

CRYPTO-CURRENCIES PRACTICES AND BUSINESS PERFORMANCE: *Evidence from Online Shopping Firms in Nigeria*

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Corresponding Author Emumena, Moses Oghenebrozie	Abstract: In this study, we investigated the extents to which crypto-currencies practices influence business performance by focusing on online shopping firms in Nigeria. The study
M.Sc. Student, Department of Business Administration, Faculty of Management Sciences, Delta State, University, Abraka	used three (3) traded crypto-currencies – Bitcoin, Etherum and the United States Dollar Tether; hence, the independent variable is crypto-currencies practices while the dependent variable is business performance. A survey one hundred and thirty-three (133) crypto-exchangers who had traded crypto-currencies like Bitcoin, Ethereum and the United States Dollar Tether were
Article History	sampled. The questionnaires administered were analyzed using descriptive, regression
Received: 09 / 03 / 2025	diagnostic and inferential statistical techniques. The multiple regression results revealed among
Accepted: 23/03/2025	others that there is significant relationship between crypto-currencies practices (Bitcoin,
Published: 27 / 03 / 2025	Ethereum and the United States Dollar Tether)and the performance of online shopping firms. Hence, performance of online shopping firms partly depends on crypto-currencies practices. In view of the findings, the study recommends among others that the Nigerian government via the Central Bank of Nigeria should regulate, control and encourage the practices of crypto- currencies by using the global digital financing system software; this software would help monitor crypto-currency practices and be able to attract more crypto –exchangers, which will in turn contribute to increased economic activities and business performance in Nigeria.
	Keywords: Bitcoin; Litecoin; Etherum; Cyrpto-currencies; Business performance; USDT.

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1. Introduction

In recent times, the inclination of numerous financial institutions including crypto-currencies has accelerated. According Khalid, Al-Absy and Farooq (2024), crypto-currencies appear to be among the first pure digital-assets which has gained prominence. Regardless that crypto-currencies share commonalities with traditional assets, they have distinct nature of their own and their behavior as assets is still under the process of being acknowledged and understood (Abdullahi & John, 2023). Remarkably, the academic community has spent considerable efforts in researching crypto-currencies practices as emerging digital currencies, research direction on crypto-currencies practices have gained significant advancement and noteworthy upsurge in interests and activities (Chowdhury, Stasi & Pellegrino, 2023; Okoro, & Egberi, 2020).

Crypto-currencies like Bitcoin(BTC), United States Dollar Tether(USDT), Ethereum(ETH), Binance, Dogecoin, Ripple, Cardano etc has gained significant market capitalization/share, resulting to billions while Bitcoin has reached over a trillion by itself (.Khalid, et al, 2024). The major dilemma for cryptocurrencies investors has been the volatility of the market and future of the technology. Shaturaev (2023) believed that if cryptocurrencies can be proven to move in an apparent way with other traded assets, the uncertainties with this technology can be mitigated. In the last years, crypto-currencies have advanced as peer-to-peer payment around the world; however, in Nigeria, this has not been widely acknowledged.

The leading crypto-currency by market capitalisation is BTC, which was introduced in 2009 by an unidentified developer under the fictitious name Satoshi Nakamoto (Ratia, 2023). To date, the price volatility of crypto-currencies thwarts them from becoming commonly used as a method of payments; however, it has gained more prominence for payments for online shopping firms (Chowdhury, 2019; Onyeka, 2020). Most crypto-currencies users see them as a store of value, safe haven (digital gold) and speculative investment assets that cannot be appropriated (Nurbarani & Soepriyanto, 2022).

