

The Growth of Crypto Currency in India: Its Challenges, Issues and Opportunities

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Abstract

Since the inception of Bitcoin in 2009, the crypto currency's technology has been quite noticeable. Because of its autonomy and convenience, the new type of currency has become a popular and viable source of cash all across the world. To serve as an alternative source of money, many varieties of cryptocurrencies have been developed. Cryptocurrencies have become increasingly popular due to several factors including India's foremost position in internet adoption, its booming tech industry and the growing number of tech-savvy millennials. This paper will discuss the emerging phenomenon of cryptocurrencies. The rise of cryptocurrencies' value available on the market and the growing recognition round the arena open some of demanding situations and concerns for business and commercial economics. This paper will present scenario of Crypto currency, its challenges, issues and various opportunities. It will also discuss about various laws in crypto currency and future of crypto currency in India.

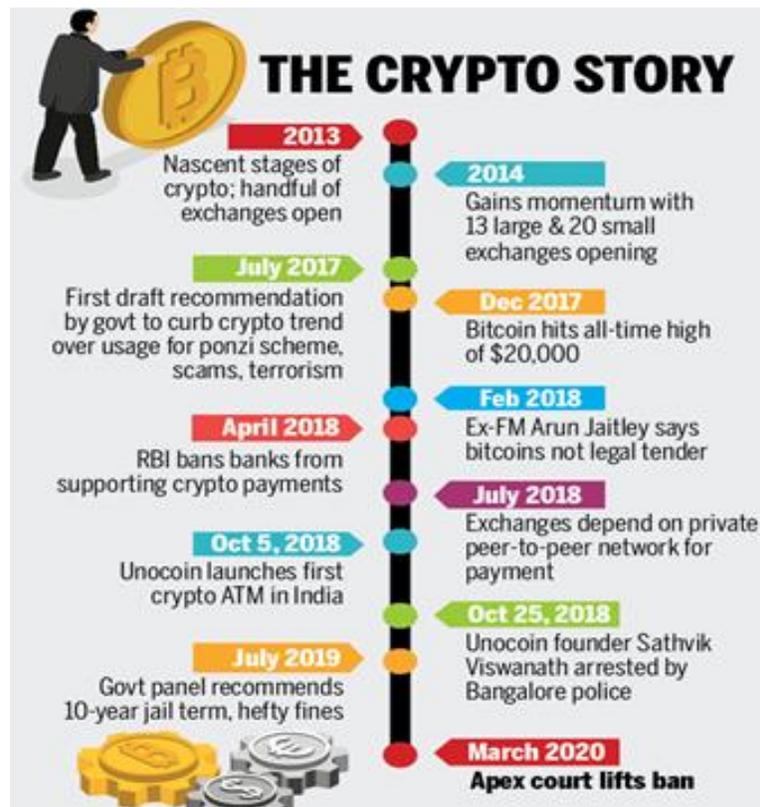
Key Words: Crypto currency, Bitcoin, Encrypted, Currency, Exchange Rate

1. Introduction

Crypto currency, an encrypted, peer-to-peer network for facilitating digital barter. Bitcoin, the first and most popular crypto currency, is paving the way as a disruptive technology to long standing and unchanged financial payment systems that have been in place for many decades. While crypto currencies are not likely to replace traditional fiat currency, they could change the way Internet-connected global markets interact with each other, clearing away barriers surrounding normative national currencies and exchange rates.

Technology advances at a rapid rate, and the success of a given technology is almost solely dictated by the market upon which it seeks to improve. Crypto currencies may revolutionize digital trade markets by creating a free flowing trading system without fees. A SWOT analysis of Bitcoin is presented, which illuminates some of the recent events and movements that could influence whether Bitcoin contributes to a shift in economic paradigms.





2. Review of Literature

As a rising decentralized structure and distributed computing paradigm underlying Bitcoin and different crypto currencies, blockchain has attracted extensive attention in each study and application in recent years. (Yuan and F. Wang, 2018) Crypto currencies have transpired as one of the trending economic software structures (Raju, 2018). Crypto currency refers to a form of virtual asset that uses disbursed ledger, or blockchain, generation to permit a comfy transaction. (Hardle et al, 2019). Blockchain, the center concept or the electricity behind the fulfillment of Bitcoin is one of the maximum trending and not unusual subjects for virtual forex in recent times. Chohan,U. W. (2017) at the center of the economic common sense of crypto currencies lies the hassle of surmounting the double-spending hassle, which poses accounting and duty challenges that effective crypto currencies have sought to conquer.

Ogorevc, M (2019) this paper is prompted by using a speculation that the lengthy-time period value of a crypto currency is determined with the aid of its future use as cash. For a crypto currency to be used as a medium of price, it has to fulfill three impartial functions: medium of change, a unit of account, and store of value. Currently, crypto currencies are held for funding purposes in place of being used for transactions and for that reason as a medium of change. For crypto currency to emerge as extensively adopted as a method of price, it first needs to go through a very volatile duration due to the fact speculative investors see long-run destiny cost within the crypto currency.

