

## Dominance of Bitcoin on Selected Token Coins and Platform Coins

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### Abstract

This study aims to investigate the relationship between Bitcoin and select token and platform coins in the cryptocurrency market. Specifically, It explores the impact of Bitcoin's dominance on these coins and examines the level of dominance exhibited by Bitcoin and its implications for different cryptocurrencies. The study utilizes a dataset spanning three years, from 2017-18 to 2020-21, and employs various statistical tools, including Stationary Test, Johansen cointegration, and Vector Error Correction Models (VECM), along with Ordinary Least Squares (OLS) regression analysis. These methodologies are employed to analyze the relationship and dynamics between Bitcoin, select token coins, and platform coins. The findings reveal that Bitcoin's dominance has been increasing on both platform coins and token coins from 2019 onwards. This study provides empirical evidence of the relationship between Bitcoin and select token and platform coins in the cryptocurrency market.

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**JEL Code :** G30, G01, O16, O33

**Keywords :** Cryptocurrency; EOS; Bitcoin; Ethereum; VECM; OLS

### I. Introduction

"EVEN THOUGH A lot of virtual currencies have been created in recent years, bitcoin is the best known of all of them and regularly reported in the news." A digital asset intended to serve as a means of exchange that is produced and controlled using cryptography rather than relying on central authority is a digital currency, and bitcoin is one such example. Bitcoin is a potential alternative currency to traditional fiat currencies (the US dollar, the Euro, the Japanese Yen, and so on) with a number of benefits, including minimal or no fees, a well-controlled and well-known currency generating algorithm, and complete knowledge disclosure of all transactions. In a word, Bitcoin is a "peer-to-peer electronic money system." This "allows for online

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### 8.1 Implications of the study

The prevalence of Bitcoin's dominance over selected tokenized and platform coins in the crypto market could entail diverse socio-economic implications. This concentration might amplify wealth inequality and impede innovation, potentially reinforcing network effects and heightened market volatility. Regulatory attention could intensify due to perceived systemic risks, while altered investment strategies may emerge in response to interconnected market dynamics. The global financial landscape might also witness shifts in investment patterns and perceptions, sparking debates about decentralization while fostering educational opportunities for a broader understanding of cryptocurrencies.

### 8.2 Limitations of the Study

- i. The current research has only looked at a few cryptocurrencies, mostly tokens and platform coins.
- ii. Report did not take into account all cryptocurrencies available on the market.
- iii. Instead of considering all cryptocurrencies, the report looked at only a handful. The research looked at a few Tokens and platform coins.

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**Annexure**  
**Table A1**  
**Bitcoin Unit Root Test**

<b>Null Hypothesis: BITCOIN has a unit root</b>		
<b>Exogenous: Constant</b>		
<b>Lag Length: 6 (Automatic - based on SIC, maxlag=23)</b>	<b>t-Statistic</b>	<b>Prob.*</b>
Augmented Dickey-Fuller test statistic	-2.945464	0.0405
Test critical values: 1% level	-3.434255	
5% level	-2.863152	
10% level	-2.567676	

**Note** : Table shows that the result of the test on Bitcoin. The Bitcoin is found to be stationary at the normal level at a 5% significance level. Since the probability value of the bitcoin is less than 0.05 therefore it got stationalized at a normal level.

*Source*: Self Computed using ADF in E-Views software.

**Table A2**  
**ADA unit root test**

<b>Null Hypothesis: D(DADA) has a unit root</b>		
<b>Exogenous: Constant</b>		
<b>Lag Length: 19 (Automatic - based on SIC, maxlag=23)</b>	<b>t-Statistic</b>	<b>Prob.*</b>
Augmented Dickey-Fuller test statistic	-17.99250	0.000000
Test critical values: 1% level	-3.434294	
5% level	-2.863169	
10% level	-2.567685	

**Note** : Table reveals that the result of the Cardano (ADA) test on Bitcoin. The Bitcoin is found to be stationary at the normal level at a 5% significance level and the ADA is found to be stationary at 1st Difference so the probability value of the Cardano (ADA) is not less than 0.05 in the normal level therefore it is found to be stationary at 1st Difference.

*Source*: Self Computed using ADF in E-Views software.

