| Average                                                                   | 3.17±0.471 | Medium  |

The findings in Table 6 show that the overall readiness in dimension of technology is at medium level. Specifically, the existence of ICT systems that cannot be attacked by cyber hackers and ICT personnel which capable of handling cryptocurrency implementation challenges was found at high level. In agreement with these findings, one of the respondents during interview described that “….in terms of security, all of our banking information systems have high level of ability to protect customers’ information. I’m confident that once cryptocurrencies comes into use our customers’ data will still be highly protected against cyber hackers…” Respondent 5, 16 March 2022. The readiness of existing ICT systems to fit with cryptocurrency is at low level while availability of adequate ICT infrastructures to support cryptocurrency adoption is at medium level.
Regarding ICT-Cryptocurrency fit, findings of this study is in line with the findings by Kosgei (2020) which indicated that majority of ICT infrastructure in Kenya’s horticultural industry had low level of interoperability with blockchain technology. Moreover, findings of this study are in agreement with those by Esselaar and Adam (2013) who found that ICT sector in Tanzania lack adequate ICT facilities to facilitate adoption of advanced technologies. On the other hand, high readiness level of ICT personnel to handle cryptocurrency implementation challenges reported in this study contradict with a previous report by Esselaar and Adam (2013) which demonstrated that development in ICT sector in Tanzania is hindered by absence of local trained ICT personnel.

Organizational Readiness

As shown in Table 7, the study established low level of readiness in terms of organizational readiness.

| Statement                                                                 | Mean    | Level    |
|---------------------------------------------------------------------------|---------|----------|
| Top management is committed to support adoption of cryptocurrency          | 1.48±0.710 | Very low |
| Open, active and collaborative communication plan exist in my institution that may support cryptocurrency implementation | 3.09±1.244 | Medium |
| Sufficient financial resources are available to support adoption of cryptocurrency | 2.74±0.947 | Medium |
| Staff have been trained with basic skills on cryptocurrency technology     | 1.35±0.493 | Very low |
| Average                                                                  | 2.17±0.879 | Low     |

The readiness of top management was found at very low level. These findings were consistent with interview data as one of the respondents described “…I’m saying that because I have not seen any serious efforts to show that top management is agreed with adoption of cryptocurrencies…” Respondent 7, 17 March 2022. A medium level of readiness was found concerning the existence of open, active and collaborative communication plan to support adoption of cryptocurrency. Readiness in terms of availability of financial resources to support adoption of cryptocurrency technology was at medium level. Moreover, readiness status of training was found at very low level. In agreement with this one of the respondents during interview stated that “…whenever there changes in information systems the management have been always able to organize trainings to staff but regarding cryptocurrency no trainings have been provided to us…. Respondent 9, 18 March 2022.

With respect to top management, findings of this study contradict with other studies that reported high commitment level of top managers on supporting adoption of technologies (Yusof & Aziz, 2015; Achieng & Jagero, 2014). Regarding readiness
level in terms of financial resources, findings of this study are in line with those by Kosgei (2020) who also found insufficient budget among Kenya’s horticultural firms to support training and capacity development on blockchain-based systems. Findings of the present study support findings by Rejeb et al. (2022) which revealed that readiness to adopt blockchain-related systems may be constrained with poor training, communication and insufficient management support.

**Environmental Readiness**

The results for environmental readiness are as shown in Table 8

| Statement                                                                 | Mean       | Level     |
|---------------------------------------------------------------------------|------------|-----------|
| My institution has got a policy and regulations related to cryptocurrencies | 1.64±0.665 | Very low  |
| Our customers are curious about using cryptocurrencies                     | 2.49±1.125 | Low       |
| Average                                                                   | 2.07±0.601 | Low       |

Readiness in dimension of environment was found to be at low level. Under this dimension readiness level in terms of policy and regulations was at very low whereas customers’ readiness was at low level. These findings agreed with interview data in which one of the respondents described “…in terms of environmental readiness we are not yet prepared. We don’t have a policy or regulations...” Respondent 9, 17 March 2022.

