

# Cryptocurrency: A Means for Economic Revolution

Rudri Mehta

*Student, Symbiosis International University, Pune, India*

**Abstract:** Globalisation has led to an interconnected network of trade but has also resulted in an interdependent set of economies being affected by minute currency changes. Fiat currencies or state institution controlled national money are being called into question because of the power and risk these institutions hold. The idea of Bitcoin, which started a wave of further Cryptocurrencies being developed, was born from the need for a trust-less, low cost and extensive medium of exchange that could fulfil the basic needs of consumers and expectations from a currency.

This paper outlines and analyses whether cryptocurrencies can replace controlled national currencies in specific markets and sectors of the international economy, in particular oil, weak and unstable economies and simple/commodity futures transactions. With respect to the oil market, this paper outlines the flaw of its existing state and how cryptocurrency can, in the future, replace the current fiat currencies (in specific the ‘petrodollar’) in how oil is traded. In respect to unstable countries, how cryptocurrency can – and has in the past – aided consumers in these economies where currencies are volatile and controlled by distrusted governments. Using secondary sources, information and data will be analysed to arrive at systems and structures that can be implemented by organisations and governments to eradicate certain flaws and problems in markets and nations and how international organisations as well as individual consumers can apply the theory and systems to improve efficiency, income and limit wastage using cryptocurrencies. This paper is a study of how cryptocurrencies can bring about an economic revolution in the way people purchase, trade and work in international economies.

**Keywords:** Cryptocurrency, Oil market, Globalisation, Decentralization.

## 1. Introduction

Capitalism is the fundamental system that most countries run on and lean on for financial and economic liberty of its citizens. The study of capitalistic markets can help reach one conclusion: every few years or decades there is a flaw in the current market situation seen and there is a consequential shift in such a scenario, leading to a collapse and a newer system built that addresses that shortcoming. This is the cycle of capitalism – one example is the aftermath of the 1970s depression: a shift was observed in the American economy from a controlled capitalism of the war era to a neoliberal form of capitalism that widened the income gap and promoted cut throat competition. This system was again called in to question by the 2008 depression, caused by the large amounts of money and power held by centralised institutions and private, wealthy banks and

financial companies.

The world economy has never had a recession and successive depression as bad as the 2008 economic crisis that resulted in a 2-trillion meltdown of the global economy. There were two fundamental problems that were made clear as a result of the crisis—one was the disadvantage of having financial institutions such as banks control such a large amount of the economy’s monetary system and the other was the fundamental shortcoming of having one currency control most of the global financial system. When the crisis happened, it was the boom resulting from a culmination of years of policy decisions and different amendments to laws to make sure the investors, bankers and politicians involved at the head of the crisis benefited the most they could. The 2008 depression resulted in one clear idea being outlined, which is that the American dollar is the closest the world economy can get to an international currency and its fluctuation as well as the government’s actions consequently affects all economies. Most of the international financial and economic systems are either directly or indirectly influenced by the dollar’s value and the actions and policy decisions of the US government. As a result of economies undermining the dollar and blaming the American government and financial systems there was a loss of faith in the same, leading to the creation of the Bitcoin in 2009. In terms of cryptocurrencies and the many emerging technologies related to it, this paper intends to fill the gap in knowledge in how cryptocurrencies can be used in a variety of markets, situations and economies to solve fundamental economic and financial problems, for example the idea of asset-backed cryptocurrencies and usage of cryptocurrencies as a method of stabilization in countries with worsening economic and socio-political scenarios. The oil market will be studied in detail, along with cryptocurrencies and the underlying technology that enables the virtual currency to be used in many different market scenarios. The body of the paper will offer realistic, systemised and structured solutions to the problems of international markets and unstable countries and economies that can benefit majorly from usage and adoption of cryptocurrencies. It offers solutions to two main problems: (1) how cryptocurrencies can replace fiat currencies, specifically the dollar, in oil trade to combat sanctions and other inefficiencies in the oil market, and (2) how virtual currencies can eliminate problems of inflation and instability in economies.

