Effect of Insurance of Cryptocurrency-based businesses on Nigeria's Economic Growth, 2019-2024

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Abstract

Research Objective: The study examined the effect of crypto currency insurance business on Nigeria economic growth. Specific objectives were to: examine the effect of Bitcoin on gross domestic product (GDP) in Nigeria and investigate the effect of Ethereum on gross domestic product (GDP) in Nigeria.

Methodology: *Ex post* facto research design was adopted. Study used secondary data of time series covering a period of 6 years i.e. 2019 – 2024, which was obtained from the Central Bank of Nigeria (CBN) statistical bulletin. The study adopted descriptive statistics, correlation test, unit root test and Auto Regressive Distributed Lag Model regression technique in testing hypotheses.

Findings: Bitcon had a negative and non significant effect on gross domestic product (GDP) in Nigeria (coefficient value of -0.336452, pv>0.05) and Ethereum had a positive and non significant effect on gross domestic product (GDP) in Nigeria (coefficient value of 0.037052, pv>0.05).

Conclusion: Insurance of Crypto currency businesses had non significant effect on gross domestic product (GDP) in Nigeria.

Recommendation: Government of Nigeria in conjunction with regulatory agencies in the country should regulate the adoption of crypto currency known as Bitcon as individual ways of conducting businesses.

Key words: *Crypto currency, Gross Domestic Product (GDP), Bitcoin, Ethereum.*

1.0 INTRODUCTION

A recent and promising digital system of payment and investment is the crypto currency. Its usage or adoption as a medium of exchange is gaining momentum around the world of which Nigeria is not an exception. The evolution and advancement of economic revolution and the

need to sustain the economy through advanced financial technology, through a new form of digital currency using encryption techniques to regulate the generation of units of a currency and verify the transfer of funds operating independently of a central bank, predicated the introduction of crypto-currency into the Nigerian economy (Salawu & Moloi, 2018).

Crypto currency is a decentralized cash payment system or digital money designed and secured payment system which uses cryptography for security and anti-counterfeiting measures and in most cases anonymous. Crypto currency is a digital derivative financial instrument which has all properties of financial instruments, issued by a company or a group of individuals in order to attract financial resources to implement promising projects or to acquire assets for capitalization (Ansoff 2018).

Crypto currency is like any other normal currency designed to serve as a medium of exchange but it's mainly for the purpose of exchanging digital information. It uses decentralized technology which enables users to secure payments and store money without using their names or bank. Dierksmeier & Seele as cited in Salawu and Moloi (2018), parties do not need to know each other; in other words, it is an anonymous transaction. Units of crypto currencies are created through a process called mining which involves the use of computer power to solve complicated problems (Wikipedia 2018).

Consequently a digital currency is beginning to gain wide information and acceptance; and one of the most famous is bitcoin. Other digital currencies include Swiss coin, bitcoin, Swiss coin and one coin are crypto currencies or digital currencies created and controlled using cryptography. Crypto currencies are not supported or backed by any central bank. Unlike fiat currencies, crypto-currencies do not have a central bank that implements monetary policy to keep purchasing power stable, meaning that changes in demand can induce massive fluctuations in price. If users cannot be sure that the purchasing power of other accounts will remain stable, they will never adopt a crypto currency as a medium of exchange over a price stable alternative. The price volatility is one of the biggest barriers to widespread adoption of the crypto-currencies.

Raskin, and Yermack (2016), crypto currency in recent times is a widely accepted means of investment in all spheres of businesses and has created a close and harmonious relationship among many world economies. It is the future wave as more organizations and countries worldwide accept them as a valid form of currency. However, the growth, awareness, and popularity of crypto currency as a financial instrument were in various ways improving faster than infrastructures that have been built to complement and support its existence (Shawdagor, 2019).

According to the report (Globe Newswire, 2025), the global market for Crypto currency Trends was valued at US$2.1 Billion in 2024 and is projected to reach US$5 Billion by 2030, growing at a CAGR of 15.4% from 2024 to 2030.The size of the market has attracted a very high level of cybercrime risk and various other forms of risks. Along with this growth in

crypto currency, there is an increasing concern over the control of risk present therein. Although crypto currencies are backed up by numerous block-chains designed to reduce risks, a sizable amount of risk is unavoidable, but this is not unusual with any new technology; however, the risk and error are widespread (Rossiter 2017).

