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The Impact of Digital Currencies on Inflation and Interest Rates: An Applied Study in Iraq for 2018-2022

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Abstract: The study sought to identify digital currencies, their nature, emergence, and how to issue them, as well as the mechanisms of trading and investing in digital currencies in currency markets. The research problem was represented by the main question, which states, (What is the nature of the relationship and impact between digital currencies, inflation, and interest rates? The study included six of the most famous digital currencies in the markets for a period of 2018–2022, based on monthly closing price data. The study reached a set of conclusions, the most important of which were the existence of a direct relationship between digital currencies and inflation, an inverse relationship between digital currencies and interest rates, and a positive relationship between digital currencies and inflation. Interest rates on digital currencies have a greater influence on inflation.

Keywords: digital currencies, inflation, interest rates

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1. Introduction

Digital currencies are a feature of the modern era and an interesting topic in the financial field, as are the latest developments in electronic financial payment methods at the global level. Therefore, digital currencies are one of the newest forms of currency. They have been widely used and spread in the last two decades due to their low fees and cost, ease of use, and speed, as payment is made immediately. Without resorting to intermediaries, one of its purest forms is a peer-to-peer version of electronic cash, which allows online payments to be sent directly from one party to another without going through a financial institution, so they are algorithms that represent a digital currency that is not issued by an official body, and no one can control it. Neither a governmental authority nor a financial authority controls it. Its circulation is linked to the existence of the Internet in a peer-to-peer manner without an intermediary (third party). It is issued through advanced computers that are available to anyone.

Likewise, digital currencies are the basis for building a value exchange platform between the virtual economy and the real economy, contribute significantly to modernizing and enhancing electronic commerce, and are an important part of it. Therefore, the group of exchanges and trading operations in digital currencies are among the main decisive factors that work to provide liquidity.

1.1. Research problem

The emergence of digital currencies represents opportunities and challenges. Digital currencies have become one of the assets of the financial market for investment transactions. Since digital currencies are characterized by market fluctuations in inflation

and interest rates, this may have an impact on investing in them, especially in Iraq, and dealing with them and their risks. Here, the dilemma or problem of the study began with a main question:

> What is the impact of digital currencies on inflation and interest rates?

The following questions arise from it:

1) What is the nature of the risks associated with digital currencies?
2) Is there a significant relationship between digital currencies, inflation, and interest rates?

1.2. Research importance

The study gains its importance because it is one of the recent studies that dealt with the topic of digital currencies and their economic and financial effects, and the most important thing that justifies this importance is the following:

1) Due to the increasing volume of dealing in digital currencies and the growth of trade in them, and the lack of a central body that regulates their work, issuance, and support trading in them, as well as the inability to decisively control those dealing with them, this may lead to an increase in cases of piracy and help in money smuggling and laundering operations.
2) Digital currencies play a major role in raising the income level of individuals and institutions through investment and speculation, as they achieve large profits if invested well.
3) The importance of money and financial transactions in building societies and stabilizing the economy.

1.3. Research objectives

This study aimed to achieve the following:

1) Learn about the reality of digital currencies regarding inflation and interest rates.
2) Learn about the extent to which inflation and interest rates are affected by digital currencies.

2. Literature Review

2.1. Digital currencies

Digital currencies have the advantage of transferring value over the Internet, where control over them is weak. They are considered a good alternative during crises that occur in paper currencies, which may be a competitor to traditional currencies due to their reliance on advanced technology. Likewise, the digital currency in its purest form is a copy of the peer. Peer-to-peer, which represents electronic cash, allows online payments to be sent directly from one party to another without going through a financial institution [1].

Digital money is a type of virtual currency that is not subject to regulation, meaning that it is usually issued and controlled by its developers (not issued by a central government) and is used and accepted among members of a particular virtual community. However, some virtual currencies are convertible into legal fiat currencies at the discretion of its user community [2], and the value of each unit of digital currency is determined based on supply and demand, in addition to the difficulty of mining each currency, and digital currencies are a means of exchange, regardless of real money, which can be used in many financial transactions, whether virtual or real [3].

Digital currencies are one of the newest forms of virtual currencies. It has become

common and widespread in the last two decades. Due to its low fees and cost, ease of use, and speed, payment is made immediately without resorting to intermediaries [4]. Likewise, global developments in the field of traditional and non-traditional currencies and their circulation have a significant impact on the lives and development of societies and even have a direct impact on those dealing with them, especially electronic currencies, including digital currencies [5].

