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Global Financial Risks of Cryptocurrencies

A Case Study of El Salvador

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Abstract

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Cryptocurrencies are blockchain technologies, offering a pseudo-anonymous way for wealth distributions. Cryptocurrencies are known for price volatility and for their involvement in organized crime (Campbell-Verduyn, 2018: 3-29, 88-108). The main object of the research is to illustrate the illicit applications of cryptocurrency and demonstrate how they can be used in international crime. The research hypothesis assumes cryptocurrencies employing new channels of illicit activities and that their popularity will continue to grow regardless of the regulation. The paper investigates the rationale behind the boosterism of cryptocurrency and identifies who benefits from it. The case study is regarding El Salvador, as Salvadoran government ventures on accepting Bitcoin as a form of legal tender to gain economic stability and independency from the USA. The paper hypothesizes that El Salvador's Bitcoin endeavor will not become successful and will cause more financial damages to the Salvadoran economy than benefits. The preliminary hypothesis of the success of Salvadoran Bitcoin endeavor was accurate. The markets and institutions reacted negatively to the news of Bitcoin adoption in El Salvador. The endeavor was deemed a catastrophe by International Monetary Fund (Adrian and Weeks-Brown, 2021; Vizcaino and Maki, 2022). The research hypothesis assuming that cryptocurrencies employ new channels of illicit activities was proven accurate. The research found linkages between transnational crime and cryptocurrency applications. Rationale behind boosterism credited to the illusion of trust which cryptocurrencies desperately need to survive. The research hypothesis presumed that cryptocurrency popularity will continue to grow regardless of the safety concerns. The hypothesis was proven correct as cryptocurrency adoption has increased significantly.

Keywords: Cryptocurrency, Transnational Crime, Financial Risks, Bitcoin, El Salvador.

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Glossary

ACES	Dogecoin Accountability for Cryptocurrency in El Salvador Act in a bipartisan legislation which allows the USA monitor remittances from El Salvador.
AML	Anti-Money Laundering is a worldwide set of regulations, policies, and laws to prevent money laundering and financial crime.
BIS	The Bank for International Settlements is a financial institute which is owned by central banks, supporting central banks' monetary and financial stability.
BTC	Bitcoin is a decentralized blockchain currency that one can buy, sell and exchange directly without a financial middlemen.
CABEI	The Central American Bank for Economic Integration is a bank that promotes economic integration and balanced economic and social development in Central America.
CAR	The Central African Republic is a country in Central Africa.
CARSI	The Central American Regional Security Initiative is an US governmental institute aiming to strengthen governance, transparency and accountability in Central America.

CFTC	The Commodity Futures Commission is an independent US governmental institution that regulates the USA’s derivatives markets.
CFT	Combating of Financing of Terrorism is a financial measure used to disrupt the flow of resources to terrorist groups via laws and regulations.
DOGE	Dogecoin is a decentralized digital currency featuring a likeness of the Shiba Inu- dog from the "Doge" Internet meme as its logo.
EBA	The European Banking Authority is an independent EU Authority which ensures effective and consistent regulation and supervision in the European banking sector.
ECB	The European Central Bank.
FMF	The Foreign Military Financing is an US governmental program supplying grants and loans to help countries purchase US weapons and defence equipment.
GAO	The US Government Accountability Office surveillances the federal government and aims to improve their performance and accountability.
IMF	The International Monetary Fund.
ODA	Official development assistance is governmental aid to promote the economic development and welfare of developing countries.
SEC	The Securities and Exchange Commission is a US governmental entity to regulate securities markets.
UNFPA	The United Nations Population Fund.
UNODC	The United Nations Office on Drugs and Crime.
USAID	The United States Agency for International Development is an independent agency of the USA supplying foreign aid and development assistance.

1 Introduction

After the global financial crisis of 2008, consumers and investors of various types had lost faith in the conventional banks and many sought out unconventional, decentralized, and even anarchist ways of conducting financial transactions. This involved the emerging cryptocurrency technologies, offering a pseudo-anonymous way of conducting wealth distributions via blockchain technology. Cryptocurrencies have since become accepted as a mean of financial redistribution in online commercial marketplaces, charities, and even by political parties. However, with the surfacing of this new cutting-edge cryptocurrency technology, the concerns regarding their environmental and social impact, and linkages to transnational crime have been raised. Cryptocurrencies were created as a reaction stemming from an anarcho-libertarian distrust of central banks, which inherently attracts perpetrators to the usage of cryptocurrencies for illicit activities (Campbell-Verduyn, 2018: 3-29). Cryptocurrencies are known for their high price volatility and for their involvement in international money laundering schemes and other illicit activities globally. Controversies regarding cryptocurrencies have attracted interest worldwide in central banks, legislative bodies, and governments. In some countries, such as China and Morocco, the governments have formally banned the usage of cryptocurrencies to reduce their harmful impact on the environment, to keep the central bank control over currency, and to minimize the spread of dark web crypto transactions (Cambell-Verduyn, 2018: 88-108). This, however, is not the status quo in the world, as many regulatory bodies are not familiar enough with cryptocurrency technology to implement any concrete governance. The nature of cryptocurrencies' transnational trading and decentralization makes the implementation of restrictions arduous compared to traditional central banks or other financial third parties.

El Salvador has struggled with social inequality and corruption for decades in addition to being one of the poorest countries in Central America. The country's financial stability is especially reliant on USA's foreign monetary aid. Previously

El Salvador had its own currency, the colón, but El Salvador opted in 2009 to take the US dollar as their official currency. The US government has granted billions of US dollars in foreign investment, funding and charity to El Salvador's economy. The USA has also been involved in supplementing military funding to El Salvador which plays a large role in these two countries' relationship. The Foreign Military Financing (FMF) program has funded El Salvador millions of US dollars. However, during Trump's presidency, many sources of funding to El Salvador were withdrawn (Goodman, 2020).

To gain economic stability and independency from the US, El Salvador's government ventures on accepting Bitcoin as a form of legal tender. This can create conflicts between the US and El Salvador, in which the latter's economy and social stability is reliant on the foreign monetary aid. Especially in developing countries, it is common practice for the central banks to debase their currencies. However, this marks the first time in history where the currency used is not fiat money (Frankel, 2021). To support this massive endeavour, El Salvador plans to release multiple governmental bonds to attract foreign investors. This venture is directed towards foreign investors and tourists, as only 39 per cent of El Salvador's citizens own a bank account, let alone having the means to own a crypto wallet. Moreover, it is estimated that approximately 45 per cent of El Salvador's population does not have access to the internet which is crucial to obtaining cryptocurrencies (World Bank, n.d.). In addition, 26.6 per cent of El Salvadorians live below the poverty line. The number of people suffering from poverty has been expected to grow due to Covid-19 pandemic (Galdamez, 2021). Nevertheless, El Salvador accepted Bitcoin as an official legal tender in 2021. El Salvador would have to undergo a massive societal restructuring to facilitate the Bitcoin adoption for its citizens. Combining the suitable environment, opportunity costs, and lack of regulation, El Salvador may find itself facilitating a new capital city for ethically questionable financial practices.

Cryptocurrencies can offer great returns for investors due to their high volatility. However, understanding the illicit side of cryptocurrencies has paramount of importance in reducing economically and societally harmful actions globally, such as money laundering, narcotics distribution, and financing of terrorism.

In the media, it is apparent that cryptocurrencies are widely discussed but rarely in a negative light. It could be argued that the disadvantages have been deliberately left out of the general discourse. Articles after articles have sold the revolutionary technology to the public as a quick fortune maker that anyone could participate in and become a millionaire overnight. Although that might have been the reality for some, the objective of this thesis is to shed light on the relative lack of attention given to the downside of cryptocurrencies. The paper aims to investigate and establish the rationale behind the boosterism and to identify who benefits from it.

Consumers and individual investors might not be informed enough about the origins of their investment and unknowingly participate in the distribution of laundered money, financing terrorism, and other transnational crime. Thus, the initial main object of the research is to illustrate the illicit applications of cryptocurrency and demonstrate how they can be used in international crime. Once the main aspect of the research idea began to formulate, El Salvador's ambitious plan of creating a Bitcoin city attracted international media coverage. This provided an opportunity for applying El Salvador as a case study to further investigate and theorize the cryptocurrency risks on a macroeconomic level. Including El Salvador in the research allows consideration of the social effects that illicit use of cryptocurrencies can have on developing societies. USA's involvement and their foreign policy interests in El Salvador's Bitcoin endeavours are also critically evaluated.

The research question of this paper is to identify the financial risks associated with cryptocurrencies in regard to their usage in illicit activities, and how El Salvador's ambitious plan of implementing Bitcoin as a legal tender could pose serious threats to traditional central banks' global standing.

To conclude, the research aims to identify and evaluate the financial risks of cryptocurrencies on a macroeconomic level, especially in relation to transnational crime with El Salvador as the target country of the case study. The research hypothesis assumes that cryptocurrencies employ new channels of illicit activities and that their popularity will continue to grow regardless of the safety concerns. The paper hypothesizes that El Salvador's Bitcoin endeavour will not become successful and will possibly cause more financial damages to the Salvadoran economy than benefits.

2 Scope of research

The scope of research is limited to the inspection of Bitcoin (BCT), as opposed to including all other cryptocurrency offerings. Bitcoin has the largest market capitalization of 368,69 billion US dollars compared to its counterpart cryptocurrencies as of 29th of September 2022 (CoinMarketCap, 2022). This estimate is used as a reference, given that there has been significant devaluation of cryptocurrencies during 2022. Having the largest market capitalization, Bitcoin is used as the main cryptocurrency to apply market-wide assumptions. The notion of cryptocurrencies can be considered a contemporary phenomenon and thus the lack of historical data limits the research scope. The first notion of cryptocurrencies surfaced in 2008 in a published white paper, but it took years for the technology to gain momentum and develop enough to allow access to wider audiences. Malcom Campbell-Verduyn shows in his book *Bitcoin and Beyond*: *Cryptocurrencies, Blockchains, and Global Governance* that scholarly treatments of Bitcoin emerged in early 2010s, in which major emphasis was placed on technical advancements of cryptocurrencies (Campbell-Verduyn, 2018). Therefore, relevant literature with historical data is scarce. The previous research literature largely avoided consideration of the implications of cryptocurrency on an economic and social level. Consequently, the research relies on roughly two decades worth of data on cryptocurrencies, compared to traditional investment instruments' or fiat money's historical data. This research aims to improve on this by providing wider understanding of causality of usage of cryptocurrencies. As Bitcoin and other cryptocurrency success stories became part of the mainstream media, the cumulative amount of misinformation has been spread widely. Thus, the literature used in the research was cross-examined and the scope of the research was kept focused.