Unavailability of policy and regulations to guide cryptocurrency usage as revealed in this study relates with results by Broni (2019) who also found that there were no policies and regulations to provide a guide for blockchain use in Ghanaian firms. Moreover, a low customer’s readiness level to adopt cryptocurrency agree with findings of a study by Gagarina et al. (2019) in which majority of respondents were not ready to investment on cryptocurrency even if they would have enough funds to trade cryptocurrencies.

**Overall Readiness**

The overall readiness and readiness level in each dimension is presented in Table 9. As shown in the table, the overall readiness of bank sector towards adoption of cryptocurrency was found at low level.

| Dimension               | Mean       | Readiness Level |
|-------------------------|------------|-----------------|
| Technological readiness | 3.17±0.471 | Medium          |
| Organizational readiness| 2.17±0.879 | Low             |
| Environmental readiness | 2.07±0.601 | Low             |
| Overall                 | 2.47±0.608 | Low             |
Relationship between Attitude and Cryptocurrency Adoption Readiness

Table 10 summarizes findings on the relationship between attitude of bank staff on cryptocurrency and cryptocurrency adoption readiness.

| Attitude       | Adoption Readiness |
|----------------|--------------------|
| 1              | 0.302**            |
| Adoption Readiness | 1                |

**. Correlation is significant at the 0.01 level (2-tailed).

Spearman correlation indicate that there was a weak positive significant correlation between attitude and cryptocurrency adoption readiness ($r=0.302$, $p<0.01$). This implies that the cryptocurrency adoption readiness was very little associated with attitude of bank staff. These findings were to some extent similar to those by Walton and Johnston (2018) which indicated that attitude had positive influences on readiness to adopt Bitcoin.

Conclusion

This study concluded that overall attitude of bank staff on cryptocurrency technology is somehow encouraging, hence may influence positive decision of Tanzania’s banks on adoption and use of cryptocurrency technology. This study also concludes that Tanzania’s bank sector is not ready to adopt cryptocurrency as major challenges were found in area of ICT infrastructure, top management support, training, communication plan, financial resources, policy and regulations.

Recommendations

This study recommends that Tanzania’s banks should start to upgrade ICT infrastructure to meet with the requirements of blockchain-based applications such as cryptocurrency. As top managements were found not committed to support cryptocurrency adoption the Government should consider putting in place incentives that may raise their interest on cryptocurrency. Trainings related to cryptocurrency should be provided to bank staff. It is also recommended that top managements in Tanzania’s banks should allocate enough budgets to support adoption of cryptocurrency. Moreover, this study recommends that policy and regulations related to cryptocurrency must be formulated.

Theoretical Contribution of the Study

This study adopted TAM-TOE model to study cryptocurrency adoption readiness in Tanzania banking sector. TAM-TOE model proposes that adoption of a technology in a particular firm may be influenced by attitude, technology, organization and environment factors. The present study contributed in the identification of variables related to TOE framework that influence cryptocurrency
adoption readiness. Findings of this study indicates that cryptocurrency adoption readiness is greatly affected by ICT infrastructure, top management support, training, financial resources, policy and regulations.

**Limitations of the Study**

In this study, availability of fund and time were the main constraints. Enough funds were needed to support the researcher during data collection phase. Regarding time, most of the respondents had tight schedule consequently causing delay in obtaining responses.

**References**

Achieng, D. O., & Jagero, J. A. (2014). Management Support in Adoption of Computer Integrated Model in Financial Forecasting. *International Journal of Academic Research in Accounting, Finance and Management Sciences, 4*(2), 170-179

Albayati, H., Kim, S. K., & Rho, J. J. (2020). Accepting financial transactions using blockchain technology and cryptocurrency: A customer perspective approach. *Technology in Society, 62*(101320): 1-20

Arias-Oliva, M., Pelegrín-Borondo, J., Matías-Clavero, G. (2019). Variables influencing cryptocurrency use: a technology acceptance model in Spain. *Frontiers in Psychology, 10* (475): 1-13

