Fundamental Analysis of Cryptocurrency Price Fluctuations: A Socio-Economic, Political and Psychological Approach

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Abstract

Cryptocurrency price fluctuations are very complicated to solve. Some practitioners of cryptocurrency traders suspect that socio-political variables also often become the determinants of the price of this digital asset commodity. However, these assumptions are not certain. However, for traders this is actually an assumption to decide to invest in cryptocurrency assets. In other words, the subjective assumptions of traders have become a reference for dealing with price uncertainty in the future, while on the other hand cryptocurrency asset investment is a type of investment that is high risk and high return, with a very extreme level of price volatility. This condition confirms that forecasting future prices is not an easy matter. Requires precise and scientific fundamental analysis. The novelty of this research is to present in detail the fundamental analysis, what factors determine the fluctuations in the price of cryptocurrency assets. Where the results of this study aim to be an investment reference for market participants, including investors, especially for novice investors in investing, so as to minimize risk and get maximum profits. The method used in this study is descriptive analysis, with the N-Vivo tools approach as an analytical tool. The data used is sourced from https://tradingeconomics.com/ which presents cryptocurrency price fluctuations and https://tradingeconomics.com/ which displays economic fundamental indicators. The results of this study found that the economic factors that determine cryptocurrency price fluctuations are determined by internal and external factors of an asset. Internal factors include the amount of supply of crypto coins and tokens, the amount of market capitalization and the utility aspect of the blockchain technology owned. Meanwhile, viewed from external factors, namely influenced by global macroeconomy conditions such as inflation trends, interest rates, unemployment rates, growth, investment, trade balance, debt, and economic recession, including fiscal and monetary policies. Judging from the social variables, the popularity factor (hype), the strength of the community, the role of important figure influencers on a coin and cryptocurrency token are variables that affect price fluctuations. Meanwhile, from a political approach, it is influenced by regulatory factors and deregulation of the legalization and prohibition of cryptocurrency adoption as well as global political instability factors that also affect cryptocurrency assets, for example the phenomenon of war, political sanctions, economic embargoes. Finally, when viewed from a psychological approach, among others, caused by factors of fear and pesimism and the level of public trust and optimism in the market becomes a psychological sentiment for the level of price fluctuations. Thus, it can be concluded that the dominance of economic factors on cryptocurrency price fluctuations is still very dominant in determining market prices, but these economic factors do not stand alone, but there are social, political and psychological factors that influence the cryptocurrency market price. The implication of this research is that market participants should be really careful and conduct in-depth research before making investment decisions, not just fear of missing out (FOMO) buying cryptocurrency assets.

Keywords
Cryptocurrency, Price, Socio-Economic, Political, Psychological

1. Introduction
In recent years, cryptocurrency investment has become very popular in various countries. Where this phenomenon occurs globally, which helps boost consumer understanding regarding cryptocurrency literacy (Chen *et al.*, 2022). Public interest is quite high for this type of investment, but on the other hand there are still many investors who are against and afraid to invest, considering that cryptocurrency is considered an asset full of uncertainty and high risk and price manipulation (Dhawan and Putnins, 2020; Bouri, et.al, 2021). In addition, cryptocurrency price fluctuations are very complicated to solve, sometimes in line with the principles of the law of demand, but on the other hand sometimes it is against the law of demand itself.

Some cryptocurrency traders, suspect that socio-geopolitical variables also often become the determinants of the price of this digital asset commodity (Colon *et al.*, 2021; Caldara and Iacoviello, 2022). However, these assumptions are not certain. However, for traders this is actually an assumption to decide to invest in cryptocurrency assets. In other words, the subjective assumptions of traders have become a reference for dealing with price uncertainty in the future, while on the other hand, cryptocurrency asset investment is a type of investment that is high risk and high return, with a very extreme level of price volatility (Elsayed, et.al, 2022).

This condition confirms that forecasting future prices is not an easy matter. Requires precise and scientific fundamental analysis. The novelty of this research is to present in detail the fundamental analysis, what factors determine the price fluctuations of cryptocurrency assets. Where the results of this study aim to be an investment reference for market participants and the government, including investors, especially for novice investors in investing, so as to minimize risk and get maximum profits.

2. Literature Review

The emergence of cryptocurrencies is a form of new monetarist model, which also influences global financial markets (Benigno, et.al, 2022). The consequences of the birth of cryptocurrencies have influenced the course of the global economy in recent years and in the future. The adoption of cryptocurrencies will become a new raw model for the future financial industry, considering that cryptocurrencies are loaded with the utility of blockchain technology, which will become a faster, decentralized and effective transformation of transaction systems.