After clarifying a simplified concept of digital currencies, they can be divided into three types, according to the figure below, which explains digital currencies and their relationship with virtual currencies.

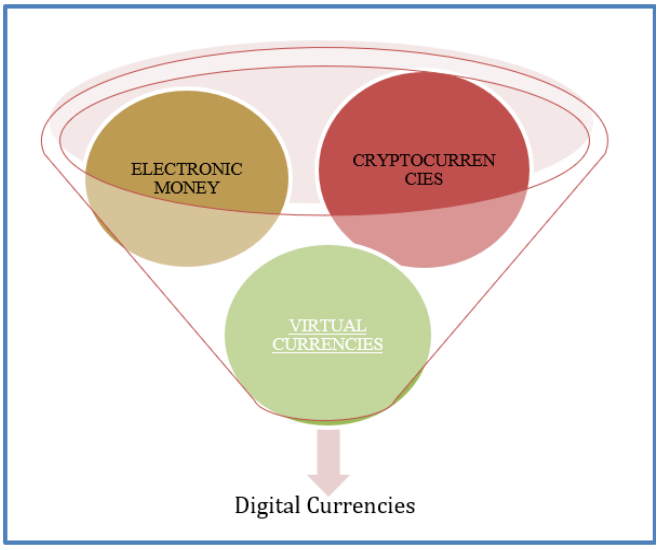

Figure 1. Forms of digital currencies [6].

2.2. Types of digital currencies

There are many digital currencies that are exchanged between users, whether natural or legal, and most of these types are based on the principle of Bitcoin. The differences are simple between them, some of which are related to mining and the method of distribution, and others to the time of trading. There are also types related to the mining algorithms responsible for the encryption process, and the types of currencies can be reviewed as follows [7]:

1) **Bitcoin:** It is symbolized by the symbol BTC and is one of the most famous digital currencies since it was issued by Satoshi Nakamoto in 2008. It contains a digital address that is linked to an electronic wallet, and when Bitcoin is purchased by the user, it is transferred from the seller's wallet to the buyer's wallet with the click of a button and using an electronic signature [8].
2) **Lite coin:** Its symbol, LTC, is an encrypted digital currency and the second most prominent virtual currency after Litecoin. Litecoin is treated as a major competitor to Litecoin currently, and the main purpose of Litecoin's design was to process small-value transactions quickly. Litecoin was founded in October 2011 [9].
3) **Ripple:** Its symbol is XRP, this currency was created in 2013 by Ryan Fugger and Chris Larsen and ranked third among digital currencies in terms of liquidity. It is distinguished from Bitcoin in that it works to preserve the traditional banking system while Bitcoin is displacing it [10].
4) **Ethereum:** Its symbol is ETH, and this currency appeared in 2015 with the aim of creating a global computer. The Ethereum block chain was launched in 2015 with the aim of creating a global computer, which is a major platform based on the blockchain for smart contracts complete Turing programs that are implemented in a decentralized network and usually deal with units. Digital value. A peer-to-peer

network of mutually distrustful nodes maintains a shared view of the global state and executes code on demand. It is stored on a blockchain secured by a proof-of-work consensus mechanism similar to that found in Bitcoin. The core value proposition of Ethereum is that it is a fully-featured programming language suitable for implementing complex business logic [11].

5) **Bitcoin Cash:** It is symbolized by BCH, and it is an encrypted virtual currency that was derived from the main currency, Bitcoin, on July 21, 2017. It was invented by Bitcoin miners. The main reason is to upgrade the program and secure a larger block chain than Bitcoin to increase the functions in the block, be more economical in energy consumption in the mining process, and work with less efficient materials than before [12].
6) **Bianco coins:** Its symbol, BNB, is one of the encrypted digital currencies that was established in 2017 by the Binance platform, which is considered one of the largest and most famous digital currency trading platforms in the world. The main reason for the increased demand for this currency is the support provided by the Binance platform as its issuer. This currency is mainly used for trading and paying fees on the digital currency exchange, and it has achieved clear success within a short period as it aims to make its platform at the forefront of global financial activities that support block chain technology [13].

2.3. Inflation

Inflation is a sustained increase in the price level of a country's economy over a specified period of time. Inflation is considered one of the most prominent economic challenges facing countries and greatly affects the lives of individuals, companies, and governments. Inflation is defined as an upward movement of prices that is characterized by the self-perpetuation of surplus demand in excess of supply capacity [14].

