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Assessing the Impact of Cryptocurrency Regulations on investment behavior globally.

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ABSTRACT :

The research aims to explore the perceptions and behaviors of millennial investors on cryptocurrency as an investment. This is achieved through research objectives by: reviewing previous literatures on cryptocurrency from millennials' perspectives, developing of a conceptual model in decision-making, identifying which factors have the most influence on millennial investors in cryptocurrency, and lastly, contributing findings to fill in gaps in both academic and business aspects. Accordingly, a mixed-methods design has been employed, utilizing a sequential exploratory approach that commences with a qualitative inquiry and culminates in a quantitative analysis. This study investigates the socio-demographic characteristics that individual cryptocurrency investors exhibit and the factors which go into their investment decisions in different Initial Coin Offerings (ICOs). A web-based revealed preference survey was conducted among Australian and Chinese blockchain and cryptocurrency followers.

The significant factors of these two choices include age, gender, education, occupation, and investment experience, and they align well with the behavioral literature. Furthermore, alongside differences in how they rank the attributes of ICOs, there is further variance between how Chinese and Australian investors rank deterrence factors and investment strategies.

The advent of blockchain technology has been changing the structure of the financial sector. Cryptocurrency, which is a product of blockchain, has created a new revolution in peer-to-peer (P2P) technology. In 2017, the price of Bitcoin – a type of cryptocurrency – skyrocketed to over US\$20,000 (Boxer and Thompson, 2020). Although there has been considerable interest in Bitcoin since its debut in 2008, it was the unexpected price movement that brought it to the attention of the general public. Supporters of cryptocurrency frequently perceive it as a way to strengthen individual freedom because it provides a way to exchange a form of currency anonymously. Remarkably, cryptocurrency participation has been growing in emerging and developed economies, including Japan, China, India and Bangladesh among other countries in the Asia-Pacific region. There is a marked increase in the number of investors or active users (the number of active users has potentially reached 5.8 million) and employment has been generated in the cryptocurrency industry.

Keywords :

Blockchain Technology, Bitcoin, Etherium, Cardano, Trading Platform, Cryptocurrency Investment, Regulatory Framework, Reserve Bank of India, Security Exchange Board of India, Retail Investors, Comparative Analysis of Historical data and Trends, Ethical and legal Barrier, DeFi.

INTRODUCTION

Cryptocurrencies are digital currencies that use cryptography – a technique for encoding data to make it unreadable to anyone who lacks a password. Because of cryptography, cryptocurrencies are practically impossible to forge, though their security is also dependent on several other factors.

Modern cryptocurrencies are decentralized systems based on blockchain technology. The blockchain is a distributed database structure first described by a cryptographer named David Chaum in his 1982 doctoral dissertation. In the crypto world, the blockchain serves as a public ledger of encrypted transactions that is maintained and updated by thousands of people all over the world. Transactions are anonymous but are publicly available.

Bitcoin is not the first digital currency. It is not the first implementation of blockchain technology. It is not the first use of public key cryptography to keep data secure. But because all of these elements are assembled into a single system, it is the first modern cryptocurrency.

The cryptocurrency that has been applauded, ridiculed, hacked (well, not directly), and dismissed. Yet it is trading at a high exchange rate against the USD. Whatever the fate of bitcoin, the technological breakthrough is worth studying. Blockchain is the distributed and decentralized database technology behind this cryptocurrency. This course explores the fundamentals of the public, transparent, secure, immutable and distributed database called blockchain. Blockchains can be used to record and transfer any digital asset not just currency. This course will introduce students to the workings and applications of this potentially disruptive technology. Its potential impact on financial services, government, banking, contracting and identity management will be discussed.

One of the digital money namely cryptocurrency is treated to be safe. It is a word which indicates any token that generated by utilizing cryptography. Simply, cryptography is the toughest method of transforming coherent data into arduous codes. Digital currencies, alternative currencies and virtual

currencies are considered as a subdivision of cryptocurrency. The currency has broader usage. A popular cryptocurrency known as Bitcoin create further modern digital money. The transactions of these sites cannot be handled by a third party.