The research is constrained by the speed of developments: advances in the applications of blockchain, the state of cryptocurrency market, cryptocurrency offerings, and the technology are constantly changing and in turmoil. The hypothesis and research conclusions should be examined as a product of the relevant information available at the time of writing the research.

The research hypothesis assumes that cryptocurrencies are inherently linked to transnational crime. Transnational crime includes multiple channels of illicit activities; therefore the focus of the research was centred on main aspects of transnational crime. Money laundering was selected as the focal point of the research. Money laundering can be used as a foundation for other illicit activities for its linkages to, for instance, financing terrorism and human trafficking. Moreover, the research aims to stay loyal to the field of business studies and not stray too far into sociology, criminology or information technologies unless these prove to be especially relevant. The main objective of the research paper is to display the negative financial effects and risks cryptocurrencies can have on a macroeconomic level and in relation to transnational crime. Legal regulations are a crucial point of information when inspecting the relationship between cryptocurrencies and transnational crime. The research does not aim to provide reviews of available legislations, but to offer insights on the legislative blind spots.

Considerable emphasis was placed on the USA’s involvement in the cryptocurrency markets and legislations. The unquestionable power of the US dollar in relation to cryptocurrencies and its foreign policy requires a thorough analysis of USA’s stand on cryptocurrencies.

In addition to limited literary resources, the target language limits the research. Although English is considered the lingua franca in the Western academia, the applied case study target country’s official language is Spanish. This limitation resulted in the reduction of research material and exclusion of material if the literature was missing accurate translations.

El Salvador is the target case study for this paper which limits the scope of research. El Salvador is regarded as a developing country and part of the Global South (IMF, n.d.). There is not a large discrepancy between general publics and specialists' views on El Salvador's global standing, which has assisted in the cross-examination of the relevant literature. Applying generalizations and stereotypes in academic research would decrease the credibility of the research as a whole. Therefore, all the assumptions made in this paper are based on cross-examined, factual records in order to present the research conclusions in a credible manner. Moreover, most scholarly research conducted about cryptocurrencies is not done by Latin Americans. This can create an academic bias in the research outcomes. Thus, the reliability of publications regarding El Salvador were confirmed and evaluated by relying on NGOs and governmental publications. Researches with unclear origins were thus discarded in this research's literature foundations.

3 Methodology

To answer the research question concerning the illicit side of cryptocurrencies and its application to vulnerable communities, the needed data was identified, collected, and cross-examined to ensure relevant and accurate research conclusions. The investigation was conducted by secondary research. Secondary research was heavily based on literature about cryptocurrencies and previous researches about the risks associated with cryptocurrencies. Moreover, El Salvador's economic standing was examined by sourcing relevant research materials. In addition to literature and previously made researches, reliable news articles were supplied to report on the prevalent situation of the research question. News articles were also used to convey trends that have risen in the cryptocurrency industry and the macroeconomic effects of said trends.

The research material available has illustrated that cryptocurrencies pose serious threats and financial risks which are not discussed in detail in the mainstream media outlets. While some of the literature sources encourage the mining and usage of cryptocurrencies, more and more international cybercriminals are starting to adopt cryptocurrencies as a channel for conducting illicit activities. The research hypothesis implies that the vulnerable communities suffer most of the negative impacts of cryptocurrency mining and trading, all while relying on cryptocurrencies to get remittance payments. Cryptocurrencies' volatility can offer high returns for a few privileged individuals and entities who have the means to hedge the risks and who can turn a blind eye to the unethical activities associated with cryptocurrencies.

The perspective of the research is critical of the boasted benefits of cryptocurrencies. The positives, however, are incorporated in the discussion and research conclusions for providing transparent and credible reporting. To approach the data as analytically and objectively as possible, there is not any competing financial interests or personal relationships that could be able to influence the work reported in this research paper. The objective of this thesis is to evaluate the illicit side of cryptocurrencies with analytical and critical evaluation of literary research sources.

Moreover, El Salvador's economic standing was revealed by sourcing relevant research materials. In addition to literature and previously research, reliable news articles were supplied to report on the prevalent situation of the research question. News articles were also used to convey trends that have arisen in the cryptocurrency trading industry and the social impact of these trends.

In conclusion, the author of this thesis has determined that the most appropriate perspective for conducting the research is to review the current information regarding illicit uses of Bitcoin in conjunction with evaluating El Salvador's abilities to establish the "Bitcoin city" sustainably and lawfully.

4 Bitcoin

4.1 Function of Bitcoin

Bitcoin was initially meant as a counter-reaction stemming from the distrust caused by the 2008 global financial crisis. Bitcoin was originally created as a criticism of the two-level monetary system which consists of central and traditional banks. Bitcoin and other cryptocurrencies rely on blockchain technology which has shifted the trust from conventional centralized financial institutions to decentralized online communities interacting through digital cryptography (Campbell-Verduyn, 2018). Thus, Bitcoin should not be viewed merely as an emerging technology, but also as a political goal of decentralizing conventional monetary systems. Erica Stanford claims in her book *Crypto Wars: Faked Deaths, Missing Billions and Industry Disruption* that with ever-growing inflation and economic downfalls, the demand and trust for Bitcoin increases significantly (Stanford, 2021).

Bitcoin is a virtual currency created in 2008 by an anonymous developer or community of developers under a pseudonym, Satoshi Nakamoto, with the intention to dethrone the power of traditional fiat currencies. Bitcoins are created via the blockchain ledger system which can be described as a shared database whose records are transparent. The Bitcoin blockchain is based on the idea of community governance and thereby abolishing third-party involvement in financial transactions. To conduct a transaction, information from the previously mined block is copied to a new block of data which is then securely encrypted. Then the transaction must be verified by the community, the miners, once the transaction is verified, a new block is opened which creates a Bitcoin. Bitcoins are given to the miners for creating and verifying the new block. The whole process of cryptocurrency mining is extremely complex, all while requiring immense amount of computing power and electricity (Nakamoto, 2008; Frankenfield, 2022). In 2019, Bitcoin mining exhausted more energy than Switzerland’s whole population (Cambridge Bitcoin Consumption Index, 2019). Moreover, Bitcoin mining is highly dependent on China’s extensive coal power stations, as approximately one third of Bitcoin production is based on usage of pure coal (McDonald, 2021). Bitcoin mining can escalate the climate change and further exacerbate vulnerable communities', who already experience multiple dimensions of deprivation, social and environmental issues (Howson and de Vries, 2022).

The demand for Bitcoins is derived from two sources. Firstly, Bitcoins are used as a mean of transferring funds and secondly, as an investment instrument. Bitcoin's blockchain technology is highly disruptive, as it can unleash political unrest by challenging the old monetary institutions and questioning the necessity of existence of said institutions all together. Bitcoin and other cryptocurrencies pose threats to current governments and regimes by carrying the possibility of fomenting economic crisis. Bitcoin aims to strip away a lot of power from governments and central banks. In case of economic crisis, the government policymakers would have little to no capacity to adjust supply of money and influence inflation rates via monetary policies (Vigna and Casey, 2015).

One of Bitcoin's greatest limitations is its high price volatility. The value of Bitcoins has been proved to fluctuate considerably. The volatile price movements make Bitcoins risky to accept as a means of exchange or as an investment instrument to store value. With the large price swings, the prediction and stabilization of Bitcoin are extremely difficult, which limits the trust placed on cryptocurrencies as a whole. Figure 1 below illustrates the price movements of Bitcoin between the years 2013-2022.

Figure 1.Historical volatility of Bitcoin (BTC) from 2013 to 26th of September 2022 (CoinMarketCap, 2022).

Bitcoin has inspired the creation of myriad other cryptocurrencies. However, most of the cryptocurrency offerings do not receive the same amount of success compared to Bitcoin. It has been speculated that over 80 per cent of new cryptocurrency offerings are either scams or failed projects (Stanford, 2021: 2-5).

4.2 Cryptocurrency and fiat currency

The research emphases cryptocurrencies having disparate features compared to state-backed, traditional fiat currency. Cryptocurrencies and fiat currencies should not be considered equivalent to one another, as their features differ greatly.

Traditional currency has three main characteristics: it can be used as a unit of account, a medium of exchange, and as an investing instrument to store value. A fiat currency is declared legal tender by a government or a regime, but it does not have intrinsic nor fixed value. Moreover, fiat currency does not possess the backing of any tangible asset, such as gold (Shubik, 1971). All fiat currencies and monetary systems have trust at the core of their operations. For any cryptocurrency to receive similar status of a traditional fiat money, it foremost needs to gain broad recognition and trust from the public and authorities. As of now, cryptocurrencies can be used as a mean of exchange and speculators have invested in cryptocurrencies in hopes of it storing value. However, cryptocurrencies are not used independently as a unit of value (Vigna and Casey, 2015: 4-10). Cryptocurrencies are also objects of speculation, in the hope that they could appreciate in value, which differs from storing value. Therefore, cryptocurrencies cannot be considered as a currency. The closest definition for cryptocurrency is a speculative asset whose value is extremely volatile, preventing its use as a store of value (Baur and Dimpfl, 2021; McDonald, 2021:142).

The supply of currencies are decided in each country's or monetary unions' central banks. For a legal tender to become widely accepted as a currency must have the notarization of traditional central banks to circulate in the economy. A currency's value is dependent upon the consensual recognition that the currency can be redeemed as an agreed-upon measure of goods and services. Thus, cash or digital fiat currencies do not have intrinsic value and their value is solely based on trust, the demand stemming from trust or distrust, and the power of central banks providing supply of currencies (Vigna and Casey, 2015: 30-39). However, cryptocurrencies do not have the backing of central banks as they rely on the community to evaluate and accept the transactions. The high volatility has caused Bitcoin and other cryptocurrencies to have distrust from most regulatory bodies and financial systems and thus, they are not notarized by most central banks.

Cryptocurrency advocates highlight the anonymity it offers, which differs drastically from traditional investments and currencies. Online-based interactions between anonymous individuals who publicly process, validate, and issue records of transactions are at the core of the concerns associated with cryptocurrency. Anyone with enough knowledge and resources can start mining cryptocurrencies by utilizing complex, problem-solving blockchains. By contrast, with traditional fiat money central banks have the authority to influence the amount of money circulating the economy. In consequence, centralized exchanges are overseen by regulatory bodies and the exchange information can be shared with governments. Thus, Bitcoins offer an alternative to many different stakeholders, ranging from organized groups aiming to launder money to lawful individuals with concerns of data privacy (Stanford, 2021). To trade cryptocurrencies, one does not have to verify one's identity when making a transaction. In traditional trading, transactions leave a paper trail which can be traced if authorities suspect any illicit activities, unlike with Bitcoin and other cryptocurrencies (Campbell-Verduyn, 2018, and Lee, 2015). The privacy model of cryptocurrencies is further illustrated and compared with traditional privacy model in the figure 2.