Cryptocurrencies that are full of technological innovations, in the future, will not only provide direct benefits to the financial industry, but will also benefit the government. This is in line with consumer assumptions regarding cryptocurrency, which is considered digital gold to accumulate wealth, given the high return of capital from this asset. (Shang, et.al, 2022). In addition to having large profits, this cryptocurrency asset also carries a high risk, given the high level of volatility and exacerbated by regulatory uncertainty regarding this cryptocurrency investment (Aysan *et al.*, 2019). There are countries that prohibit cryptocurrency trading activities, but on the other hand there are countries that actually legalize cryptocurrency as legal tender, such as El Salvador. Thus, this uncertainty sends a message to investors to remain cautious in investing in this sector. For this reason, every investor is required to have an in-depth understanding of cryptocurrency assets, before carrying out the entry process in the cryptocurrency market. To enter this cryptocurrency market requires knowledge of fundamental analysis, related to macroeconomics. Macroeconomic conditions affect cryptocurrency price fluctuations (Naeem and Karim, 2021). However, it is different from the view Svogun and Bazán-Palomino (2022) that the price of cryptocurrencies is precisely determined by an understanding of price technical analysis, compared to fundamental analysis. Understanding the various rules and patterns of candlestick movement is much more useful in analyzing cryptocurrency price movements. For this reason, an understanding of technical analysis is very necessary in the cryptocurrency trading process, especially for short term conditions. However, in the long term technical analysis is also needed, to invest in the long term.

Cryptocurrency prices can be influenced by the efforts made by influencers with a pump signal mechanism, making efforts in such a way, promoting certain cryptocurrency assets, so as to send a signal to potential investors that the asset is profitable to buy. Efforts to pump signals that are viral on social media, can attract the attention of potential investors so that they can massively influence these potential investors (Dhawan and Putnins, 2020). This pump signal mechanism is very massively carried out on various social media platforms. This scheme is categorized as an effort to invite more buyers to buy certain cryptocurrency assets. This practice is manipulative in nature, so that potential investors who do not do research before buying cryptocurrency assets may be consumed by the pump signal propaganda carried out by influencers. Where in these conditions, there is asymmetric information used by influencers, which can lead to price asymmetry. Thus, some influencers try to play the perception of the cryptocurrency market with pump signal efforts. This is in line with the findings Hamurcu (2022) that Elon Musk's positive tweet regarding the Dogecoin token was able to boost the price of Dogecoin. This confirms that the effect of personal postings made by influencers on social media is able to influence the Dogecoin market, so that the interest of buyers to buy the token is higher. In addition, community strength is also a fairly strong variable in influencing cryptocurrency prices. It was confirmed by Yeong *et al.*, (2022) in his finding that community strength has a significant effect on cryptocurrency prices. The greater the community strength of a cryptocurrency token or coin, the greater its role in influencing cryptocurrency prices. The community indirectly acts as a social influencer on the cryptocurrency market, so its role is very strategic in the market.

Khalfaoui, et.al, (2022) revealed that political conditions also affect the price of cryptocurrencies, for example the impact of the war in Russia and Ukraine also affects the price of cryptocurrencies, especially in the short term. In the midst of war conditions, resulting in a negative influence on cryptocurrency prices. The impact caused the cryptocurrency market to be in a bearish market condition. The war has triggered economic and political instability, the direct impact of the war is that it has hampered the supply of energy and grain from Russia and Ukraine, resulting in shortages in global markets. Finally, these conditions trigger inflation to recession in many countries, especially in America and Europe, for example in the United States and Britain. It is known that these countries are the center of cryptocurrency market players, where when the economies of these countries are disrupted, global market conditions are also affected.

Regulatory factors are very influential on the cryptocurrency market. According to Borri and Shakhnov (2020) that regulatory support for the cryptocurrency market, not only has a positive impact in South Korea, but also affects the global cryptocurrency market price. This confirms how important regulatory support is for the cryptocurrency market. However, this is different from the findings Chen and Liu, (2022) who did not find a correlation between the regulation prohibiting cryptocurrency trading in China with the cryptocurrency market in that country. Investors remain enthusiastic about buying cryptocurrency assets, such as Bitcoin and Tether as a means of storing value and investing in the future. This confirms that regulations that prohibit cryptocurrency trading are not optimal in preventing the adoption of cryptocurrencies as an investment medium for investors.