A crypto tax regime was finally brought in by India in the Union Budget of 2022-23. The government took a conservative stance on taxes when it is announced. The Finance Minister, Nirmala Sitharaman forenamed that a tax of 30 percent and TDS of one percent would be charged on revenue for transferring the virtual digital assets. No deduction other than cost of acquisition will be acknowledged while reporting income from transfer of digital asset. The loss of digital assets cannot be compensated with any other income. The gift of digital assets will attract tax into the hands of the recipient. Cryptocurrency is a type of digital or virtual money that uses cryptography for security. Unlike traditional currencies (like dollars or euros), cryptocurrencies are decentralized meaning no government or bank controls them. The most well-known cryptocurrency is Bitcoin, but there are thousands of others, like Ethereum, Litecoin, and Ripple.

Key Features

- Decentralized: Operates on a technology called blockchain, a public ledger shared across many computers.
- Secure: Uses cryptography to protect transactions and control the creation of new units.
- Global and Fast: Can be sent across borders quickly, with low fees.
- Limited Supply: Most cryptocurrencies have a cap (e.g., only 21 million Bitcoins will ever exist).

What is Blockchain?

A blockchain is like a digital ledger that records all transactions. Each record (or "block") is linked to the previous one, forming a "chain." It's maintained by a network of computers, making it very hard to tamper with.

Popular Cryptocurrencies

- 1. Bitcoin (BTC) The original cryptocurrency, launched in 2009.
- 2. Ethereum (ETH) Allows for smart contracts and decentralized apps (dApps).
- 3. Binance Coin (BNB) Used in the Binance ecosystem.
- 4. Cardano (ADA) Focuses on security and scalability.
- 5. Solana (SOL) Known for high speed and low fees.

> Trading Platform for Investment of Cryptocurrency

Trading Platform for cryptocurrency Investment: -

Mudrex:-

Mudrex stands out as the best crypto app for investing in cryptocurrency because of its intuitive user interface, diverse selection of tokens, curated crypto baskets, and strong customer support. as the most versatile and compliant crypto investing app in India. With a sharp focus on user safety and investor education, the platform has launched several new features over the past year that enhance its value.

Key Features:-

- Video KYC for Secure Withdrawals: Added in mid-2024 to further safeguard user assets.
- 650+ Cryptocurrency Options: Expanded from 380 to 650 coins, offering India's widest selection.
- INR and Crypto Instant Transfers: Seamless UPI-based deposits and fast crypto withdrawals.
- Coin Sets: Themed investment baskets like AI Tracker and Ethereum Ecosystem Sets for risk-management.

COINDCX: -

CoinDCX is one of India's leading cryptocurrency platforms, offering a comprehensive suite of features tailored for both novice and experienced traders. Here's an in-depth look at its standout offerings:

Core Features of CoinDCX:-

- Trade over 500 cryptocurrencies, including major assets like Bitcoin (BTC), Ethereum (ETH), and Ripple (XRP).
- Access to 50,000+ DeFi tokens through the integrated Web3 mode, covering ecosystems such as Solana, Binance Smart Chain, and Polygon. Seamlessly explore and invest in emerging and pre-launch tokens directly within the CoinDCX app.
- Utilize INR deposits to acquire tokens like ETH, MATIC, USDT, and USDC, which can then be transferred to the Web3 mode for broader investment opportunities.
- Earn Okto Points for interactions within the Web3 mode, potentially qualifying for exclusive rewards and airdrops. 2. Decentralized Custody Options
- Transition your holdings from CoinDCX's custody to a decentralized wallet
- Total Reserves: CoinDCX's Proof of Reserve (PoR) report from March 2025 indicates total crypto holdings valued at approximately \$455 million. This comprises:
 - o On-Chain Reserves: \$317 million
 - Partner Holdings: \$138 million
 - o Major Custodians: Assets are distributed across platforms like Binance, KuCoin, Gate.io, and Deribit .

- Asset Allocation: The portfolio includes significant holdings in Bitcoin (BTC), Ethereum (ETH), Shiba Inu (SHIB), Polygon (MATIC), and XRP. Notably, CoinDCX holds over 1,100 BTC and 14,000+ ETH.
- Reserves to Liabilities Ratio (R2L): CoinDCX maintains a reserves-to-liabilities ratio exceeding 1:1, ensuring that user assets are fully backed and accessible at all times.

