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Between promise and peril: Bitcoin as a financial alternative in Yemen

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ABSTRACT

In the last decade, cryptocurrency has emerged as a major financial and technological phenomenon. This research explores the use of Bitcoin in Yemen. Yemen is a country currently facing a severe humanitarian and economic crisis. The study aims to analyze the opportunities offered by Bitcoin. These opportunities could help overcome traditional financial constraints. The research also examines the challenges that hinder its spread and use. An analytical descriptive methodology was used. The study looked at economic, legal, and social aspects. The results showed that Bitcoin provides real opportunities. It can facilitate financial transfers and offer alternatives to broken banking systems. However, it also faces significant challenges. These include the absence of a legal framework. Other challenges are weak infrastructure and the risks of security breaches and fraud. The research also addressed the legal stance towards these currencies, which remains unclear. The study concludes with recommendations. It provides suggestions for relevant authorities and users. The goal is to maximize benefits and reduce the risks of cryptocurrencies. It emphasizes the need for effective regulations. This will ensure safe and sustainable use.

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Bitcoin, financial alternative, criptocurrencies, inflation, digital currency

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1. INTRODUCTION

The world has seen rapid technological change in the last decade. This has led to new economic and financial concepts. Cryptocurrencies are the most notable example. Bitcoin is at their forefront. These currencies use decentralized "Blockchain" technology. They have revolutionized our ideas about cash and financial transactions. They present an alternative to traditional banking systems. Traditional systems rely on central authorities. The world is moving towards financial digitization. This raises a question. What is the impact of these technologies on developing countries? This is especially relevant for nations in exceptional circumstances, like Yemen. Yemen is currently facing a deep crisis. It is experiencing a humanitarian and economic disaster from ongoing conflict. This conflict has severely damaged infrastructure and essential services. The financial sector has been significantly impacted. Under these conditions, cryptocurrencies are gaining more attention. They are seen as a potential tool to bypass financial constraints. They could also help facilitate transactions. However, adopting this technology in an unstable environment is complex. It presents both opportunities and challenges. These require in-depth study. This research will explore Bitcoin and cryptocurrencies in Yemen. It focuses on the opportunities these technologies offer citizens and the financial sector. It also examines the challenges to their spread and use. The research will address economic, legal, and social aspects. It aims to provide a complete picture of digital currencies in Yemen today. It will also discuss their legal status. The research will provide recommendations for authorities and users. The goal is to enhance opportunities and reduce risks. (Khawrin Mohammed, 2022).

1.1 Problem Statement

The persistent financial and economic crisis in Yemen, exacerbated by war, hyperinflation, and the collapse of the formal banking sector, has created an urgent need for alternative financial systems. In this context, cryptocurrencies like Bitcoin have been proposed globally as a potential solution for nations facing monetary instability, offering features such as decentralization, censorship resistance, and accessibility. While a significant body of literature exists on the potential of cryptocurrencies in developed economies and their theoretical application in developing nations, a critical research gap remains regarding their specific suitability and practical implementation in a context as uniquely complex as Yemen's. Existing studies often not contribute to account for the confluence of extreme factors present in Yemen: the absence legal framework, severe infrastructural limitations, and deep-rooted economic vulnerabilities. Therefore, this study seeks to address this gap by investigating the extent to which cryptocurrencies, particularly Bitcoin, can serve as a viable solution to Yemen's financial woes. It will move beyond theoretical generalizations to explore the most prominent opportunities—such as facilitating remittances, enabling savings preservation, and allowing for basic commerce—alongside the severe challenges, including technological barriers, volatility, security risks, and the potential for exploitation in an unregulated and unstable environment. The research aims to provide a nuanced analysis that is specifically grounded in the realities of the Yemeni context.

1.2 Study Objectives

- Define the concept of cryptocurrencies and their key characteristics.
- Analyze the economic and social opportunities that cryptocurrencies can provide in Yemen.
- Identify the main challenges (economic, legal, security, social) facing the adoption and use of cryptocurrencies in Yemen.
- Provide recommendations for relevant authorities and users to maximize benefits and minimize risks associated with cryptocurrencies in Yemen.