Martin, et.al, (2022) emphasized that cryptocurrency is a symbol of psychological freedom, in the world of investment. Freedom of asset ownership, in response to the advancement of the blockchain-based financial industry. Ownership of cryptocurrency assets is not only a message of freedom, but also has a positive psychological effect and is able to reduce personality anger. The decision to invest in cryptocurrency assets is influenced by psychological sentiment factors, especially from the use of social media. Opinions spread by influencers have a very strong influence on individual investment decisions, compared to macroeconomic factors themselves (Naeem, et.al, 2021). Public psychological sentiment towards the cryptocurrency market can influence investment decisions, for example paying attention to the fear greed index to read market psychology. The index represents the general psychological condition of the market. The higher the fear greed index, the higher the level of investor confidence in the cryptocurrency market. If the bear market is getting worse, then the indexation number will also be lower. On the other hand, in a bull market, the fear greed index number is higher, so the market psychology is also getting better for the cryptocurrency market.

3. Methods

The method used in this study is descriptive analysis, with the N-Vivo tools approach as an analytical tool. The data used is sourced from https://coinmarketcap.com/ which presents cryptocurrency price fluctuations. The cryptocurrency data in question is Bitcoin data because Bitcoin represents the overall cryptocurrency price movement, either in the form of coins or tokens. In addition, Bitcoin has the largest market cap in the cryptocurrency market, so it is assumed that the Bitcoin price is able to be a barometer of the overall cryptocurrency market price movement. Meanwhile, the data on fundamental economic indicators used are macroeconomic indicators for the USA, because the assumption is that the country is the mecca of the global economy. The macroeconomic data is obtained from https://tradingeconomics.com/ which displays actual macroeconomic developments in the last one year, namely 2021-2022.

4. Results and Discussion

Bitcoin was first introduced through a whitepaper in 2008 by Satoshi Nakamoto, an anonymous name that has been known until now. In January 2009, Bitcoin was first launched and mined at a price of 0 USD. After that, Bitcoin was first commercialized by Laszlo Hanyecz in 2010 by exchanging 10,000 Bitcoins for a pizza. However, no one expected Bitcoin that this decentralized cryptocurrency asset, evolved into a store of value and even became digital gold at a very fantastic price. In January 2014, the price of Bitcoin has touched the level of 865 USD and continues to climb up to penetrate 67,749 USD in 2021, which is also an (all time high) or the highest record of the Bitcoin price. (Coinmarketcap, 2022) (Figure 1-6).

Source: Coinmarketcap (2022)

Figure 1. Bitcoin Price 2014-2022 (USD)

Viewed from an economic perspective, internal and external factors of a cryptocurrency asset are variables that are quite influential on price movements. First, judging from the internal factors of the cryptocurrency asset itself, the most basic thing is related to supply. The amount of Bitcoin supply, which is only 21 million, continues to decrease from year to year. In 2022, the remaining supply of Bitcoin is 2 million coins. This is what makes the price of Bitcoin continue to increase, given the increasingly limited supply.

Source: Coinmarketcap (2022)

Figure 2. Total Marketcap Bitcoin 2014-2022 (USD)

Second, another factor is the amount of market capitalization. Bitcoin market capitalization consistently increases with an uptrend pattern from time to time. In 2014 the amount was only 1.12 million USD, but entering 2022 the number has crossed the 368 billion USD figure until October 2022. This confirms that Bitcoin has evolved into a store of value in the financial industry, which is not only bought by individuals , but global financial institutions have also invested in this digital asset (Coinmarketcap, 2022). Third, namely the utility aspect of the blockchain technology owned. Bitcoin is a decentralized cryptocurrency with utility as a store of value for the global community. With this utility advantage, investors flock to buy this cryptocurrency asset.

Referring to the results of the data run on the Vivo N, it shows the following results; First, when viewed from an economic perspective, the inflation variable has the biggest share in determining cryptocurrency prices. This is in line with the findings Conlon, et.al, (2021) that there has been a decline in cryptocurrency prices in line with rising inflation amid the COVID-19 pandemic, especially Bitcoin and Ethereum. Second, the unemployment variable is the second largest variable after inflation, which has an influence on cryptocurrency prices. Third, the interest rate variable also has a hand in cryptocurrency price movements. Finally, the Consumer Price Index (CPI) can also be a benchmark variable in cryptocurrency price changes. While the export and investment variables do not show a large enough influence on cryptocurrency prices. In essence, all of these macroeconomic variables are important variables that affect cryptocurrency prices. For this reason, investors must understand the macroeconomic situation that occurs so that their investment literacy is better and can get maximum profits in the process of investing and trading cryptocurrencies.