<u>Coin Switch:</u>-

CoinSwitch is a cryptocurrency exchange platform that simplifies crypto trading for users, particularly in India. it as a secure and user-friendly platform for buying, selling, and trading over 100 cryptocurrencies with Indian Rupees. It offers a range of features and tools to assist both beginners and experienced traders, including options for spot trading, futures trading, and algorithmic trading.

Zeb Pay: -

Launched initially in 2014 by Mahin Gupta, Sandeep Goenka, and Saurabh Agarwal, Zeb Pay quickly ascended to become one of the country's largest platforms for cryptocurrency trading.

As of 2023, boasting over 3 million users, Zeb Pay offers a user-friendly trading environment with features like lightning network payments and zero deposit fees. This makes it a strong contender in the crypto space. Zeb Pay operates in Australia and Singapore in addition to India.

- Facilitates instant buying and selling of cryptocurrencies through a user-friendly interface.
- Supports over 300 trading pairs, including popular assets like Bitcoin, Ethereum, and Solana. Offers curated portfolios comprising handpicked tokens, designed by experienced professionals.
- Provides insights into risk-reward dynamics and performance tracking over periods ranging from 1 week to 3 months.

List of events of cryptocurrency regulation framework

2008: Satoshi Nakamoto and Bitcoin

The internet domain bitcoin.org was registered in August 2008. It remains the homepage of the world's most widely used cryptocurrency. On October 31 of the same year, a person or organization using the name Satoshi Nakamoto published a scientific paper titled. This paper is known in the crypto world as "Satoshi's whitepaper."

The paper presented the concept of cryptographically secured blockchain technology. Bitcoin was described as a theoretical open-source digital resource. "Open source" meant that no one owned it and that everyone could participate in its use and development.

2009: Bitcoin Mining Begins

In early 2009 the Bitcoin software became available to the public for the first time. Satoshi Nakamoto mined the first 50 Bitcoins, thus launching the practice of crypto mining. It was a time when only a small team of programmers and enthusiasts participated in the development of what few of them anticipated would one day be viewed as a groundbreaking technology.

2010: Early Transactions

It wasn't realistic to attribute any real value to Bitcoin during its first year of existence. Developer Gavin Andresen bought 10,000 Bitcoins for \$50 and created a website called Bitcoin Faucet where he literally donated Bitcoin for fun.

The most famous tale from this era concerns Laszlo Hanyecz, a software developer who bought two pizzas for 10,000 Bitcoins. This is widely recognized as the very first cryptocurrency transaction. At Bitcoin's peak price, those two pizzas would be worth well in excess of \$600 million. But Laszlo never regretted his decision. He believes it was a crucial step in establishing the growth of the crypto ecosystem.

2011: New Cryptocurrencies Are Born

On the wings of Bitcoin's success, the idea of decentralized digital currencies slowly started to gain traction. As a result, the first alternative cryptocurrencies began to appear. Because these currencies were alternatives to the established cryptocurrency, Bitcoin, they were known as altcoins.

2013: The First Big Bubble

In January 2013, the price of a single Bitcoin exceeded \$1,000 for the first time. It was an important milestone, even if the price dropped quickly afterward and then stagnated for about two years before managing to hit the \$1,000 mark again. Some early adopters suffered great losses during the price lull, and it caused a lot of negative press for Bitcoin. There was a lot of news coverage, and many people learned about cryptocurrency for the first time in the context of these lost fortunes.

2014: Mt. Gox and Turbulent Times

The market's biggest <u>cryptocurrency exchange</u> was a website called Mt. Gox. In January 2014, it was hacked. The hackers got away with 850,000 bitcoins. It still isn't clear who was responsible for what remains the largest theft in crypto history.Critics said that because cryptocurrencies are based on anonymity and decentralization, it was no wonder it was hacked and that the hackers were impossible to trace.In November 2014, the founder of the Silk Road crypto website was sentenced to life imprisonment after illegal drugs were found to account for about 70% of the products sold via his website, which relied on Bitcoin to make sales to anonymous customers.