Broadly, crypto-currencies practices resemble practices on the capital market. Both small and large crypto-currencies investors are impacted by market fluctuations (Prihatini & Widakdo, 2022). For instance, the values of crypto-currencies can drastically change overnight and a single price of coin could rise by above 100 percent within hours and then speedily decline again. Even the most predominant crypto-currency, BTC can experience extraordinary price swing and it price can become more unpredictable (Ubesie, Etuka & Anya, 2023). The literature has explored the adoption of cryptocurrencies around the world. For instance, the adoption of cryptocurrencies has been examined in the literature in Japan, China, the United States of America, United Kingdom, Malaysia, Philippines among others. Success and/or failure of crypto-currencies practices remains a topic under investigation in Nigeria, notwithstanding the fact that several studies had focused on the dynamics causing investors to profit or lose money while investing in cryptocurrencies. While country such as the United States tax authorities sees crypto-currencies as 'property', other countries like Nigeria see them as currencies. Another problem is the global reach of crypto-currencies arising from their digital and decentralized nature.

Other challenges encompass cumbersomeness in monitoring as well as strong connections with crimes such as money laundering and terrorist-financing. These issues perhaps have tampered with the use and adoption of crypto-currencies as legal tender in Nigeria; this in turn has affected the growth, development, performance and dampened public perception on crypto-currencies. In addition, there are relatively few empirical studies that had assessed how crypto-currencies practices (BTC, ETH and USDT) influence the performance of online shopping firms in Delta State, Nigeria. In line with the specific objectives, the following research hypotheses were formulated:

- H_o1: There is no significant relationship between Bitcon practices and the performance of online-shopping firms.
- H_o2: There is no significant relationship between Ethereum practices and the performance of onlineshopping firms.
- H_o3: There is no significant relationship between the United States Dollar Tether practices and the performance of online-shopping firms.

2. Review of Related Literature

2.1 Crypto-Currency Practices

The term "trading" explains the act of executing trades on specific instrument like shares, foreign exchange or virtual currencies; hence, trading can be broadly described in the form of 'buy when prices are low and sell when prices are high. Cryptocurrencies trading have not yet been a subject of significant research in Nigeria. Crypto-currency is a decentralised means of exchange which employs cryptographic functions to perform financial transactions (Ahannaya, Oshinowo, Sanni, Arogundade & Ogunwole, 2023).

Crypto-currencies leverage on Blockchain technology to gain decentralisation, immutability, and transparency. Hence, security of crypto-currencies is built on cryptography, neither on trust nor by people. For instance, Bitcoin (BTC) makes use of method referred to as"elliptic curve cryptography" (ECC) to ensure that exchange or transactions involving BTC are secured. As regards its use as a currency, crypto-currencies have similar characteristics as money. All crypto-currencies control supply of tokens through a timetable encoded in a Blockchain (Böhme, Eckey, Moore, Narula, Ruffing & Zohar, 2020)

One of the imperative characteristics of crypto-currencies is the elimination of financial intermediaries and this reduces transaction costs for crypto-traders. Crypto-currencies also have other imperative characteristics such as not being controlled by any central or local authority (Corbet, Lucey & Yarovaya, 2018); the decentralised nature of Blockchain ensures that crypto-currencies are protected from local, national and international government control and intrusion. Statistics suggests that as at 2019, there exist 4,950 crypto-currencies as well as 20,325 crypto-currency markets(Fakunmoju, Banmore, Gbadamosi & Okunbanjo, 2022).

In times, recent, crypto-currencies have shown significant signs of stabilization. Broadly, there are four (4) conventional crypto-currencies - Bitcoin (BTC), Ethereum (ETH), Litecoin (LTC), and the United States Dollar Tether (USDT). In 2009, BTC was created and it gained massive popularity. ETH is a unique Blockchain with a unique token termed Ether. One of the most imperative characteristics of ETH is its ability to create new tokens on the ETH Blockchain. Litecoin is a peer-to-peer crypto-currency created according to the BTC protocol but uses a diverse hashing algorithm.

Crypto-currencies are tools aimed at supporting development processes by growing financial inclusion, offering better traceability of funds and enabling individuals to escape poverty (Nakamoto, 2008 as cited in Fang et al, 2020). Aside BTC, ETH, LTC, USDT, there are other variants of crypto-currencies such as Dash, Ripple, Libra, Bitcoin Cash, Monero. As observed by Abdullahi and John (2023), crypto-currencies trading is done more in Nigeria compared to other parts of the world. For instance, between 2015-2020, nearly \$600 million in Bitcoin were traded in Nigeria (Ndukwe, 2021). Hence, crypto-currencies are \$2 trillion market that cannot be ignored (Agama, 2021).

