Factors Influencing Cryptocurrency Adoption Among Nigerian University Fintech Entrepreneurs: An UTAUT perspective

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ABSTRACT*: Electronic transactions in the financial sector have continued to surge unprecedentedly around the globe. Governments, politicians, and practitioners around the world have been paying close attention to cryptocurrencies in recent years. Cryptocurrencies, a cutting-edge method of exchanging value without the need for a physical medium, offer a number of potential advantages, including quick transactions, cross-border use, low transaction fees, transparency, high security, anonymity, and privacy. As a result, they are anticipated to bring about a significant revolution in the way money is exchanged in the future. In order to forecast adoption of cryptocurrency among Nigerian University FinTech Entrepreneurs, this study will use the Unified Theory of Acceptance and Use of Technology (UTAUT) paradigm. The population of study was drawn from three major universities in Anambra state. Sample sizes of 323 students were used, out of which 313 questionnaires were correctly filled and returned and were used for the analysis. The findings of the study shows that performance expectancy, effort expectancy and facilitating conditions have a positive relationship with cryptocurrency adoption while there was no relationship established with social influence. This study adds to the expanding body of literature on cryptocurrencies and provides beneficial knowledge to fund managers (investors), enterprises, and individual users (payees) (receiving cryptocurrency as a payment method).*

KEYWORDS: Cryptocurrency, Unified Theory of Acceptance and Use of Technology, performance expectancy, effort expectancy, social influence, facilitating conditions**.**

INTRODUCTION

The ubiquity of technology, which can be seen in practically every area of the economy, has unwittingly changed many business models, including those in the financial industry. (Ezenwafor, Olise & Ebizie, 2021). A notable development in this regard is the fusion of Technology and Finance, called FinTech. FinTech is disruptive and is predicted to revolutionize the financial ecosystem (Cheng, 2020). It is the invention and delivery of financial services at the nexus of finance and technology (Mazambani & Mutambara, 2020). The demand for digital currencies to facilitate smooth and instantaneous financial transactions has recently increased as a result of Fintech innovations including peer-to-peer lending, mobile payments, digital banking, and other high-tech developments (Brezo & Bringas, 2012).

As a follow up to this breakthrough, cryptographic algorithms were used to create a brand-new virtual currency known as cryptocurrency as a replacement for traditional currency (Alqaryouti et al., 2020a). Officially, Cryptocurrencies were launched sometime in 2009 (Meera, 2018), though they were initially introduced in 2008 through a white paper published under the

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pseudonym "Satoshi Nakamoto" (Berentsen and Schar, 2018). Since its inception, more and more use cases are being realized; According to Hilleman and Rauchs (2017), the number of unique active cryptocurrency users worldwide ranges from 2.8 to 5.8 million. Among them, 61% live in North America and Europe, 20% are from the Asia-Pacific region, 13% from Latin America, and 6% from Africa and the Middle East. Fang, Tian, and Wang, (2018); Nguyen, Nguyen, Nguyen and Pham, (2019) affirmed its wide use in China.

The popularity of crypto has led to its increased interest among scholars and practitioners. Scholars have examined adoption of cryptocurrency in previous studies (Won-jun, 2018; Omar & Rana, 2018; Mazambani & Mutambara, 2019; Zamzami, 2020; Abbasi, Tiew, Tang, Goh and Thurasamy, 2021), however, there is limited evidence from Nigeria with reference to university fintech entrepreneurs. Therefore, this study examines the factors that drive the adoption of cryptocurrency among Fintech entrepreneurs. This perspective is important because the growth of Cryptocurrency hinges on its acceptance as a means of payment or legal tender.

Just as the Vice President of Nigeria, Prof. Yemi Osinbajo publicly criticized the prohibition in February and as the Central Bank of Nigeria (CBN) prepares to introduce the eNaira, this research will be useful for regulatory organizations to assess the current state of bitcoin adoption with users and non-users. From a managerial perspective, this research can aid in expressing the conditions necessary for successful cryptocurrency acceptance across a range of business sectors by gaining new knowledge and understanding the factors that influence current, potential, and non-users of cryptocurrency to adopt cryptocurrencies. Last but not least, from a scholarly standpoint, this study would add to the body of knowledge regarding the connection between the Unified Theory of Acceptance and Use of Technology (UTAUT) model and the implementation of digital currency.

