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The effect of cryptocurrency on company income tax in Nigeria banking industry a study of first bank Nigeria PLC

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Abstract

Innovations in digital systems have transformed the workings of the global economy of exchange and, as a result, virtual currencies are gaining immense popularity. Cryptocurrency offers a decentralized system without an intermediary, which allows people to remain in control of managing their funds. The main aim of this study is to investigate the effect of cryptocurrency on company income tax in Nigeria banking industry a case study of First Bank Nigeria Plc. This study used descriptive and inferential statistics. Data analysis for this study employed the multiple regression, descriptive statistical techniques used tables, frequencies, and percentages as well as mean and standard deviation were used to analyse the demographical variable of the respondents while inferential statistics was used to determine the influence of independent variables effect of cryptocurrency on the dependent company income tax the study used SPSS version 18.0 to analyse the data. The results reveal that Siftcion cryptocurrency, Ethereum cryptocurrency and Siftcion cryptocurrency negatively and significantly influence Company income tax (i.e., inverse relationship). The study recommends the need to be prepared for potential speculative attacks and incorporate this means of payment better into the financial system, the study also recommend the need for education on the economic benefits of cryptocurrency and the possibility of their co-existing with fiat currency should be intensified at all levels.

Keywords: Siftcion cryptocurrency, Ethereum cryptocurrency, Siftcion cryptocurrency and Company income tax

Introduction

Money has been used as a medium of exchange for about 3,000 years, following the usage of the barter system. The evolution of money has accompanied the development of societies and technological innovation, from precious stones to metal coins and paper currency. Initially, money was in the form of commodities, but as civilizations progressed to using precious commodities and metals or stones, this led to the formation of coins (similar to those used today), typically made of gold or silver. During the Middle Ages, as people looked to goldsmiths for the safekeeping of their money, the latter started issuing receipts as a guarantee of repayment when required. Over time, these receipts became a currency that was repayable in gold or silver on presentation. This led to the development of the gold standard, where government-issued notes became trusts that could be exchanged for gold. At the turn of the twenty-first century, further developments in currency took place in the form of e-money and virtual currencies (Davies, 2010) ^[4].

Money is now classified as real, electronic and virtual, and these all exist simultaneously in the global financial system. Real currency comprises all cash or coins circulating in an economy, which have been declared legal tender by the government (Financial Crimes Enforcement Network, 2013). E-money or 'plastic money' is an extension of real currency notes, and includes credit cards, debit cards and other instruments issued by banks to simulate the exchange of real currency. While virtual currency does not hold the status of legal tender, it does act as a substitute for real currency and is convertible into real money (Financial Crimes Enforcement Network, 2013).

Thus, it is often considered an important medium of exchange as well as an important store of value.

Innovations in digital systems have transformed the workings of the global economy of exchange and, as a result, virtual currencies are gaining immense popularity. Cryptocurrency offers a decentralized system without an intermediary, which allows people to remain in control of managing their funds. Moreover, as currencies such as the Venezuelan bolivar are quickly losing value, cryptocurrencies have the potential to provide a better store of value than fiat currency. Cryptocurrencies are gaining increased acceptance because of their low cost, high-speed transferability and a decentralized tracking network that provides secure transactions and anonymity. Among virtual currencies, cryptocurrencies have shown faster growth and acceptability, with immense potential.

A cryptocurrency is an electronic cash system, working on a peer-to-peer basis to facilitate the transfer of funds between users without a financial intermediary or central repository. These types of virtual currencies are unregulated and are not backed by any government. Their rapid growth presents a challenge to governments around the world, given that the wide acceptance of cryptocurrencies has the potential to disrupt regulated payment systems and affect the implementation of monetary policy. Moreover, because they promote anonymity, these currencies can be used for unlawful purposes (Middlebrooke & Hughes, 2014) [24].

The decentralized system of cryptocurrencies has made global monetary systems more dynamic and is thus more prone to misuse as well as posing a threat to financial stability. There is a need for governments to provide effective regulation to minimize the risks associated with this innovative payment system and to maximize its potential benefits. Cryptocurrencies are revolutionary in terms of their distributed ledger technology (DLT), which has many different applications both for the public as well as governments and public institutions. In fact, Davidson *et al.* (2016) [3] argue that these may compete with various economic institutions due to their widespread applications.