Kauflin, (2019) posited that where assets exist, there is bound to be Insurance. Since the primary function of Insurance is the provision of financial protection of the insured against unforeseen losses. Crypto currency seems to be here to stay for the primary time and so does the risk inherent in investing in such an instrument. It is expected that firms and individuals investing in such an instrument consider obtaining an insurance policy that will safeguard their interest during interacting with such an instrument. The presence of insurance industries across the world in crypto currency is becoming increasingly popular, and some insurance firms are already rising to the challenge by providing adequate insurance cover for investors and such an instrument and tapping into the existing market, however, with caution (Grensing, 2019).

Economic growth, according to Dwivedi (2024), is a steady rise in net national product or per capita national production. This means that overall productivity must be growing at a greater rate than the population. Additionally, the foundation of a nation's economy is the idea that the manufacturing of goods and provision of services in such a country should be those that satisfy the wants of the largest numbers of citizens and non-citizens of the country. Economic growth, as defined by Appah *et al.* (2023), is the increase in the volume of a nation's goods and services over time; this may be used to calculate the size of a nation. At this juncture, the study deemed necessary to investigate the effect of crypto currency insurance business on Nigeria economic growth, 2019-2024.

Statement of the Problem

The volatility and inherent risks of crypto currencies have made insurance an attractive option for investors looking to safeguard their digital assets. With the increasing frequency of cyber attacks targeting crypto exchanges and wallets, many users are understandably concerned about the safety of their investments. Traditional financial institutions often shy away from providing services to crypto currency businesses, leaving a gap in the market for tailored insurance solutions. This gap presents an opportunity for insurers to create products that specifically address the needs of crypto currency holders. Additionally, as regulatory frameworks surrounding crypto currencies evolve, having insurance can enhance credibility and trust among users.

Despite the numerous advantages associated with the use of crypto currencies such as; providing a safety net against potential total loss, enhancing risk management strategies boosting confidence in the crypto currency market, among others, the innovation is laden with considerable challenges that hinder its widespread adoption. Among them is the lack of historical data on crypto currency risks, making it difficult for insurers to accurately assess

and price coverage. Furthermore, the rapidly changing nature of the crypto landscape poses additional difficulties in determining what should be covered and at what cost.

Regulatory uncertainty also complicates the situation, as insurers must navigate varying laws and regulations across jurisdictions. In addition, many insurance products currently available do not fully cover the risks associated with digital assets, which may leave policyholders exposed. Lastly is that it is very difficult to get insurance to protect against unforeseen events. For instance, a cyber-attack in a Japanese coin exchange led to a loss of more than $500 million. Another American coin exchange faced cyber theft and lost coins worth $70 million. The threats to the business are serious. However, it seems like the financial services industry as a whole is choosing to ignore this predicament. Many insurance agents are aware of their consumer's needs and hence are willing to provide insurance in order to tap the huge potential market. However, there are very few insurers who are willing to underwrite such policies despite their huge demand. The reason for this reluctance is the various challenges that insuring crypto currency brings along.

Despite the existence of numerous works that address crypto currencies, there is still a lack of a comprehensive literature that specifically examines crypto currency of insurance business on Nigeria growth. To comprehend the extent of the influence of crypto currencies, it is imperative that an extensive amount of research be carried out. There is a dearth of systematic reviews that specifically examines crypto currency (Bitcoin & Ethereum) of insurance business on Nigeria growth, 2019-2024. Therefore, the study examined the effect of crypto currency of insurance business on Nigeria economic growth, 2019-2024

Objectives of the Study

The main objective of the study was to examine the effect of crypto currency insurance business on Nigeria economic growth. Specific objectives were to:

i. Examine the effect of Bitcoin on gross domestic product (GDP) in Nigeria.

ii. Investigate the effect of Ethereum on gross domestic product (GDP) in Nigeria.