3. Types of Crypto currency

Crypto currency is designed to work as a medium of exchange. The number of cryptocurrencies available over the internet is over 1600 and growing. A new crypto currency can be created at any time. By market capitalization, Bitcoin is currently the largest blockchain network, followed by Ripple, Ethereum and Litecoin.

- Bitcoin (BTC)** - One of the most commonly known currencies, Bitcoin is considered an original crypto currency. It was created in 2009 as open-source software. Using blockchain technology, Bitcoin allows users to make transparent peer-to-peer transactions. All users can view these transactions; however, they are

secured through the algorithm within the blockchain. While everyone can see the transaction, only the owner of that Bitcoin can decrypt it with a “private key” that is given to each owner.

- b) **Litecoin (LTC)** - Litecoin was launched in October 2011 as an alternative to Bitcoin. Like other cryptocurrencies, Litecoin is a peer-to-peer crypto currency and open source-source software project released under the MIT/X11 licenses. Its creation and transfer is based on an open source cryptographic protocol and it is completely decentralized. Litecoin is different in some ways from Bitcoin. A few differences between these digital currencies are: The Litecoin network aims to process a block every 2.5 minutes but Bitcoin takes 10 minutes. This allows Litecoin to have faster transaction confirmation. The coin limit for Bitcoin is 21 million and Litecoin is 84 million. Experts says that Litecoin are more complicated to create and more expensive to produce because it uses different algorithm called scrypt and FPGA (Field Programable Gate Array)and ASIC (Application Specific Integrated Circuit) devices made for mining.
- c) **Ethereum (ETH)** - Ethereum is a type of crypto currency which was proposed in late 2013 by Vitalik Buterin, a crypto currency researcher and programmer. It was initially released on July 2015. It is an open source platform based on blockchain technology. While tracking ownership of digital currency transactions, Ethereum blockchain also focuses on running the programming code of any decentralized application, allowing it to be used by application developers to pay for transaction fees and services on the Ethereum network.
- d) **Ripple (XRP)** - Ripple is a real-time gross settlement system, currency exchange and remittance network created by Ripple Labs Incorporation, a US based company. Ripple was released in 2012 that acts as both a crypto currency and a digital payment network for financial transactions. It’s a global settlement network that is designed to create a fast, secure and low-cost method of transferring money. Ripple allows for any type of currency to be exchanged, from USD and Bitcoin to gold and EUR and connects to banks, unlike other currencies. Ripple also differs from other types of digital currencies because its primary focus is not for person-to-person transactions, rather for moving sums of money on a larger scale.
- e) **Bitcoin Cash** - Bitcoin Cash is a type of digital currency that was created to improve certain features of Bitcoin. Bitcoin Cash increased the size of blocks, allowing more transactions to be processed faster.
- f) **Ethereum Classic**- Ethereum Classic is a version of the Ethereumn blockchain. It runs smart contracts on a similar decentralized platform. Smart contracts are applications that run exactly as programmed without any possibility of downtime, censorship, fraud or third-party interface. Like Ethereum, it provides value token called “classic ether,” which is used to pay users for products or services.

4. Challenges and Issues of Crypto currency

The form of crypto currencies is not free from some financial problems and security concerns. After analyzing several studies and crypto currency platforms and also observed some crypto currency selling forums in order to explore challenges and issues that are existing in such virtual phenomenon. The main problems and impacts of crypto currency can include:

- a) **Security threats:** Hackers and malicious users can create as much as they want from virtual currency if they break the system and know the method of virtual currency creations. This will lead to the ability to create fake virtual currency or steal virtual currency by just changing the accounts balances. For example, selling in-game virtual items and virtual currency is against World of Warcraft (WoW) game policies. Therefore, many users log into WoW gold selling websites to buy virtual gold in order to pay for virtual items that they need. Many of WoW gold selling websites are not reliable and they are vulnerable to hacking and many users are complaining about paying real money for nothing or for fake virtual currency.
- b) **Collapse concerns in crypto currency systems:** Unlimited issuing of virtual currency in the variety virtual communities will lead to economic problems since its issuing is not based on the demand and supply. It is possible for some providers such as Second Life to issue unlimited Linden Dollars and increase their virtual items prices in order to gain more real revenues. On the other hand, it will suffer from inflation and economic issues leading to collapse in the virtual currency system.
- c) **Impact on real monetary systems:** Since some virtual currency systems are connected with real world monetary systems, they may affect the demands and supply facilities of real world money. For example,

enabling users to purchase virtual and real goods and services with virtual currency in some platforms may reduce the demands on real money. Users will no longer depend on real money to buy what they want and they will use virtual money instead. On the other hand, some platforms enable users to exchange their virtual currency with real currency and this will increase the demands on real world currency. This fluctuation will affect on the real monetary systems.