Bitcoin was the first cryptocurrency launched in 2008 by an individual or group of individuals operating under the name of 'Satoshi Nakamoto'. This currency adopted block chain technology and created a peer-to-peer payment system that ensures anonymity and transparency in transactions. Further, the technology is deemed to be practical for trade as the transactions are irreversible and can help prevent fraud through smart contracts (Satoshi Nakamoto, 2008) [27]. The creation of cryptocurrency as a cybernetic currency has been generating reactions in the global economy such as a country like Nigeria. There has been countless advantage and disadvantage discourse on cryptocurrencies' importance on the Nigerian economy. However, the Nigeria government through its governing agencies such as the Central Bank of Nigeria and the Securities and Exchange Commission has tried to place a ban on cryptocurrency. However, its legal status remains unclear, unlike in countries like Morocco and Algeria where there is an explicit prohibition on trading in Bitcoins such that a breach attracts hefty fines (Dierksmeier & Seele, 2016) [5]. The cautions are primarily designed to educate the citizenry about the difference between genuine currencies issued and guaranteed by the state and cryptocurrencies, which are not. Following the moves taken by the Central Bank of Nigeria and the Securities and Exchange Commission, lawmakers have also advised the

regulatory authorities to speed up efforts in presenting a legal framework for cryptocurrencies in Nigeria.

Economy with an underdeveloped financial market, the activity of cryptocurrency may be challenging to regulate and, as such, may provide the platform for investors, both individuals and corporate bodies to evade tax thereby resulting in a low-income generation for government relative to the level of activities in the market which could affect the budgetary plans of the government. However, in an economy with a highly developed financial market, the suitable management of cryptocurrency might result in an increase in revenue generation through a tax which would enhance the budgetary plans of the government. Moreover, cryptocurrencies operate alongside official currencies. The current volumes are small and do not challenge the position of official money as the main currency. But as algorithms improve to limit the volatility of cryptocurrencies, their popularity and use tend to increase. This would lead to coexistence with other official currencies. The relations between cryptocurrencies and central bank monetary policy is treated in detail by Fernandes-Villa Verde and Sanches (2018) [10]. Their theoretical model predicts that the central bank and private money's existence hinge on the monetary policy the former follows. In specific, privately-issued currencies would be used if the official currencies do not ensure price stability but would lose their value as a medium of exchange when the central bank credibly guarantees the real value of money balances. Nonetheless, from a practical viewpoint, central banks could face certain risks from the advent of cryptocurrencies as relevant mediums of exchange with stable purchasing power due to their high volatility level. This study will examine the effect of cryptocurrency on company income tax in Nigeria banking industry a case study of First Bank Nigeria Plc.

Objectives of the Study

The main aim of this study is to investigate the effect of cryptocurrency on company income tax in Nigeria banking industry a case study of First Bank Nigeria Plc, however, the specific objectives are as follows.

1. To examine the influence of Bitcoin cryptocurrency price on company income tax in Nigeria banking industry a case study of First Bank Nigeria Plc.
2. To access the effect of Ethereum cryptocurrency price on company income tax in Nigeria banking industry a case study of First Bank Nigeria Plc.
3. To find out the impact of Siftcion cryptocurrency price on company income tax in Nigeria banking industry a case study of First Bank Nigeria Plc.

Hypothesis of the Study

In order to achieve the objectives of the study, the following hypothesis are formulated to serve as guide:

1. Bitcoin cryptocurrency price does not significantly influence First Bank Nigeria Plc income tax.
2. Ethereum cryptocurrency price does not significantly influence First Bank Nigeria Plc income tax.
3. Siftcion cryptocurrency price does not significantly influence First Bank Nigeria Plc income tax.