2.0   REVIEW OF RELATED LITERATURE

Crypto Currency

Crypto currency is a way of transaction that uses robust cryptography to secure the financial transactions of assets and verify the asset transfer between the parties involved (Raj & Manoj, 2020; Eli & Jerry, 2014). By using a crypto currency, parties in a transaction can make financial transactions without the knowledge or over the sight of a third party (Peter, 2016). Crypto currency is a popular way of financial transactions, and it has proven to be robust and highly confidential, which has attracted lots of investors with massive investment in the virtual currency (Jacob, Henry & Aaron, 2019; Eli & Jerry, 2014; Mayank *et al*, 2018). Laura

(2020) points out that the whole list of crypto currency is conditionally divided into three main types, namely; (i) Bitcoin; (ii) Altcoins, and (iii) Token, and further clarified that the price of crypto currency is regulated by the supply and demand, meaning that the value people themselves put into it determine the price.

Bitcoin

Eucharia, Francisca and Martins (2023) described Bitcoin as a peer-to-peer virtual currency that enables payments to be made electronically between individuals or organizations without the need for financial institutions. The first digital currency was Bitcoin, which was developed in 2009. It is an open-source, standards-based system that uses protocols in a cryptographic manner to record and validate online transactions, ensuring their safety and secrecy. Users generate and save bitcoin addresses (private keys), in digital wallets with their corresponding public keys in order to trade bitcoin. Bitcoin transaction logs are kept on a network of computers and include a system for rewarding truthful individuals who figure out a puzzle. Spending more time online will be necessary to solve this issue, and this will raise the quantity of cyberspace required to manage and operate this new business. Thus, a new market indicates more economic growth (Ashimbayev & Tashenova, 2018).

Ethereum's

Ethereum's block chain supports decentralized applications (DApps), which are applications that run on a decentralized network rather than a centralized server. DApps leverage Ethereum's smart contract functionality to provide decentralized, secure, and transparent solutions across various sectors (Chimezie & Inimgba, 2022). Examples of popular DApps include decentralized finance (DeFi) platforms, which offer financial services such as lending, borrowing, and trading without traditional financial intermediaries, and non-fungible token (NFT) marketplaces, which allow for the creation, buying, and selling of unique digital assets (Chimezie & Inimgba, 2022; Ademosu & Ayodele, 2023).

Economic Growth

Dwivedi (2024) refers to economic growth as a steady rise in net national product and per capita national production. This means that overall productivity must be growing at a greater rate than the population. Additionally, the foundation of a nation's economy is the idea that the manufacturing of goods and provision of services in such a country should be those that satisfy the wants of the largest numbers of citizens and non-citizens of the country. Therefore, the quantitative rise in the monetary value of products and services produced in an economy during a specific year is known as economic growth. A percentage change in the Gross National Product or Gross Domestic Product is used to represent economic growth (Dwivedi, 2024).

Economic growth, as defined by Appah et al. (2023), is the increase in the volume of a nation's goods and services over time; this may be used to calculate the size of a nation. Over

a lengthy period of time, the net national product or per capita national production has grown steadily. It indicates that the rate of increase in overall output must outpace the rate of population expansion, improving or elevating the standard of life for inhabitants (Munyeka, 2021).

Gross Domestic Product (GDP)

Ahmed and Mohammed (2019) expressed that a nation's GDP is the total value of its goods and services produced. It is regarded as part of national accounts, a thorough collection of data that enables decision-makers to assess whether the economy is expanding or contracting. In addition, it may be used to estimate the size of the macro economy and evaluate economic activity and efficiency.

The entire quantity of output that occurs in the economy, regardless of the nationality of those who generate the commodities and services, is known as the gross domestic product (Appah & Zibaghafa, 2018). GDP is the total quantity of output that both Nigerians and foreigners create in Nigeria. The GDP excludes Nigerians' income and foreign real estate profits. Additionally, international earnings and foreign property profits in Nigeria are not excluded. By adding up the worth of products and services produced in a country during a specific time frame, GDP calculates the size of an economy (Ahmed & Mohammed, 2019).

Ironkwe and Agu (2019) believed that the contributions of each industry or economic sector may be separated apart from the overall GDP. Per capita GDP, sometimes referred to as Mean Standard of Living, is the ratio of GDP to the entire population of a region. The "world's most powerful statistical indicator of national development and progress" is the GDP. The GDP is a crucial metric for assessing the state of a nation's economy (Tomiwa (2020; Akwagyiram & Wilson, 2020; Jeffery, 2020).