Asenahabi, B.M. (2019). Basics of research design: A guide to selecting appropriate research design. *International Journal of Contemporary Applied Research, 6*(5): 76-89

Balasubramanian, S., Shukla, V., Sethi, J. S., Islam, N., Saloum, R. (2021). A readiness assessment framework for Blockchain adoption: A healthcare case study. *Technological Forecasting and Social Change, 165*(1): 1-16

Bank of Tanzania (2019). Public Notice on Cryptocurrencies. Retrieved from [https://www.bot.go.tz/Adverts/PressRelease/sw/2020031307240424208.pdf](https://www.bot.go.tz/Adverts/PressRelease/sw/2020031307240424208.pdf)

Broni, F. E. J. (2019). Blockchain Technology Readiness in Firms: Industry Experts’ Perspectives from a Developing Economy. Thesis Awarded for Masters degree at University of Ghana: Ghana

Chanwaiwit, P. (2018). Using effective feedback to improve professionalism as an English student teacher. *The New English Teacher, 12*(2): 1-14

Chen, N. P., Shen, K. Y., & Liang, C. J. (2021). Hybrid Decision Model for Evaluating Blockchain Business Strategy: A Bank’s Perspective. *Sustainability, 13*(5809): 1-22

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly, 13*(3): 319-340

Doblas, M. P. (2019). Awareness and attitude towards cryptocurrencies in relation to adoption among college students in a private tertiary institution in Cagayan De Oro City, Philippines. *International Journal of Advanced Research and Publications, 3*(4): 15-19

Esselaar, S., & Adam, L. (2013). Understanding what is happening in ICT in Tanzania: A supply-and demand-side analysis of the ICT sector. Retrieved from [https://researchchitfrica.net/publications/Evidence_for_ICT_Policy_Action/Policy_Paper_11_-](https://researchchitfrica.net/publications/Evidence_for_ICT_Policy_Action/Policy_Paper_11_-)
Foster, K., Blakstad, S., Gazi, S., & Bos, M. (2021). Digital currencies and CBDC impacts on Least Developed Countries (LDCs): Technical paper 1.2. Retrieved from https://www.undp.org/sites/g/files/zskgke326/files/2021-06/UNDP-UNCDF-TP-1-2-Digital-Currencies-and-CBDC-Impacts-on-Least-Developed-Countries-LDCs-EN.pdf

Gagarina, M., Nestik, T., & Drobysheva, T. (2019). Social and Psychological Predictors of Youths’ Attitudes to Cryptocurrency. Behavioral Sciences, 9(118): 1-10

Gangwar, H., Date, H., & Ramaswamy, R. (2015). Developing a cloud-computing adoption framework. Global Business Review, 16(4): 632-651

Ghaleb, E. A., Dominic, P. D. D., Fati, S. M., Muneer, A., & Ali, R. F. (2021). The Assessment of Big Data Adoption Readiness with a Technology-Organization-Environment Framework: A Perspective towards Healthcare Employees. Sustainability, 13(8379): 1-33

He, D., Habermeier, K., Leckow, R., Haksar, V., Almeida, Y., Kshima, M., Kyriakos-Saad, N., Oura, H. (2016). Virtual currencies and beyond: Initial considerations. Retrieved from https://www.jdcoin.us/images/sdn1603.pdf

Johnson, A., McCurdy, D., Schechter, D., & Loch, K. (2020). Hot or Cold... How Ready are Third Party Logistics Cold Storage Companies to Implement Blockchain?. Retrieved from https://scholarspace.manoa.hawaii.edu/bitstream/10125/64395/1/0525.pdf

Kesa, O., & Mahoro, V. (2019). Rwandacoin: Prospects and challenges of developing a cryptocurrency for transactions in Rwanda. Retrieved from https://arxiv.org/ftp/arxiv/papers/1901/1901.06249.pdf

Kidunda, E., & Pastory, D. (2021). Examination of Factors Influencing the Intention to Adopt Cryptocurrencies in Tanzania. Business Education Journal, 10(3): 1-11