Notably, in 2021, the Central Bank of Nigeria (CBN) directed commercial banks to halt transactions with and in cryptocurrencies dealing entities due to its anonymous feature. However, shortly after the CBN's restriction, crypto-currencies continued to be traded, and still at a premium; this clearly shows a growing keenness for the trading of crypto-currencies in Nigeria(Fakunmoju, et al, 2022). The literature suggests that BTC is the world's largest crypto-currency by market capitalization (Ubesie, et al, 2023; Shaturaev, 2023). There is no physical BTC; however, only balances kept on a ledger that everyone has clear access to.

Consequently, all BTC transactions are verified by an enormous amount of computing-power (Chowdhury, 2019; Böhme, et al, 2020; Kanyutu, 2021). BTC supply is limited to only 21million coins while LTC aggregate fixed supply is about 84million coins (Auer, et al, 2023). The benefits of cryptocurrencies include but not limited to availability of crypto-markets for 24hours and no financial intermediaries

2.2 Business Performance

In the management literature, a number of metrics have been used to measure performance (Okoro & Ekwueme, 2018; Ososuakpor & Okoro, 2023). Several metrics have been used to measure business performance (Okoro & Ekwueme, 2020; Okoro & Egbunike, 2017), which according to Kanyutu (2021), makes it difficult to have a single measure; these metrics have been broadly categorized as financial and non-financial performance. Business performance refers to the ability of an organization to maximize its wealth and be able to realize its short-and long-term goals (Ahmadi, Nakaa & Bouri, 2018). In this study, business performance was measured via nonfinancial metrics like efficiency, productivity, etc. According to Brahma, Nwafor and Boateng (2020), the notion of business performance is the heart of strategic management. Consequently, most strategic management studies use construct of business performance in a bid to examine varied strategies and processes. The literature suggests that business performance is vivid via many prescriptions offered for performance enhancements (Prihatini & Widakdo, 2022).

Theoretically, business performance in recent times is partly dependent on the practices of crypto-currencies (Ratia, 2023; Onyeka, 2020). Notably, there are relatively few empirical studies that had assessed how crypto-currencies practices influence business performance in Nigeria; on the recognition of this identified gap that this study was carried out to examine the relationship between crypto-currencies practices and performance of online shopping firms in Nigeria.

2.3 Theoretical Framework

This study was anchored on the Technology Acceptance Theory (TAT) advocated by Davis (1989) as cited in Chowdhury (2020). The theory explains that people acknowledge and exploit financial system technologies and innovation when the technologies and innovation are able to improve their activities or operations. TAT suggests that these technologies and innovations enhance digital financial system and financial technologies accessibility and efficiency to financial dealings and functions (Auer, Cornelli, Doerr, Frost & Gambacorta, 2023). Thus, TAT looks at behavioural intentions of investors or crypto-exchangers towards digital financial system and information and communication technology users in financial dealings

TAT contends that investors' or crypto-exchangers' attitude towards digital currency system largely depends on their intention regarding digital-financing. Hence, it influences investors or crypto-exchangers' attitudes toward perceived usefulness of financial technologies enhancing economic activities and business performance (Nadeem, Liu, Pitafi, Younis & Xu, 2021). More so, the attitudes and perceived usefulness of investors or cryptoexchangers are influenced by ease-of-use of financial technologies.

The relevance of TAT to this study is that the theory explains the consideration of end-users vis-à-vis, user-friendliness and usefulness of financing technologies like crypto-currencies. The theory however, does not consider online-hackers, legislation, and insecurity of crypto-currencies in Nigeria. Regardless of the limitations of TAT, it comprehensively embraces and contributes to the prediction of crypto-exchangers or investors' usage of financial technologies to promote economic development and business performance. TAT is used in this study to see how crypto-currencies practices improve performance of onlineshopping firms in Nigeria.