Theoretical Review

This study was underpinned on innovation growth theory and technology acceptance model.

The Innovation-Growth Theory

The innovation-growth concept was developed by Paul Romer in 1994 (Romer, 1994). The theory states that economic forces affect the inclination of organizations, particularly academics and entrepreneurs, to produce novel concepts and inventions. According to Rivera-Batiz (2019), when the economy is doing well, businesses, researchers, and entrepreneurs will come up with inventions that boost economic activity and increase economic productivity.

To state in another form, the theory contends that entrepreneurs and researchers react to financial incentives and that their creative ideas lead to technological breakthroughs that positively impact the economic growth of society. According to this theory, innovation and economic growth are strongly correlated (Ebelogu , Oriahki, Ojo, & Agu, 2019).

The requirement to sustain a desirable rate of economic growth may encourage inventors to produce new digital inventions, like bitcoin and Ethereum coin that help achieve the targeted rate of economic growth, which is why this theory supports the development of digital currencies. As a result, the theory promotes the creation of digital currencies since they have the potential to boost economic growth by making it easier for money to move between investment, commerce, production, and consumption.

Technology Acceptance Model (TAM)

In 1989, Davis revised the paradigm of technological adoption. This information system theory explains how technology consumers come to embrace and utilize new systems. Davis (1989) explained the key factors influencing people's readiness to accept and use new technology using the technology acceptance model. According to the study, people's intentions to adopt and use new technologies are mostly influenced by perceived usefulness and ease of use.

Perceived utility is a component that affects user acceptance since it establishes how well the new technology may enhance work performance (Ailemen, Enobong, Osuma, Evbuomwa, & Ndigwe., 2018). In addition to producing a positive performance, the technology must be able to provide a beneficial outcome. People's perceived ease of use refers to how easy it is for them to accept new technology. It suggests that it should be easy to use the new technology (Iwedi, Owakah, & Wofuru-Nyenke., 2023).

According to Lai (2016), there is typically a tension between the quick evolution of technology and the natural barriers to the uptake of new goods or services, which drives the development of payment systems. This theory is pertinent to the study, though, because digital technology adoption which has risen sharply with blockchain technologies like bitcoin, Ethereum, Binance, and others has been greatly facilitated by information and communication technology (ICT), which has improved and stimulated economic growth.

Empirical Review

This section reviewed some of the works done by researchers in the past and recent times.

Ajibola, Fasina and Balogun, (2024) examined how digital currency affects Nigeria's economic growth. Data from secondary sources spanning a decade (2014–2023) was used in the study. Findings revealed there was no discernible impact of either Bitcoin or Binance on the GDP of Nigeria between 2014 and 2023.

Ahannaya et al. (2021) examined the impact of crypto currency on Nigeria's economic development. The study gathered quantitative data, through the use of a structured questionnaire. It was found that the Nigerian economy benefits from the usage of digital currency. It also confirmed that more and more people believe that digital currencies like Ethereum, Litecoin, and Bitcoin are respectable and safe.

The contribution of digital currency to financial inclusion for growth and development of Nigeria was examined by Ekong and Ekong (2022). Quarterly data from 2006 to 2020 were utilized in the analysis. According to the report, adopting digital currency greatly boosted both the level of growth in the nation and the number of individuals participating in financial operations.

Between the fourth quarter of 2010 and the third quarter of 2022, Ademosu and Ayodele (2023) conducted research on virtual currencies and the Nigerian economy, concentrating on bitcoin, Ethereum, and Litecoin. The Granger causality test and the ARDL model were used to analyze the gathered data. The study also found that low fluctuations in markets will accelerate economic growth, especially for Ethereum.

In Nigeria, Eucharia, Francisca, and Martins,. (2023) looked at the viability and adoption of blockchain technology and Bitcoin. In order to collect 320 responses from an online survey, a purposive sampling strategy was employed. Statistics for correlation and description were used to analyze the collected data. Bitcoin has 97.5% acceptability, making it the most widely used crypto currency.

Obisesan et al. (2024) looked into how crypto currencies affected economic growth in African nations. Findings showed that, as indicated by the GDP growth rate, Bitcoin significantly hinders the economic development of developing African nations; Ethereum significantly and favorably influences the economic development of developing African nations; and Binance coin significantly hinders the economic development of Africa.