2. METHODOLOGY

This study employs an analytical descriptive methodology, which is deemed the most appropriate approach for achieving the research objectives. This methodology facilitates both the systematic description of the phenomenon of cryptocurrency usage in Yemen and the critical analysis of the opportunities and challenges inherent within it. The descriptive component allows for the accurate portrayal of the current state of Bitcoin adoption, while the analytical component enables the identification of causal relationships, trends, and underlying factors influencing this emerging financial landscape. The research is based on a comprehensive review of secondary data due to the significant logistical and security constraints associated with conducting primary research in the Yemeni context. The data collection process involved a systematic gathering of information from the following sources: Academic Literature: Scholarly peer-reviewed journal articles, theses, and conference papers focusing on cryptocurrency adoption.

3. LITERATURE REVIEW

Abu Salih (2018) provides a foundational look at digital finance and e-commerce. It offers insights that fall under key themes for digital currency adoption.

3.1 Economic Opportunities and Market Integration

A central finding highlights the significant economic opportunities from digital finance. Abu Salih (2018) finds a positive relationship in the UAE between digital currencies and e-commerce. The study also finds a positive link between digital wallets and e-commerce. This suggests these technologies boost digital trade. They may improve transaction efficiency and expand market reach. They also align with the demands of a advanced digital economy. The study positions digital currencies as a viable part of modern commerce, not just a novelty.

3.2 Operational and Infrastructural Factors

The research also covers key operational aspects. Interestingly, Abu Salih's (2018) results show no major difficulties in applying digital currencies in the UAE. This finding is important. It implies the necessary infrastructure, and technological readiness may be more mature than thought. This presents a favorable environment for further adoption into the national economy.

3.3 Contextual Limitations and Future Research

The study confirms functional relationships and a conducive environment. However, it focuses more on the "if" than the "how" or "why." This highlights a gap in the legal and regulatory framework theme. The research does not deeply explore specific regulatory challenges or security concerns. It also does not address consumer protection laws. These are often major hurdles in other countries. Therefore, Abu Salih (2018) shows the market's potential and readiness. But it calls for more detailed analysis into the policies needed to sustainably use this potential. Bin Matouq (2020) provides a foundational understanding of Bitcoin. It identifies the core technology behind Bitcoin and its key operational challenges. A broader look at the literature shows that discussions on Bitcoin fall into three main themes. These are its technological and economic foundations, its risks and regulations, and its potential for future innovation.

3.4 Technological Mechanism and Economic Disruption

A central theme is Bitcoin's technology and its power to disrupt economics. Bin Matouq (2020) establishes that Bitcoin is a decentralized virtual currency. It is powered by blockchain technology and cryptography. This creates a "trustless" system for peer-to-peer value transfer. It eliminates the need for traditional financial intermediaries like banks.

3.5 Regulatory and Operational Risks

Research also focuses heavily on Bitcoin's substantial risks and challenges. Bin Matouq's (2020) findings are part of a larger consensus. The study notes its use for illicit activities and its weak international recognition. Legal scholars point to a major problem: there is no consistent global regulatory framework. This creates ambiguity for users, businesses, and governments. This legal gray area makes other risks worse, including:

- Market Volatility: Extreme price swings stop it from being a reliable currency or stable store of value.
- Security Vulnerabilities: The blockchain is secure, but the surrounding ecosystem is not. It is prone to exchange hacks, fraud, and theft.
- Compliance Challenges: Its pseudonymous nature creates problems for Anti-Money Laundering (AML) and Know Your Customer (KYC) rules. This reinforces its link to financial crimes.

This study accurately identifies Bitcoin's core mechanism and its main challenges. These elements are deeply connected. The same technological innovations that create economic opportunities also create its biggest regulatory problems. Bitcoin's future depends on balancing its disruptive potential with new regulations. These rules must mitigate its risks without stopping its innovation. Farah (2019) argues that virtual currencies are now an "imposed reality." Ignoring their legal and economic challenges will not resolve them. This highlights a consensus. Experts agree that proactive and insightful policymaking is essential. This is needed to navigate this new financial frontier. Another key theme is the defining characteristics of virtual currencies. These features distinguish them from traditional legal tender. Their most prominent feature is a decentralized nature. They operate without the oversight of a central authority, like a central bank (Farah, 2019). This autonomy is built on unique encryption and peer-to-peer technology. This technology ensures a high degree of anonymity for users and their transactions. Finally, the literature explores the economic opportunities from virtual currencies. They also offer new efficiencies. Their architecture lets users conduct exchanges rapidly and at a low cost. This removes many intermediaries and frictions found in traditional banking systems (Farah, 2019). This combination of speed, low cost, and anonymity is a significant advantage for users. It also presents a complex challenge for regulators. This tension forms the core of the ongoing debate about their global economic integration.