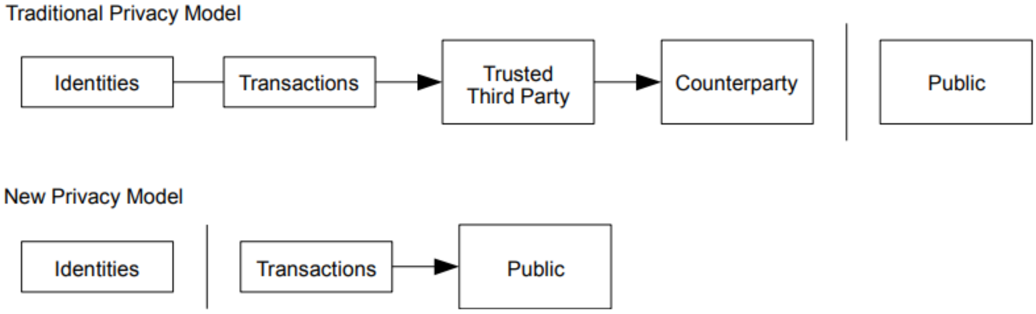

Figure 2.The original Bitcoin whitepaper illustrating the privacy model of cryptocurrencies compared to traditional model (Nakamoto, 2008).

To conclude, cryptocurrencies do not fit the benchmark of typical currency. A cryptocurrency like Bitcoin has, however, the possibility of becoming legal tender if it is able to stabilize its price volatility and gain wider trust from governments and the public. Cryptocurrencies are designed differently compared to traditional currencies, as the central banks have been replaced by decentralized communities.

4.3 Regulation

Regulatory authorities have raised interest to regulate cryptocurrencies as cryptocurrencies have expanded their standing significantly in the global monetary systems and investment landscapes. Around the world, governments' reactions have varied from one another, with reactions ranging from passively tolerating to outright banning cryptocurrencies (Fletcher, 2021). Also, an issue of classification of cryptocurrencies plays a part in the ambiguous regulations as some legislation views cryptocurrency as an asset and while others regard it as a form of money. This international patchwork of regulations has resulted in cryptocurrencies being subject to vastly different classifications and legislative treatments globally.

Cryptocurrency holding and trading companies are mostly domiciled in the USA: a total of 28 of the main 50 companies are said to be located in the USA (Yue, 2022). Despite being the home country for majority of cryptocurrency firms, the USA has not implemented a cohesive regulatory framework for cryptocurrencies. Cryptocurrency mining, trading, and usage is legal in the USA. The lack of unambiguous regulations in the US stems from different fiscal and monetary institutes' classifications of cryptocurrencies. In the Securities and Exchange Commission (SEC) cryptocurrencies are defined as a security, whereas Commodity Futures Commission (CFTC) classifies them as a commodity (U.S. Commodity Futures Trading Commission, n.d.; U.S. Department of Treasury, n.d; Financial Crimes Enforcement Network, 2013; Smith, 2022). Moreover, the US Treasury classifies cryptocurrency as a currency. These discrepancies in the classifications of cryptocurrencies hinder the implementation of nation-wide legislation and governance. The Biden administration has released the first-ever framework on cryptocurrency regulation in the USA, but the implementation might be difficult as it is in the USA's interest to oversee the development and adaption of cryptocurrencies to secure US dollars' political power globally (Sigalos, 2022). However, it has become apparent that regulation is needed to deter criminal activity and regain control of transactions.

The European Union states that crypto assets, which includes cryptocurrencies, are not guaranteed nor issued by a European central bank or other European authority. Moreover, currently the EU legislation has kept cryptocurrencies out of their scope of governance, albeit more and more interest is placed on increasing the regulation related to cryptocurrencies to minimize the financial risks and cyber-crime in the EU. Cryptocurrency exchanges and mining are lawful in the EU (European Parliament, 2022).

In Latin America, the cryptocurrency regulations differ from adoption, such as El Salvador, to prohibition, such as in Bolivia. The only country in Latin America to completely authorize cryptocurrency usage is El Salvador, which recognizes Bitcoin as a legal tender. El Salvador also offers governmental subsidization for Bitcoin mining using renewable energy sources. Many Latin America countries are still developing regulations for cryptocurrency despite voicing concerns over cryptocurrencies' effects on financial stability (Escobar, 2022; Dwyer, 2021). In Latin America, governmental institutions are accused of acting passively over recognizing the global governance issues of cryptocurrency and its impacts on the societies (Delva Benavides and Guadalupe Mora Hernández, 2018).

Some governments, such as in China and Morocco, have formally banned the usage, mining, and exchange of cryptocurrencies all together to reduce cryptocurrency mining's harmful impact on environment, to minimize the spread of dark web cryptocurrency transactions, and especially to keep the central bank control over the population (Campbell-Verduyn, 2018: 88-108)

Cryptocurrencies have affluent and vocal advocates who preach for the benefits of cryptocurrencies to the public. These opinion leaders can also have an impact on regulations due to lobbying, thus they hold a lot of power in the general discussions of the topic. The Public Citizen, an NGO consumer advocacy organization, reports in their investigation that spending on lobbying has quadrupled between years 2018 and 2021. The spending used for cryptocurrency lobbying rose from $2.2 million to $9 million. In the USA, it is reported that the number of cryptocurrency lobbyists has tripled from 47 to 157 in four years. The table below illustrates the changes throughout four years (Claypool, 2022).

YEAR	CRYPTO LOBBYING SPENDING	CRYPTO LOBBYISTS
2018	$2,230,000	47
2019	$2,525,000	53
2020	$2,809,000	56
2021	$9,025,663	157

Table 1.Public Citizen's analysis of increasing lobbying on cryptocurrency (Claypool, 2022).

Surprisingly, traditional wealth redistribution companies have also lobbied for cryptocurrency. Visa had been reported to lobby on cryptocurrency in 2021. In fact, Visa introduced a new cryptocurrency advisory services in 2021 which plays into the motivations behind Visa's lobbying. PayPal has also been actively lobbying for cryptocurrencies since 2022. PayPal's application allows its users to buy, sell and hold cryptocurrencies. In 2021, Facebook's Meta, IBM, and the US Chamber of Commerce have also lobbied over cryptocurrency policy in the US. Meta, for example, was at that time developing its own cryptocurrency (Claypool, 2022; Ford, 2022). Lobbying for cryptocurrency has increased in Brussels where there has been reported to be deployed 52 full-time lobbyists in 2021. Lobby groups like Blockchain for Europe have taken a very vocal and active role in shaping the EU's cryptocurrency policies. Some lobbyists are aiming to dismiss stricter regulations by making proposals that serve their own interests. The cryptocurrency lobbying industry has gained political power by offering politicians financial support in their campaigning and influencing the decision-makers when making of the legislation proposals (The Economist, 2021; Smith-Meyer, 2022).

The Blockchain Association, a lobbying group representing over 70 cryptocurrency platforms, has been lobbying against the US Congress regarding two bills designed to target the use of cryptocurrency by Russian oligarchs as a way to evade sanctions. These bills would allow the authorities to prohibit USA based or regulated cryptocurrency exchange platforms to process payments originating from Russia. This would further allow imposing sanctions on foreign exchanges that act as middlemen in processing of transactions by sanctioned Russian individuals or corporations (Schwartz, 2022).

The CEO of Tesla and one of the richest individuals in the world, Elon Musk, is one of the largest individual cryptocurrency investors who campaigns for the benefits of cryptocurrencies. Musk has proven to have influence over cryptocurrency market movements via single tweets. This has led to major price movements and “meme-cryptocurrencies” such as Dogecoin to enter the market. Musk is credited with influencing Dogecoin (DOGE) to its current position in the market as one of the most valuable cryptocurrencies with market capitalization of 8.472 billion US dollars. Dogecoin was never meant to be a respectable cryptocurrency, rather than a jab towards emerging cryptocurrencies. However, Musk’s actions led the “meme-cryptocurrency” to a widely different track than anticipated by its creators (The Economic Times, 2022; CoinMarketCap, 2022).

5 Crime in cryptocurrencies

The topic of safety of cryptocurrencies will grow in its significance in the future as increasing numbers of institutions, corporations, and individuals embrace the usage of cryptocurrencies. Cryptocurrencies provide a channel for cybercriminals to obscure the source of criminal proceeds and thus, cryptocurrencies are increasingly becoming the preferred currency of cybercriminals. Illicit usage of cryptocurrency is not confined to cybercrime-related activities; cryptocurrencies are employed in all types of criminal activities that require the transmission of monetary value (Europol, 2021). Activities such as purchasing illicit goods using Bitcoin and ransomware attacks have become an occurring theme in the international crime circles. This trend is becoming more prevalent nowadays due to cryptocurrencies’ offerings of anonymity, ease of use, and the ability to circumvent international regulations and borders (Marks, 2021). In 2018, the World Bank recognized that the illicit transactions via dark web, cryptocurrencies, and new revolutionary technologies can create emerging opportunities for corruption (World Bank, 2018).

Criminal groups and individuals have found a way to exploit Bitcoin's features. Peer-to-peer transactions and pseudo-anonymity facilitates extensively money laundering schemes. Cryptocurrencies are not linked to the traditional monetary systems and thus further encouraging the usage of cryptocurrencies to avoid anti-money laundering surveillance and authorities (Adam and Fazekas, 2018; McDonald, 2021:17). Government reactions to the increasing criminal activity and safeguarding national security interests has varied greatly and thus, offered leeway for international criminal activities to take place in cryptocurrency (Fletcher, et al., 2021). As decentralized currencies lack of governmental control, they are not officially supervised or backed up by the governments. Although the monetary and crime prevention institutions have started to create regulation policies (Swartz, 2014). Julie Maupin highlights that governments all around the globe should take action to take advantage of the benefits and to minimize the risks of cryptocurrencies (Maupin, 2017).

The European Banking Authority (EBA) emphasizes the possibility that cryptocurrency could be employed for money laundering, narcotics distributions, among other illicit activities. The EBA stresses that, in the event of detecting illicit practices, enforcing sanctions in other countries' jurisdictions might be challenging (European Banking Authority, 2014). Tackling illicit practices related to cryptocurrencies should be considered a risk for economies worldwide, since illicit usage of cryptocurrencies erode economic value in society and decrease social welfare globally (Buchanan, 2004). At the beginning of the cryptocurrency adoption, cybercriminals simply processed their illicit funds in Bitcoins. However, as cryptocurrencies spread, criminal use of cryptocurrencies started to require anonymity enhancement services, such as Tor network, to operate anonymously from the supervisory authorities (Europol, 2021).