Ademosu and Ayodele, (2023) emphasizes the implication of dynamic connection between digital currency and Nigerian economic growth rate by focusing attention on Bitcoin, Ethereum and Litecoin with respect to their returns and volatility from 2010Q4 to 2022Q3. The study further found that low volatility in the market will raise (significantly especially for Ethereum) growth rate of the economy.

Onodugo, Anigbo, Onyeledo and Mekuye (2021) ascertained the effect of crypto currencies on the Nigeria Economy. It also examined the benefits of crypto currencies in Nigeria. The study revealed that blockchain technology has its fair share of advantages beyond the financial sector (a protected assemblage of essential data and information, such as scientific bills, health records, vote records, etc.).

Ahannaya, Oshimouo, Sanni, Adewale and Ogunwole, (2021) undertook to ascertain the effect of crypto currencies on the Nigeria Economy. Results revealed that crypto currencies such as Bitcoin and Ethereum in performing online transactions have been on the rise and almost accepted globally. The study concluded that a significant number of people are now fully convinced that the digital Currency-Bitcoin is legitimate, safe and has value.

Onyekwere, Ogwueleka, and Irhebhude (2023) investigated the adoption and sustainability of Bitcoin and blockchain in Nigeria. The findings revealed that Bitcoin is the most popular

crypto currency, with a 97.5% acceptance rate, and is expected to remain the leading virtual currency over the next five years.

Ajibola, Fasina and Balogun, (2024) examined how digital currency affects Nigeria's economic growth. Descriptive statistics, correlation and panel regression analysis were used to examine the collected data. According to the results, there was no discernible impact of either Bitcoin or Binance on the GDP of Nigeria between 2014 and 2023.

Oluwaseun, Dada and Ajayi, (2024) assessed the impact of crypto currency on economic growth in Africa. Discoveries from the study revealed that Bitcoin exert negative significant impact economic growth of developing African countries proxied with gross domestic product growth rate with reported coefficient estimate, Ethereum exert positive and significant impact on economic growth of developing African countries and Binance coin exert significant negative impact on Africa economic growth of developing African countries.

Between the fourth quarter of 2010 and the third quarter of 2022, Ademosu and Ayodele (2023) conducted research on virtual currencies and the Nigerian economy, concentrating on bitcoin, Ethereum, and Litecoin.. The study also found that low fluctuations in markets will accelerate economic growth, especially for Ethereum. This finding has causal implications for growth and exchange rates as well as the returns and volatility of these currencies.

Obisesan, Dada, and Ajayi. (2024) looked into how crypto currencies affected economic growth in African nations. The study gathered secondary panel data for five African countries from all around the continent for the years 2016–2021. Descriptive statistics, correlation analysis, fixed and random effect analysis, and pooled OLS estimation were used to evaluate the data. The study's conclusions showed that, as indicated by the GDP growth rate, Bitcoin significantly hinders the economic development of developing African nations; Ethereum significantly and favorably influences the economic development of developing African nations; and Binance coin significantly hinders the economic development of Africa.

Gandalph *et al.* (2021) examined the impact of crypto currencies on the economy of Nigeria. In addition, the benefits of crypto currencies in Nigeria were evaluated. The study demonstrates that blockchain technology has advantages outside of the banking sector (a protected assemblage of essential data and information, such as scientific bills, health records, vote records, etc.).

 Oranefo, (2024) investigated the effect of digital currency on financial transactions in Nigeria, using eNaira, Bitcoin and Ethereum to enhance efficiency in financial transactions in Nigeria. The study adopted descriptive survey research design. The findings revealed that the use of digital currencies significantly enhances efficiency in financial transactions in Nigeria.

Gaps in Empirical Review

Additionally, an empirical review was carried out where past and present studies both global and local were reviewed. In addition to the above, quite a number of gaps were identified

easily from the previous studies reviewed such as; geography or area of the study was different from other studies, organizations used for the study may be different from other studies, and the variables studied may be different from other empirical examinations.