2015: Ethereum and the Altcoin Boom

The Ethereum project was launched in 2015. Some people think of it as the first truly useful implementation of the ideas underlying Bitcoin. Ethereum introduced smart contracts, a technology that allows the blockchain to host software programs in addition to crypto funds. Smart contracts enabled the development of complex, useful applications in finance and other areas.

2016: A Flood of ICOs

Ethereum's popularity was marked by the emergence of projects that acquired start-up funds via crowdfunding – specifically initial coin offerings in which new tokens are offered to investors much as newly issued stock is offered to investors when a corporation goes public in an IPO, or initial public offering. People bought the coins as investments or to support the projects the coins were created to support.

2017: Bitcoin reaches \$20,000

The number of publicly available trading platforms and exchanges gradually increased, making it much easier to buy and sell cryptocurrencies. The explosion of ICOs intensified. All of this contributed to the rapid growth of the ecosystem. This young technology promised huge profits, and the total market capitalization of cryptocurrencies exceeded \$800 billion dollars by the start of 2018. It seemed like the only thing you needed to put a new company on the map was to make sure "crypto" or "blockchain" was part of its name.

2018: Back to Reality

The market's growth was unsustainable, so in retrospect it seems inevitable that the bubble burst and prices began a step decline. Many projects collapsed as they were poorly conceived or too ambitious.

2019-Present: Solving Real Problems

Crypto projects that survived the 2018 burst seemed to have something in common. They address real problems and deliver useful new services using the power of blockchain technology and cryptocurrencies. Investors are now analyzing the business plans of crypto start-ups instead of simply investing in new cryptocurrencies based on their usefulness in everyday buying and selling. Today's crypto projects are found in gambling, video games, sports, identity management, finance, and other industries.

Regulatory Framework for Cryptocurrency

> Application of Software for Trading

Systems and Processes of Bitcoin and Its Non-Transparency Bitcoin is based on a public blockchain that is usable by anybody and is not owned or controlled by an entity. All transactions are verified and added to the public ledger through the 'mining' process, which is also the process through which new Bitcoin units are emitted. Bitcoins are created in the protocol, but mining nodes can claim their ownership by solving maths questions. Ownership of bitcoin is established through digital keys, bitcoin addresses, and digital signatures. The digital keys are created and stored by users in a database called a wallet. These keys are completely independent of the bitcoin protocol and can be generated and managed by the user's wallet software on its own, even offline. Mining nodes are responsible for solving complicated mathematical puzzles that are part of the Bitcoin programme, the so called 'proof of work'. However, there are rules governing the operations of mining nodes and the designer of the mathematical puzzles is not public knowledge. As Bitcoin mining is essentially guesswork and is highly competitive, being the first miner to find the correct answer in a profitable way requires the most up-to-date hardware and/or membership in a group of miners who can combine their computing power.

> System using Blockchain Technology as comply its legal tender authority of Technology:

In this section, the authors consider a model of modern portfolio theory, which is a mathematical formulation of risk diversification in investing aimed at selecting a group of investment assets that collectively have a lower risk than any individual asset. Intuitively, this becomes possible, as the value of various assets often changes in opposite directions. As a rule, any investment portfolio makes a compromise between risk and profitability.

Cutting Out Middlemen: -

Cutting Out the Middleman The cryptocurrency blockchain simplifies the settlement process in real property purchases. As the cryptocurrency blockchain is a large property rights database, digital currency can be used to execute and enforce two-party contracts on real property. In this way, transactions using cryptocurrency as a payment method can cut out the middleman and thus help eliminate expensive brokerage and legal fees while enabling the completion of a contract at a future time. Since cryptocurrencies are accessible to anyone with access to the Internet or to a mobile phone, approximately 1.7 billion individuals in the developing world who are currently excluded from traditional exchange systems could benefit from such a system. Cryptocurrencies are designed for low-cost and no-fee transactions most users use a third-party service, such as Coinbase, which charges fees for creating and maintaining their own Bitcoin wallets. This service is similar to PayPal, an online intermediary payment service that facilitates peer-to-peer payment systems. However, one major benefit of cryptocurrencies is that their owners are free to engage a third party because they do not need to depend on a centralized entity to facilitate the transaction. In principle, cryptocurrency owners are not subject to third-party terms of service.