The reasons behind cyber criminals turning to Bitcoin are threefold. Firstly, Bitcoin's nature of quasi-anonymity. While Bitcoins and Bitcoin transactions can be traced to the specific computer where the transaction was made, the users are never required to use their actual identity. Linking Bitcoin transactions to an individual or corporation has been found to be virtually impossible (Deepika and Kaur, 2017). Furthermore, cryptocurrencies are notably more vulnerable to illicit financial transactions compared to conventional payment and wealth distribution methods such as bank transfers and credit cards. Conventional methods do not enable anonymous operators to shield their users unlike in cryptocurrencies (Financial Action Task Force, 2019). Secondly, Bitcoin transactions are transnational, near instantaneous, and irreversible. Cross-border cryptocurrency transfers involve multiple jurisdictions which increases the difficulty of monitoring transactions and law enforcement (Financial Action Task Force, 2019). Third, Bitcoin’s decentralized platform allows transactions bypass the regulatory frameworks imposed by traditional financial sectors. In addition, the way governmental bodies have failed to react accordingly to cryptocurrencies has resulted in outdated and even non-existent policies, regulations, and law enforcement initiatives (Fletcher, et al., 2021; Gonzálvez-Gallego, et al., 2021). Moreover, there has not been established specific global institution to implement Anti-Money Laundering (AML) surveillance in order to monitor possible illicit practices in cryptocurrency transactions (Financial Action Task Force, 2019). This has, in consequence, enabled criminal organizations and individuals to abuse Bitcoin blockchain technology for money laundering and to other channels of organized crime. The economic impact of illicit practices in relation to cryptocurrencies is difficult to measure. In 2019, it was estimated that essentially a half of Bitcoin transactions were related to criminal activity amounting to 76 billion US dollars (Foley et al., 2019).

The research literature does include the notion that cryptocurrencies can be used for improving society. This is certainly a major claim of its libertarian advocates. The Finnish government has decided to sell its Bitcoin reserves which were seized by the Finnish customs authorities tracking narcotics distributions and other illicit activities. It is estimated that the state will receive additional revenue of EUR 70-80 million from the sale and a significant part of the sum is said to be donated to support war-torn Ukraine. This can be regarded as an extra capital reserve, and it can be used to multiply Finnish foreign aid to Ukraine (Elo, et al., 2022). Nevertheless, it is worth noting that the origins of the confiscated Bitcoins have linkages to international criminal activities.

Illicit activities tied to cryptocurrencies are not limited to a single countries due to the transnational features of cryptocurrencies. Coordinated international governance and regulation policies are, thus, required to assist the investigations and conduct arrests related to the crimes related with cryptocurrencies. Law enforcement authorities across various countries would need to establish cohesive regulation and international cooperation strategies (Tsuchiya and Hiramoto, 2021). As of now, governments have approached cryptocurrencies vastly differently, and even within national institutions discrepancies of treatment of cryptocurrencies are apparent. Therefore, perpetrators are rarely caught and the damages to economies and societies will continue to grow as increasing amounts of international criminal activities shift to the cryptocurrency industry. Almaqableh et al. highlights how the impact of weak social and regulatory foundations drives criminal behaviour which can infiltrate communities, marginalizing orthodox businesses (Almaqableh et al., 2021).

5.1 Cases of illicit activities with cryptocurrency

Reporting about the cases of illicit activities with cryptocurrency provides vital insights on how cryptocurrencies can be misused. The following sections will each focus on specific forms of crime related to cryptocurrency to illustrate how far cryptocurrency-related crime has spread.

5.1.1 Money laundering

Cryptocurrencies are increasingly employed in money laundering schemes with virtual organized crime groups exploiting blockchain technologies in their operations (Europol, 2022). Europol reports that the main activity associated with criminal usage of cryptocurrencies is money laundering and essentially all forms of illicit proceeds are being laundered by cryptocurrencies (Europol, 2021). Money laundering refers to concealment of proceeds from illicit origins in the financial systems. Cryptocurrency related money laundering activities range from transforming cash into virtual currency to laundering illicit proceeds already in virtual currency (Europol, 2021). Cryptocurrency research group, CipherTrace, conducted research in 2018 which revealed that cybercriminals had laundered 380,000 Bitcoins worth of $2.5 billion at that time. The laundering was conducted via cryptocurrency exchanges, and most of them took place in countries with lax Anti-Money Laundering (AML), or Financial Action Task Force on Money Laundering (FATF), regulations (CipherTrace, 2018). The usage of cryptocurrency in money laundering schemes has been growing over the years and during the COVID-19 pandemic, organized crime relied on cryptocurrencies as a mean of payment. Organized criminal groups have learned sophisticated ways of conducting illicit activities via cryptocurrencies. Cryptocurrencies can be used to obscure capital flows in complex money laundering schemes, and as a payment or investment fraud currency (Europol, 2021).

The money laundering process can be divided into three stages: placement, layering, and integration (Madsen, 2009:102-120). Placement follows the process of acquiring proceeds from illicit activities and transferring the funds to unsuspicious forms which then are transferred back into the monetary system. In layering stage, money launderers aim to conceal the origins and ownership of the capital by shifting them between multiple institutions for the origins to become untraceable. Lastly, in integration stage, the funds will return to the financial system as “clean” money (Campbell-Verduyn, 2018: 69-74). The process of money laundering is similar with cryptocurrencies, with the difference that the proceeds can be transferred to cryptocurrency exchanges and virtual wallets instead of traditional bank accounts. The AML regime has relied on capital flowing between traditional financial institutions due to its central role withing global finance systems and governance. Cryptocurrencies have undermined the centralized financial intermediaries and their compliance checks (Isa et al., 2015: 7-13). Blockchain transactions are built upon algorithms and on decentralized virtual communities who verify the validity of exchanges rather than trusting traditional centralized institutions. Identifying cryptocurrency users is rendered extremely difficult by the complexity of the blockchains. The international AML regime's central implication is that regulators need to know the identity of all parties. Thus, financial institutions bound by the AML legislation have difficulties supervising the transactions made in cryptocurrency (Campbell-Verduyn, 2018: 74-76). Criminal groups can engage with cryptocurrency money laundering networks specializing in large scale laundering schemes to obscure the process from supervisory bodies. Thus, it is difficult to distinguish money originating from illicit activities from those from orthodox business (Europol, 2021).

Cryptocurrency advocates claim that the risk of cryptocurrencies being utilized in money laundering are inflated. Granted, traditional money laundering persists as a bigger industry, with estimations of global money laundering amounting from $800 billion to $2 trillion or two to five per cent of global GDP per year (UNODC, n.d.) Nevertheless, cryptocurrencies are fundamentally challenging key actors in the international AML regime's efforts (Campbell-Verduyn, 2018: 74-76). High price volatility in cryptocurrency plays a major role in perpetrators' hesitation to use cryptocurrency over the long term. It is still, however, attractive tool to evade international governance (Europol, 2021).

5.1.2 Financing of criminal activities

Organized crime groups' exploitation of inferred pseudonymity from cryptocurrency is at the core of new ways of criminals finance their operations. The emergence of cryptocurrency has been reported to considerably influence the growth of illicit purchases in online marketplaces. Cryptocurrency provides a virtual environment for organized criminals to conduct business worldwide, while enjoying minimal risks posed by international law enforcements (Guzmán, et al., 2020). A significant part of the fundamental value of cryptocurrency, and especially of Bitcoin, is derived from the usage as a medium of illicit exchanges (Foley et al., 2018). The "Silk Road" website is regarded as the first digital black marketplace where illicit transactions were conducted in Bitcoins. Between 2011 and 2013, thousands of illicit goods and services were traded with monthly transactions totalling $1.2 million (Moore and Christin, 2012). The Silk Road was accessible through the Tor network which anonymizes user data obscuring unwanted surveillance in transactions. In consequence, the Silk Road buyers and sellers could conduct illicit transactions anonymously and so that the payments could not be traced back to them. The Federal Bureau of Investigation (FBI) shut down the Silk Road in 2013, seizing over 170 thousand Bitcoins which were at that time valued at $33.6 million (FBI, 2013). One of the most common channels of financing criminal activity is narcotics distribution. The linkages between drug trafficking and cryptocurrency market have been reported all over the world (Almaqableh et al., 2021). United Nations Office on Drugs and Crime's, UNODC, findings on *Darknet Threat Assessment Report 2020*, shows that narcotics are most widely available illicit products offered on the darknet, amounting to 68 percent of the total marketplace. UNODC also warns about the challenges cryptocurrency has on the illicit darknet markets in relation to governance, drug supply reduction, and crime prevention (UNODC, 2020). The US Government Accountability Office states that cryptocurrency is increasingly used in human trafficking. Cryptocurrency was reported to be the second-most commonly accepted method of payment in the commercial sex market websites which is used to facilitate human trafficking (GAO, 2022). Moreover, evidence suggests that cryptocurrency has been linked to a number of terror attacks all over the world. A study in 2014 revealed that terrorist organizations such as Al Qaeda have started to use cryptocurrency to fund their operations (Manheim et al., 2017). Cryptocurrency allows seamless and anonymous transfer of funds between terrorist organizations and their supporters which presents significant risks to countries' security (Irwin and Milad, 2016). Currently, the cryptocurrency usage for financing of terrorism is still in its early stages, but it is a possibility that it will further continue to grow in the future (Wang and Zhu, 2021).

5.1.3 International sanctions evasion

International sanctions are tools employed to restrict or suspend economic and commercial relations between a particular country, individuals or entities and the governments imposing the sanctions. International sanctions can also refer to restrictions to areas such as communications or diplomatic relations (Ministry of Foreign Affairs Finland, n.d.). Cryptocurrency usage is an alternative for entities and individuals to evade financial sanctions. Sanctions are a powerful tool to influence the behaviour of other countries. In particular, the USA has been able to employ sanctions as a powerful diplomatic tool. The US dollar is considered as the world's reserve currency, with global notarization. Central banks are at the centre of sanctions enforcement. Cryptocurrencies can diminish the power of central banks and circumvent the impact of sanctions (Flitter and Yaffe-Bellany, 2022). Notably North Korea and Iran have become notorious in their cryptocurrency usage to evade sanctions. Since 2006, North Korea has been subject to the UN's sanctions which have been strengthened over the years in an effort to target North Korea's nuclear and ballistic missile programs. Moreover, North Korea has been suspected of using cryptocurrencies and cyber-attacks to fund the country's missile programs, amounting minimum of $170 million by the UN Security Council estimate (Bartlett, 2022; UN Security Council, 2019). Iran's Bitcoin mining revenue has been found to be used to minimize the financial losses resulting from sanctions on Iran's ability to sell oil (International Institute for Strategic Studies, 2022). Russian elites are suspected of using cryptocurrencies to bypass international sanctions launched in reaction to the Russian invasion in Ukraine. This would not come as a surprise as Russia is the third largest cryptocurrency mining country in the world (Pismennaya et al., 2022). Legislative bodies all over the world have raised interest in the governance of cryptocurrencies to enforce sanctions as cryptocurrency has the ability to undermine nations' political decisions.