The remainder of the paper is divided into a literature review, which discusses the idea of cryptocurrencies and what is previously known while assessing the state of the field and the focus of this investigation. The creation of hypotheses, which addresses the dimension argument, comes next. It examines many perspectives through which researchers have examined the idea. Additionally, research technique involves how to acquire data and the best way to evaluate it, whereas analysis deals with how to assess the work. The findings, the study's relevance, and the study's managerial implications are all examined in the interpretation and conclusion section.

REVIEW OF LITERATURE

Cryptocurrency
Economic transactions have continually utilized currencies as medium of exchange. As a unit of account, a store of value, and a medium of exchange, currency is acknowledged as legal tender (Gaudamuz & Marden, 2015; Prasad, 2018) and a crucial element in fostering the development of trustworthy smart contracts among people globally (Shahzad, GuoYi, Jian and Shahbaz, 2018).ordinarily, the traditional fiat through the commercial banks has being used for business transactions, as expected, this form has performed as planned and to the best of its ability (Xinjean and Hwa, 2019). In the last two decades, there has being a shift from paper to virtual currency, a new form of currency which marked the birth of cryptocurrency (Kavanagh

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and Ennis, 2020). One of the most recent advancements in the financial and monetary world is cryptocurrency. Cryptocurrencies are virtual money that are created digitally and protected by sophisticated cryptography. According to Cohen (2017) Cryptocurrency serve as a medium of exchange, a store of value, they are not issued by any central authorities, highly secured, occasioned by its use of cryptography technique by using encryption protocol to identify and verify transactions.

Some mainstream Cryptocurrencies by market capitalization as tracked by coinmarket are:

Cryptocurrency	Market Capitalization
Bitcoin	$608.6 billion
Ethereum	$240.4 billion
Tether	$61.8 billion
Binance Coin	$48.6 billion
Cardano	$37.6 billion
XRP	$27.4 billion
USD Coin	$26.9 billion
Dogecoin	$24.9 billion
Polkadot	$12.5 billion
Binance USD	$11.5 billion

Source: https://www.telegraph.co.uk/technology/0/what-cryptocurrency-why-how-work-bitcoin-ethereum/ (Accessed 1.04.2021, 3:30PM).

THEORETICAL FRAMEWORK

Unified Theory Of Acceptance And Use Of Technology (Utaut)
Venkatesh et al. (2003) proposed the unified theory of acceptance and use of technology (UTAUT) as a unification of earlier models (theory of reasoned action (TRA) proposed by Fishbein and Ajzen (1975), theory of planned behavior (TPB) proposed by Ajzen, (1991), the diffusion of innovation (DIO) proposed by Rogers (1983), technology Acceptance model (TAM) by Davis (1989), and TAM2 by Venkatesh and Davis (2000) regarding behaviour in the technology systems usage. The UTAUT uses the following four dimensions as its primary predictors of behavioral and technological intentions to adopt usage behavior: social influence, enabling factors, performance expectancy, and effort expectancy (Venkatesh et al., 2003). Four major variables—gender, age, experience, and voluntariness of use—as well as other factors also moderate the model. The use of these moderators has, however, been abandoned in recent studies because the adherence is not appropriate in all settings (Dwivedi, Rana, Janssen, et al., 2017; Dwivedi, Rana, Jeyaraj, et al., 2019). Since the UTAUT model's introduction, researchers performing empirical investigations of user intention and behavior have frequently used it in technology adoption and diffusion research as a theoretical lens, according to Williams, Rana, and Dwivedi (2015).