Figure 1: Conceptual Model of Study

Source: Conceptualized by the Researcher (2024)

2.4 Empirical Studies

Khalid et al (2024) examined the influence of behavioral factors like overconfidence and herding, demographic factor(education) and investment experience on business performance using questionnaire administered to 270 cryptocurrency Bahrain investors. The multiple regression results revealed that overconfidence and herding significantly influence trading performance of crypto-currency investors. On the other hand, educational level, age of the investor and investment experience had insignificant influence on investors' crypto-currency trading performance.

Auer, et al (2023) assessed the determinants of cryptotrading and Bitcoin prices among 95 countries from 2015–2022. The time-series analysis revealed that rising prices of Bitcoin is accompanied by entry of new crypto users, (specifically among risk-seeking crypto users). Also, the study finds evidence that when prices of Bitcoin rise, large holders of Bitcoin sells, hence making a return at retail users' expense.

Abdullahi and John (2023) investigated how cryptocurrency volatility influence firms' performance listed on the Nigerian Exchange Group. The generalized auto-regression conditional heteroskedasticy (GARCH) and principal component analysis (PCA) results revealed crypto-currency trading is sensitive to good news than bad news while the current conditional volatility of crypto-currencies and firms' performance are influenced by prior shocks and volatility conditions.

Ubesie, Etuka and Anya (2023) studied the influence of crypto-currencies on Nigerian banking system development. Crypto-currencies such as Bitcoin (BTC), Litecoin (LTC) Ethereum (ETH) and Bitcoin Cash were examined to determine the level of profitability of a commercial bank for a 10 year period. The multiple regression analyses revealed that BTC payment system had positive significant influence on profitability. Similarly, a negative significant influence was found for ETH while BTC cash had positive significant influence effect on profitability of the commercial bank.

Shaturaev (2023) investigated the effect of crypto-currency market on United States stock market performance using USS&P 500 daily index (dependent variable), daily price and Bitcoin volume (independent variables), and US volatility index and oil prices (control variables) from 2017-2021. The simple regression results revealed significantly negative influence of crypto-currency on US stock market performance, while insignificant negative influence was found for oil price and US stock market performance.

Ratia (2023) examined how technical analyses perform on crypto-currencies. After testing, methods and different currencies were compared; findings indicated crypto-currencies are excellent platforms for testing technical analyses. Interestingly, it was found that buying and selling crypto-currencies are not limited to stock markets.

Ahannaya, et al (2023) studied the influence of cryptocurrencies on economy performance in Nigeria via structured

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questionnaire. The multiple regression revealed that cryptocurrencies (BTC and ETH trading) have significant positive influence on Nigerian economic performance.

Fakunmoju, Banmore, Gbadamosi and Okunbanjo (2022) investigated the impact of crypto-currency trading and monetary corrupt practices on economic performance using 98 copies of questionnaire. The Tobit regression results revealed that cryptocurrency and monetary corrupt practices had negative significant impact on economic performance. Hence, crypto-currency and monetary corrupt practices influence Nigerian economic performance.

Agama (2021) examined the dynamics influencing the adoption/usage of crypto-currencies using a survey of 102 active crypto-users in Nigeria. The study found that all 102 crypto-users have actively invested in crypto-currencies. Additionally, demographic characteristics such as, gender, literacy level, and age had influenced the adoption of crypto-currencies in the country.

Nadeem et al (2021) evaluated the dynamics influencing individuals' intention to adopt and use crypto-currencies in a survey of 385 in China. The results revealed that respondents' perceived ease of use and usefulness of Bitcoin, hence they desire to adopt and use crypto-currencies. Also the perceived speed of crypto-currencies transaction processing had a significant influence their intention to adopt and use them.

Fang, et al (2020) offered a comprehensive survey of crypto-currency trading by examining 126 empirical studies on varied crypto-currency trading such as crypto-assets, technical trading, crypto-currency trading system, bubble and extreme condition, etc. Findings from the descriptive results revealed that crypto-currency trading offers promising opportunities for businesses and business growth.