Ultimately Cryptocurrency has least Regulations Practices to make the Investment, which doesn't have Own Jurisdiction to Implement the Trading Practices like Stock Exchange, Financial Institution, Banks etc to serve as a Watchdog to observe the cryptocurrency operations to mechanizing the patterns of Investment and Framing of Plans and Policies.

Lack of Regulation, a Cause of Uncertainty and Untrustworthiness Discussions about blockchain are dominated by its applications in finance and business. It is perceived mostly as a threat to the current system, and it suffers from a consequent lack of trust. In 2018, at least 60% of Americans, Europeans and Australians were aware of crypto assets, but only 8% and 9% of Europeans owned cryptocurrency.

Regulatory Framework of Cryptocurrency in India

1. Introduction

India's approach to cryptocurrency regulation has been cautious, oscillating between restrictive measures and exploratory initiatives. While India has not fully banned cryptocurrencies, it also hasn't granted them legal tender status. The regulatory framework is largely under development, with policymakers aiming to strike a balance between encouraging technological innovation and ensuring financial stability and consumer protection.

2. Historical Timeline of Regulatory Developments

2013-2017: Early Warnings and Caution

- The Reserve Bank of India (RBI) issued its first warning in 2013, cautioning users against risks of trading in virtual currencies like Bitcoin.
- No formal regulation or recognition was provided at this time.

2018: RBI Ban on Banking Services

- In April 2018, the RBI issued a circular prohibiting regulated financial institutions from providing services to individuals or businesses dealing in virtual currencies.
- This move effectively discouraged the use of cryptocurrency by severing links to the banking system.

2020: Supreme Court Lifts the Ban

- In March 2020, the Supreme Court of India overturned the RBI's ban, stating it was unconstitutional and not proportionate.
- This marked a significant turning point, reviving crypto trading platforms and investor interest.

Key Regulatory and Government Bodies Involved

a. Reserve Bank of India (RBI)

- The central authority on monetary policy and currency control.
- RBI is skeptical of cryptocurrencies and supports the development of its own **Central Bank Digital Currency** (**CBDC**) the **Digital Rupee**, launched on a pilot basis in 2022.

b. Ministry of Finance

- Handles fiscal measures and taxation on crypto assets.
- Has led discussions at G20 forums, emphasizing global cooperation for crypto regulation.

c. Securities and Exchange Board of India (SEBI)

- May oversee crypto assets that function as securities.
- Likely to play a future role if tokenized securities or ICOs are legalized.

Historical Data Analysis

Top Countries of Crypto Adoption:-

Courtesy – Chainalysis Index 2024

Risk Country	Region	
India	South Asia	
Nigeria	South Saharan Africa	
Indonesia	Southeast Asia	
United states	North America	
Vietnam	Southeast Asia	

Crypto Ownership Demographics: -

Demographics	Crypto Users
Age 18-24	34%
Age 25-34	22%



FIGURE 1. DEMOGRAPHIC ACCEPTENCE OF CRYPTOCURRENCY

SOURCE :- COIN DCX Trading Platform http://coindcx.com

Top countries by crypto Adoption: -

Source- Data Collected from Mudrex based on ownership of cryptocurrency

Region	Estimated owner (2024)	% of Global Owners
Asia	326.8 million	
		58
North America	72.2 million	
		13%
Europe	49.2 million	
		9%
Africa	41.7 million	
		7%
South America	38.0 million	
		7%

 Table 1 Multiple Authors (2017). What is cryptocurrency. Retrieved November 21, 2017, https://blockgeeks.com/guides/what-is-cryptocurrency.

 screenshot

Figure :- Source: CoinMarketCap. (2017). Crypto-Currency Market Capitalizations, Retrieved on November 20, 2017, https://coinmarketcap.com. - screenshot.