Despite the numerous studies on crypto currency, there was a dearth of studies that covered the two variables (Bitcoin and Ethereum) that were examined in this study. The study assessed the various variables so as to get a glimpse of crypto currency of insurance business on economic growth of Nigeria. This aided in getting results and as a result closing the gap. In addition, the gap in empirical review was even more significant as more studies were centered in the Western developed countries, Few studies have been conducted on crypto currency of insurance business on economic growth of Nigeria examples; place of Nigerian insurance industry on crypto currency insurance as an emerging market; Evidence from selected insurance firms in Nigeria (Alli, Kamal & Aina, 2020), analysis of the effect of crypto currencies on Nigerian economy (Onodugo, Anigbo, Onyeledo, & Mekuye 2021) , the impact of crypto currency on economic growth of African countries (Oluwaseeum, Dada & Ajayi, 2024), crypto- currency and the Nigerian economy (Yunusa, 2021) among others.

In addition, most studies have used survey research design, which limits the understanding of the complex relationship between variables. Secondly, none of the studies have measured the relationship between the independent and dependent variables beyond the sample period or provided insights into the relative importance of each variable in the model. Lastly, there were conflicting results from previous studies. This study aims to address these gaps by complementing previous research, exploring the dynamic relationship between crypto currencies of insurance business on economic growth of Nigeria using secondary data that includes two inputs: Bitcoin and Ethereum. The study also estimates the magnitude of the relationship between these variables. It is therefore important that crypto currencies (Bitcoin and Ethereum) be examined to bring to light such interplay in this sector. The study seeks to fill these gaps.

3.0   METHODOLOGY

Research Design

The study used *ex-post* facto research design. The choice of the *ex-post* facto design was because the research relied on already recorded events, and researchers do not have control over the relevant dependent and independent variables they are studying with a view to manipulating them (Onwumere, 2009).

Nature and Sources of Data

This study made use of secondary data of time series covering a period of 6 years i.e. 2019 – 2024, which was obtained from the Central Bank of Nigeria (CBN) statistical bulletin.

Model Specification

EFFECT OF INSURANCE OF CRYPTO-CURRENCY BASED BUSINESSES ON NIGERIA'S ECONOMIC GROWTH

The main aim of this study was to examine the effect of crypto currency insurance business on Nigeria economic growth, 2019-2024. The study adopted the model of Obisesan, *et al* (2024). The model was specified on the functional form and after modified:

GDP = f (BIT, ETH) --- (i)

Transforming the data into a log form, the econometric model becomes;

$GDP_t = \alpha + \beta_1 LBIT_{t-i} + \beta_2 LETH_{t-i} +$ - £t ------ ----------------------------------- (ii)

Where;

GDP	=	Gross Domestic product (a proxy for economic growth in Nigeria)
BIT	=	Bitcon (Independent Variable)
ETH	=	Ethereum
μ	=	Error Term
α	=	Constant
β	=	Regression coefficient
t	=	Time at Present
t-i	=	Time at lag i, i-1,2, ……..

The a priori expectation (i,e, $\beta_1 \geq 0$)

Methods of Data Analyses

Time series data covering a period of 6 years were estimated using descriptive statistics, correlation test, unit root test and Auto Regressive Distributed Lag Model.

4.0   DATA PRESENTATION AND ANALYSES

Data Presentation

Table 4.1: The data were presented in terms of RGDP, BITCON and ETHEREUM as variables under the study from 2019 to 2024 annually.

Period	GDP at Market Price	BITCON	ETHEREUM
2019	145,639.14	14.75	247,117,483.830
2020	154,252.32	19.46	470,673,397,126
2021	176,075.50	20.59	621,047,023,890
2022	202,365.03	7.63	161,130,639,970
2023	234,425.91	11.23	351,655,489,427
2024	234,425.91	9.87	1,118,659,048,135

Source: Compiled by the researcher from CBN, Coin Market Cap Online Platform.

Descriptive Statistics

Table 4.2 Descriptive Statistics

	GDP_AT_MARKET_PRICE	LOGBITCON	LOGETHEREUM
Mean	191197.3	2.570764	25.58200
Median	189220.3	2.554916	26.73167
Maximum	234425.9	3.024806	27.74315
Minimum	145639.1	2.032088	19.32537
Std. Dev.	38810.54	0.392732	3.131299
Skewness	0.054392	-0.086369	-1.625110
Kurtosis	1.398752	1.600995	3.904682
JB	0.643957	0.496764	2.845595
Probability	0.724714	0.780062	0.241039
Obs	6	6	6

Source: extracted from E- View 10 package

Table 4.2 contains the description of the variables using normality test which comprises Skewness, Kurtosis and Jarque – Bera Statistics. The table shows that the gross domestic product , bitcoin and ethereum are positively and negatively skewed relative not normally distributed.