5.1.4 Ransomware

Ransomware is a form of cybercrime where perpetrators block access to computer systems or threaten to leak sensitive data unless a ransom is paid by the victim (Peters, 2022). An alarming trend has surfaced among cryptocurrency users where hospital information systems are hacked by infiltrators encrypting the victims' information and demanding payment in cryptocurrency. This can become life-threatening and in most cases, the authorities must bend to the infiltrators' demands to ensue patient safety (Brandom, 2017, Finnegan, 2019, and Mack, 2021). Ransomware attacks can produce wide-spread economic disruptions. In 2021, Colonial Pipeline, an American oil pipeline system carrying gasoline and jet fuel, was attacked by cyber criminals who had been able to infiltrate the company's computer system and shut it down. Colonial Pipeline was forced to pay $4.3 million, roughly 75 Bitcoins at that time, to the perpetrators. The ransomware attack prompted fuel shortages and spikes in gasoline prices in the market. Longer disruptions in fuel supply chains could have caused chaos in the markets globally (Perlroth et al., 2021). A cyber-attack on the world's largest meat processor, JBS, resulted in a ransom payment of $11 million equivalent in Bitcoins after the attack caused the shutdown of its plants in the USA, Canada and Australia (Bunge, 2021)

5.2 Summary of findings

Based on the example cases of illicit activities linked to cryptocurrencies, it is apparent that cryptocurrency has multiple applications in transnational organized crime schemes. The nature of cryptocurrencies' pseudo-anonymity attracts criminals as it can be a powerful tool to conduct money laundering, sanctions evasion, ransomware, and other financing of illicit activities. Criminal conduct of cryptocurrencies is a global issue that causes vast financial damages to economies.

The following chapter will provide insights to the case study and what aspects of El Salvadoran society factored in the adaptation of Bitcoin as a legal tender.

6 El Salvador

6.1 Country background

Country background is provided to illustrate the environment in which such an ambitious programme of cryptocurrency adoption has been launched. It is crucial to understand the underlying reasons of why a country would endeavour to adopt cryptocurrency as a legal tender and what effects it can have on the country's economy and society.

6.1.1 Economy

El Salvador's economic growth has been minimal during the 21st century. El Salvador can be considered a developing country according to the International Monetary Fund's definition due to its low economic performance (IMF, n.d.). El Salvador fosters a service-oriented economy, importing consumer goods and exporting labour to the United States, Canada, and Australia (Gammage, 2006). The economic strengths stem from its dollarized economy which provides El Salvador low and stable rates of inflation compared to, for instance, Argentina where the legal tender is Argentine peso and inflation rates run rampant (Allianz, 2022). The Salvadoran economy is estimated by the World Bank to grow 2.2 per cent in 2022 and 2.0 per cent in 2023 (World Bank, n.d.). Per capita income in El Salvador is approximately $4,000 annually which is extremely low by global standards (O'Neill, 2022). El Salvador's economic weaknesses are high fiscal deficit and public debt. El Salvador's economy is structurally vulnerable to external shocks due to lack of export diversification and high dependency on the USA through remittance payments and USD inflows. The USA is El Salvador's biggest trading partner in export and import activities (Allianz, 2022). The Salvadoran economy is facing liquidity risks. The fiscal deficit increased substantially as a result of a decrease in revenues and higher pandemic-related spending. It is expected that El Salvador cannot return to pre-COVID19 pandemic fiscal deficits (Allianz, 2022).

El Salvador could face the risk of default on its obligations as almost 90 per cent of El Salvador’s GDP consists of debt (World Bank, 2022). It has been speculated that it will continue to grow due to the Bitcoin adoption (Sigalos, 2022). The IMF estimates that El Salvador’s public debt may reach 96 per cent of GDP by 2026 (IMF, 2022). The public debt started to rapidly increase in 2017 when transition costs from the implementation of pension reform exerted pressure on public finances. This resulted in El Salvador acquiring debt to meet its commitments. Moreover, the rate of interest on debt has increased at a higher rate compared to El Salvador’s public revenue which has put constant pressure on public finances (World Bank, n.d.). El Salvador’s interest payments represent a considerable percentage of the country's GDP. According to the IMF interest payments are expected to represent 4.7 per cent of the country’s GDP (IMF, 2022).

The USA has issued stimulus packages to support demand for El Salvador’s exports. The country, however, is extremely reliant on global commodity prices, especially of oil. Foreign direct investment to El Salvador has been decreasing given the sluggish growth prospects and high levels of uncertainty in the economy (US International Trade Administration, 2021). Lack of investor confidence in poorly managed macroeconomic policies and strained relations with the USA, after the passage of the controversial Bitcoin law, has decreased private investment into the country (Allianz, 2022). S&P Global data estimates that El Salvador’s costs associated with insuring against sovereign debt default are reaching a multi-year high (Kraemer, et al., 2020). This makes El Salvador’s loans more expensive and inaccessible.

The main source of household income is derived from remittances with roughly 24 per cent of GDP was purely remittance payments, most originating from the USA. A remittance payment is defined as capital sent from one party to other (The Global Economy, 2020). Furthermore, El Salvador ranks as 7th most remittance-benefitting country in the world (World Bank, 2020). Migration and migrants sending remittances regulates the Salvadoran economy by alleviating foreign exchange constraints, compensating declining export prices and volumes, and limiting the excess labour in the country. Remittance payments enables elites to generate income from the flow of capital and labour, thus reducing direct and indirect poverty in El Salvador. Increasing migration and remittances have increased the size of the financial sector in El Salvador (Gammage, 2006). In most vulnerable communities, the citizens live in a cash economy and El Salvador is no different to the status quo (Lant, 2017). Most remittances are transferred via traditional financial intermediaries, but a substantial number are couriered to remote towns. Gammage estimates that over 30 per cent of all remittance services are informal couriers (Gammage, 2006). Employing these couriers further drives up the costs related to remittance payments which can be over a half of the remittance value (Vigna and Casey, 2015: 186-218; Campbell-Verduyn, 2018). One of the main reasons of El Salvador embracing Bitcoin as a legal tender is the possibility of increasing efficiency in international remittances. Using Bitcoin in remittance payments could potentially lower the transfer costs and make receiving the payments faster. However, it is still unclear whether remittance payments are enough to compensate for the loss of purchasing power from the rise in inflation (Arslanian, et al., 2021).

Migration and remittances fostered El Salvador’s transition to a dollarized economy (Gammage, 2006). El Salvador is a dollarized economy and thus, the Salvadoran central bank lacks the tools to fight inflation. Instead, El Salvador uses fiscal tools, such as lowering import tariffs on commodities (Hira and Dean, 2004). A dollarized economy stabilises the national accounts, improves foreign investment inflows, and decreases inflation rates. El Salvador’s private sectors and the government benefits from dollarization’s help in international capital markets. Dollarization may have improved El Salvador’s macroeconomic accounts, but it damages exporters and increases external borrowing costs. Furthermore, dollarization can perpetuate or exacerbate deficits by unbalancing the imports and exports (Hira and Dean, 2004). Dollarization’s benefits are perceived to be out of reach for the most vulnerable groups in society, as is the case with shifts to macroeconomic and trade liberalization (De Nicolo, 2003). Therefore, a majority of El Salvador’s population cannot enjoy the benefits of dollarization in their society. Hira and Dean argue in *Distributional effects of dollarisation: the Latin American case* that opposition for dollarization in El Salvador is low, but it can provide grounds for future opposition if the economy continues the stagnate (Hira and Dean, 2004: 461–482). It could be speculated that behind the Bitcoin craze in El Salvador lies an anti-dollarization motive and hopes to detach from the USA influence.

El Salvador has been able to achieve structural reforms in its economy such as trade liberalization and privatization of state holdings (Allianz, 2022). Conducting business activities in El Salvador remains challenging. El Salvador was ranked the 91st out of 190 countries in which to do business by the World Bank's index in 2020 as the country lags behind on protecting minority investors and enforcing business contracts (World Bank, n.d.). Moreover, issues in Salvadoran society, such as gang violence, deter businesses and discourages inflow of investments (Allianz, 2022).

Economic challenges persist for El Salvador's current economic model. The need for reforms in fiscal sustainability is critical to ensue economic growth in the future. Weak economic performance has far-ranging implications such as increasing migration out of the country, social exclusion, and insecurity (Orozco, 2022). The high level of public debt with low economic growth can pose threats to El Salvador's economy in the medium and long term, which raises the question whether the large investment in Bitcoin is reasonable or beneficial.

6.1.2 Politics

El Salvador's political climate has been in turmoil ever since the civil war from 1979 to 1992. El Salvador is an independent country with a constitutional multiparty republic and democratically elected government. In 2019, Nayib Bukele was elected as the president of El Salvador. He has gained recognition for breaking the traditional El Salvadorian political systems of local parties and actively participating in governing from social networks such as Twitter (Human Rights Watch, 2022). International surveillance perceived the voting result as free and accurate (United States Department of State, 2021). NGOs have raised concerns over the deterioration of democracy in El Salvador (Wola, 2021). President Bukele’s government is reported to be undermining basic democratic checks and balances. In 2021, Bukele dismissed and replaced Supreme Court judges who opposed him and passed laws to further dismiss lower-level juridical bodies. Moreover, despite constitutional prohibition, El Salvador’s Constitutional Chamber of the Supreme Court granted Bukele to run for re-election (Human Rights Watch, 2022). Bukele has also been credited to sending soldiers from the Salvadoran Army into the Legislative Assembly building to coerce the approval of $109 million loan for law enforcement and military equipment from the USA. The event has been condemned as the first major political crisis since the end of the civil war (McDonnell and Renderos, 2020). The Salvadoran government has deported multiple foreign journalists who have vocally opposed Bukele and harassed human rights groups (Congressional Research Service, 2021).