Year	Estimated Global	Percent of	Key Drivers and Notes
	Crypto owners	world	
		population	
2015	5 million	0.07	Early adoption phase; primarily Bitcoin enthusiasts and tech-savvy individuals.
2016	10 million	0.013	Introduction of Ethereum; growing interest in blockchain technology.
2017	20 million	0.26	Crypto market boom; Bitcoin reaches ~\$20,000; surge in ICOs.
2018	35 million	0.45	Market correction; increased regulatory scrutiny; continued interest in
			blockchain.
2019	50 million	0.65	Emergence of DeFi platforms; gradual institutional interest.
2020	100 million	1.3	COVID-19 pandemic accelerates digital adoption; Bitcoin halving event.
2021	300 million	3.9	Bull market; NFTs gain popularity; increased media coverage.
2022	420 million	5.3	Market volatility; growing interest in stablecoins and DeFi.
2023	580 million	7.3	Institutional adoption rises; Bitcoin ETFs introduced; regulatory frameworks
			develop.
2024	659 million	8.3	Continued institutional interest; expansion of crypto services; mainstream
			media coverage.

GLOBAL CRYPTOCURRENCY OWNERSHIP (2015-2024) :-

Table :- 2 Rapid adoption of cryptocurrency year by year due to various key drivers mention above in the the table.

The Evolution of Retail Industry of Cryptocurrency: -

We can split retail investors into two categories: shrimps, who hold less than one bitcoin (BTC), and crabs, who hold anywhere between one and ten bitcoin.

In the last six months of 2017, bitcoin soared from \$2,000 to \$20,000. As hundreds of thousands of bitcoins were accumulated by retail, the price started to climb higher, showing they were chasing the market as crypto hit the mainstream media.

However, coming out of a prolonged bear market in 2018 and 2019, bitcoin moved again in late-2020 into early 2021 as the price climbed from roughly \$10,000 to \$60,000. However, we can see that this cohort was selling bitcoin during the entire period, locking in those gains as they were buyers in the previous bear market instead of buying the top they were selling. Then came the Luna and FTX collapses in 2022, where retail investors really showed their intelligence, accumulating the most bitcoin on record. In June 2022, they accumulated over 300k bitcoins, while during the FTX collapse, it was over 525k bitcoins. Even as recently as the March 2024 peak, they were selling into the bull.

> Retail Investors are perpetual Buyers: -

The second takeaway is that as retail has evolved into "smart money." There is increasing adoption of a dollar-cost averaging approach or been seen as a perpetual buyer. Again, taking less than ten bitcoins as retail, they currently hold around 15% of the circulating supply, translating to around 3 million bitcoins. But, as a cohort, they continue to increase their holdings with very little sell-side pressure. The data suggests they are the dollar-cost average cohort, and it would be fitting to categorize them as smart money as they continue to grow their bitcoin holdings and not be shaken out by price corrections. This behavior and mindset are like that of an ETF buyer or a passive investor who buys index funds each month. If we look at the iShares Bitcoin Trust ETF (IBIT), which has seen \$21.5 billion of net inflows since launch there have been only three trading days of net outflows, which is remarkable given bitcoin's volatility. Notably, during the yen carry trade unwind on Aug. 5 and 6., IBIT registered \$0 of outflows.

1.Shift from Hype to Utility:-

Then (2020–2022): Retail investors were driven by hype—meme coins, social media trends (e.g., Dogecoin, Shiba Inu), and fear of missing out (FOMO).Now (2024–2025): There's more focus on real-world **utility and use cases**—such as payments, gaming, DeFi, and Web3 identities.

2. Smarter Retail Investors

- Investors are now more educated and cautious, often using tools like on-chain analytics, token omics evaluation, and fundamental project analysis.
- New retail users are less speculative, often entering via regulated platforms or through real-world applications (e.g., remittances, NFTs with purpose).

3. Rise of Regulation and Compliance

- More countries are introducing or enforcing KYC/AML rules on crypto exchanges.
- Retail access is becoming more formalized, especially through licensed apps and banks offering crypto services (like Revolut, Robinhood, PayPal).

4. Decline in Speculative Trading Volume

- Retail trading on centralized exchanges (CEXs) has declined compared to the bull run years, partly due to:
 - o Market volatility
 - o Regulatory uncertainty
 - o Collapse of major players (e.g., FTX, Celsius, etc.)
- But long-term holding and staking are growing trends.

Stablecoins & Tokenized Assets Gaining Favor

- Many retail users are moving toward stablecoins for:
 - o Inflation hedging
 - o Cross-border transactions
 - o Lower volatility
- Also, there's growing interest in Real-World Assets (RWAs) like tokenized gold, real estate, and government bonds on-chain.