## 2. Literature Review

### A. Cryptocurrency

Cryptocurrency refers to a digital currency in which encryption techniques are used to regulate the generation of units of currency, and verify the transfer of funds, operating independently of a central bank or any other over viewing financial body. Cryptocurrency was an idea born out of the hardships of fiat currencies, more specifically the dollar, with Bitcoin being the first ever paperless, trust-less money system created by Satoshi Nakamoto – “What is needed is an electronic payment system based on cryptographic proof instead of trust, allowing any two willing parties to transact directly with each other without the need for a trusted third party.” (Nakamoto, 2009).

The concept of Bitcoin and by and large all Cryptocurrencies is based on creating a system of payment that can be used across industries and markets as well as a method of replacement of fiat currencies. Bitcoin, Ethereum, ripple and most other major market cap Cryptocurrencies are based on blockchain technology, which is a chain of signatures of the transaction history of Bitcoin that builds in volume as more transactions take place; each blockchain file has a private and public key access to it, which makes the software harder to hack or damage (Turpin, 2014). The blockchain is the core of the cryptocurrency system as it is transparent and clear since you can see every transaction in the public records, which is a full proof and safe way to keep cryptocurrency records. There are a finite number of most Cryptocurrencies, and the limited number prevents artificial inflation or fluctuation. The process of mining uses large amounts of electricity and special, well-equipped CPUs that aid in the solving of complex mathematical equations, which generates bitcoins (Hileman and Rauchs, 2017).

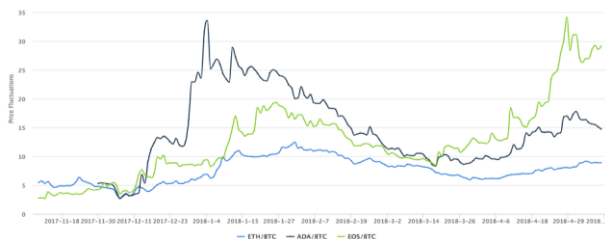
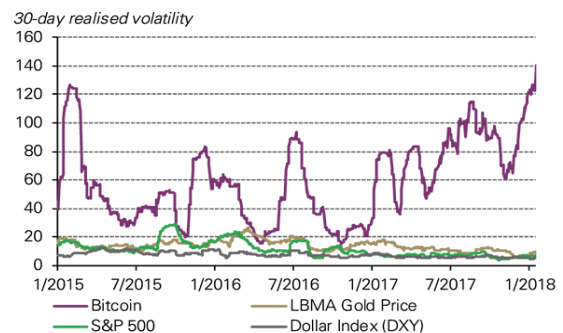


Fig. 1. Cryptocurrency Price Fluctuations  
 (Source: Turtle BC, Market Analysis)

Bitcoin accounts for up to 86% of the total market value of all Cryptocurrencies. Other major Cryptocurrencies are varied in structure and processes yet have around the same uses. All have different volatilities and fluctuations in value due to market and value changes. Fig. 1, shows the varied volatilities of different Cryptocurrencies like Bitcoin and Ethereum that all fluctuate in various speeds and amounts due to changing market conditions. Ripple, for example, is a peer-to-peer cashless system of exchange for all Cryptocurrencies that uses gateway to make transactions and has a cryptocurrency of its own that is

based on blockchain and is used more by banks and financial institutions, therefore known as the banker’s coin – it has major scope in the financial industry. Another major currency lauded and used widely by the crypto community is Ethereum, or ether, that operates on a separate blockchain design. It is less volatile, more multi-functional and connected to the trade of precious metals (Liu, 2018).

Cryptocurrency, as complex a concept it is, is widely used and revered in financial markets consisting of both experienced investors and citizens of countries that want a way out of spending on fiat currencies. Many global consumers see Cryptocurrencies as a hedge against inflation since the number of Cryptocurrencies of each kind is mathematically limited in circulation. The Bitcoin ‘community’ monitors and theoretically tracks the various transactions on the Bitcoin blockchain, a system known as peer-to-peer and fully trustworthy. Since a finite number of bitcoins can exist, it is hard to manipulate or otherwise fraudulently use bitcoins (J.K. Darlington, 2014).