Inflation can also be restricted to some extent through the implementation of economic policies by the government, such as raising interest rates on loans and deposits, reducing the issuance of money in circulation, and stimulating production and export. In conclusion, inflation is an important economic challenge that must be dealt with caution, as it can lead to the deterioration of the national economy and negative effects on individuals' livelihoods. Therefore, managing the economy requires a careful balance between economic growth and price stability [15].

2.4. Causes of inflation

There are several reasons that lead to the emergence of significantly high rates of inflation, which are as follows [4,16]:

1) Increase in consumer and investment spending
2) Expanding the opening of credits by banks
3) Psychological expectations
4) Aggregate supply is directed towards inflation.

2.5. Interest rate

The interest rate is the cost of borrowing money or the return on investment. It is usually expressed as a percentage and is calculated by central banks or financial authorities to control the balance of the economy and encourage economic growth.

Interest rates are affected by several factors, including the supply and demand for money, the inflation rate, and the government's monetary and economic policies. Central banks are responsible for setting the main interest rate in the country by adjusting the main interest rate for commercial banks and loan banks.

The interest rate affects the economy overall. When the interest rate is low, it stimulates investments and lending and promotes economic activity and growth. Conversely, when the interest rate is high, it reduces lending and investments and weakens economic activity and growth [17].

2.6. Types of interest rates

The nominal interest rate is a price determined by the monetary commodity represented by the central bank. It also has three types: the first rate, applied by the central bank to institutions with good financial performance; the second rate, applied to institutions less financially sound than the first; and the nominal rate, applied to small financial institutions [18].

Real interest rate: Fisher defined it in the equation

$$r = i - p\hat{}e \quad (1)$$

Since r = the real interest rate, which is equal to the difference between the nominal interest rate (i) and the expected inflation rate, which is (p^e), the distinction between the nominal and real interest rates is of great importance because the factor influencing the decisions of creditors and debtors is the real return on investment and borrowing [19].

3. Method

3.1. Study plan

In light of the study's problem and objectives, a hypothetical chart was developed that reflects the nature of the assumed relationship between digital currencies, inflation, and interest rates. The chart was divided into two main variables: digital currencies as an independent variable and inflation and interest rates as a dependent variable, measured through indicators of inflation and interest rates for the currency markets.

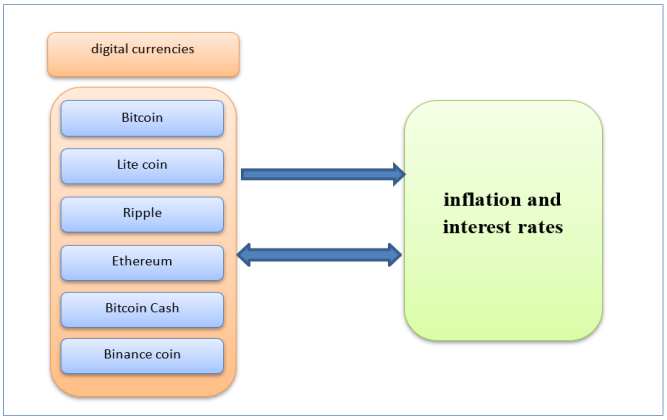

Figure 2. Hypothetical study plan (own work)

3.2. Research hypotheses

Based on the hypothetical study plan and to achieve its objectives, a set of hypotheses were derived, which are a provisional answer to the questions presented and expressing the problem of the study, as follows:

1) There is no significant correlation between digital currencies and inflation.
2) There is no significant correlation between digital currencies and interest rates.
3) There is no significant impact relationship between digital currencies and inflation.
4) There is no significant impact relationship between digital currencies and interest rates.

4. Results and Discussion

The time series data views of the closing prices of virtual currencies in the study sample were limited to (360) monthly views throughout the period extending from January 2018 until December 2022.

4.1. Descriptive statistics for the study variables

Although the entire literature assumes a normal distribution of financial data, the fluctuating nature of this data imposes instability on the time series, and therefore the data was tested using the EViews10 program to determine whether the distribution of the data is normal or not, as shown in Table 1.