Yet, Bukele has enjoyed vast support from El Salvadorans since taking office in 2019. The approval rate has been over 75 per cent during the presidency, notably one of the highest ratings of any Salvadoran president (Vasquez, 2022). He has gained sympathy of El Salvadorans by realigning public spending to reduce extreme poverty. Bukele’s rise in popularity was largely contributed to decreasing the number of extreme poverty for the first time in El Salvador’s contemporary history alongside raising minimum wage up to 20 per cent (LatinNews, 2021; The Economist, 2021). Bukele’s implementation of a territorial control plan to tackle gang activities has been perceived as one of the most successful policies. The government’s reaction to COVID-19 pandemic has earned Bukele praise among El Salvadorans (Blitzer, 2022; Lomeli, 2021). These improvement show more concrete effects on the citizens’ everyday lives and thus, it could be the reason why there has been so little domestic criticism of Bukele’s actions. It is also worth to note that many El Salvadorans have low expectations of government officials: in 2018 it was estimated that mere 28 per cent of El Salvador’s population supported democracy as the preferred form of government (Zovatto, 2018; Romero, 2022).

6.1.3 Dependency on the USA

El Salvador and the USA established diplomatic relations in 1863 after El Salvador gained independence from Spain. The USA is major political and economic partner to El Salvador, reflected in many economic-commercial development and cooperation projects. Moreover, there are over 2 million Salvadorans living in the USA (US Embassy, n.d.). Remittance payments from Salvadorans living in the USA accounts for more than 20 per cent of El Salvador's GDP (Bremmer, 2021). El Salvador's financial stability is especially reliant on USA's foreign monetary aid. Previously El Salvador had its own legal tender, the colón, but in 2001, El Salvador decided to take US dollar as their official currency. The reasoning behind adopting the US dollar as legal tender was to ensure the monetary stability and reduce the interest rates (Frankel, 2021). The USA has granted over $4.4 billion through USAID and its predecessor US Government programs to El Salvador's economy. The US is also the largest Official Development Assistance (ODA) donor to El Salvador with total donations of $185 million (Foreign Assistance, 2022). The objective behind USA's funding to El Salvador has been to mitigate the emigration from El Salvador. In 2019, most foreign aids were suspended due to El Salvador's government's failure to address irregular migration to the USA. However, in 2020 the US Congress approved $411 million for El Salvador to implement migration strategy through bilateral assistance or via the Central American Regional Security Initiative (CARSI) (US Department of State, 2021; Seelke, 2020). The USA is the main supplier of foreign direct investment to El Salvador. Furthermore, the USA is the largest trading partner for El Salvador, being the destination for over 40 per cent of Salvadoran export (Seelke, 2012). Moreover, the USA has the largest share of voting influence on the IMF's board of directors which can affect El Salvador's plan of obtaining loans from IMF, if they do not have good relations with the USA (McDonald and Vizcaino, 2022).

El Salvador's and the USA's relations differ from other Central American countries. El Salvador remained uninvolved from US military intervention until the 1980s whereas US military have had military activities in the surrounding countries years before El Salvador. During the civil war, El Salvador was the largest recipient of US military hardware in the Western Hemisphere. During the 80s the USA was heavily involved El Salvador and Latin America via extensive funding to deter the spread of communism (McKinney, 2015). Historically, El Salvador has not raised the USA's interest until communist groups gained popularity in Cuba and Nicaragua. El Salvador was deemed to be the next to adopt communist ideologies and thus, the USA increased financial support for the Salvadoran military and regime. For the financial support to continue, the USA required biannual confirmation of improvements on human rights in El Salvador (Milz, 2021). The USA's involvement in financing military activities in El Salvador has had a major impact for the relationship between USA and El Salvador. Foreign Military Financing (FMF) program funds foreign countries' purchases of US military equipment and services. In return, El Salvador has allowed USA's military aircraft to use El Salvador's airports. Since 2016, El Salvador alone has received approximately $15 million which includes $1.9 million in 2020 (Goodman, 2020).

In 2019, most of US foreign assistance to El Salvador was cut off under Trump's administration (Clay, 2019). Moreover, in late 2020, the FMF funding was cut down (Goodman, 2020). Withdrawal of foreign assistance and military funding has created conflicts between the USA and El Salvador, in which the latter's economy and social stability is reliant on the foreign monetary aid. This could have been the catalyst for Bitcoin adoption in El Salvador. Reducing the reliance on the US dollar could allow El Salvador to gain more independence over its politics, finances and society (Arslanian, 2021). Bukele administration supporters claim that top American newspapers have targeted Bukele as he is not pursuing the interests of US Embassy but of the Salvadoran people (Patricio, 2021). The USA's dominance in the international systems can be attributed to its massive foreign aid policies which aims to stimulate socio-economic development in foreign countries and to promote the USA's foreign policy interests in the recipient countries. In 2021, the USA spent 50 billion on foreign funding purposes in almost 100 countries (USAID, n.d.; Salvador Santino, 2022). Fleck and Kilby claim in *Changing Aid Regimes? U.S. Foreign*

Aid from the Cold War to the War on Terror that the USA has used foreign funding as a way to preserve a USA-led international system and to bolster USA's security objectives (Fleck and Kilby 2010).

However, the USA's standing has been challenged by Chinese foreign aid and diplomacy expanding its global reach. The USA withdrawing its foreign aid to El Salvador provides an opportunity for China to promote its strategic interests abroad through foreign aid, loans, and grants (Jennings, 2017). Therefore, the USA might return its previous foreign funding to ensure that the USA's interests are served in the surrounding countries and governances.

El Salvador has been subjected to controversial operations by the USA such as involvement in El Salvador's Civil War and elections (Miller, 1988). Bukele has commented that the USA wants absolute subjugation or nothing (McDonald and Vizcaino, 2022). Cryptocurrency is a powerful political tool. Adopting Bitcoin has been the first step for El Salvador to gain independence from the USA's tight grip. It, however, can be short-lived as the USA exercises immense power over El Salvador's economy. It has been reported that relations between El Salvador and the USA have been temporarily put on hold due to increasing political conflicts between the two countries (Seelke, 2022).

6.1.4 Society and Environment

El Salvador is one of the most densely populated countries in Latin America, being home to 6 million people with half the population being below the age of 25 (United Nations Population Fund, n.d.). El Salvador has battled with complex social issue for decades. El Salvadorians' migration to the USA dates back to the 1930s and in 2020, Salvadorians constituted the second largest group of unauthorized Latin American migrants in the USA (Krogstad, 2021). Migration to the USA has been fuelled by perpetual violence and a combination of economic and humanitarian factors in El Salvador's society. El Salvador has one of the highest rates of homicide in the world and more than 50 per cent of homicide victims are between ages 15 and 29. In 2021, the estimated number of active gang members operating in El Salvador was 86,000. Violence related to gang activities has been epidemic in El Salvador for decades and it has been El Salvador’s major security concern. The gangs exert control over their territory and participate in organized crime activities, especially in drug trafficking. The government responses have ranged from negotiation to strict policies resulting in human rights violations (Pappier, 2022; OECD, n.d.). Women’s rights, LGBTQ+ rights, and disabled rights are limited at best and non-existent at worst in El Salvador’s society, as reported by human rights organizations (Human Rights Watch, 2021). A mere 39 per cent of El Salvadorians have access to traditional banking, leaving over 60 per cent unbanked and shunned from traditional financial services (Statista , 2022). Moreover, approximately 45 per cent of El Salvador’s population do not have any access to internet (WorldData, n.d.). In El Salvador, the rate of multidimensional poverty is 27.2 per cent, affecting over 500,000 households, of which majority are located in the rural areas. The COVID-19 pandemic has negatively impacted poverty eradication as income losses have resulted in extreme poverty increasing by 2.4 per cent, making El Salvador the second most affected country by poverty in Latin America (United Nations Children’s Fund, 2021).

El Salvador is exposed to natural hazards, such as floods, earthquakes, and volcanic eruptions due to its geographic location. El Salvador is extremely vulnerable to impacts of climate change which has resulted in frequent floods, droughts, and tropical storms. The effects of climate change disproportionally affects the vulnerable societies compared to wealthier populations (World Bank, 2022). The Salvadoran Ministry of Environment reported in 2020 that approximately 70 per cent of river waters in El Salvador are qualified as bad. The country is nearing water crisis due to the contamination of bodies of water which will increase climate change-based migration (The Salvadoran Ministry of Environment, 2020). The UNFPA, United Nations Population Fund, considers El Salvador as an extremely vulnerable country to climate change, with 95 per cent of the population living in high-risk areas. El Salvador, and its neighbouring countries Guatemala and Honduras, make up a region where widespread gang violence, poverty and extreme climate conditions have resulted in high levels of forced migration (United Nations Population Fund, n.d.). El Salvador is home to

30 volcanoes producing geothermal energy which is being harnessed in Bitcoin mining (Gaubert, 2021). However, in 2021 it was reported that at least 11 of every 100 households in El Salvador do not have direct access to electricity. Using energy for Bitcoin mining could result in acceleration of national inequality in the accessibility to energy (Artiga and López, 2021). Allowing excessive usage of electricity in Bitcoin mining is, at the very least, a questionable choice given that many citizens' basic needs are not resolved.

6.2 El Salvador and Bitcoin

El Salvador is pioneering on the adoption of Bitcoin as a legal tender. On 7th of September 2021, El Salvador officially became the first nation to make Bitcoin legal tender. For many onlookers, this endeavour serves as a test for nations with weak currencies or dollarized economies hoping to reduce their reliance on the US dollar. El Salvador, however, does not pursue the replacement of the US dollar as the official currency. According to the plans, the US dollar will continue to be a reference currency for accounting purposes and markets will be allowed freely determine the USD to Bitcoin exchange rate (Gorjon, 2021). Any taxes or previous obligations expressed in the US dollars can now be paid in Bitcoin. Bukele's government obtained approval to set up a fund amounting to $150 million at the Development Bank of El Salvador. This fund is said to be used to encourage the adoption of Bitcoin among the public and to allow Bitcoins to be converted to US dollars, and vice versa, outside of private exchanges (Renteria, 2021). The Salvadoran government has released a state-sponsored Bitcoin wallet app, the Chivo Wallet, that allows El Salvadorans to purchase goods in Bitcoins from the government's Bitcoin reserve. The Chivo Wallet can be installed for free, and the users are not charged for transaction fees (Gorjon, 2021). El Salvador's government owned over 2,000 Bitcoins as of 30th of June in 2022, ranking up the total investment of acquiring Bitcoins to over $100 million (Galdamez, 2022). It is still unclear what impact adopting Bitcoin will have on the valuation of El Salvador's currency reserves and its credit in capital markets. Bitcoin has not been able to surpass the US dollar in El Salvador, despite cryptocurrency advocates' wishes.

The process of submitting the bill detailing the Bitcoin’s adoption as legal tender to the Salvadoran Congress and getting it passed took mere days, which has created criticism in foreign countries, monetary institutions, and among the El Salvadorans. Bukele’s decision to proceed with the plan was the first governmental measure of his presidency that was widely rejected by the population, as they feared Bitcoin adaptation could have an adverse effect on their lives. Nevertheless, after the official launch of Bitcoin as a legal tender, protests have died down (CIVICUS, 2021).