Empirical Literature Review

Mothokoa (2017) [25] employed a desktop-research methodology to carry out an analytical, explorative and comparative study. Complex concepts of crypto-currency

were analyzed and explored. The author then used the comparative method to contrast the legal and regulatory frameworks of Canada, the US and the EU with the legal position of cryptocurrencies in South Africa. The study illustrated that crypto-currencies are decentralized convertible virtual currencies that are based on cryptographic algorithms.

In a related study, Katsiampa (2017) ^[16] estimated the volatility of Bitcoin through a comparison of GARCH models and found that the AR-CGARCH model gives the most optimal fit. He underlined that the Bitcoin market is high speculative.

El Bahrawy and Alessandretti (2017) ^[8] examined the behavior of entire market of 1469 cryptocurrencies between April 2013 and May 2017 and found that cryptocurrencies appear and disappear continuously and that their market capitalization is increasing exponentially while several statistical properties of the market have been stable for some years

Bouoiyour and Selmi (2016) studied daily Bitcoin prices using an optimal GARCH model and found that its volatility has decreasing trend comparing pre- and post-2015 data after observing significant asymmetries in the Bitcoin market where the prices are driven more by negative than positive shocks.

Dyhrberg (2016) ^[7] he found that bitcoin can be used as a hedging tool against stocks in the Financial Times Stock Exchange Index and against the American dollar in the short term.

Few of the other works that also studied the dynamics and indeterminacy of equilibrium prices of a cryptocurrency include Fernandez-Villaverde and Sanches (2016) ^[10], Uhlig and Schilling (2018) ^[31] and Eyal and Sirer (2018) ^[9].

It is important to note that most of these studies on cryptocurrency AIS and company income tax were conducted outside Nigeria, the few once conducted in Nigeria were not conducted in First Bank Plc, hence, these necessitate the need for conducting similar research by employing a more robust methodology.

Methodology

Research Design

This study employs the survey design as its research approach. The idea behind survey design is to measure variables by asking a set of questions on the relationships between the variable (Isah, 2010) ^[10]. It is considered appropriate for this study as it seeks to evaluate the effects of cryptocurrency on company income tax in Nigeria banking industry a case study of First Bank Nigeria Plc.

Population of the Study

The population of the study consists of all staffs of First Bank Nigeria Plc Kano main office. A total of 58 staffs from both junior and senior category constitute the population of the study. Hence, since the population is small the study intended to use all the 58 staffs as respondents of the study.

Source and Method of Data Collection

This field survey was supported by the use of structured questionnaires using close-ended and five Likert scale questions. The questions in the questionnaire were formulated in order to achieve the research objectives and to answer the research questions. Also, sample of other questionnaires in the related research area were consulted in

order to come up with the questions. The questions in the instrument were designed into two section, section A is the Respondent's demographic information were as, section B measure the variable of the study namely effect of cryptocurrency and company income tax

Technique for Data Analysis

This study used descriptive and inferential statistics. Data analysis for this study employed the multiple regression as in Previous studies conducted by Gandolph (2021), descriptive statistical techniques used tables, frequencies, and percentages as well as mean and standard deviation were used to analyse the demographical variable of the respondents while inferential statistics was used to determine the influence of independent variables effect of cryptocurrency on the dependent company income tax the study used SPSS version 22.0 to analyse the data.

Data presentation and Analysis

Questionnaire Administration Feed Back

The survey was started with the administering of questionnaire to the respondents. A total of 58 copies were purposively administered in line with specifications indicated in Chapter Three. After due follow up, 54 copies of the questionnaire were returned. This indicates that 98% success was recorded in the administration of the questionnaire, thereby giving the process credibility.

Descriptive Statistics

Demographic Feature of the Respondents

The survey questionnaire requires respondents to answer four demographic features reflecting their gender, age group, marital status and level of education. This section summarizes the general frequency distribution of respondents on different demographic items as shown in Tables 1

Table 1: Socio-Demographic Information

Variables	Options	Frequency	Percentage
Gender	Male	39	72
	Female	5	28
	Total	54	100.0
Age Group	18-39	26	48
	40-59	19	35
	60 and above	9	17
	Total	54	100.0
Marital Status	Single	13	24
	Married	41	76
	Total	54	100.0
Level of Education	Diploma	9	17
	B.Sc./ HND	34	63
	Postgraduate	11	20
	Total	54	100.0