Al-Adham (2023) provides a foundational overview of cryptocurrency systems. It explains that the core of this system is a decentralized network of nodes. The study highlights those transactions occur directly between users. This is done through a peer-to-peer (P2P) mechanism. This process is facilitated by "Blockchain" technology. Blockchain acts as a distributed ledger. Encrypted transaction data is verified on this ledger. It is then distributed among all network participants. This ensures the ledger's integrity and validity. Crucially, this happens without a central clearinghouse. Furthermore, Al-Adham (2023) notes that new currency units are created by a computational process. This process is known as "mining." Mining is integral to managing the currency's supply. It is also essential for the network's security. Another critical theme is the novel governance model of cryptocurrencies. Specifically, they operate without a central authority. This stands in stark contrast to conventional fiat currencies. Traditional currencies are managed by central banks. The work of Al-Adham (2023) is central here. Its primary finding is that the system works entirely "without the intervention or control of a central bank or any intermediary." This principle of decentralization is not just a technical feature. It is a core ideological and functional attribute. It implies a shift from a trust-based system to a verification-based system. Instead of trusting a bank or government, users trust cryptographic proof and consensus. This forms the basis for later discussions on both risks and opportunities. The unique characteristics of cryptocurrencies create significant challenges for regulators worldwide. The features described by Al-Adham (2023) complicate traditional financial regulation. These features are decentralization, encryption, and cross-border P2P transfers. The study's point about no intermediaries is the main reason regulators struggle. They face issues with consumer protection, Anti-Money Laundering (AML) enforcement, and taxation. Al-Adham (2023) mentions reviewing definitions from "international organizations and central banks." This underscores a preliminary step authorities must take: simply classifying these assets. Is it a currency, a commodity, security, or something new? The answer dictates the entire regulatory approach. Other studies in this section would explore this question. Finally, the economic implications of cryptocurrencies present both opportunities and risks. The mechanism described by Al-Adham (2023) lays the groundwork for this. The opportunity lies in creating a more inclusive financial system. It can also be more efficient by reducing transaction costs. This happens by removing intermediaries.

Amal (2020) provides a comprehensive examination of cryptocurrencies. It uses three interconnected lenses: their defining features, global regulatory stances, and their associated challenges and opportunities. Instead of looking at sources in isolation, this review synthesizes findings under three core themes. These themes are economic potential, legal fragmentation, and systemic risks. The goal is to move beyond simple description toward meaningful analysis. A dominant theme in literature is the transformative potential of cryptocurrencies. This potential is primarily anchored in blockchain technology. Scholars consistently highlight blockchain's capacity for decentralized and transparent transactions. They see this as the cornerstone of crypto's value proposition. This innovation is viewed as more than just a financial tool. It is considered a paradigm shift in trust architecture. It replaces intermediaries with algorithmic consensus. Proponents argue that cryptocurrencies can foster financial inclusion. They can also reduce cross-border transaction costs. Furthermore, they can challenge the monopolistic control of traditional banking systems. An important and recurrent analogy is drawn with early paper currency. Just as metallic money gave way to fiat money over generations, virtual currencies may follow a similar path. This evolution is accelerated by today's digital infrastructure. Growing institutional interest signals a latent economic legitimacy. This includes central bank digital currencies (CBDCs) and corporate treasury diversification.

The study concludes that the crypto debate is not fundamentally about technology itself. It is about how societies choose to govern innovation in the absence of established norms. Both defenders and detractors use the same attributes to justify opposing views. This suggests the real question is not "what is crypto?" but "what kind of financial future do we want?".