Table 4.3: Unit Root Test

Variables	ADF	cv@5%	Probability	Inference
GDP	-0.43	-3.69	0.8210	1(0)
BIT	-1.71	-6.48	0.6566	1(1)
ETH	-8.10	-3.69	0.0020	1(0)

Source: extracted from E- View 10 package

The a priori expectation when using the ADF test is that a variable is stationary when the value of the ADF test statistic is more negative than the critical value at 5%. Table 4.3 shows that some variables are stationary at first difference while some are stationary at level. Based on this evidence, the Autoregressive Distributed Lag Model (ARDL) emerged as the best tool for testing hypotheses since there was a combination of 1(0) and 1(1).

Test of Hypotheses

Test of Hypothesis One

Restatement of hypothesis in null and alternate form thus:

H_{a1}: Bitcoin does not significantly affect gross domestic product (GDP) in Nigeria.

Decision Rule: Accept the null hypothesis if the sign of the coefficient is negative and probability value > 0.05. Otherwise, reject the null hypothesis and accept the alternative accordingly.

Table 4.4 ARDL Result

Dependent Variable: LOGGDP

Method: Least Squares

Date: 04/30/25   Time: 06:34

Sample: 2019 2024

Included observations: 6

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGBITCON	-0.336452	0.142442	-2.362028	0.0992
LOGETHEREUM	0.037052	0.017865	2.073997	0.1297
C	12.06065	0.606339	19.89093	0.0003

R-squared	0.778974	Mean dependent var	12.14359
Adjusted R-squared	0.631624	S.D. dependent var	0.205649
S.E. of regression	0.124816	Akaike info criterion	-1.017093
Sum squared resid	0.046737	Schwarz criterion	-1.121213
Log likelihood	6.051280	Hannan-Quinn criter.	-1.433895
F-statistic	5.286547	Durbin-Watson stat	2.708652
Prob(F-statistic)	0.103911		

In table 4.4, given the decision criteria to reject H_0 if the t-statistics is >2.0 and the probability value is > 0.05. Table 4.4 shows the t-statistics as -2.362028, coefficient value of -0.336452 while the probability is 0.0992>0.05. We reject the null hypothesis (H_0) and conclude that bitcon exerts a negative and non-significant effect on gross domestic product (GDP) in Nigeria.

Test of Hypothesis Two

H_{a2}: Ethereum does not significantly affect gross domestic product (GDP) in Nigeria.

Table 4.5 ARDL Result

Dependent Variable: LOGGDP

Method: Least Squares

Date: 04/30/25   Time: 06:34

Sample: 2019 2024

Included observations: 6

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGBITCON	-0.336452	0.142442	-2.362028	0.0992
LOGETHEREUM	0.037052	0.017865	2.073997	0.1297
C	12.06065	0.606339	19.89093	0.0003

R-squared	0.778974	Mean dependent var	12.14359
Adjusted R-squared	0.631624	S.D. dependent var	0.205649
S.E. of regression	0.124816	Akaike info criterion	-1.017093
Sum squared resid	0.046737	Schwarz criterion	-1.121213
Log likelihood	6.051280	Hannan-Quinn criter.	-1.433895
F-statistic	5.286547	Durbin-Watson stat	2.708652
Prob(F-statistic)	0.103911		

In table 4.5, given the decision criteria to reject H_0 if the t-statistics was >2.0 and the probability value was < 0.05. Table 4.5 shows the t-statistics as 2.073997, coefficient value of 0.037052 while the probability is 0.1297>0.05. We reject the null hypothesis (H_0) and conclude that ethereum exert a positive and non significant effect on gross domestic product (GDP) in Nigeria.

4.4 Discussion of Findings

Hypothesis One: Bitcoin does not significantly affect gross domestic product (GDP) in Nigeria.