Table 1. Standard tests digital currencies

Currencies	BTC	LTC	XRP	ETH	BCH	BNB
Mean	0.03102	0.018033	0.047801	0.045157	-0.0005	0.124266
Median	-0.03378	-0.00595	-0.09457	0.0112	-0.05993	0.020709
Max	0.608461	0.648073	1.803992	0.783746	0.966187	3.744522
Min	-0.37325	-0.42409	-0.66974	-0.53787	-0.58406	-0.46049
Std. Dev	0.220539	0.262493	0.449447	0.308892	0.317663	0.556187
Skewness	0.410614	0.484817	2.317106	0.520827	1.103817	4.826047
Kurtosis	2.675653	2.424446	9.167019	2.61289	4.299937	31.75003
Jarque-Bera	1.916554	3.125653	146.2906	3.035784	16.13523	2260.996
Probability	0.383553	0.209543	0.0671	0.219173	0. 0514	0.101
Observations	60	60	60	60	60	60

(Own work, based on the statistical program EViews 10)

The highest return for BTC during the study period was (0.608461%), while the lowest return for BTC was (-0.37325%), while the highest return for LTC during the study period was (0.648073%), and the lowest return for LTC was (-0.42409%) The highest return for XRP during the study period was (1.803992%), the lowest return for XRP was (-0.66974%), the highest return for ETH during the study period was (0.783746%), and the lowest return for ETH was (-0.53787%). The highest return for BCH during the study period was (0.966187%), the lowest return for BCH was (-0.58406%), the highest return for BNB during the study period was (3.744522%), and the lowest return for BNB was (-0.46049%). Table 1 shows us that the return of virtual currencies approaches its normal distribution. The Jarque-Bera test was used to be the decision rule to determine whether the data follows a normal distribution or not. By referring to Table 1, it appears that the returns of virtual currencies It follows a normal distribution, as the value of the Jerque – Bera test for virtual currencies (BTC), (LTC), (XRP), (ETH), BCH, (BNB), and respectively (1.916554), (3.125653), (146.2906), (3.035784), (16.13523), (2260.996), and with a probability value respectively (0.383553), (0.209543), (0.0671), (0.219173), (0.0514), (0.101), which is greater than the Sig value (0.05), This shows that virtual currency data follows a normal distribution and does not have a stable pattern in its fluctuations during the study period.

Table 2. Choice of normal distribution for inflation and interest rates

Value	Mean	Median	Max	Min	Std. Dev	Skewness	Kurtosis	Jarque-Bera	Probability
Inflation	2.46	1	8.6	-0.9	2.81	0.5392	1.8427	6.256	0.43
Interest Rates	11.4618	11.26	12.09	10.52	0.39	0.1345	1.8364	3.565	0.168

(Own work, based on the statistical program EViews 10)

Table 2 -0.42409%, and the values of Inflation and interest rates follow a normal distribution, as the value of the Jerque – Bera test for both Inflation and interest rates reached (6.256), (3.565) and the probability value was (0.43), (0.168), which is greater than the value of Sig. (0.05), this shows that the data of inflation and interest rates follow a normal distribution and do not have a stable pattern in their fluctuations during the study period.

4.2. Testing the stability of time series

The Unit Root Test and the Dicky-Fuller Augmented method were applied in order to determine the stability of the time series for the indicator of the study variables. Table

3 shows the results of the analysis.

Table 3. Unit Root Test results for the study variables

UNIT ROOT TEST TABLE (ADF) At Level									
		Inflation	**Interest Rate**	**BTC**	**LTC**	**XRP**	**ETH**	**BCH**	**BNB**
With Constant	t-Statistic	-1.728	-0.868	-1.314	-2.234	-3.443	-1.253	-3.925	-1.601
	Prob.	0.206	0.791	0.617	0.196	0.013	0.645	0.053	0.475
With Constant & Trend	t-Statistic	-2.044	-3.707	-2.068	-2.312	-3.647	-1.705	-3.757	-2.357
	Prob.	0.564	0.059	0.551	0.420	0.062	0.736	0.056	0.397
Without Constant & Trend	t-Statistic	-0.666	-0.841	-0.663	-1.460	-2.092	-0.893	-3.140	-0.973
	Prob.	0.424	0.346	0.425	0.133	0.065	0.325	0.052	0.059

(Own work, based on the statistical program EViews 10)

It turns out that the variables inflation, interest rates, and digital currencies are unstable at the original level of the data, according to the Dicky-Fuller Augmented test, so the difference was taken for the study variables, as shown in the Table 4.