Table 1: Concepts of Digital Currencies

Digital Currencies	Virtual Currencies	Cryptocurrencies	Electronic Money
An umbrella term covering any form of currency or medium of exchange that has no physical form and is stored and managed electronically. This is the broadest term that includes all other types. Digital currencies can be centralized or decentralized and may be issued by central banks or private entities.	A type of digital currency that is not regulated by a central authority like central banks or governments. They are issued and managed by their developers and used and accepted by members of a specific virtual community.	A type of virtual currency that relies primarily on cryptography to secure transactions and control the creation of new units. Decentralized blockchain technology is used to record transactions in a public and distributed ledger, making them highly secure and difficult to tamper with.	Money stored in electronic form on a technical medium such as a payment card or an electronic wallet. Unlike virtual and cryptocurrencies, electronic money typically is a digital representation of a traditional currency (like the dollar or euro) and is backed and regulated by a central entity (a bank or financial institution).
E.g.: Electronic money (e-money) used in online bank transfers, or even Central Bank Digital Currencies (CBDCs) that some countries have begun to explore.	E.g.: Could be currencies used within a video game or specific social network. Bitcoin and Ethereum are considered virtual currencies, but they possess additional characteristics that make them cryptocurrencies.	E.g.: Bitcoin (Bitcoin) and Ethereum (Ethereum) are the most famous examples of cryptocurrencies.	E.g.: The balance in your bank account that you can use to make electronic transfers or pay bills online.

Source: Central Bank of Jordan 2018

3.6 Concept and Characteristics of Cryptocurrencies

Cryptocurrencies, also known as virtual currencies, are a form of digital money. They use encryption to secure transactions. This encryption also controls the creation of new units. Unlike traditional currencies, cryptocurrencies are decentralized. This means they are not supervised or controlled by a central authority, like a central bank. Bitcoin is considered the first and most famous cryptocurrency. It was launched in 2009. Bitcoin and most other cryptocurrencies rely on a technology called "blockchain." A blockchain is a distributed, public ledger. It records all transactions securely, transparently, and immutably. Cryptocurrencies have no physical existence in the real world. They are dealt with and traded only via the Internet. (Sabri Mohammed et al., 2023)

3.7 Characteristics of Cryptocurrencies

Decentralization: Transactions are verified and recorded by a network of users (miners) instead of a central bank, making them resistant to government censorship and manipulation. (Toubi Abdul Malik et al., 2021).

Encryption: Advanced encryption techniques are used to secure transactions and verify asset ownership.

Transparency: All transactions are recorded in the public ledger (blockchain), allowing anyone to view and verify them, although user identities are often anonymous. (Yahya Rawiya et al., 2021).

Speed: Cryptocurrencies can be sent across borders very quickly.

Irreversibility: Once a transaction is confirmed, it cannot be reversed, providing security for recipients.

Volatility: Characterized by high price fluctuations, making them a high-risk investment and an opportunity for speculators.

Low Fees: Users are not required to pay any transfer or transmission fees like those imposed through traditional money transfer channels, and there is no need for an intermediary between the customer and the merchant to transfer money, who would deduct a percentage, because the currency is not transferred; rather, the currency symbol is what leaves the buyer's wallet and enters the seller's wallet in what is called peer-to-peer. (Al-Baidani Haitham et al., 2024).

3.8 Bitcoin's Mechanism of Action

Individuals can use Bitcoin to pay other people or merchants. This can be done without a third party, like a bank, for verification. Instead, the system itself approves and verifies transactions using blockchain technology. In simple terms, blockchain is a system that transfers and stores data from cryptocurrency transactions. It is a public ledger that records all Bitcoin transactions. This ledger displays every transaction executed on the Bitcoin system. A "block" represents a permanent record of recent transactions. These recorded data blocks are built on top of each other. They form a chain of blocks. This chain traces all the way back to the very first Bitcoin transaction. The blockchain creates a verification process and transparency. This is essential for security. It allows the community to monitor transaction activities. The community can then self-regulate. It also verifies both the sender and receiver. This ensures that the same Bitcoins cannot be spent twice. When a person creates a Bitcoin wallet, they receive a public key and a private key. These keys are two long sets of numbers and letters. They function like a username and password. Because it is just a set of numbers, no username or email is needed. This provides anonymity for Bitcoin users.

However, the private key must never be disclosed. On the blockchain, the private key represents a person's identity. It is the key used to access their Bitcoins. If anyone else sees it, they can steal all the Bitcoins in that wallet. (Amita Garg, 2022).

3.9 Bitcoin in Yemen: Opportunities

In light of the financial crisis in Yemen, cryptocurrencies offer a set of potential opportunities that could alleviate the severity of the crisis and provide alternatives for citizens and the financial sector.

Bypassing Financial Disruptions: Yemen's banking system faces major disruptions. This makes basic banking services hard to access. Cryptocurrencies provide a way around these problems. People can conduct financial transactions without traditional banks. Statistics show high web traffic to decentralized finance platforms. This indicates a growing reliance on them as an alternative.