**Table A3**  
**Binance Unit Root Test**

<b>Null Hypothesis: D(DBINANCE) has a unit root</b>		
<b>Exogenous: Constant</b>		
<b>Lag Length: 23 (Automatic - based on SIC, maxlag=23)</b>	<b>t-Statistic</b>	<b>Prob.*</b>
Augmented Dickey-Fuller test statistic	-5.623394	0.0000
Test critical values: 1% level	-3.434304	
5% level	-2.863173	
10% level	-2.567688	

**Note** : Table depicts that the result of the Binance test on Bitcoin. The Bitcoin is found to be stationary at the normal level at a 5% significance level. The Binance is found to be stationary at 1st Difference. Since the probability value of the Binance is not less than 0.05 in the normal level therefore it is found to be stationary at 1st Difference.

*Source*: Self Computed using ADF in E-Views software.

**Table A4**  
**Ethereum Unit Root Test**

<b>Null Hypothesis: D(ETHEREUM) has a unit root</b>		
<b>Exogenous: Constant</b>		
<b>Lag Length: 19 (Automatic - based on SIC, maxlag=23)</b>	<b>t-Statistic</b>	<b>Prob.*</b>
Augmented Dickey-Fuller test statistic	-20.20768	0.0000
Test critical values: 1% level	-3.434294	
5% level	-2.863169	
10% level	-2.567685	

**Note** : Table shows the result of the Ethereum test on Bitcoin. The Bitcoin is found to be stationary at the normal level at a 5% significance level. The Ethereum is found to be stationary at 1st Difference. Since the probability value of the Ethereum is not less than 0.05 in the normal level therefore it is found to be stationary at 1st Difference.

*Source*: Self Computed using ADF in E-Views software.

**Table AV**  
**Lite coin unit root test**

<b>Null Hypothesis: LITECOIN has a unit root</b>		
<b>Exogenous: Constant</b>		
<b>Lag Length: 1 (Automatic - based on SIC, maxlag=23)</b>	<b>t-Statistic</b>	<b>Prob.*</b>
Augmented Dickey-Fuller test statistic	-3.300331	0.0151
Test critical values: 1% level	-3.434242	
5% level	-2.863146	
10% level	-2.567673	

**Note :** Table shows the result of the Litecoin test on Bitcoin. The Bitcoin is found to be stationary at the normal level at a 5% significance level. The Litecoin is found to be stationary at the normal level so the probability value of Litecoin is less than 0.05 therefore it found stationalized at a normal level.

*Source:* Self Computed using ADF in E-Views software.

**Table AVI**  
**Steller Unit Root Test**

<b>Null Hypothesis: D(DSTELLER) has a unit root</b>		
<b>Exogenous: Constant</b>		
<b>Lag Length: 23 (Automatic - based on SIC, maxlag=23)</b>	<b>t-Statistic</b>	<b>Prob.*</b>
Augmented Dickey-Fuller test statistic	-14.55799	0.0000
Test critical values: 1% level	-3.434304	
5% level	-2.863173	
10% level	-2.567688	

**Note :** Table indicates that the result of the Steller test on Bitcoin. The Bitcoin is found to be stationary at the normal level at a 5% significance level. Since the probability value of the Steller is not less than 0.05 in normal level therefore it is found to be stationary at 1st Difference.

*Source:* Self Computed using ADF in E-Views software.

**Table AVII**  
**XRP Unit Root Test**

<b>Null Hypothesis: XRP has a unit root</b>		
<b>Exogenous: Constant</b>		
<b>Lag Length: 1 (Automatic - based on SIC, maxlag=23)</b>	<b>t-Statistic</b>	<b>Prob.*</b>
Augmented Dickey-Fuller test statistic	-3.521446	0.0076
Test critical values: 1% level	-3.434242	
5% level	-2.863146	
10% level	-2.567673	

**Note :** Table depicts that the result of the Ripple (XRP) test on Bitcoin. The Bitcoin is found to be stationary at the normal level at a 5% significance level. The Ripple is found to be stationary at the Normal level. Since the probability value of XRP is less than 0.05 therefore it got stationalized at a normal level.

*Source:* Self Computed using ADF in E-Views software.