\*As of 19 January 2018  
 Fig. 2. 30-day comparative realised volatility  
 (Source: Bloomberg, World Gold Council)

When it comes to the question of the volatility of Cryptocurrencies, there is ample evidence to support the fact that they fluctuate more frequently and more violently than other traditional assets and fiat currencies in global markets. Bitcoin in specific is very sensitive to price changes as its price is connected to demand for the currency - which is also determined by aspects such as weekly average Google searches of Bitcoin- as well as the total trading of Bitcoin done in a specific period of time (B. Turpin, 2014). This sensitivity in prices leads to a currency vulnerable to changes but also one that is flexible and easily adaptable to existing global systems and structures.

### B. Cryptocurrency – poverty and instability

There are various fundamental factors that are wrong with existing financial systems around the globe that have been operating the same way for decades on an end. With changing technology and newer innovations these factors have emerged as problems that need to be solved, especially in times of political and economic turmoil. Cryptocurrency was created with the specific problem of no trust-less transaction system

existing in mind and a solution required for it (Nakamoto, 2009). To make financial transactions implies a part of the user's income being taken as a transactional fee – credit card companies take cuts from transactions to the tune of around \$48 billion a year. Companies like PayPal dominate the financial sector with the innovation in technology and transactional safety. The company reported a figure of \$4.96 billion revenue in the 4<sup>th</sup> quarter of 2019 (PayPal, 2019) which in itself is an indicator of the rapidly changing scenario of payments and the further need for innovative financial instruments such as cryptocurrency.

There are various difficulties Cryptocurrencies face with respect to becoming a viable currency option, such as technical issues in the blockchain technology, acceptability and regulatory problems, and as such will not be a common currency in the near future. However, Cryptocurrencies with wide usage, popularity, strong structures and transparency like Ripple, Ethereum and Bitcoin are all viable financial tools that can be used by countries to pull their populations out of poverty and by citizens in politically, economically and geographically unstable countries.

Economists such as Milton Friedman and various prominent bankers across the finance industry, such as William Blair, have continually criticised the fundamentals of the Federal Reserve and its excessive control on the central currency, the American dollar, and have supported the existence of the trust-less, central method of exchange that is cryptocurrency. It is not only a cheap payment system but also means a way for families in poverty to own property, which is the biggest factor of creation of wealth, and secure their futures without dependence on the government and a politically influenced financial system. Another benefit of Cryptocurrencies, in specific Bitcoin, is that they are largely immune to hyperinflation – paper money is controlled in supply by governments which give institutions the free reign to increase the physical supply of money during times of economic recession (Hanke and Kwok, 2009).

Many countries have often been the bearers of backlash due to volatile currencies that fluctuate for many reasons and leave their citizens at an uncertain state. For example, Zimbabwe's skyrocketing hyperinflation hurt the country's financial, economic and international position, leaving the citizens at a loss of the value of the currencies they held. Similarly, Brazil's rapidly fluctuating real has resulted in the citizens of the country investing in cryptocurrency, specifically bitcoin, which acts as an effective hedge against rapidly fluctuating fiat currencies. Similar to Brazil, there has been a spike in interest towards cryptocurrency in countries in the same state, such as Argentina, Venezuela, and Nicaragua (Southurst, 2014). Bitcoin, Ethereum, Ripple and many other popular cryptocurrencies can pull citizens out of a disrupted financial state they may be in due to turbulent governments, shaky foreign policies and rampant corruption. Trading and investing in cryptocurrencies can hedge people from the damage volatile currencies can do, open up international markets accessible

through virtual currencies and allow for safe transactions on a large scale (J.K. Darlington, 2014).

### C. Oil and the Dollar

The international oil market is a complex structure consisting of the buyers, producers and traders of one of the most valuable commodities of the modern day global market, crude oil. This market is dictated by forces of demand and supply, the speculations of traders, actions of the OPEC and the fluctuations of the U.S. dollar, the currency it is priced in. In short, exogenous - external political, geographic and economic affects in OPEC countries - and endogenous - internal investment and demand-supply shocks and changes in the oil market - factors affect the oil market (A Structural Model of the World Oil Market, Oxford institute for Energy Studies, 2017).