Financial Transfers and Remittances: The traditional banking system has many problems. Accessing financial services is difficult. Bitcoin can be an effective tool for sending and receiving money. This works both within Yemen and from abroad. Cryptocurrencies allow for fast transfers. They also have lower costs than traditional methods. This benefits individuals and families. Many rely on these remittances for their basic needs. (Ismael Rezaeinejad, 2021)

Financial Innovation and Economic Development: Adopting blockchain and cryptocurrencies could encourage financial innovation. This may open new paths for long-term economic development. The current infrastructure may not fully support this yet. However, growing interest in cryptocurrencies could push for local technical solutions. Cryptocurrencies also offer positive external advantages. For example, they can provide a chance for high returns in a short time. They also allow for rapid growth.

3.10 Bitcoin in Yemen: Challenges

Cryptocurrency offers promising opportunities for Yemen. However, its adoption faces many inherent challenges.

Absence of a Legal and Regulatory Framework: Yemen has no clear laws for cryptocurrency use. This creates legal uncertainty. Individuals and companies face legal risks. It is hard to add cryptocurrencies to the formal financial system. The lack of rules also raises the risks of money laundering and terrorist financing. (Al-Baidani Haitham et al., 2024)

Administrative Division and Banking Restrictions: The ongoing war has caused a banking system crisis. Financial services are disrupted. Electricity and banking are unavailable in many areas. They are also unreliable where they exist. This complicates all financial activity, including crypto.

Security and Fraud Risks: Cryptocurrencies have many security risks. There are technical risks to digital wallets. There is also a risk of use in illegal activities. This includes money laundering and terrorist financing. People worry these technologies fund illegal acts. Low financial awareness also makes people vulnerable to fraud. Scams exploit the unregulated market. (Ismael Rezaeinejad, 2021)

Infrastructure: Cryptocurrencies need strong internet and digital infrastructure. In Yemen, the communications infrastructure is weak. Internet access is unreliable and expensive. This makes regular use of cryptocurrencies difficult. Trading and accessing digital wallets require a stable connection. Frequent power outages add to this problem.

Price Volatility and Lack of Awareness: Cryptocurrency prices change very quickly. This is a major challenge. People cannot rely on them as a stable store of value. Yemenis already suffer from the falling value of their currency. Adding extreme volatility increases financial risks. This is made worse by a lack of financial awareness. Many people do not understand how these currencies work. They also do not understand the risks. This leads to uninformed decisions. For example, Bitcoin's value peaked in April 2021. It then fell by over 50% the next month. Ethereum's value fell 57% in one week in May 2021. (Khawrin Mohammed et al., 2022).

Table 2: Digital Currencies and Virtual Currencies

Criterion	Digital Currencies (CBDCs)	Virtual Currencies (e.g., Bitcoin, Ethereum)
Form of Money	Digital currency issued by a central bank.	Digital or crypto assets, with no physical existence.
Unit of Account	National legal tender (e.g., Digital Rial) with a stable value equal to the paper currency.	A private unit of account (e.g., BTC, ETH) with a highly volatile value not necessarily tied to any national currency.
Acceptance	Mandatory acceptance within the country (same acceptance as paper currency).	Not mandatory, depends on the acceptance of the contracting parties and the community that deals with it.
Legal Status	Legal tender with full sovereignty recognized by the government and central bank.	Not legal tender in most countries worldwide. Considered in many legislations as an asset, property, or commodity.
Money Supply	Fully controlled by the central bank; it is part of the state's money supply.	Not controlled by any central authority. Relies on predefined algorithms and protocols (e.g., mining for Bitcoin).
Issuance	Issued exclusively by the state's central bank.	Issued in a decentralized manner through Peer-to-Peer networks or by private companies (in the case of stable coins).
Central Oversight	Fully centralized. Subject to the supervision of the central bank and government regulatory bodies.	Fully decentralized (in the case of cryptocurrencies like Bitcoin). No intermediary authority controls them.
Type of Risk	Generally low risk.	High risk. Technical risks, extreme volatility risks, regulatory risks, hacking risks, lack of a safety net.