Source: Field survey data (2021)

The descriptive summary of demographical feature of the respondents displayed in Table 1 above shows that 39(72%) of the respondents are male while 5(28%) are female, while in term of age group 26(48%) of respondents aged 18-39 years, 19(35%) of the respondents are 40-59 years and also 9(17%) of the respondents are within the age bracket of 60 and above. A total of 13(24%) of the respondents are single; 41(76%) are married. Consequently, on the level of education, 9(17%) hold diploma certificate as at the time of the study, 34(63%) acquired B.Sc./HND certificate, 11(20%) obtained postgraduate certificate.

Descriptive Analysis of Variable

Descriptive statistics of variable of the study were also evaluated, presented and discussed. Specifically, four variables were analyzed to determine their mean, standard

deviation as well as the minimum and maximum values. Table 2 provides a summary of the descriptive statistics of the study.

Table 2: Descriptive Statistics of Variables

Descriptive Statistics					
Variable	No items	Min	Max	Mean	SD.
Bitcoin cryptocurrency		Statistic	Statistic	Statistic	Statistic
	5	1.00	5.00	4.8712	0.74582
Ethereum cryptocurrency	5	1.00	5.00	4.6761	0.45469
Siftcion cryptocurrency	5	1.00	5.00	3.9383	0.55109
Company income tax	5	1.00	5.00	4.2139	0.43258

Source: Field Survey (2021)

Table 2 shows that the mean and standard deviation for Bitcoin cryptocurrency were 4.8712 and 0.7458, respectively. This suggests that bitcoin cryptocurrency tended to have high level of output. Table 2 also indicates that the mean for Ethereum cryptocurrency was 4.6761, with a standard deviation of 0.4547, suggesting that the Ethereum cryptocurrency outcomes as high. Furthermore, the results show a moderate score for Siftcion cryptocurrency (Mean = 3.9383, Standard deviation = 0.5511) also a high score for company income tax with mean and standard deviation of 4.2139 and 0.43258.

Pre-estimation Test

Preliminary analysis is used to address the reliability of data and normality of the data. This is the process of examining the data before further analysis i.e., inferential statistics can be conducted. This process will provide assurance that the data to be examined are of good quality for further analysis (Sekaran, 2013) ^[28]. The process begins by checking reliability of data and then checking of the data distributions with respect to normality.

Reliability Test

The results indicate that the Cronbach's Alpha reliability coefficients for all variables are all above 0.6. Generally,

Sekaran (2006) ^[29] stated that reliability of less than 0.6 is considered to be good, while the closer the reliability coefficient to 1.0, the better.

Table 3: Result of the Reliability Statistics of the variable of the Study

Variables	No of items	Cronbach's Alpha
Bitcoin cryptocurrency	6	0.612
Ethereum cryptocurrency	6	0.872
Siftcion cryptocurrency	6	0.756
Company income tax	6	0.721

Source: Field Survey (2021)

Table 3 indicates that, the internal consistency reliability of the variables used in this study is above the yard stick of 0.6 as indicated on Table 3.

Normality Test

Table 4 shows the summary of the normality test for the constructs used in the study. The Kolmogorov-Smirnov significant value should be less than 0.05, which indicates the data is normally distributed (Hair *et al.*, 2006) ^[12]. Based on the normality test results, all the variable significant value is less than 0.05 i.e. indicating normally distribution.

Table 4: Test of Normality

Kolmogorov-Smirnov					
	Statistic	df	Sig.	Skewness	Kurtosis
Bitcoin cryptocurrency	0.072	187	0.164	-0.497	0.257
Ethereum cryptocurrency	0.061	187	0.086	-0.332	-0.397
Siftcion cryptocurrency	0.099	187	0.370	-0.371	0.252
Company income tax	0.088	187	0.230	-0.506	0.414

Source: Field Survey (2021)

The analyses show the skewness and kurtosis of the distribution support the normality distribution of the data as both values fall within the range of -1 to +1. Values falling outside this range indicate a non-normal distribution of data (Hair *et al.*, 2006) ^[12]. Based on the Table 4 above, it can be concluded that the data is normally distributed.