The wide usage and supply for oil is the fundamental reason for its status as an energy source. By 2006, the oil market made up for 13% of the total global commodity trade; an estimated \$4 Billion worth of oil is traded per day according to a 2008 United Nations report (J.L. Smith, 2009). The many grades of crude oil are a part of the complex marketplace that consists of almost 50 oil rich countries as producers of oil and major economies such as Japan, China and the U.S. being large consumers. The complexity, uncertainty and reach of the oil market are the reasons for its effect on most economies and stock exchanges globally. Events such as the 1973 OPEC oil price shock have proved that there is a large political aspect to the vulnerable and fragile oil market. The 1973 crisis resulted in a major fluctuation seen in stock exchanges, national exchange rates and growth rates of economies (Dees, et al., 2004). The reason was President Richard Nixon's action to remove the dollar from the gold standard in 1971 and its various repercussions on the global economy.

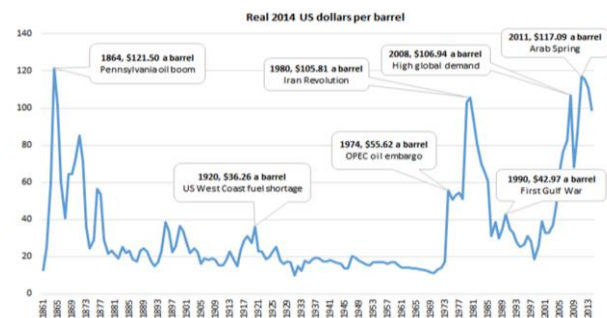


Fig. 3. Historical prices of Crude oil and factors responsible for fluctuation (1861-2014)

(Source: BP Statistical Review of World Energy 2015)

There are various factors that adversely affect the prices of oil as outlined – this includes the presence, actions and monopolising of OPEC, speculation and the value of the dollar that rapidly fluctuates and inadvertently drives similar behaviour in oil prices. The prices, peaks and drops shown above are ones due to global events that have either disturbed the demand or supply of oil, but also due to speculation on a fall in value before/in anticipation of fluctuations in prices.



Speculation in oil is the economic trading of oil in the futures market; that is, for future rather than current consumption and usually barring actual physical ownership of oil barrels (Fattouh, et al., 2012). Some literature supports the traditional viewpoint that speculation in oil markets, especially after increased financialization and deregulation of markets, has caused unnecessary inflation of the essential commodity's price and that major institutions use these prices to hedge against investment risks and complex financial instruments that effect everyday oil prices. The Dodd-Frank Wall Street reform was introduced on the basis of increased speculation driving prices and creating a bubble like expansion in the 2008 crisis, demanding increased transparency in hedging and trading to prevent oil price run ups (Sornette, et al., 2009). Yet other literature argues that speculation in oil trade and a highly liquid market reduces the risk of hedging, allows for integrated financial markets and greater trade and reduced costs across geographically distanced oil markets (B Fattouh, 2008). Speculation is therefore a complex factor in oil markets – on one hand it helps reflect the state of the global economy and accordingly adjusts prices and demand but also artificially drives up oil prices and leaves the commodity open for speculative manipulation, adversely affecting countries dependant on oil trade for essential revenue.

Another big factor of the oil market, specifically with the dollar, is the use of economic sanctions by the American Government against other countries to achieve political and national security objectives that often compel countries to look for alternates to the dollar. Oil sanctions in specific have been favoured by U.S. administrators for its enforceability and for the fact that the dollar is the main reserve currency used by economies (Konowicz, 2018). The same paper examines different reasons for the use of sanctions, such as state sponsored terrorism in countries such as Sudan, and how the price of oil is inadvertently affected due to the economic tool, which restricts exports of a country and gives a large margin of control to the American government and the dollar.