Table 4. Dicky-Fuller Augmented test results for the study variables for the first difference

(ADF) At First Level **UNIT ROOT TEST TABLE (PP) At Level**									
		Inflation	**Interest Rate**	**BTC**	**LTC**	**XRP**	**ETH**	**BCH**	**BNB**
With Constant	t-Statistic	-8.745	-8.475	-6.053	-7.608	-8.175	-6.777	-9.648	-8.171
	Prob.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
With Constant & Trend	t-Statistic	-8.692	-8.407	-6.028	-7.595	-8.075	-6.714	-9.689	-8.099
	Prob.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Without Constant & Trend	t-Statistic	-8.753	-8.467	-6.105	-7.631	-8.240	-6.834	-9.561	-8.216
	Prob.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

(Own work, based on the statistical program EViews 10)

It appears from the Table 4 that the study variables become stable after taking their first difference and according to the Dicky-Fuller Augmented test, meaning that the study variables become integrated of first degree.

4.3. Correlation test between the study variables

To achieve this presentation, the researcher used Pearson analysis in the program EViews 10, and the results were in the following Table. Note that the calculated adjusted correlation coefficient if its value is 1:

Table 5. The correlation between the study variables

Currencies / **Correlate**	**BTC**	**LTC**	**XRP**	**ETH**	**BCH**	**BNB**
Inflation	-.092	-.039	.090	.081	-.016	.083
Prob.	0.000	0.00	0.00	0.000	0.870	0.000
Interest Rate	-.084	-.158	-.067	-.184	-.003	-.098
Prob.	0.000	0.204	0.063	0.000	0.081	0.000

(Own work, based on the statistical program EViews 10)

The table (5) shows that:

1) The Correlation analysis between inflation and digital currencies is a positive relationship in some and an inverse relationship in others, that is, the focus was on inflation and also on testing the trading platforms and the statements or information that attract attention present in the trading platforms and not on the history of the currency, meaning when the prices of digital currencies rise. An increase leads to inflation. Therefore, we reject the hypothesis that states that there is no significant

correlation between digital currencies and inflation, and accept the alternative hypothesis that indicates that there is an inverse and direct significant correlation between digital currencies and inflation.

2) The Correlation analysis between the interest rate and digital currencies is an inverse relationship, meaning that when the interest rate increases, the price of digital currencies and the return decrease, but when the interest rate decreases, the return on digital currencies increases and the price of digital currencies increases. Therefore, we reject the hypothesis that states that there is no significant correlation between digital currencies and the interest rate, and accept the alternative hypothesis that indicates that there is an inverse significant correlation between digital currencies and the interest rate.

4.4. Regression analysis between study variables

The contents of this part come as a continuation of testing the validity of the study plan by verifying the validity of the influence hypotheses that indicate the existence of an influence relationship between the study variables. In light of the sequence of study hypotheses, we review the results of the analysis as follows:

Table 6. Regression analysis of cryptocurrencies and inflation

	Inflation				
Currencies	**B1**	**T- Statistic**	**F - Statistic**	**R-squared**	**Prob**
BTC	-1.177	6.618	0.484	0.063	0.000
LTC	-0.423	6.568	0.088	0.007	0.000
XRP	0.563	6.474	0.460	0.032	0.000
ETH	0.741	6.420	0.375	0.045	0.000
BCH	-0.139	6.559	0.014	0.052	0.000
BNB	0.420	6.282	0.392	0.089	0.000

(Own work, based on the statistical program EViews 10)

We note from the results of table (6) that the effect of the BTC currency on inflation, as the total of what the BTC currency explains according to the value of (R2) amounted to about (6.3%), while (94.7%) of the change occurring in digital currencies is due to other factors. It cannot be controlled or it was not included in the regression model, and this is supported by the value of the regression coefficient (B1) of (-1.177), which indicates that if Bitcoin increases in digital currencies by one unit, inflation will change in the opposite direction by (-1.177) units. It is a significant increase according to the calculated (F) value, which reached (0.484) at two degrees of freedom (1.59) at a statistical significance (0.000) less than a significance level (0.05), as well as according to the calculated (T) value, which amounts to (6.618).