Onyeka (2020) assessed the problems and prospective of crypto-currencies and the Nigerian economy using qualitative research approach. The qualitative results revealed among others that the emergence of crypto-currencies has necessitated new regimes in financial payment systems globally; thus, this innovation has anonymity traits making it nearly impracticable to link transactions to identifiable individual.

3. Research Methods

In this study, survey research design was employed because it is concerned with observation of people and aids in data collection. In addition, this design enabled the researcher in obtaining degree of flexibility in data collection, presentation and analysis of results on how crypto-currencies influence online shopping firms' performance in Delta State, Nigeria. For our empirical analysis, we obtained two hundred (200) cryptoexchangers (Database of Crypto-Currencies –Global Free Aidrop, 2024); the crypto-exchanges are individuals who had used cryptocurrencies (such as BTC, ETH and USDT) majorly for online shopping. On the other hand, Taro-Yamane sample size determination formula was used in obtaining a sample size of one hundred and thirty-three (133)

The main data collection instrument is the questionnaire which was designed to elicit responses on crypto-currencies and business performance. The study used questionnaire to obtain data on the dependent variable (business performance) and the independent variable (crypto-currencies – BTC, ETH, and USDT). Structured questionnaire was obtained on the perception of respondents on the measures of crypto-currencies practices and online shopping performance. The questionnaire was designed on a 4-point Likert scale of Strongly Agree, Agree, Disagree and Strongly Disagree; the instruments were adapted from Khalid, et al (2024); and Fang, et al (2020). Also, the questionnaires were administered using online survey poll.

In testing for reliability of the instrument, test-retest method was used and the outcome was subjected to Cronbach alpha examination. The procedures entailed administration of the validated instrument to 10% of the sample size, amounting to thirteen (13) respondents who trade crypto-currencies. Data obtained from the pilot tests were correlated using Cronbach Alpha. The Cronbach Alpha results were above 0.05; hence, the research instrument was considered reliable (see Table 1):

Variables Cronbach Alpha Index				
Business Performance	0.77			
Bitcoin (BTC)	0.84			
Ethereum (ETH)	0.80			
United States Dollar Tether (USDT)	0.89			
Source: Compiled by the Researcher (2024).				

Table 1: Results of Cronbach Alpha Coefficients

Given the dependent and independent variables of the study, the following empirical models were estimated:

 $\begin{array}{rcl} Onshpe & = & f(Btc, Eth, Usdt) & - & eq. \ 1 \\ Equation 1 \ is the implicit form of the multiple regression models; \\ hence equation 2 was expressed in its explicit forms: \end{array}$

 $\begin{aligned} Onshpe_i &= \beta_0 + \beta_1 Btc_i + \beta_2 Eth_i + \beta_1 Usdt_i + u_i & \ \ eq. \ 2 \end{aligned}$ Where: Onshpe = Performance of Online Shopping Firms; Btc = Bitcoin; Eth = Ethereum;

USDT = United States Dollar Tether; U_i = Error Term; B = Intercept; β_1 - β_3 = Coefficients of the independent variable.

4. Results and Discussion

In this study, several statistical techniques were used; *first*, summary of descriptive statistics (mean, standard deviation, minimum and maximum values, skewness, kurtosis and Pearson correlation); *second*, regression diagnostic statistics (variance inflation factor); and *third*, inferential statistical tests (multiple regression) were performed to validate the hypotheses of the study. The decision rule is if F-Probability is greater than F-Tabulated., null hypotheses were rejected while the alternate hypotheses were accepted vice-versa. Microsoft Excel was used in data coding while STATA 16.0 software was employed in the analysis of data.