METHODOLOGY

Research Design

This study adopts a mixed-methods approach combining both qualitative and quantitative research techniques to provide a comprehensive understanding of the impact of cryptocurrency regulations on investment behavior.

- Qualitative methods were used to analyze regulatory policies and investor sentiments.
- Quantitative analysis involved statistical review of crypto market performance before and after regulatory events.

2. Data Collection

a. Secondary Data Sources

- **Regulatory Documents:** Government publications, policy announcements, whitepapers (e.g., MiCA in the EU, SEC rulings, Indian crypto tax regulations).
- Market Data: Historical prices, trading volumes, and market cap data from platforms like Coin Market Cap, Coin Gecko, and Bloomberg Crypto.
- Academic Journals and Reports: Peer-reviewed papers, financial research reports, and articles from sources like the IMF, BIS, and World Bank.
- News & Media Analysis: Major events tracked from reputable news platforms such as Reuters, CoinDesk, and The Financial Times.

3.Data Analysis Techniques

• Event Study Methodology:

Used to measure the market reaction (price and volume changes) to specific regulatory announcements or changes.

- Investment trends were compared across countries/regions with different regulatory frameworks (e.g., USA vs. EU vs. China).
- Thematic Analysis (Qualitative): Key themes were extracted from policy documents and interviews to understand how regulation affects investor behavior and institutional entry.
- Regression Analysis (if quantitative data collected): To assess correlation between regulatory changes and investment variables like market capitalization, inflow/outflow trends, and user growth.

4. Time Frame

The study focuses on the period from **2015 to 2024**, capturing both the early phases of cryptocurrency evolution and the more recent surge in regulatory efforts globally. The emergence of cryptocurrency as a financial asset has disrupted traditional investment paradigms. As a decentralized and highly volatile digital currency, it presents both opportunities and risks that have influenced the behavioural patterns of retail and institutional investors. Understanding these shifts in investment behaviour is crucial for financial advisors, policymakers, and investors themselves.

Limitations

The study of cryptocurrency regulation is still evolving and is marked by several critical limitations that restrict the depth, consistency, and generalizability of current research. These limitations arise from the inherent complexity of cryptocurrencies, their decentralized nature, and the dynamic global legal landscape in which they operate.

Lack of Uniform Global Regulatory Framework

One of the most significant limitations is the absence of a universally accepted regulatory framework for cryptocurrencies. Countries have adopted varying approaches—ranging from complete bans (e.g., China), to regulated acceptance (e.g., the U.S., UK), to unclear or evolving stances (e.g., many developing countries).

This regulatory fragmentation poses challenges for researchers attempting cross-country comparisons or longitudinal studies. The inconsistencies make it difficult to draw conclusions about the effectiveness or impact of regulation globally, as legal environments change rapidly and differ vastly by jurisdiction.

Regulatory Ambiguity and Rapid Evolution

The dynamic nature of regulations is another major limitation. In many cases, regulations are reactive rather than proactive, often implemented after incidents such as fraud, scams, or major crypto crashes. This results in frequent changes in policy, which complicates empirical studies. Moreover, the lack of clarity in legal definitions—such as whether cryptocurrencies are to be treated as commodities, securities, or currencies—creates confusion for both market participants and researchers. This legal grey area hampers the ability to assess long-term impacts and discourages the development of robust, consistent research models. Regulation-related studies often require access to transaction-level data, user demographics, and market behavior. However, due to the pseudonymous nature of blockchain and privacy concerns, acquiring accurate and detailed data is difficult. In some regions, crypto exchanges are not legally required to disclose detailed reports or audit results, especially in unregulated markets. This lack of transparency limits the reliability and scope of regulatory research.

Difficulty in Isolating Regulatory Effects

Cryptocurrency markets are influenced by a multitude of factors, including technological advancements, social media sentiment, macroeconomic trends, celebrity endorsements, and geopolitical events. This makes it difficult to isolate the effect of regulation from other variables. For example, a decline in crypto prices following a new law may be incorrectly attributed to regulation when in fact it was caused by a broader market downturn or a major cyber-attack. The high volatility and sensitivity of the crypto market further complicate this.