As for the effect of the LTC currency on inflation, the total of what the LTC currency explains according to the value of (R2) amounted to about 0.7%, while 99.3% of the change occurring in digital currencies is due to other factors that cannot be controlled or are It was not included in the regression model, and this is supported by the value of the regression coefficient (B1) of (-0.423), which indicates that if the LTC currency in digital currencies increases by one unit, inflation will decrease in the opposite direction by (-0.423) units, which is a significant increase according to the value of the calculated (F) reached (6.568) at two degrees of freedom (1.59) at a statistical significance (0.000) less than a significance level (0.05), as well as according to the calculated (T) value of (6.568).

As for the effect of the XRP currency on inflation, the total of what the XRP currency explains according to the value of (R2) amounted to about (3.2%), while (96.8%) of the change occurring in digital currencies is due to other factors that cannot be controlled or are It was not included in the regression model, and this is supported by the value of the

regression coefficient (B1) of (0.563), which indicates that if the XRP of digital currencies increases by one unit, inflation will increase by (0.563) units, which is a significant increase according to the calculated (F) value. Which reached (0.460) at two degrees of freedom (1.59) at a statistical significance (0.000) less than a significance level (0.05), as well as according to the calculated (T) value of (6.474).

As for the effect of the ETH currency on inflation, the total of what the ETH currency explains according to the value of (R2) has reached about (4.5%), while (95.5%) of the change occurring in digital currencies is due to other factors that cannot be controlled or are It was not included in the regression model, and this is supported by the value of the regression coefficient (B1) of (0.741), which indicates that if the ETH currency in digital currencies increases by one unit, inflation will increase by (0.741) units, which is a significant increase according to the calculated (F) value. Which reached (0.375) at two degrees of freedom (1.59) at a statistical significance (0.000) less than a significance level (0.05), as well as according to the calculated (T) value of 6.420.

As for the effect of the BCH currency on inflation, the total of what the BCH currency explains according to the value of (R2) amounted to about (5.2%), while (94.8%) of the change occurring in digital currencies is due to other factors that cannot be controlled or are It was not included in the regression model, and this is supported by the value of the regression coefficient (B1) of (-0.139), which indicates that if the BCH currency in digital currencies increases by one unit, inflation will change in the opposite direction by (-0.139) units, which is a significant increase according to the value of the calculated (F) reached (0.014) at two degrees of freedom (1.59) at a statistical significance (0.000) less than a significance level (0.05), as well as according to the calculated (T) value of (6.559).

As for the effect of the BNB currency on inflation, the total of what the BNB currency explains according to the value of (R2) amounted to about 8.9%, while (91.1%) of the change occurring in digital currencies is due to other factors that cannot be controlled or are It was not included in the regression model, and this is supported by the value of the regression coefficient (B1) of 0.420, which indicates that if the BNB currency in digital currencies increases by one unit, inflation will increase by 0.420 units, which is a significant increase according to the calculated (F) value. Which reached (0.392) at two degrees of freedom (1.59) at a statistical significance (0.000) less than a significance level (0.05), as well as according to the calculated (T) value of (6.282).

Table 7. Regression analysis between digital currencies and interest rates

	Inflation				
Currencies	**B1**	**T- Statistic**	**F - Statistic**	**R-squared**	**Prob**
BTC	-0.151	221.411	0.408	0.017	0.000
LTC	-0.236	225.109	1.455	0.025	0.000
XRP	-0.059	222.031	0.261	0.005	0.000
ETH	-0.233	224.391	1.996	0.034	0.000
BCH	-.004	222.742	0.001	0.002	0.000
BNB	-0.069	218.504	0.551	0.010	0.000

(Own work, based on the statistical program EViews 10)

We note from the results of table (7) that the Regression of the BTC currency on the interest rate is significant, as the total amount explained by the BTC currency according to the value of (R2) amounted to about 1.7%, while (98.3%) of the change occurring in digital currencies is due to factors that cannot be controlled or were not included in the regression model. This is supported by the value of the regression coefficient (B1) of (-0.151), which indicates that if the currency Bitcoin increases in digital currencies by one unit, the interest rate will change in the opposite direction by (-0.151). unit, which is a significant increase according to the calculated (F) value, which amounted to (0.408) at

two degrees of freedom (1.59) at a statistical significance (0.000) less than a significance level (0.05), and also according to the calculated (T) value, which amounted to (221.411).