Source: Al-Omrawi Salim et al., 2022

Table 3. Global Bitcoin and Cryptocurrency Adoption Statistics

Region	Current Adoption Rate (as of 2024)	2025 Forecast	Key Insights
North America	13.8% -15%	16% - 17%	The United States and Canada lead adoption, with increasing acceptance by major institutions.
Western Europe	9.5%	11% - 12%	Switzerland, Germany, and the UK have the highest adoption rates in the region.
East Asia & Pacific	7.8%	9% - 10%	Japan, South Korea, and Singapore are mature markets with growing adoption.
Eastern Europe	11.2%	13% - 14%	Ukraine and Russia show high rates due to geopolitical factors and remittances.
Latin America	8.5%	10% - 11%	Widespread use for remittances and inflation hedging (notably in Brazil & Argentina).
Middle East	6.2%	7.5% - 8.5%	The UAE and Turkey lead regional adoption efforts.
South Asia	6.8%	8% - 9%	India and Vietnam show rapid growth rates despite varying regulations.
South Africa	9.3%	11% - 12%	Nigeria, Kenya, and South Africa show the highest adoption for daily use and remittances.

Source: Chainalysis. (2024) and Statista. (2024). Global Crypto Adoption Index

Table 4. Bitcoin Adoption and Cryptocurrency Use in Yemen

Point	Details
Bitcoin Adoption Rate in Yemen	2024 Estimates: 2.1% of the population
Cryptocurrency Use in Yemen	• Financial Remittances • Savings • Daily Transactions • Majority of users are male
Regional Comparison (2024)	• Yemen: 2.1% • Saudi Arabia: 11.3% • United Arab Emirates: 27.8% • Iraq: 4.2% • Egypt: 5.5%

4. CONCLUSION AND RECOMMENDATIONS

This study shows that Bitcoin and cryptocurrencies in Yemen are a complex issue. They are intertwined with both promising opportunities and formidable challenges. Given the severe humanitarian and economic crisis, these currencies could offer vital alternatives. They can bypass the country's damaged traditional financial systems. This is especially useful for overcoming banking disruptions and facilitating financial transfers. However, the challenges to their adoption are significant and cannot be ignored. The main issues include legal ambiguity and weak infrastructure. There is also a lack of financial awareness among the population. Other serious concerns are the risks of fraud and extreme price volatility. This study makes a unique contribution. It moves beyond general talk about cryptocurrency. It demonstrates how digital assets actually function in a real-world crisis. The research provides a critical case study of crypto-adoption. This adoption is not driven by investment speculation. Instead, it is driven by a sheer necessity for survival and resilience. The study offers new insights into how decentralized technologies interact with formal institutions. In Yemen, crypto has become a pragmatic tool for humanitarian aid and remittances. It provides basic economic sustenance where there is no functioning financial system. Therefore, dealing with cryptocurrencies in Yemen requires a balanced approach. We must leverage their unique opportunities while also mitigating their profound risks. These technologies cannot be ignored in a world that is moving towards financial digitization. However, they must be adopted with caution and awareness. It is crucial to take Yemen's specific local circumstances into account.

5. RECOMMENDATIONS

Based on the above, the Study recommends the following:

5.1 The Government and Regulatory Authorities (Central Bank)

- Establish a clear legal framework: The Central Bank and legislative bodies should expedite the establishment of a comprehensive legal framework regulating cryptocurrencies, including their definition, trading rules, and consumer protection mechanisms.
- Enhance oversight and combat financial crimes: Effective regulatory mechanisms should be developed to combat the use of cryptocurrencies in money laundering and terrorist financing, leveraging international expertise in this field.
- Study the possibility of issuing a central bank digital currency (CBDC): The Yemeni Central Bank could study the feasibility of issuing a central bank digital currency (CBDC) linked to the local currency, to provide a safe and regulated alternative to decentralized cryptocurrencies.

5.2 Educational Institutions and NGOs

- Increase awareness and financial literacy: Large-scale awareness and financial literacy campaigns about cryptocurrencies should be launched, targeting the general public, to explain how they work, their risks, and how to deal with them safely.
- Develop digital infrastructure: Work on improving communications and internet infrastructure in Yemen, providing reliable and affordable access to support digital development in general.

5.3 Individuals and Investors

- Exercise caution and research: Individuals should exercise the utmost caution when dealing with cryptocurrencies, conduct thorough research before any investment, and understand the risks associated with price volatility and fraud.

- Use trusted platforms: It is preferable to deal with reputable trading platforms and digital wallets known globally, and avoid unknown or suspicious platforms.
- Protect digital assets: Take all necessary security measures to protect digital wallets, such as using strong passwords, two-factor authentication (2FA), and secure storage methods for private keys.

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