Kosgei, A.K. (2020). Blockchain readiness assessment for domestic Horticulture traceability in Urban Kenya. Thesis Awarded for Masters degree at University of Nairobi: Kenya

Ku-Mahamud, K. R., Omar, M., Bakar, N. A. A., &Muraina, I. D. (2019). Awareness, trust, and adoption of blockchain technology and cryptocurrency among blockchain communities in Malaysia. International Journal on Advanced Science, Engineering & Information Technology, 9(4): 1217-1222

Laboure, M., & Reid, J. (2020). The Future of Payments-Part III. Digital Currencies: the Ultimate Hard Power Tool. Research, Deutsche Bank. Retrieved from https://bit.ly/3qLVOfg

Mohajan, H. K. (2017). Two criteria for good measurements in research: Validity and reliability. Annals of SpiruHaret University. Economic Series, 17(4): 59-82

Nadeem, M. A., Liu, Z., Pitaﬁ, A. H., Younis, A., &Xu, Y. (2021). Investigating the Adoption Factors of Cryptocurrencies—A Case of Bitcoin: Empirical Evidence From China. SAGE Open, 11(1):1-15

Noble, H., & Smith, J. (2015). Issues of validity and reliability in qualitative research. Evidence-based nursing, 18(2), 34-35

Ozturan, M., Atasu, I., & Soydan, H. (2019). Assessment of blockchain technology readiness level of banking industry: Case of Turkey. International Journal of Business Marketing and Management, 4(12): 1-13
Rejeb, A., Rejeb, K., Keogh, J. G., & Zailani, S. (2022). Barriers to Blockchain Adoption in the Circular Economy: A Fuzzy Delphi and Best-Worst Approach. Sustainability, 14(3611): 1-23

Ren, M. (2019). Why technology adoption succeeds or fails: an exploration from the perspective of intra-organizational legitimacy. The Journal of Chinese Sociology, 6(21): 1-26

Silas, K. A. (2021). Assessment of Enterprise Resource Planning System Preimplementation Readiness in Tanzania: The Case of Petroleum Bulk Procurement Agency. Dissertation for Award of Masters degree at College of Business Education: Tanzania

Smutny, Z., Sulc, Z., & Lansky, J. (2021). Motivations, Barriers and Risk-Taking When Investing in Cryptocurrencies. Mathematics, 9(1665): 1-22

The Citizen (2021). Bank of Tanzania cautious over digital currencies. Retrieved from https://www.thecitizen.co.tz/tanzania/news/business/bank-of-tanzania-cautious-over-digital-currencies-3649222

Tornatzky, L. G., Fleischer, M. (1990). Processes of Technological Innovation. MA: Lexington Books

VanVoorhis, C. W., & Morgan, B. L. (2007). Understanding power and rules of thumb for determining sample sizes. Tutorials in quantitative methods for psychology, 3(2): 43-50

Walton, A. J., & Johnston, K. A. (2018). Exploring perceptions of bitcoin adoption: The South African virtual community perspective. Interdisciplinary Journal of Information, Knowledge, and Management, 13(1): 165-182

Wątorek, M., Drożdż, S., Kwapien, J., Minati, L., Oświęcimka, P., & Stanuszek, M. (2021). Multiscale characteristics of the emerging global cryptocurrency market. Physics Reports, 901(1): 1-82

Wu, R., Ishfaq, K., Hussain, S., Asmi, F., Siddiquei, A. N., & Anwar, M. A. (2022). Investigating e-Retailers’ Intentions to Adopt Cryptocurrency Considering the Mediation of Technostress and Technology Involvement. Sustainability, 14(641):1-21

Yusof, M. M., & Aziz, K. A. (2015). Evaluation of organizational readiness in information systems adoption: A case study. Asia-Pacific Journal of Information Technology and Multimedia, 4(2), 69-86

Zheng, Z., Xie, S., Dai, H., Chen, X., & Wang, H. (2017). An overview of blockchain technology: Architecture, consensus, and future trends. In 2017 IEEE international congress on big data (BigData congress). pp. 557-564