- d) **Gold farming risks:** Gold farming term is very popular in China and developing countries. Gold farmers are players who play in social games such as World of Warcraft in order to gain gold, which is virtual currency of the game, and then sell it for real money. The targeted buyers are the players who do not have enough time to play and compete for gaining virtual currency. In fact, huge cash flow is generated from gold farming process and it is not controlled and regulated. This will increase fraud and financial risks where virtual currency is exchanged with real money in unreliable environment.
- e) **Fluctuation in virtual currency value:** According to Chow and Guo study, it is observed that when the popularity of a virtual community drops, the value of its virtual currency will be devalued. For example, users who own 1000 units of virtual currency can buy from variety of 100 items. In case the provider of that virtual currency drops, users can only buy from 10 items with their 1000 units since dropping will be reflected in fewer goods and services especially in closed virtual communities.
- f) **Money laundering:** Money laundering is one risk that is very likely to rise with the use of Virtual Currency especially with platforms that enable users to exchange virtual currency with real money. In practical case occurred in Korea in 2008, the police arrested a group of 14 persons for laundering \$38 million obtained from selling virtual currency. The group converted the amount of \$38 million, which is generated by gold farming, from Korea to a paper company in China as payments for purchases.
- g) **Unknown identity risks:** Since creating an account in most of virtual currency platforms such as social games and social networks is not authenticated, financial transactions cannot be monitored very well. Gamers and users can create more than one account with unknown identities and use them for illegal transactions. There is no way to recognize the source of creating or cashing out the virtual currencies. This leads to inability to track the transactions in case of money laundering suspicion. Moreover, unknown identity will enable criminals to get paid with virtual currency for their crimes.
- h) **Black market for crypto currency:** The financial position of some social games such as Second Life and World of Warcraft are mature enough to create black market for buying and selling their virtual currency. The increasing popularity of virtual currency in online environment has led to a thriving black market for trading virtual currency with real money. By observing several social games' forums, some fraud cases have been raised and discussed between users. For example, when a gamer decides to quit from a game, he/she may want to sell the owned virtual currency by offering them in the game's forums. The way of receiving the payments is risky since many malicious users may not complete the payment or they dispute after paying. In this case, they will get their money back plus the virtual currency.

5. Opportunities in Crypto currency

Crypto currency is in a unique position as a forerunner in a possibly transformative technology to long standing financial systems. By its very nature, it is able to fill gaps in current financial technologies and be able to help solve traditional banking problems by being a peer-to-peer system. Napster, another peer-to-peer system, transformed the music industry by cutting out the middle man (Kelly, 2014). Transformative technologies start by solving a specific problem in an industry. For instance, cryptocurrencies are poised to help remediate the problems related to unbanked consumers. Significant portions of the population in developing countries are unbanked. In Latin America, 60% of 600 million inhabitants have no access to bank accounts (Magro, 2016). Bitcoin's technology allows for individuals to exchange currency without needing a third trusted party, like a bank, to oversee the transaction. All that is needed to use Bitcoin is a mobile phone, which 70% of Latin Americans do have access to (Magro, 2016). Due to bitcoin's ad-hoc networking capability, two users can trade bitcoin with each other by scanning QR codes displayed on their phones printed out by the application. This is a truly unique solution to a problem that has existed for many years for some people. This would invariably increase as the user base grows, so the demand for better crypto currency network and applications will come to the forefront. There is an enormous market for potential developers to create these applications, as this technology could affect any industry

that relies on a trusted third-party clearing system (PwC, 2015). Any developers who increase usability through application and GUI improvements to bitcoin would be very successful. Bitcoin's progression into becoming a transformative technology is driven by its ability to solve long standing problems, combined with a supportive and growing community of developers and users.

Businesses are beginning to see the value in using crypto currencies for international transactions, especially when transactions need to occur quickly in response to an emergency. Crypto currencies are solely positioned to solve this problem thanks to the speed and ease of transaction in the peer-to-peer system. Money can be wired internationally, but typically arriving days after being sent and not for the full amount (Team, 2016). The transaction can be hit with any number of unexplained fees as it crosses borders, making it difficult to send the correct amount to another business. A good example of this type of emergency need is an online company who is suffering from a denial-of-service attack and is looking to get immediate protection from a network security company (Team, 2016). In this scenario, speed and transaction is of the essence, for every minute that the company's website is down, profits are being lost. Crypto currency has a major advantage over traditional currencies thanks to its agility in making fast peer-to-peer transactions, especially in international business-to-business scenarios.