As for the effect of the LTC currency on the interest rate, the total of what the LTC currency explains according to the value of (R2) amounted to about 2.5%, while 97.5 percent of the change occurring in digital currencies is due to other factors that cannot be controlled. It was not included in the regression model, and this is supported by the value of the regression coefficient (B1) of (-0.236), which indicates that if the LTC currency in digital currencies increases by one unit, the interest rate will change in the opposite direction by (-0.236) units, which is a significant increase. According to the calculated (F) value, which amounted to (1.455) at two degrees of freedom (1.59) at a statistical significance (0.000) less than a significance level (0.05), as well as according to the calculated (T) value, which amounted to (225.109).

As for the effect of the XRP currency on the interest rate, the sum of what the XRP currency explains according to the value of (R2) amounted to about (0.5%), while (99.5%) of the change occurring in digital currencies is due to other factors that cannot be controlled. It was not included in the regression model, and this is supported by the value of the regression coefficient (B1) of (-0.059), which indicates that if the XRP of digital currencies increases by one unit, the interest rate will change in the opposite direction by (-0.059) units, which is a significant increase. According to the calculated (F) value, which amounted to (0.261) at two degrees of freedom (1.59) at a statistical significance (0.000) less than a significance level (0.05), as well as according to the calculated (T) value, which amounted to (222.031).

As for the effect of the ETH currency on the interest rate, the total amount that the ETH currency explains according to the value of (R2) amounted to about (3.4%), while (96.6%) of the change occurring in digital currencies is due to other factors that cannot be controlled. It was not included in the regression model, and this is supported by the value of the regression coefficient (B1) of (-0.233), which indicates that if the ETH currency in digital currencies increases by one unit, the interest rate will increase by (-0.233) units, which is a significant increase according to the value of the calculated (F) reached (1.996) at two degrees of freedom (1.59) at a statistical significance (0.000) less than a significance level (0.05), as well as according to the calculated (T) value of (224.391).

As for the effect of the BCH currency on the interest rate, the sum of what the BCH currency explains according to the value of (R2) amounted to about (0.2%), while (99.8%) of the change occurring in digital currencies is due to other factors that cannot be controlled. It was not included in the regression model, and this is supported by the value of the regression coefficient (B1) of (-.004), which indicates that if the BCH currency in digital currencies increases by one unit, the interest rate will change in the opposite direction by (-.004) units. It is a significant increase according to the calculated (F) value, which reached (0.001) at two degrees of freedom (1.59) at a statistical significance (0.000) less than a significance level (0.05), as well as according to the calculated (T) value, which amounts to (222.742).

As for the effect of the BNB currency on inflation, the total of what the BNB currency explains according to the value of (R2) has reached about (1%), while (99%) of the change occurring in digital currencies is due to other factors that cannot be controlled or are It was not included in the regression model, and this is supported by the value of the regression coefficient (B1) of (-0.069), which indicates that if the BNB currency in digital currencies increases by one unit, the interest rate will change in the opposite direction by (-0.069) units, which is a significant increase according to the calculated (F) value reached (0.551) at two degrees of freedom (1.59) at a statistical significance (0.000) less than a significance level (0.05), as well as according to the calculated (T) value amounting to (218.504).

5. Conclusion

5.1. Conclusions

1) The results of the study and statistical analysis through the jerque-bera test and the unit root test showed that data on digital currencies, inflation, and interest rates are in an unstable fluctuation movement at the original level, so taking the first difference level indicates stability.
2) The study showed that there is a clear, direct, and inverse significant correlation between digital currencies, inflation, and interest rates during the study period.
3) The study showed that there is an influence relationship between digital currencies and inflation, as well as a clear influence relationship between interest rates and digital currencies during the study period.
4) There is no central system that controls the interest rate for digital currencies, as happens in traditional currencies that enjoy government control. This means that there is no central body that can intervene to adjust the interest rate of cryptocurrencies, and thus cryptocurrencies can have an unstable effect on interest rates and inflation.

5.2. Recommendations

1) An effective framework of laws and regulations must be implemented to regulate digital currency activity and prevent the possibilities of manipulation, fraud and deception. This contributes to reducing negative impacts on inflation and interest rates.
2) It benefits from studying existing experiences in some countries that have adopted digital currencies to reduce inflation and enhance economic stability. These models can be analyzed and the preferences and lessons learned applied to other countries.
3) Countries must adopt a professional and regular approach to evaluate the potential effects of digital currencies on inflation and interest rates and adjust policies according to the data and results.
4) The necessity of using a central system that controls the interest rate of digital currencies, as happens in traditional currencies that enjoy government control, and thus digital currencies can have a stable impact on interest rates and inflation.

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