Regression Results

In this section the study employed the multiple regression model using ordinary least square (OLS) estimator, to examine the impact of independent variables namely (Bitcoin cryptocurrency, Ethereum cryptocurrency and Siftcion cryptocurrency) on the dependent variable (company income tax).

Table 5: Linear Multiple Regression

Variable	Coef.	p-value	(95% Conf Interval)		Sig
Siftcion cryptocurrency	-0.322	0.008	-0.344	0.341	***
Bitcoin cryptocurrency	-0.643	0.002	-0.542	0.120	***
Ethereum cryptocurrency	-0.854	0.001	0.322	0.001	***
R-squared	0.564	Number of observations			54
F-test	23.657	Prob > F			0.000

Source: Field Survey (2021)

The results in Table 5 of the R squared indicate that it is estimated that the predictors of company income tax explain (0.564 = 56 percent) of its variance, the F statistics is also statistically significant. To achieve the objective of the study three hypotheses has been developed which are interpreted or analyzed below:

Testing of Hypothesis

Siftcion cryptocurrency and Company Income Tax

The hypothesis of this study was formulated as: Siftcion cryptocurrency does not significantly influence First Bank Nigeria Plc income tax. The result in Table 5 shows that the influence of Siftcion cryptocurrency on income tax is negative (-0.322 i.e., -32%) and statistically significant ($P < 0.05$). Therefore, the Null hypothesis was rejected and the first objective of this study is achieved, hence Siftcion cryptocurrency negatively influences First Bank Nigeria Plc income tax. This finding is consistent with previous results by Eyal and Siner (2018) ^[9].

Bitcoin cryptocurrency and Company Income Tax

The hypothesis of this study was formulated as: Bitcoin cryptocurrency does not significantly influence First Bank Nigeria Plc income tax. The result in Table 5 shows that the influence of bitcoin on income tax is negative (-0.643 i.e., -64%) and statistically significant ($p < 0.05$). Therefore, the Null hypothesis was rejected and the first objective of this study is achieved, hence bitcoin cryptocurrency negatively influences First Bank Nigeria Plc income tax. This finding is consistent with previous results by Eyal and Siner (2018) ^[9].

Ethereum cryptocurrency and Company Income Tax

The hypothesis of this study was formulated as: Ethereum cryptocurrency does not significantly influence First Bank Nigeria Plc income tax. The result in Table 5 shows that the influence of Ethereum cryptocurrency on income tax is negative (-0.854 i.e., -85%) and statistically significant ($P < 0.05$). Therefore, the Null hypothesis was rejected and the third objective of this study is achieved, hence Ethereum cryptocurrency negatively influences First Bank Nigeria Plc income tax. This finding is consistent with previous results by Eyal and Siner (2018) ^[9].

Conclusions

In the light of the summary of the major findings of the study, the following conclusions are drawn:

1. The Bitcoin cryptocurrency price decreases the level of company income tax of First Bank Nigeria Plc.
2. The Ethereum cryptocurrency price decreases the level of company income tax of First Bank Nigeria Plc.
3. The Siftcion cryptocurrency price decreases the level of company income tax of First Bank Nigeria Plc.

Recommendations

In the light of the conclusion of the study, the following recommendations are made:

1. Given that cryptocurrencies reduce the effectiveness of monetary policy at the country level, there should be greater international cooperation through the International Monetary Fund (IMF). This is because typically central banks hold reserves to counter speculative attacks against their currencies.
2. With the Bitcoin becoming increasingly popular, there is a clear need to be prepared for potential speculative

attacks and incorporate this means of payment better into the financial system. For cryptocurrencies not tied to a particular platform for instance Bitcoin, these currencies can impact on price stability, financial stability and payment stability.

3. Education on the economic benefits of cryptocurrency and the possibility of their co-existing with fiat currency should be intensified at all levels, especially at the executive level. This will enable governments to develop the required blockchain mindset to evaluate business opportunities and challenges around potential blockchain solutions.

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