The UTAUT model outperformed each and every one of the other individual technology adoption models when it was tested and compared to them. The model was then put to the test against various other data sources, and each time it was determined to be the most successful

model. As a result, the UTAUT model offers a helpful tool to evaluate the chances of success for the adoption of new technologies. Additionally, it offers insight into the factors that influence acceptance, enabling one to proactively create interventions for user groups who might be less likely to adopt new innovations. (Venkatesh et al, 2003). Based on the above, the TUAUT model was adopted for this study.

Hypotheses Development
Performance Expectancy And Cryptocurrency Adoption
Performance Expectancy is the degree to which a person thinks that utilizing a particular technology or system would be beneficial in raising his or her performance in particular tasks (Venkatesh et al., 2003). PE is formed from the 5 construct combinations of perceived usefulness (TAM), extrinsic motivation (MM), job-fit (MPCU), relative advantage (IDT), and outcome expectations (SCT). Due to its continued significance across all stages of assessment in both voluntary and mandatory situations, PE is still the composite of these five dimensions' greatest predictor of intention (Venkatesh et al., 2003). Rogers (2003) claimed that in order for an innovation to be adopted, it needed to produce a proportionate advantage, benefit, or usefulness for the user. These benefits stand for performance expectancy (Abbasi et al., 2021). When a person experiences an ease in the use of a particular system, he or she is like to use it again (Venkatesh et al., 2012). The significance of performance expectancy has been suggested by several published empirical investigations (Makanyeza and Mutambayashata (2018); Sánchez-Torres, Canada, Sandoval, and Alzate, (2018); Khan, Hameed, and Khan (2017) even its corresponding construct as perceived usefulness (Folkinshteyn & Lennon (2016); Presthus & O'Malley (2017); Nadeem et al., (2021) asserting that a technology, like cryptocurrencies, has a favorable impact on consumers' intentions to use it. In the study done by Arias-Oliva et al., (2019), (PE) was found to be a major determinant of the adoption and use of the digital currency in spain. For this reason, (PE) is regarded as one of the crucial elements influencing the acceptance of cryptocurrencies. Based on this empirical evidence, we hypothesize:
H1: Performance expectancy significantly influences the adoption of cryptocurrency.

Effort Expectancy And Cryptocurrency Adoption
The level of simplicity entailed in using a certain technology is known as effort expectation (Venkatesh et al., 2003). It is that amount of effort required of an individual to learn a specific technology. This dimension was birthed from three variables of already existing models: complexity (MPCU), ease of use (IDT) and perceived ease of use (TAM/TAM2) (adapted from Venkatesh et al., 2003). In this study, (EE) is conceptualized as a construct that explores the ease of use of the digital money. Catherine et al., (2018) postulated that a technology which is more likely to flourish is one that is user-friendly, convenient, flexible and effective. It is debatable whether a technology's usability has an impact on how widely it is used and accepted (Lu, 2021). This construct has been well exploited in that great number of empirical research has affirmed that the adoption of a technology as cryptocurrency is positively influenced by certain level of effort commitment necessary to learn it (Kishore and Sequeira (2016); Batara et al. (2017); Moon and Hwang (2018); Farah et al. (2018). A study conducted by Schaupp and Festa (2018) to explore the use of cryptocurrency, it revealed that (EE) has a significant influence on its adoption. Accordingly, this study hypothesizes the following:
H2: Effort Expectancy significantly influences the adoption of cryptocurrency.

*Social Influence And Cryptocurrency Adoption*

The constructs from earlier models, such as the subjective norm (TAM2), social factors (MPCU), and image (IDT), are included in the social impact dimension (Venkatesh et al., 2003). It refers to how strongly someone feels that influential others think they should use the new system (Venkatesh et al., 2003). An individual's norms, roles, memberships, and values, which influence his or her perception of what they should do is described as social influence. Family, friends, mentors, and peers can all have an impact on someone's social life (Rana et al., 2017). Many empirical researches have shown that social influence either has a significant positive influence (Nseke (2017); Kim et al., (2018); Moon and Hwang (2018) or do not influence (Abbasi, Tiew, Tang, Goh and Thurasamy, 2021; Arias-Oliva et al., 2019; Mendoza-Tello et al., 2018) the adoption of technology. The study done by Chow et al. (2019) revealed that social influence greatly influences the adoption of cryptocurrency. However, in order to take a superior position in this circumstance, we hypothesize:

H3: social influence has a significant influence on the adoption of cryptocurrency.