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Iddle 2: Results for Socio-Demographic Characteristics of Respondents				
Items	Frequency(N)=131	Percentage (%)		
Gender				
Male	116	87.2%		
Female	17	12.8%		
Total	133	100%		
Age				
21-25 years	66	49.62%		
26-30 years	40	30.08%		
31-35 years	15	11.28%		
36years & above	12	9.02%		
Total	133	100%		
Marital Status				
Single	67	50.38%		
Married	66	49.62%		
Total	133	100%		
Highest Educational Qualification				
OND/NCE	31	23.31%		
B.Sc./HND	87	65.41%		
M.Sc./MBA	15	11.28%		
Total	133	100%		

Table 2: Results	for Socio-Demograt	phic Characteristics of	of Resnandents
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Source: Field Survey, 2024

Table 2 showed the results of socio-demographic characteristics of respondents in terms of their (gender, age, marital status and highest educational qualifications; the results revealed that 116(87.2%) of the respondents were males while 17(12.8%) were females who participated in the survey. The ages of respondents revealed that majority of the respondents were within age bracket 21-25years (49.62), 40(30.08%) were within ages 26-30yearss while the remaining respondents fall within ages 36years and above (9.02).

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Furthermore, the results revealed that majority of the respondents representing 67(50.38%) were married while the remaining respondents were single, 66(49.62%); also, the results revealed that majority of the respondents had obtained B.Sc./HND degrees representing 87(65.41%), while the remaining respondents had obtained educational degrees such as OND/NCE and representing 31(23.31%) and 15(11.28%) M.Sc./MBA respectively.

Table 3: Result of Normality Test				
Statistics	Onshpe	Btc	Eth	Usdt
Skewness	-0.2833	-0.0770	-1.0131	-0.2215
Kurtosis	2.9541	2.4638	3.2995	2.8413

Source: Field Survey, 2024

Table 3 revealed that the performance of online shopping firms (Onshpe = 2.9541) had the least kurtosis, which is smallest possible value of kurtosis and Ethereum (Eth =3.2995), the most. In maximally platykurtic distribution Eth appears to have its score in its tail, however, no score is far from the mean (has no tail). In leptokurtic distribution Btc seems only to have a score in its tail and is not farther away from the mean.

Furthermore, the skewness values revealed that the performance of online shopping firms skewed towards the same direction (negative) with the dimensions of crypto-currencies (Btc, Eth, and Usdt). Overall, kurtosis values for the variables are not far away from 3; indicating that the dependent and independent variables are normally distributed.

Variables	Obs.	Mean	Std. Dev.	Min. Val.	Max Val.
Onshpe	133	3.0430	0.4988	1	4
Btc	133	3.0236	0.5031	1	4
Eth	133	3.5274	0.2969	1	4
Usdt	133	3.4548	0.6425	1	4

Source: Field Survey, 2024

Table 4 revealed that all the dimensions of cryptocurrencies practices (Btc, Eth, Usdt) beat the mean benchmark of 3.0, indicating that respondents perceived the questionnaire items as good predictors and as means of evaluating the performance of

online shopping firms. Also, values of standard deviation for the variables were small; an indication that perceptions of respondents are not too from each other on how crypto-currencies practices can influence the level of online shopping firms' performance

Table 5: Result of Pearson Correlation					
Onshpe Btc Eth Usdt					
Onshope	1.0000				
Btc	0.2753	1.0000			
Eth	0.0652	0.3834	1.0000		

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	Usdt	0.0531	0.4301	0.3653	1.0000	
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Source: Field Survey, 2024

Table 5 revealed that the dimensions of crypto-currencies practices (Btc, Eth, UsDT) were positively correlated with the dependent variable (Onshpe); this implies positive relationship

between crypto-currencies practices and the performance of online shopping firms.

Table 6: Result of Variance Inflation Factor (VIF)			
Variables	VIF	1/VIF	
Btc	1.18	0.8474	
Usdt	1.17	0.8547	
Eth	1.10	0.9090	
Mean VIF	1.15		

Source: Field Survey, 2024

The result in Table 6 revealed that the mean VIF is 1.15, which is less than the accepted mean VIF of 10.0, indicating an

absence of multicollinearity in the empirical models of of the study.