Bias in Academic and Institutional Research:-

Another concern is the **presence of bias** in research sponsored or conducted by institutions with vested interests—such as crypto firms, governments, or financial institutions. These stakeholders may present skewed findings that support their regulatory preferences or investment interests.

Limited Focus on Developing Economies:-

Much of the existing literature focuses on developed markets like the U.S., UK, and EU, where regulatory infrastructure is relatively mature. There is a notable research gap in understanding how regulations affect cryptocurrency adoption and investor behavior in developing and underbanked regions, where crypto is often used as a hedge against inflation or currency instability.

Ethical and Legal Barriers in Studying Illicit Use

Cryptocurrencies have been associated with illegal activities such as money laundering, tax evasion, and ransomware payments. However, studying these aspects is inherently difficult due to ethical and legal constraints on accessing data related to dark web transactions or criminal use. This creates a blind spot in the regulatory research, as policymakers aim to curb these very activities.

Conclusion -

In summary, while research on cryptocurrency regulation is expanding, it faces significant limitations related to regulatory inconsistency, lack of longterm data, and methodological challenges. Overcoming these limitations will require collaborative global efforts, more standardized regulatory models, and improved data collection and transparency.

REFERENCES

- Browne, R. (2021, October 19). Bitcoin ETFs are finally here. What to know before investing. CNBC. https://www.cnbc.com/2021/10/19/bitcoin-etfs-are-finally-here-what-to-know-before-investing.html
- 2. Casey, M. J., & Vigna, P. (2018). The truth machine: The blockchain and the future of everything. St. Martin's Press.
- 3. Corbet, S., Lucey, B., Urquhart, A., & Yarovaya, L. (2019). Cryptocurrencies as a financial asset: A systematic analysis. *International Review* of Financial Analysis, 62, 182–199. https://doi.org/10.1016/j.irfa.2018.09.003
- 4. Nakamoto, S. (2008). Bitcoin: A peer-to-peer electronic cash system. Bitcoin.org, https://bitcoin.org/bitcoin.pdf
- 5. World Economic Forum. (2021). Crypto, what is it good for? An overview of cryptocurrency use cases. World Economic Forum.
- 6. https://www.weforum.org/whitepapers/crypto-what-is-it-good-for-an-overview-of-cryptocurrency-use-cases

Main Website (General Reference).

- Kriptomat. (n.d.). Buy, sell & securely store cryptocurrencies. Kriptomat. <u>https://kriptomat.io/.</u>
- Kriptomat. (n.d.). *Our story: From idea to Europe's leading crypto platform*. Kriptomat. <u>https://kriptomat.io/about-us/</u>
 KriptoEarn Launch Reference

Kriptomat. (n.d.). Earn rewards with KriptoEarn. Kriptomat. https://kriptomat.io/earn/.

- Modgil, S. (2017, June 26). Indian government mulling legalising Bitcoin cryptocurrency in India. Inc42. <u>https://inc42.com/buzz/bitcoin-cryptocurrency-india-government/</u>
- Nakamoto, S. (2008). Bitcoin: A peer-to-peer electronic cash system. Bitcoin.org. <u>https://bitcoin.org/bitcoin.pdf</u>
- Mahindra. (2017). Mahindra and IBM to develop blockchain solution for supply chain finance [Press release]. http://www.mahindra.com/news-room/pressrelease/Mahindra-and-IBM-to-Develop-Blockchain-Solution-for-Supply-Chain-Finance
- ExpressBPD. (2017). NSE looking at blockchain for ensuring settlement guarantees. <u>http://computer.expressbpd.com/news/nse-looking-at-blockchain-for-ensuring-settlementguarantees/18956/</u>
- Reserve Bank of India. (2017, December 29). Master direction on issuance and operation of prepaid payment instruments: Fourth bi-monthly monetary policy statement. <u>https://www.rbi.org.in</u>
- World Economic Forum. (2017). The future of financial infrastructure: An ambitious look at how blockchain can reshape financial services. https://www.weforum.org/reports/the-future-of-financial-infrastructure-an-ambitious-look-at-how-blockchain-can-reshape-financial-services