Facilitating Conditions And Cryptocurrency Adoption
Facilitating condition is composed of three major constructs of three models, behavioural control (TPB), facilitating conditions (MPCU) and compatibility (IDT). The extent to which a person thinks that an administrative and technological framework is in place to assist the use of the system is referred to as a facilitative condition by Venkatesh et al., (2003). It is the degree of support and enhancement made available for the use of a specific system. Lu et al., (2005) pointed out that adequate training for effective operation of the technology could be a form of support. The FC variable is operated to encompass the organizational and technology environmental factors that are created to eliminate huddles. A lot of studies have indicated a significant influence to adopt a system (Chow et al. (2019); Khan et al., (2017). In light of the aforementioned arguments, the current study formulates the following hypothesis:

H4**:** facilitating condition significantly influence the adoption of cryptocurrency
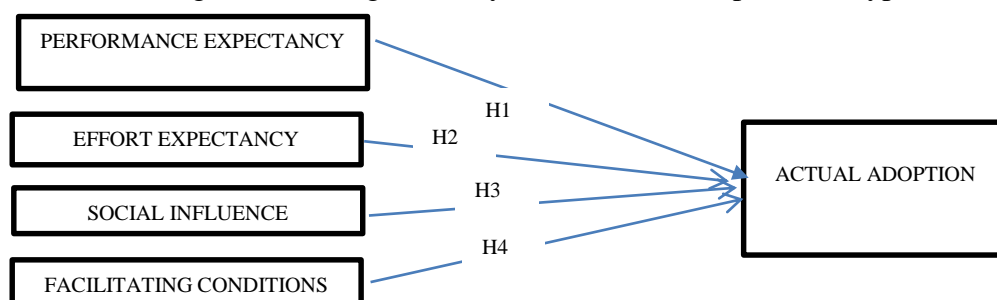
RESEARCH MODEL
Source: Authors' iwn

RESEARCH METHODS

Materials and Methodology
Students from the three largest universities in Anambra state make up the study's population of university fintech entrepreneurs. A sample of chosen university fintech enthusiasts was chosen using Snowball sampling, which generated 323 potential respondents. 313 of the 323 university fintech entrepreneurs that responded to the survey in Anambra state, southeast Nigeria, filled

it out correctly and returned it, allowing data to be gathered. To guarantee that the expected responses are adequate, fintech enthusiasts have been included.

Measurement

The questionnaire consist of a 5-point likert-scale from strongly disagree '1' to strongly agree '5'. Questionnaires were distributed through various social media platform to enable it have verse respondent participation. Quota sampling was employed due to its near probability characteristic. The question items generated for this study consist of 4 UTAUT constructs and 1 adoption construct. The technology adoption dimension where extracted from the work of Venkatesh et al. (2003), while question set of cryptocurrency adoption were culled from (Arias-Oliva et al., 2019; Gil-Cordero et al., 2020). The hypotheses were tested using statistical package for social sciences (SPSS) version 16. Instrument was validated via discriminant analysis while construct validity was employed to test for reliability.

DATA ANALYSIS AND RESULTS

A.   Descriptive Analysis

Table 1: Demographic characteristics of the respondents

Characteristics	category	frequency	percentage
Gender	Male	200	63.90
	Female	113	36.10
Age	18- 25	68	21.73
	26- 33	205	65.50
	34- 41	20	6.39
	42- 49	15	4.79
	50 and above	5	1.60
Educational status	undergraduate	63	20.13
	PGD	60	19.16
	Master	161	51.44
	PhD	29	9.27
Income Level	Low (<N50,000)	83	26.52
	Middle	195	62.30
	High (>N100,000)	35	11.18

The result in the above table shows that 200(63.90%) of respondents are male and 113(36.10%) of the respondents are female. The age bracket of 18-25 represented 68(21.73%), 26-33 represented 205(65.50%), 34-41 represented 20(6.39%), 42-49 represented 15(4.79%) and 50 and above are 5(1.60%). the percentage for educational status are undergraduate 63(20.13%), PGD are 60(19.16%), Master are 161(51.44) and PhD are 29(9.27%).