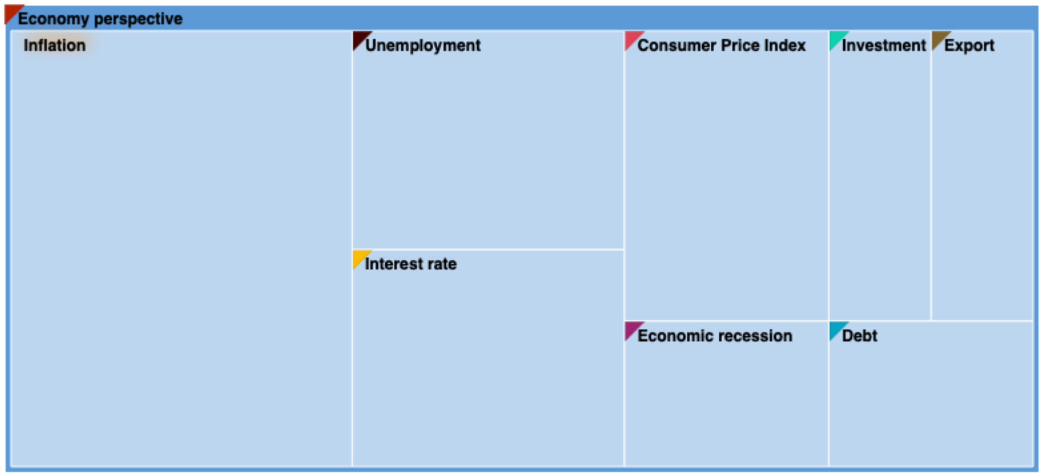

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Figure 3. Economic variables that affect cryptocurrency prices

Judging from the social variables, there are several factors that are quite significant in influencing the price of cryptocurrency assets. First, the role of influencers as carriers of positive messages for a coin and cryptocurrency token is a variable that has a very significant effect on price fluctuations.

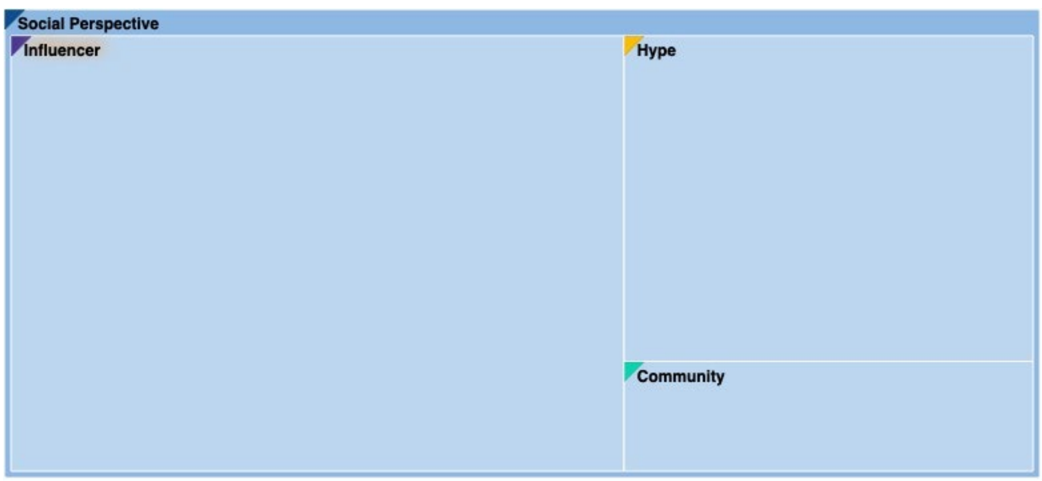

Figure 4. Social variables that affect cryptocurrency prices

Source:Processed from attachments

According to the findings of this research, it shows that influencers play the biggest role in boosting cryptocurrency prices. Influencers are able to be an attraction for a certain cryptocurrency asset, even influencers have a role in making that asset viral. The role taken by influencers serves as a pump signal or pump mechanism, which aims to attract as many potential investors as possible to invest. Second, the popularity (hype) factor has the second biggest influence, in influencing cryptocurrency prices. The more hype a cryptocurrency asset has, the greater the opportunity to grab the attention and interest of investors to buy the asset. The hype factor is an important factor in the cryptocurrency market. Third, the community power factor has an important role in influencing the price of a cryptocurrency asset. The strength of a strong community is able to become its own networking and market in the cryptocurrency market.Perspektif politik

From a political perspective, there are two major currents that can influence prices. First, it is influenced by regulatory factors and deregulation of the legalization and prohibition of cryptocurrency adoption. The legalization of cryptocurrencies is still debatable in many countries. There are many countries that prohibit cryptocurrency market activity. But at the same time, there are also countries that have legalized cryptocurrencies as tradable commodities. This can have an impact on financial inclusion and the investment climate in the financial industry sector. Second, geopolitical factors and global political instability also affect cryptocurrency assets, for example the phenomenon of political sanctions, economic embargoes and wars. Geopolitical factors can trigger market uncertainty, so investors should be able to read the developing geopolitical conditions.