The dollar is a large part of the oil markets and an essential fulcrum of international economics. The importance of the currency stemmed after World War 2 and has continued to play its role as a quintessential currency. Any international currency plays certain roles in both the private and public sectors of economies: presented schematically below, the role of the dollar as an international currency is reiterated as its importance as a method of government intervention, as a peg for other currencies, as a medium of exchange or a 'vehicle', as a store of value in both sectors (Krugman 1984). The dollar acts as a major instrument of international trade, which in itself gives it the power to be a reserve, a peg and a major currency in terms of financial tools and transactions in the international economy. These functions of the dollar made it the fulcrum in historic depressions, includes the 1920s crash and more majorly the two trillion 'meltdown' of global economies in 2008. The major drivers of this large shift and the collapse of the global economy

were unrestrained deregulation that boosted private bank profits, increased debt and leverage ratios exponentially and allowed banks to create risky financial tools such as derivatives and credit default swaps (G. Rajan, 2006).

Large government bailouts by the U.S. were observed and many countries struggled with stabilising their economies, all largely influenced by the decisions of the American government and institutions as well as the dollar itself. Reserves were drained trying to stabilise national currencies and the idea of capitalism was called into question (Kotz, 2009). During 2008, oil prices had reached an all-time high of around \$149 a barrel compared to the stable \$50-60s it was in. This served as another warning sign for economies around the world – the U.S. held too much of the world financial sector in its hand due to the influence of its trade, currency and central bank, the Federal Reserve (which had largely partaken in and had not stopped the crash of 2008). The 2008 crash changed the outlook and fundamental assumptions of many economies around the world as major nations realised the need for a currency that could replace the shortcomings of the dollar and its many fluctuations tied closely to what the American economy and government did or decided on matters. Out of the need for a trustworthy currency that is publically transparent came the Bitcoin and many major Cryptocurrencies in the years after.

### 3. Body

#### A. *Cryptocurrency and Oil Markets*

The oil market is considered by most economists to be the fulcrum of the international economy and its trading, done in dollars, the centre of the influence of the U.S.A. Based on different sources and statistics over the years, the price elasticity of demand of oil varies between estimates of 0.02 and 0.10 in the short term and long term respectively (L. Smith, 2009). The same paper examines volatility of oil prices fluctuating from 35% to 90% depending on the coinciding and separate eras of oil production. Assuming demand and supply are both inelastic due to crude oil being a major factor in various industries and years being taken to increase productive capacity of oil fields, the author concludes that oil price fluctuations can be majorly chalked up to speculation, dollar value fluctuation and the OPEC's influence.

The effect of the dollar can be seen in the major fluctuations in oil prices during and after the 2008 crisis and the influence of the OPEC can be observed through a study of oil prices that reflect the organisation's decisions and power, such as OPEC's 1974 oil embargo. Speculation in the oil market has often been the object of scrutiny of critics and economists due to the perception that hedging and trading by financial investors often distort 'real' oil prices (Fattouh, et al., 2012). There are therefore various debatable flaws in the existing international oil market and the many systems dependant on it. Many prominent economists have often suggested the idea of cryptocurrencies backed by oil reserves, and this direction is reflected in the experimentation and investment in such

technologies by various countries.

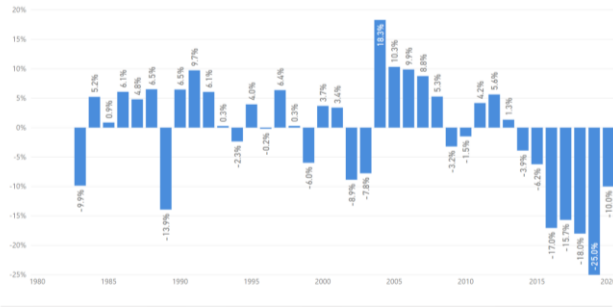


Fig. 4. Venezuela Real GDP Growth from 1980-2020 (Source: IMG World Economic Outlook)

However, when the idea of asset-backed cryptocurrencies is considered, in particular with oil reserves, there are many specific shortcomings that arise, especially the failing asset-backed Venezuelan cryptocurrency Petro, which reduced the credibility and advancement of the concept of asset-backed virtual currency. There are several problems with the currency that was intended to be a tool for the country to slip out of the economic instability it consistently experienced and its fluctuating GDP that seems to move parallel to oil prices. The cryptocurrency, when researched, seemed to have no existing blockchain system behind it or any trading platform the Petro was listed or traded in.