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.816
Bartlett's Test of Sphericity	Approx. Chi-Square	3283.06
	Df	210
	Sig.	.000

The first output in the factor analysis is the Kaiser-Meyer-Olkin (KMO) and Bartlett's Test. the KMO test of sampling adequacy is .816 which is well above the .5 threshold. Also the Bartlett's test of Sphericity has approximate Chi Square value of 3283.06 with a degree of freedom of 210 which is statistically significant at .000 well below the .05 margin of error. This shows that the factor analysis is dependable and reliable.

Hypotheses Testing

Factors influencing cryptocurrency adoption H1 to H4 was examined using multiple regression analysis via SPSS version 17. The overall regression model for cryptocurrency adoption produced a good fit (F=34.56, p=.00) and explains 68% of the change in the dependent variable.

The conceptual model with performance expectancy, effort expectancy, social influence, facilitating conditions and actual adoption were dimensions respectively as shown in figure 1. The hypothesis shall be accepted if P-Value values is <0.005. Hypothesis 1 sought to test the influence of performance expectancy on cryptocurrency adoption among Nigerian university fintech entrepreneurs.The result showed that performance expectancy (β = .17, t=3.11, p < 0.05) has a significant and positive influence on cryptocurrency adoption. Therefore, H1 was supported. It therefore means that Nigerian university fintech entrepreneurs will adopt the digital currency if it possesses more use benefit. Similarly, support was found for Hypothesis 2.

Also, the result showed that effort expectancy (β = .27, t=4.71, p < 0.05) has a significant and positive influence on cryptocurrency adoption. Therefore, Nigerian university fintech entrepreneurs find cryptocurrency very easy to use. The influence of social influence on cryptocurrency adoption was tested in H3.The result showed that social influence (β = .02, t= .31, p = 0.76) has no significant influence on cryptocurrency adoption. Finally, the H4 examined the influence of facilitating conditions on cryptocurrency adoption. The result showed that facilitating conditions (β = .32, t=6.28, p < 0.05) has a significant influence on cryptocurrency adoption. Thus, confirming H4.

Regression Results

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	1.084	.255		4.242	.000
Performance expectancy	.171	.055	.176	3.110	.002
Effort expectancy	.271	.058	.260	4.705	.000
Social influence	-.016	.053	-.017	-.307	.759
Facilitating conditions	.320	.051	.340	6.277	.000
F	34.56				.000
R^2	.310				
Adjusted R^2	.301				

Table 2: Hypotheses Test Result
DV: Cryptocurrency adoption

DISCUSSION

The rate cryptocurrency is creating wealth has generated debate about its sustainability and continued adoption globally. While there are effort to control its use and adoption, it has continued to gain traction. Hence, drawing on the UTAUT model, this study examined its adoption in the context of Fintech entrepreneurs in Nigeria.

The result showed that performance expectancy has a positive and significant effect on actual adoption consistent with the findings of Tamphakdiphanit and Laokulrach (2020). Performance expectancy is one of the elements of UTAUT in harmony with theory of Venkatesh et al., (2003). The usefulness or perceived advantage of a technology has shown to significantly predict its actual adoption. Also, this finding is in agreement with the finding of Gillies et al., (2020); Arias-Oliva et al., (2019) which found that performance expectancy is the greatest determinant of cryptocurrency adoption. In conformity to Schaupp and Festa (2018), we also found a positive and significant effect of effort expectancy fintech actual adoption. Fintech entrepreneurs would accept Crypto as long as it is easy to use and does not require so much mental effort. This translates that effort expectancy influences their adoption.