Table 7: Results of Multiple Regression				
Source	SS	Df	MS	F (3, 129) = 15.07
Model	5.0187	3	1.0036	Prob. $>$ F = 0.0000
Residual	118.75	129	0.2057	\mathbf{R}^2 = 0.3866
Total	123.85	132	1.2093	Adj. $\mathbf{R}^2 = 0.3800$
Onshpe	Coefficient	Std. Error	t-value	P>/t/
Btc	0.0627	0.0312	5.19	0.000
Eth	0.0300	0.0381	4.08	0.000
Usdt	0.0693	0.0357	4.98	0.000
Constant	3.1969	0.2189	10.77	0.000

Source: Field Survey, 2024

Table 7 revealed that values of R-squared is 0.3866; an indication that all the independent variables jointly explained about 39% of the systematic variation in the dependent variable. Also, the R-squared value suggests that 61% of the variables in the empirical model could not predict the dependent variable, thus indicating that there are other variables in captured in the regression models that could predict the performance of online shopping firms

The F-value (df = 3, 129, F-value = 15.07) with P-value of 0.0000 indicates that the result is significant at 5%. Also, the regression coefficients and t-values were carrying positive signs; this indicates positive link between crypto-currencies practices and business performance. Also, the regression coefficients - Btc (0.0627), Eth (0.0300), and Usdt (0.0693) revealed that a unit increase in Btc, Eth, and Usdt would lead to approximately 6.27%, 3% and 6.9% increases in the performance of online shopping firms respectively. In addition, the t-values were employed in validating the research hypotheses of the study as follows:

The t-value is 5.19 with probability of 0.000 is less than 0.05%; this implies that the null hypothesis is rejected while the alternate hypothesis is accepted. This suggests that there is significant relationship between Bitcon practices and the performance of online-shopping firms. This finding corroborates the views of Auer, et al (2023); Ubesie, Etuka and Anya (2023); Shaturaev (2023) who established positive significant influence of crypto-currencies on stock market and business performance.

Furthermore, t-value is 4.08 with probability of 0.000 is less than 0.05%; this implies that the null hypothesis is rejected while the alternate hypothesis is accepted. This suggests that there is significant relationship between Ethereum practices and the performance of online-shopping firms. This finding corroborates the views of Auer, et al (2023); Ubesie, Etuka and Anya (2023); Shaturaev (2023) who established positive significant influence of crypto-currencies on stock market and business performance.

Overall, t-value is 4.98 with probability of 0.000 is less than 0.05%; this implies that the null hypothesis is rejected while the alternate hypothesis is accepted. This suggests that there is significant link between United States Dollar Tether practices and the performance of online-shopping firms. This finding corroborates the views of Auer, et al (2023); Ubesie, Etuka and Anya (2023); Shaturaev (2023) who established positive significant influence of crypto-currencies on stock market and business performance.

5. Conclusion and Recommendations

The adoption and practices of crypto-currencies has been well documented in the management literature (particularly in developed countries) due to the vital roles they play in enhancing trade and exchange. Moreover, there is lack of empirical studies on the extents to which crypto-currencies (Bitcoin, Ethereum, and United States Dollar Tether) influence the level of performance of online shopping firms in Nigeria. In this study, three (3) cryptocurrencies highly traded among crypto-exchangers in Nigeria were employed - Bitcoin, Ethereum, and United States Dollar Tether. Questionnaire was the major instrument of data collection which were administered to crypto-exchangers who had BTC, ETH and USDT wallets for online shopping.

The study concludes that there is significant relationship between crypto-currencies practices and the performance of online shopping firms. Hence, performance of online shopping firms partly depends on crypto-currencies practices Given the findings of the study, the following recommendations were proffered:

- The Nigerian government via the Central Bank of Nigeria (CBN) should regulate, control and encourage the practices of Bitcoin by using the Global Digital Financing System Software (GDFSS); this software would help monitor Bitcoin practices and be able to contribute to increased economic activities in Nigeria.
- The study recommends the practices of Ethereum; this can be done by sensitizing the public that the digital currency-Ethereum is legitimate, safe and has significant value.
- The study recommends that the Nigerian government should recognize United States Dollar Tether as a legitimate asset class as well as an alternative payment system for goods and services.

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