There is no transparency in its operation, mining or ‘decentralised’ system it is supposed to follow, with shaky fundamentals and institutions with no clarified role, such as the ‘Blockchain Observatory’ created by the Venezuelan government to monitor the cryptocurrency (Chohan, 2018). The cryptocurrency is also not accepted within the political systems of the country, deemed ‘null’ by many Venezuelan courts themselves. The cryptocurrency is generally bought by Venezuelan citizens at a fixed Bolivar rate and the tokens sometimes are worth more than they are bought at, which leaves merchants dealing with the currency less Bolivars in hand than the good they sell are worth (Helms, 2020). The fundamental lack of transparency, government control, technical shortcomings and inefficient conversion, along with many other problems, leave the Petro a poorly created and managed cryptocurrency that has increased wariness of international investors and governments towards asset-backed cryptocurrencies. However, the cryptocurrency community has often deemed it important not to overlook the various advantages offered by such a technology on the basis of one failing experiment. Moreover, there are several examples of oil backed cryptocurrencies operating according to law that have seen major success, such as OilCoin (U.S.) and Bilur Energy (UK).

After the consequences of the financial crisis many G20 governments have called for a reduced role of speculators and major reforms in the existing global financial systems. An asset backed cryptocurrency – specifically by oil reserves – therefore presents many advantages to governments. A centrally

controlled cryptocurrency that has transparency in its blockchain, is decentralised and provides an effective pedestal for trade and is backed by oil reserves, therefore making the prices of oil directly related to the cryptocurrency, can solve virtually all problems that are an inherent part of the oil market. Russia’s plan of creating an oil-backed cryptocurrency, named ‘Neft-coin’, has furthered the movement towards cryptocurrencies by countries that are backstopped by the American government or hindered in trading due to dollar value fluctuations, sanctions, etc. including economies like India and China, who have expressed the favouring of trade in currency other than the dollar (Oxford Institute for Energy Studies, 2017).

There is also the advantage to traders in countries that are majorly influenced by the price of the dollar and the price of oil to consider. In countries such as Venezuela and Brazil – unstable, in political turmoil and dependant on income generated by exports of oil – many small businesses and traders can benefit from a central oil backed cryptocurrency that will allow international trade and therefore prevent trade being stopped due to ill functioning government systems, weak currencies or general political turmoil. Countries such as Venezuela, having a large proportion of income derived from oil trade and many merchants and small businesses depending on oil, would benefit from an asset backed cryptocurrency allowing international trade.

With reducing oil reserves and an increasing push towards renewable sources of energy, it is imperative that the volatility of oil prices be based more on demand-supply factors that can reflect the commodity’s real value rather than speculative and artificial events and factors. If a decentralised, remotely monitored, transparent and asset backed cryptocurrency can be designed and used with accompanying systems for the trading of oil in international markets, there is large scope for the current problems with the oil market to be solved and efficiency in trade increased drastically. Moreover, the underlying blockchain technology has tremendous potential to be used as a tool for inventory management, asset tracking and supply chain management by oil traders and miners. There are, therefore, various advantages to the consideration of an efficient, transparent, and monitored cryptocurrency that is tackled in volatility by tying its value to oil reserves as a tool to fix the various shortcomings of the international oil market.