Figure 5. Political variables that affect cryptocurrency prices
Source:Processed from attachments

When viewed from a psychological perspective, among others, caused by factors of fear and pessimistic signals as well as the level of optimism and public trust in the market becomes a psychological sentiment for the level of price fluctuations. Fear and pessimism are psychological factors that are inherent in humans, so every human being has fear and pessimism. For this reason, if it is more dominant for investors, it will affect their investment decisions so that prices may depreciate and lead to a bear market. Vice versa, trust and optimism can trigger investor psychology to buy cryptocurrency assets. Optimism over the prospects and potential of certain assets can boost the level of demand for these assets. This has a very close relationship with the role of influencers and social media in sending positive messages about certain assets.

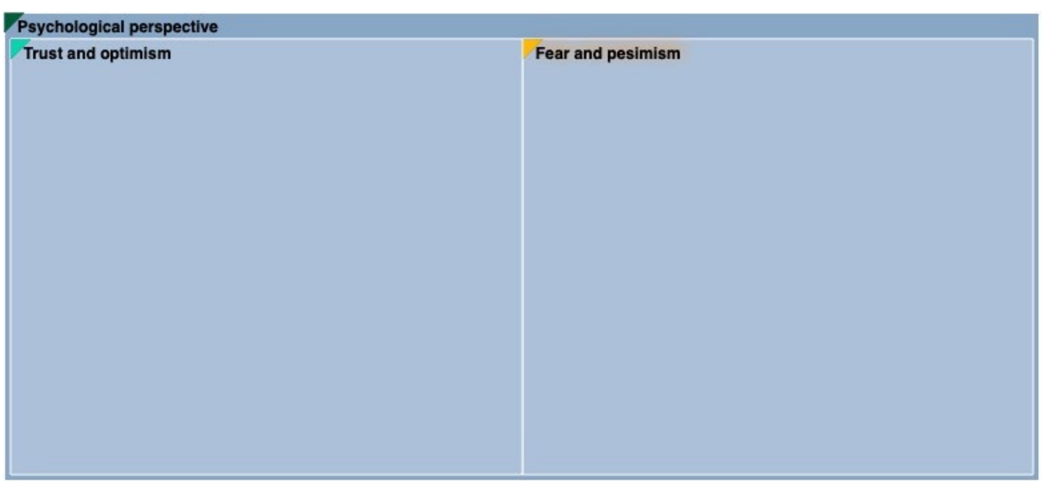

Figure 6. Psychological variables that affect cryptocurrency prices
Source:Processed from attachments

5. Conclusion

The results of this study found that the economic factors that determine cryptocurrency price fluctuations are determined by internal and external factors of an asset. Internal factors include the amount of supply of crypto coins and tokens, the amount of market capitalization and the utility aspect of the blockchain technology owned. Meanwhile, viewed from external factors, namely influenced by global macroeconomy conditions such as inflation trends, interest rates, unemployment rates, growth, investment, trade balance, debt, and economic recession, including fiscal and monetary policies. Judging from the social variables, the popularity factor (hype), the strength of the community, the role of important figure influencers on a coin and cryptocurrency token are variables that affect price fluctuations. Meanwhile, from a political perspective, it is influenced by regulatory factors and deregulation of the legalization and prohibition of cryptocurrency adoption as well as global political instability factors that also affect cryptocurrency assets, for example the phenomenon of war, political sanctions, economic embargoes. Finally, if viewed from a psychological perspective, among others caused by factors of fear and pessimism as well as the level of public trust and optimism towards the market become psychological sentiments for the level of price fluctuations. Thus, it can be concluded that the dominance of economic factors on cryptocurrency price fluctuations is still very dominant in determining market prices, but these economic factors do not stand alone, but there are social, political and psychological factors that influence the cryptocurrency market price.

The implication of this research is that market participants should be really careful and conduct in-depth research before making investment decisions, not in a state of fear of missing out (FOMO) buying cryptocurrency assets. Meanwhile, the government should have a good understanding of macroeconomic conditions and socio-political and psychological conditions, in making regulations and deregulations of the cryptocurrency market, in order to be able to generate greater revenue for the state.

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