Approximately a third of the world’s population does not have access to banking which is typical of developing countries such as El Salvador. The traditional banking sector does not see it as economically viable to serve these vulnerable communities and individuals (Stanford, 2021:190; Vigna and Casey, 2015: 190-218). Bitcoin as a legal tender could provide financial services to larger parts of the population. The traditional financial institutions have left a third of world’s population relying on extremely high remittance payment costs. Bitcoin is a highly attractive form of currency in vulnerable societies as it offers the ability to send and accept money quickly, cheaply, and freely. Before cryptocurrencies, this was the privilege of the few (Vigna and Casey, 2015:186-218). Remittance payments play a vital role in El Salvador’s economy and society. Bukele’s government’s goal is that majority of Salvadorans living in the USA would use Chivo to send remittances. Over 50 thousand Bitcoin ATMs are located in the USA for local usage and for sending remittances (Wade, 2022). Using Bitcoin in remittances is the most attractive option for the public as the transaction fees are fraction of what traditional channels charge. Ultimately, the usage of Chivo remittances is still low due to technical issues. The amount of remittances sent to El Salvador has increased by 3.9 per cent between January and May of 2022 when inspecting to the same time period in 2021. El Salvador received approximately $118 million more remittances, but only $52 million came through Chivo transactions (El Salvador News, 2022).

Bitcoin advocates and the Salvadorian government claim that El Salvador’s economy has benefited enormously from the adoption of Bitcoin. Especially the tourism industry has gained immense attraction from Bitcoin implementation (Galdamez, 2022). In 2021, El Salvador's GDP had for the first time in the nation's history growth in double-digits, as over 10 per cent growth was recorded. El Salvador's central bank, Banco Central De Reserva, reported in the first quarter of 2022 economic growth of 2.4 per cent. Furthermore, El Salvador's GDP growth is expected to reach 2.6 per cent by the end of the year (Banco Central de Reserva, 2022). Despite the economic growth, El Salvador's deficit is still high and debt-to-GDP ratio is estimated to grow up to 78 per cent in 2022. This has sparked fears that El Salvador may not be able to settle its obligations (TradingEconomics, n.d.). El Salvador would need to cash, that is, US dollars, to meet its debt obligations which are said to amount more than $1 billion (Sigalos, 2022). El Salvador has found itself in a difficult position as international lenders are demonstrating their anxieties through unwillingness to lend money to a country using tax money on extreme price-volatile cryptocurrencies. Bukele's administration would need to persuade lenders that the government is fiscally stable, otherwise borrowing money will become more expensive (Bremmer, 2021).

The adoption of Bitcoin has moved slower than expected, which is mostly credited to Bitcoin's price-volatility. Bitcoins' value has decreased over 70 per cent since the price peak of November 2021 (Statista, n.d.). The Salvadoran government is facing the consequences of cryptocurrency bear markets. As of now, the government has approximately $58 million in unrealized losses from buying Bitcoins (McDonald, 2022). It has been estimated that El Salvador has spent roughly $425 million on the Bitcoin endeavour (Sigalos, 2022). Moreover, El Salvador cannot print cash as to save their fiscal policy as only the US Federal Reserve can do it. It is very unlikely that the USA would risk their own fiscal stability to support El Salvador.

Furthermore, El Salvador is facing technical challenges in the attempt to make Bitcoin part of its society. The blockchain technology requires a lot of capital investments, namely energy resources and accessible financial services. Part of El Salvador's society does not have access to electricity or the internet, which makes Bitcoin inaccessible to them. Moreover, Bukele's administration will have to educate the population about how to use cryptocurrency. The Bitcoin wallet Chivo has over 4 million downloads which represents over half of El Salvador's population. It is, however, reported by the National Bureau of Economic Research that only 10 per cent of Chivo users continue to use the app after spending the $30 free incentive (Kurmanaev and Avelar, 2022). It will be a challenge to be able to convince El Salvadorans to fully adopt Bitcoin as a legal tender, especially when the US dollar offers much more stable price fluctuations compared to Bitcoin. Not to mention, many El Salvadorans still live in a cash economy where the US dollar is the only option for money.

Bukele's administration has not taken into account safety aspects of Bitcoin usage. El Salvador would have to adhere to international legislations such as Anti-Money Laundering (AML) and Combating of Financing of Terrorism (CFT) regulations. Therefore, El Salvador would have to establish user verification processes and supervision that is in line with the international agreements to mitigate security risks (Arslanian et al., 2021).

Anders F. Cifuentes argues that increasing inflation, inefficient fiscal policies, and political instability collaterally results in the accelerated growth of cryptocurrencies (Cifuentes, 2018). All these aspects can be found in El Salvador, whose economic growth has been minimal even after adopting the US dollar. The political sphere has experienced turmoil and social instability has been the norm in El Salvador. Therefore, El Salvadorians were more receptive to the integration of Bitcoin. Adding a charismatic leader, and hype surrounding cryptocurrency during its bull markets gave El Salvador the opportunity to accept Bitcoins as a legal tender.

El Salvador seems to be counting on that the USA will limit their actions to public criticism, all while continuing to financially support El Salvador to avoid large-scale border crisis. If, however, the USA interferes in the Bitcoin adaptation, they will have the upper hand in the situation. El Salvador has few alternatives to keep the economy afloat if the USA chooses to limit their financial support. Bukele’s government could nationalize the country's pension plans or pressure local banks for funds. Alternatively, El Salvador could cooperate with China which has not criticized the Bitcoin endeavour. China is one of the top trading partners of South America’s countries and a leading supplier of foreign direct investment (Roy, 2022). China has increased its investment in El Salvador, such as a $40 million cultural centre and $500 million for other infrastructure projects (Ellis, 2021).

It could be assumed that Bukele’s administration will refuse to back down on the Bitcoin endeavour at any price. Bukele is adamant that Bitcoin adoption will be successful and worth the investment (McDonald, 2022). Cryptocurrency supporters claim that it will take longer than a year to fully see the benefits of adopting cryptocurrency as a legal tender. Advocates speculate that El Salvador could, in the future, become a hub of fintech, creating job opportunities and increasing tourism in the area (McDonald, 2022).

6.3 Global reaction

The global reaction to Bitcoin adoption has varied greatly. One of the most vocal critics has been the International Monetary Fund which has continuously cautioned El Salvador regarding significant economic harm stemming from granting Bitcoin legal status. The IMF speculates that having Bitcoin alongside the US dollar could squander time and resources and jeopardize government revenues. The IMF argues that El Salvador’s monetary policy could lose its power by surrendering monetary autonomy to a fluctuating outside influence. Furthermore, as long as El Salvador will not back down on the Bitcoin endeavour, the loan renegotiations with IMF are at a stalemate. Bitcoin poses a major obstacle to El Salvador’s efforts to obtain a $1.3 billion loan from IMF. A deal between the IMF and El Salvador would help cover the government’s short-term obligations and assist access to other multilateral loans. The IMF recommends El Salvador to undergo fiscal adjustments, improve governance, implement revised AML laws, and remove Bitcoin’s status as a legal tender in the country (Adrian and Weeks-Brown, 2021; Drakopoulos et al., 2021; Lagarde, 2018; IMF Article IV, 2022)

The USA has remained concerned about the impacts Bitcoin adoption can have on El Salvador's financial system and how it can impact the number of migrants to the USA. US Senators have drafted bipartisan legislation, the Accountability for Cryptocurrency in El Salvador Act (ACES), about mitigating El Salvador's potential risks to the US financial system (Foreign Relations Committee, 2022). Bukele has publicly reacted to USA's criticism by calling on US senators to stay out of El Salvador's internal affairs. No official statement can be found about the USA's stand on the issue; however it can be assumed that the USA is closely monitoring the adoption. US senators have expressed concerns over Bitcoin weakening the power of the USA government's sanctions policy. Diplomatic relations between the two countries has deteriorated after the White House denounced publicly corruption cases in Bukele's government (Euro News, 2022).

The president of the European Central Bank, Christine Lagarde, has voiced concerns about cryptocurrencies being prone to money laundering and the fact that cryptocurrency does not have intrinsic value. Lagarde calls for stricter regulations to secure investors. The European Central Bank's view on cryptocurrency is states that cryptocurrency is not money or a currency, rather than a highly speculative investment asset. El Salvador's endeavour has not been able to change ECB's stance on cryptocurrencies (Browne, 2022).

In addition, the Central American Institute for Fiscal Studies (ECEFI) strongly suggested that the Bitcoin law should be repealed. ECEFI also has stated that Bitcoin has not caused El Salvador's financial problems but amplified them. (Renteria et al., 2022). The World Bank has stated that it will not support El Salvador's Bitcoin adoption, citing environmental and transparency issues (Farzan, 2021). The Bank for International Settlements (BIS) has described the usage of Bitcoin in El Salvador as an interesting experiment, but it has not changed its views on cryptocurrency, stating that Bitcoin and any other cryptocurrency fails as a means of payment test (Milliken & Jones, 2021).

The market responded negatively to the Bitcoin adoption immediately, as can be seen in the sharp decrease in El Salvador's long and short-term bond prices. Bond holders are speculating whether El Salvador is able to pay their obligations in 2023 (Vizcaino and Maki, 2022). International rating agencies, such as Fitch and Moody's, decreased El Salvador's credit score, citing the unpredictability of the country's economy after adopting Bitcoin as legal tender. As of now, El Salvador's rating on Moody's is Caa3, a sharp decrease from the previous given rating of Caa1. Caa3 rating illustrates that El Salvador obligations are judged to be at a poor standing and nearing default with extremely high credit risk. This means that El Salvador's bonds can be considered highly speculative and categorized as "junk" (Moody's, 2022). In fact, Fitch's rating is aligned with Moody's, which decreased its rating from B- to CCC (Fitch Ratings, 2022). The notable worsening state of governance in El Salvador, Bitcoin adoption, and the heightening of tensions in the relations between El Salvador and the USA have affected El Salvador's credit rating significantly. Lower credit rating hinders El Salvador's chances of obtaining loans and causes El Salvador to pay premium interest rates on its debt obligations (Gorjon, 2021).

While international communities had mixed reactions to the news about El Salvador's Bitcoin adoption, other countries with aspirations to make cryptocurrency a legal tender are following El Salvador's example. The Central African Republic (CAR) proclaimed that they will introduce Bitcoin as a legal tender alongside the French-backed CFA franc. CAR is one of the poorest nations in the world, with only 4 per cent of its population having access to the internet. The introduction of Bitcoin as a legal tender in CAR could be seen as an attempt to decrease the French influence in CAR, just like El Salvador is aiming to limit the USA's power in the country (Margulies, 2022).