### B. Cryptocurrency and Unstable economies

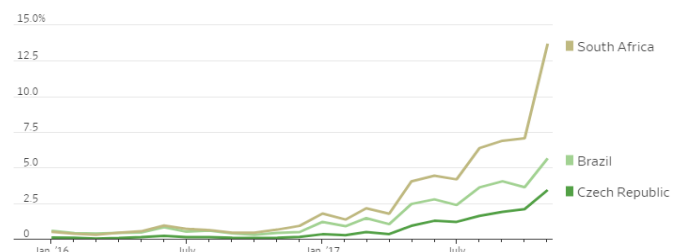


Fig. 5. Cryptocurrency adoption (up till 2018) in unstable economies (Source – eToro Platform)

Citizens of countries such as Zimbabwe, Venezuela, Nicaragua, Brazil and others are often subject to the consequences of a failing political, financial and economic state as a result of inefficient and corrupt governments and leaders. These citizens are often the lowest income earning workers of the country. In countries such as these the citizens can solidify their financial position and trade internationally when their own markets are failing through use of cryptocurrencies. There has been a coordinated movement towards these virtual currencies in many countries, specifically unstable and economically slow economies as shown in graph 3.2. Cryptocurrencies in such unstable economies can majorly benefit the citizens of that nation for multiple reasons.

Firstly, use of cryptocurrencies such as Bitcoin, Ethereum and Ripple can substitute inflationary and failing currencies, also reducing transaction costs significantly unlike use of traditional credit/debit cards. (B. Turpin, 2014). Secondly, use of cryptocurrencies is beneficial to individuals as a hedge against wildly fluctuating currencies. While it is true that most cryptocurrencies have a history of fluctuation in value, there is always a period of stability and that interval increases as more users join the Bitcoin community. In short, with more users and due to cryptocurrencies like Bitcoin being limited in quantity, there is no scope for hyperinflation, artificial pumping of coins or any other problem that usually befall fiat currencies (B Scott, 2016). Thirdly, bitcoins are more secure in safety of transactions as compared to currencies of most unstable economies, especially considering newer innovations in the blockchain system allowing for use of state channels and smart contracts wherein individuals personally verify wallet transactions (Torpey, 2019).

Due to the decentralised, transparent system of cryptocurrencies traders in unstable countries do not need to rely on government systems and failing currencies and can invest in cryptocurrencies as a method of building solidarity finance and enabling smart investments in assets for those struck financially by failing economies. Cryptocurrencies should therefore be heavily promoted in countries like these, with central, international bodies such as the IMF that can oversee systems such as this. In economies where there are multiple problems that plague the citizens of the country this system of finance can greatly help traders, merchants and workers dependant on the government to effectively pull themselves out of the grasp downtrodden economies. In a country with rampant hyperinflation like Zimbabwe, a government which's instability and lack of good policy upends economic growth like Brazil and countries overly dependent on specific natural resources such as Venezuela – and many other political, financial and economic problems such as terrorism that plague countries – a system of usage of cryptocurrencies to open up markets and allow for trading, saving and investments can greatly help families and individuals.

Another major factor to consider when it comes to unstable economies is the political tool often used on developing and less

developed economies that end up hurting the lowest of income holders is sanctions. Economic sanctions are an economic tool usually imposed in the form of embargos and tariffs on countries. For example, sanctions imposed on Iran and Iraq by the US and EU has majorly reduced their oil exports, similar to Russia. North Korea faces sanctions because of its nuclear weapon program, Russia faced major sanctions in 2014 for its invasion of Crimea, Sudan is under economic sanctions for the use of state sponsored terrorism and there are various other countries facing similar sanctions consequent to their political activities (Deane R. Konowicz, 2018). This also means that countries under economic sanctions find various ways to get around them, including through use of cryptocurrencies to achieve their means. This is not a threat currently to the US and its sanctions, but it is an important factor to consider, although blockchain technology enables the user's details to be recorded and publically shared when transactions take place.