When people use new technologies, it is believed that their significant others contributes to their adoption. While this factor has shown mixed result, our finding shows a non-significant of social influence on actual adoption. This suggest that fintech entrepreneurs would use crypto currency but not because of the influence of their important others. A plausible explanation for the non-significant effect of social influence is that entrepreneurs are believed to have high internal locus of control as such the opinion of others may play little or no role in influencing their decision. Howvever, this finding is in sharp contrast with other studies (Chow et al., 2019; Gupta et al., 2020; Tamphakdiphanit & Laokulrach, 2020) which found social influence to be strong predictor of cryptocurrency adoption. Finally, as shown by the study, facilitating

conditions has significant effect on cryptocurrency adoption. Our findings support previous studies (Chow et al., 2019; Hussain et al., 2018) and suggest that Nigerian university fintech entrepreneurs are interested on the support mechanism available for the use of crptocurrency (Tamphakdiphanit & Laokulrach, 2020).

CONCLUSION, LIMITATIONS AND DIRECTION FOR FURTHER STUDIES

The goal of this paper is to investigate cryptocurrency adoption decision. We examined the factors influencing its adoption decision and provided an in-depth analysis of each factor. The study suggests that the factors influencing its adoption decision fall into four main categories: performance expectancy, effort expectancy, social influence and facilitating conditions. The most influencing factor is facilitating conditions while social influence was seen not to have significant influence on cryptocurrency adoption.

This study, factors influencing cryptocurrency adoption among Nigerian university fintech entrepreneurs using UTAUT is obviously limited to Nigerian university fintech entrepreneurs in Anambra state, Nigeria. Although the UTAUT model performed well in elaborating the factors influencing cryptocurrency adoption, the compatibility of research model should be examined in other contexts, such as users in societies with different cultural backgrounds. This helps to assess and validate the research framework in other ethnicities. Besides, we examined direct relationships in this study, future studies can test for the possibility of a mediating or moderating variables in the relationship. Finally, a number of factors that potentially influence cryptocurrency adoption should be explored and examined in the future. For example, both the personal and psychological characteristics of adopters can be investigated to extend the debate.

Implications
Theoretical Implications
This study examined cryptocurrency's adoption influencing factors, and The findings help to pinpoint the variables influencing the uptake of cryptocurrencies.. There are no studies on fintech entrepreneurs'-centered approach in cryptocurrency literature. By utilizing the UTAUT paradigm, this study aims to fill a critical vacuum in the literature on cryptocurrencies, which is still in its infancy but is rapidly expanding. In order to improve our comprehension of the acceptance of cryptocurrencies, this pioneering effort expressly employs the UTAUT paradigm without the involvement of moderators.
Mainly, this study conceptualizes the influence of performance expectancy, effort expectancy, social influence and facilitating conditions, the findings reveal a positive relationship between them and actual adoption except for social influence that was not significant. This means that the mere opinion of important people around us does not simply make us adopt a technology rather, with a high perceived usefulness, enabling facilities and less stressful to use, a technology becomes easily adopted.
Academics can build on the findings to further our research and explore new directions for discussion and inquiry in the future.

Practical Implications
The statistical evidence gained from this study has reckoning implications from the practical perspective. Firstly, by focusing on making the cryptocurrency use process more beneficial, simple, pleasurable, and reliable, the study's findings can help cryptocurrency developers create

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tactics that will persuade people to adopt cryptocurrencies in their everyday transactions. Cryptocurrency technology cannot be effectively implemented unless customers broadly accept it as an alternative to conventional channels. To increase the rate of bitcoin adoption in the nation, regulators and local financial institutions may both show the advantages of using cryptocurrencies.

Second, Users' perceptions of cryptocurrencies are significantly influenced by their ideas about how they operate as well as their level of expertise. According to this study, it's important to take into account the comprehension, expertise, and skills of new potential customers.

Furthermore, the results of this study have unmistakably demonstrated that there is a larger likelihood that a technology will be adopted and subsequently used if users find it simple to use and there are supports in place to make it possible for users to complete their tasks. In order for the adoption of this novel technology to have broad positive effects, particularly for emerging economies, technology manufacturers must pay close attention to these considerations.

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