Most of the support for El Salvador has come from individual Bitcoin enthusiasts and groups outside of the country. Bitcoin investor Max Keiser supports the adoption of Bitcoin as a legal tender and claims that the future of El Salvador's economy will improve as he speculates that Bitcoin's value will increase and, therefore, generate positive domino effects (González Madrid, 2022). Bryan Hernandez argues in *CoinTelegraph* that Bitcoin as a legal tender is assisting El Salvador to regain its monetary sovereignty and providing opportunities to solve the country's problems (Hernandez, 2022). The Central American Bank for Economic Integration (CABEI) is working alongside El Salvador to assist in the Bitcoin implementation as a legal tender. CABEI's president, Dante Mossi, has supported El Salvador, saying that Bitcoin brings innovation and opportunities to the country (CABEI, 2022). It is worth to note that CABEI is based in Honduras, whose economic environment is very similar to El Salvador. Both are extremely reliant on outside remittances and the USA's influence.

Despite facing major opposition from foreign countries and institutions like the International Monetary Fund, president Bukele and his administration have repeatedly made it clear that they are not reversing the Bitcoin laws. Bukele's administration is dedicated to the continuation of keeping Bitcoin as a legal tender in El Salvador at any price (Galdamez, 2022).

7 Estimates for the future

It is extremely unlikely that Bitcoin, or other cryptocurrency, could ever surpass traditional fiat money. Moreover, cryptocurrencies are highly speculative and too volatile to be considered as a currency. The author of this paper hypothesizes that cryptocurrency will receive definite classification in the following years as central banks and international institutions start implementing stricter regulation on cryptocurrencies. Based on previous research, most suitable definition of cryptocurrencies would describe cryptocurrency as speculative tokens of no intrinsic value.

The increasing inflation rates cause distrust in the markets which may influence the adaption of cryptocurrencies. The inflation rate of August 2022 in the European Union member countries raged from 9.5 per cent to 24.8 per cent, in the USA was reported 8.3 per cent, and in Central America the inflation rate ranged between 1.89 per cent and 114.1 per cent. (TradingEconomics, 2022). If the citizens do not trust the government to represent their interests, there will not be trust in the monetary system build around the economy of question. Thus, when given a chance, the population will shift to alternatives which they regard trustworthy (Vigna and Casey, 2015:17). Cryptocurrencies exploit the distrust towards governments and to avoid shift towards cryptocurrency, governments should bolster stable and transparent institutions (Gonzálvez-Gallego and Concepción Pérez-Cárceles, 2021). The IMF recommends that governments should prioritize strengthening of macroeconomic policies and improving payment systems to create trust between financial institutions and the population (Drakopoulos et al., 2021).

The current traditional financial system has failed many countries. Developing countries are closely observing El Salvador's experiment to assess whether they could also employ cryptocurrency within their borders (Arslanian, 2021). Lebanon, Argentina, and Venezuela, to new a few, have seen rise in popularity of Bitcoins amid rampant hyperinflation. Venezuela especially has suffered from extreme hyperinflation, in 2021 inflation rate reached close to 700 per cent (Artiga and López, 2021). If a nation's economy's volatility is higher than the fluctuation of cryptocurrency market value, cryptocurrencies pose a potential to supplement fiat currency (Cifuentes, 2019). Moreover, the importance of fast and cheap remittance payments has accelerated the adoption of cryptocurrency. If inflation continues to grow while the economies are still recovering from COVID-19 and navigating energy crisis, remittances will continue to grow its importance on the developing economies and thus, increasing cryptocurrency usage. Bitcoin is highly attractive form of currency in vulnerable societies as it offers the ability to send and accept money quickly, cheaply, and freely. Before cryptocurrencies, this was the privilege of the few. Bitcoins are a mean of bringing financial freedom to communities which the central banks have failed to cater to (Stanford, 2021:185-190). In conscience, outright banning cryptocurrencies, for their linkages to transnational crime, can have negative impacts on vulnerable societies and cause societal restlessness.

Bitcoin adoption in El Salvador has proven to be a very successful marketing campaign despite the negative ramifications on Salvadoran economy. Before the Bitcoin endeavour, vast majority of the world had overlooked El Salvador. Bukele was able to raise El Salvador as a part of world politics relatively cheaply. Countries such as Costa Rica invests billions of dollars on their country marketing campaigns (Sigalos, 2022). Bitcoin allowed for the first-time developing countries an opportunity to gain financial independence or at least a sense of independence which can play paramount of role in the administration’s popularity and in the country morale. Bitcoin advocates promote the notion of empowerment and reduced reliance of central banks. Bitcoin, however, was never intended to the financially vulnerable or excluded; It was created by and for tech-savvy, privileged, and predominantly male elite (Stanford, 2021). Therefore the application of Bitcoin in El Salvador does pose dubious motivations. The Bitcoin experiment will be expensive for current and future Salvadoran generations as Bitcoin can only represent a false solution to maintain elites and exploitation of resources, not long-lasting sustainable solutions (Artiga and López, 2021).

It is highly likely that cryptocurrencies will not fully integrate into traditional monetary systems or investing spheres. However, cryptocurrencies have inspired central banks to consider creating their own, state-backed virtual currency. The IMF suggests that central bank notarized digital currencies may assist in the need of better payment technologies (Drakopoulos et al., 2021). Federal Reserve Chair, Jerome Powell, has stated that the main incentive for the USA to create own cryptocurrency is to eliminate the usage of other uncontrollable cryptocurrencies in the USA (Smialek, 2022). It can be assumed that the USA will closely monitor the cryptocurrency industry to stay on top of competition and to make sure its foreign politic interests are served. The European Central Bank, ECB, is also experimenting with creating a digital euro. The ECB is not aiming for replacing cash but to increase accessibility and inclusion. The investigation of digital euro started in 2021 and it will conclude in 2023 (European Central Bank, n.d.). If central banks decide to create virtual versions of traditional fiat money, they could completely override cryptocurrencies' power in the market, making cryptocurrency obsolete. Central Bank's digital currency would enjoy the same level of confidence and stability as cash since both currencies would have backing of the central bank. Digital currency would be more secure as it would be under central banks' surveillance and thus, providing similar services as cryptocurrency but with improved security aspects.

It is abundantly clear that organized crime will continue to employ emerging technologies in their activities (Madsen, 2009:123). However, legislations are catching up on the blockchain technology advancements, and it is highly likely that surveillance will deter some illicit usage of cryptocurrency. Hanke et al., suggests that Bitcoin adopters will be ensnared in a web of regulations once the regulatory bodies are able to implement governance over cryptocurrency transactions (Hanke et al., 2021).

Cryptocurrency's blockchain technology could be utilized in finance for the creation of more secure and efficient record-keeping. Blockchain technology could improve transparency and the level of trust in the financial system as the record ledger would be open for inspection (Wolf, 2019). It is likely that the blockchain technology will be applied more widely across industries and countries. Cryptocurrencies could be developed for the greater good, however the benefits would likely be overshadowed by implications and linkages to transnational crime.

The main attraction to Bitcoin and other cryptocurrency stemmed from fear of missing out. It is probable that cryptocurrencies will cease to exist once the main hype has died down, especially if the cryptocurrency markets remain bearish and central banks begin offering their own virtual currencies.

8 Conclusion

Cryptocurrency revolutionized transferring of capital. Cryptocurrency shifted some authority from centralized central banks to decentralized virtual communities. Cryptocurrency, however, cannot be classified as a currency as it does not fit into the definition of a currency. Moreover, cryptocurrency value is highly volatile which makes it incredibly risky as an investment and in the application of a currency. The research hypothesis assuming that cryptocurrencies employ new channels of illicit activities was proven correct. The research found linkages between transnational crime and cryptocurrency applications. Criminals have inflected cryptocurrency on every form of illicit activities due to the anonymous nature of cryptocurrency. Most prominently, cryptocurrency characteristics were exploited in money laundering which has significant impact on economies. Cryptocurrency was proven to be an effective tool for governments and individuals to evade sanctions which affects the diplomatic power of influencing the behaviour of the sanctioned nations and persons. Ransomware attacks on hospitals and other societally vulnerable institutions demanding cryptocurrency as a ransom threaten nations' security. Moreover, the relationship between the usage of cryptocurrency and illicit transactions of narcotics and human trafficking was found in the research.

It is indisputable that cryptocurrencies enjoy vast support from wealthy investors and developing nations. For investors, the boosterism creates an illusion of trust which cryptocurrencies desperately need to survive in the long-term. For developing nations, it can be a desperate attempt to gain independence from its colonizer countries and utilize relatively cheap remittance transactions which play paramount of importance in many countries' economy. Therefore, cryptocurrency is not only an investment, but also an ideology of financial anarchism and a powerful political tool. Cryptocurrency advocates believe that cryptocurrency would reshape and improve people's lives worldwide and bring fortune to those who invest in it. Paul Vigna and Michael Casey describe this in *Cryptocurrency: How Bitcoin and Digital Money are Challenging the Global Economic Order* as a "Capitalism with radically altruistic bent" (Vigna and Casey, 2015:188). The ground-breaking blockchain technology could prove to be extremely useful for record-keeping in finance industry but for now, it only serves as a speculative investment asset.

The preliminary hypothesis of the success of El Salvador's Bitcoin endeavour was accurate. The markets and international institutions reacted negatively to the news of Bitcoin adoption in El Salvador. The endeavour was deemed a catastrophe by International Monetary Fund. El Salvador's economy is heading towards defaulting on its short-term obligations due to excessive buy-outs of Bitcoin. Bitcoin adoption has also severely damaged El Salvador's foreign relations to the USA and to IMF.

The research hypothesis presumed that cryptocurrency popularity will continue to grow regardless of the safety concerns. The hypothesis was proven correct as more and more countries adopt cryptocurrencies as a legal tender or accept the usage alongside the nation's own currency.

Traditional banks reject and criticize cryptocurrency adoption and usage due to lack of regulation and the risks associated with cryptocurrency. However, if traditional banks would have enjoyed full trust from the population and that banking services could have been catered to vulnerable communities, there would have not been any need for cryptocurrency. The legacy of the 2008's global financial crisis erode the trust build between the population and central banks. To a certain extent, traditional monetary systems and politics created the need for cryptocurrency. And now they must face the consequences of decentralized communities receiving partial authority over transactions.

The society itself is rapidly changing with new emerging technologies and challenges. Cryptocurrency has raised tensions between centralization and decentralization which effects can be seen across society. It is highly likely that governmental intervention will prevent the widespread of cryptocurrency. However, the ideology of decentralization has been planted into the minds of consumers and the population which can result in vast financial revolutions in the future.

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