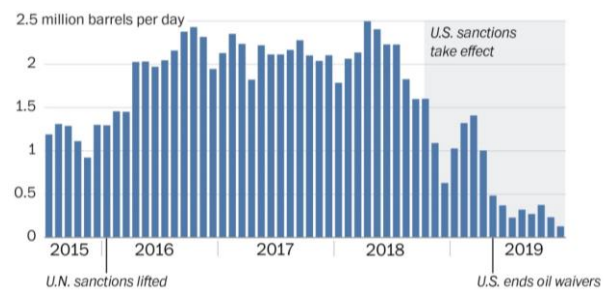


Fig. 6. Iran oil exports in million barrels per day parallel to sanctions on the country and their effect on export amounts (Source – Bloomberg News, U.S. Department of the Treasury)

Furthermore, it is important to note that countries with sanctions imposed on them often have a large sector of their economy in absolute or relative poverty, therefore creating economic problems that hit a particular income class harder. International sanctions placed on national banks of such countries reduces their access to further capital, therefore limiting growth and limiting the standard of living of the bottom poorest. Research has consecutively found that sanctions often work opposite to their intended effect. Sanctions further the income equality in societies and hit rural and non-industrial sectors harder, also allowing the elite and wealthy of a country, who the sanctions aim to limit in the first place, to negotiate out of the limitations and effects. On average, a 25% reduction in GDP has affected sanctioned countries and the blame for continued poverty is often placed on countries imposing sanctions while governments continue to perform the very activities they incur economic sanctions for, such as financed terrorism and arms dealing (Dylan O’Driscoll, 2017). Sudan follows policies that magnify the effect of economic sanctions in order to keep the population of the country from revolting against the regime, whose activities are not hindered by sanctions.

Cryptocurrencies in such a background can drastically improve the standard of living, earning and status of the



population being held down by governments and their actions. Not only would this allow millions of families to escape from their financial status through effective usage of cryptocurrencies to trade internationally, mostly by dealing in their natural resources, it would also allow whole economies that have been suffering for years due to the indirect and direct actions of their governments to grow at an increased rate. Sanctions are a favoured economic and political tool by developed countries, but the effect of these on the majority of the population of nations such as Sudan, Russia, Venezuela, Brazil, etc. are unaccounted for by those countries. The development of systems within economies that encourages low income households to use cryptocurrencies to improve their financial status and educates them on the benefits of dealing in Ethereum, Bitcoin and many other virtual currencies can boost living standards and income expectations in countries where bare minimum essentials are sometimes not available to more than 90% of the population.

#### 4. Conclusion

Existing literature on cryptocurrencies points to one conclusive thing: the technology is revolutionary and researchers have just scratched the surface of its various possibilities. Whether it is the actual usage of the currency or the underlying blockchain technology that has extended to various industries and usages, such as inventory control and supply chain management, the technology in it has the potential to disrupt the centralised systems of power that have been followed for so long. Implemented in the oil market, cryptocurrencies can break the hold of central organisations (OPEC) and central currencies (dollar) on the industry to ensure that traders across economies and sizes can deal equally and fairly. The concept of an asset backed, limited in number cryptocurrency can revolutionise the way oil is traded and dealt with.

On the other hand, with an observed growing trend of cryptocurrencies in unstable countries and countries in economic or socio-political turmoil supports the central intention behind the creation of Bitcoin by Nakamoto – for users and consumers to do away with dependence on central systems and currencies. When a system in place can be implemented, as explored in the paper, dealing with cryptocurrencies in these countries can be eased and encouraged. State systems of exchange and contracts requiring verification can all be implemented, as proven by recent research, to ensure a transparent system of dealing and trading. When such as system is designed and implemented with full faith from trusted central organisations, for example aid from institutions such as the IMF and UN, or even with local, ground level encouragement for usage, the foreign aspect of the technology can be quickly overcome by users to trade in their country's natural resources without the constraints of politically motivated and inefficient sanctions, failing currencies and failing governments to hold down their financial status.

Although the technology is not without flaws or problems in this time, there is confidence from many sectors in the revolutionary capabilities of cryptocurrencies. We are not close to using it as a means of daily transactions because of its instability due to fewer users in the system at this current stage; however, the means it provides to consumers in countries where within days the currency they hold becomes worthless is immeasurable – users can store their income in the form of cryptocurrencies that can allow for financial security, access to capital and a way to purchase property. The decentralised system of currencies is highly volatile, less used and illegal in many countries. Despite these problems, cryptocurrencies can bring about an effective revolution economically, politically and socially across industries and markets.

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