In table 4.4, given the decision criteria to reject H_0 if the t-statistics was >2.0 and the probability value was > 0.05. Table 4.4 shows the t-statistics as -2.362028, coefficient value of -0.336452 while the probability is 0.0992>0.05. We reject the null hypothesis (H_0) and conclude that bitcon exerts a negative and non-significant effect on gross domestic product (GDP) in Nigeria. In a similar study by Ajibola, Fasina and Balogun, (2024) examined how digital currency affects Nigeria's economic growth. Data from secondary sources spanning a decade (2014–2023) was used in the study. Findings revealed there was no discernible impact of either Bitcoin or Binance on the GDP of Nigeria between 2014 and 2023.

Hypothesis Two: Ethereum does not significantly affect gross domestic product (GDP) in Nigeria.

In table 4.5, given the decision criteria to reject H_0 if the t-statistics was >2.0 and the probability value was < 0.05. Table 4.5 shows the t-statistics as 2.073997, coefficient value of 0.037052 while the probability is 0.1297>0.05. We reject the null hypothesis (H_0) and conclude that ethereum exert a positive and non significant effect on gross domestic product (GDP) in Nigeria. This was in agreement with the study by Obisesan et al. (2024) that looked into how crypto currencies affected economic growth in African nations. Findings showed that, as indicated by the GDP growth rate, Bitcoin significantly hinders the economic development of developing African nations; Ethereum significantly and favorably influences the economic development of developing African nations; and Binance coin significantly hinders the economic development of Africa.

5.0   SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

Summary of Findings

i. Bitcon had a negative and non-significant effect on gross domestic product (GDP) in Nigeria (coefficient value of -0.336452, pv>0.05).

ii. Ethereum had a positive and non-significant effect on gross domestic product (GDP) in Nigeria (coefficient value of 0.037052, pv>0.05).

Conclusion

In light of the findings, the study concluded that crypto currency of insurance business had non significant effect on gross domestic product (GDP) in Nigeria. Even though specific findings still concluded that bitcon had a negative and non significant effect on gross domestic product (GDP) in Nigeria and ethereum had a positive and non significant effect on gross domestic product (GDP) in Nigeria.

Recommendations

Premise on the findings drawn from the analysis alongside the conclusions the study therefore outlined some compatible recommendations:

i. Government of Nigeria in conjunction with regulatory agencies in the country should regulate the adoption of crypto currency known as bitcoin as individual ways of trending businesses just like every other developed world.

ii. Government of Nigeria in considering the regulation of ethereum should deploy measures to protect its users from the high volatility and vulnerability of the currency to criminal activities in Nigeria; this is towards averting unexpected reduction in investors wealth which adversely affects the growth of the economy.

Contribution to Knowledge

This study made a significant contribution to knowledge by providing a model (see figure 5.1) on the effect of crypto currency insurance business on Nigeria economic growth, 2019-2024. The contributive diagram was illustrated below with statistical evidence of weak, moderation and high. figure 5.1 below.
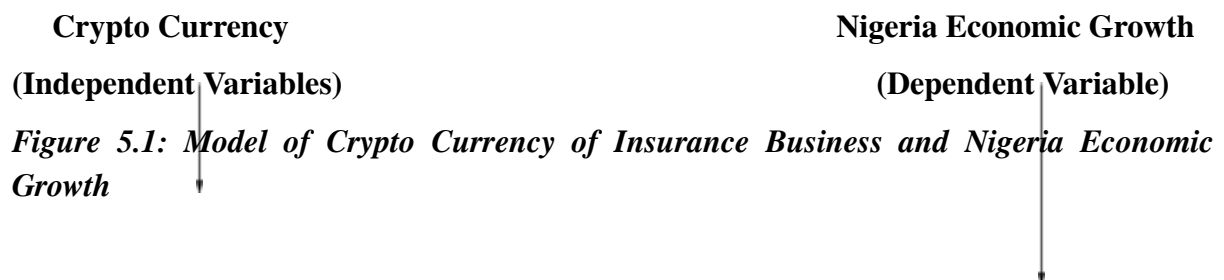
Crypto Currency   **Nigeria Economic Growth**

(Independent Variables)   **(Dependent Variable)**

Figure 5.1: Model of Crypto Currency of Insurance Business and Nigeria Economic Growth

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