Internet marketplaces have been thriving and are true contenders to traditional brick-and-mortar stores. Amazon.com has grown to a degree that seems almost unexpected. They have even begun to hire "on-demand" delivery drivers, who use their own personally owned vehicle to deliver standard packages (Saito, 2016). This type of growth shows an attempt to further tighten control of the company's logistics costs, which expand exponentially with increased business. Ebay.com already uses a paying system that is similar to Bitcoin called PayPal, and has been very successful in using it to facilitate all purchases made on its site. Silk Road was another example of a thriving online market, albeit it's very illegal nature. It connected buyers and sellers who mostly used bitcoin to complete transactions. This marketplace showed how a digital currency can connect buyers and sellers without much interference by presiding governments and still succeed. Online shopping is thriving, and bitcoin is poised to extend its reach with efficient and easy payments for both vendors and customers. General purpose online shopping for individuals accounted for nearly 23 percent of transactions processed by Bitpay in the second quarter of 2015 (Kasiyanto, 2016). Crypto currency has the advantage over traditional card-based for the vendor in that it eliminates those fees.

6. Crypto Currency in India

Crypto currency is a recent and significant innovation in the monetary industry. The purpose is to provide forex that isn't tied, created, or sponsored by using a central authority. Crypto currency uses blockchain generation as a monetary platform. The crypto currency adoption degree has improved, and the market has grown dramatically. (Alzahrani and T. U. Daim, 2019) Though India becomes regularly buying and selling bitcoin as early as 2015, the crypto currency made its real debut as fiat cash in November 2016 whilst the Modi-led government demonetized 86 percent of paper foreign money. (Bradley Dunseith, 2017) Cryptocurrencies retain to draw a variety of attention from investors, entrepreneurs, regulators, and most people. Many current public discussions of cryptocurrencies were brought on with the aid of the substantial adjustments of their expenses, claims that the market for cryptocurrencies is a bubble with no fundamental value, and also worries approximately evasion of regulatory and criminal oversight (Giudici, G et al, 2019).

7. Future of Crypto currency in India

The fate of crypto currency in India is looking brilliant, because of the country's dynamic community local area and its decision-making government. According to a recent survey, India is the fastest growing crypto currency market in the world. As per a new study, India is the quickest developing crypto currency market in the world. It has developed at a dramatic rate throughout recent years, and its development rate has been quicker than that of some other countries. Experts predict that India will play a major role in the future of crypto currency if it forges ahead

with this direction. Indian Government is a active player. The Indian government is currently formulating policy on Web 3.0. To be a huge player in the worldwide Web 3 economy, it should take part in the worldwide strategy improvement and adjust its strategies to this quick world. Up to that point, Indian Web 3 startups should battle with a generally safe administrative climate.

Cryptocurrencies have been in circulation since 2009 but for the last couple of years, unprecedented growth has been seen in this asset class. Crypto assets are very popular among younger investors who have a better appetite for risk and are enthusiastic about acquiring adequate financial education to reap the benefits of the ever-changing landscape of digital finance. According to a report by The Economic Times, around 20 million Indians are dealing in crypto currency.

8. Laws related to Crypto currency

Guidance should be taken from other jurisdictions that have already had extensive discussions and workshops on this subject while evaluating the legal approach on crypto currency. The Uniform Law Commission has drafted legislation on the issue, the ‘Uniform Regulation of Virtual Currency Businesses Act’ (‘ULC Model Law’), after reviewing the opinions of policymakers, members of the public, non-profit groups and leading leaders of the industry. Crypto-assets are a common phenomenon rather than a regional authority, thus, making global precedents easy to apply to the Indian context.

- a) **Prevention of Money Laundering Act (PMLA)** is the definitive Indian law on KYC/AML (Know your Customer/ Application lifecycle management). Crypto-asset undertakings may be brought under the PMLA as any entity that is a ‘bank company, financial institution, intermediary or a person carrying on a designated business or profession.’ In any event, the RBI has the power to prescribe enhanced or simplified measures under the Prevention of Money Laundering (Maintenance of Records) Rules to verify the identity of the client. Consideration of the type of customer, corporate arrangement, complexity and importance of the transactions concerning the potential risk of money laundering and terrorist funding. The RBI will adopt a risk-based strategy and mitigate money laundering issues while preventing a full ban on funding these businesses. This will require accountable and reputable businesses to work in a controlled manner. The RBI Circular might not be appropriate for that approach. A new regulatory system will require responsibilities for crypto-asset companies, such as financial adequacy, audits and monitoring. A proposed licensing system will help to better safeguard customer safety.
- b) **Payment and Settlement System Act, 2007** – PSS Act Sections 10, 18, and 38 grants the RBI the authority to create rules, directives, and guidance. That is, for example, the control the RBI uses to enforce the Master Directive on Prepaid Payment Instruments. By this legislation, crypto currency trading sites can also be put under a licensing regime under the PSS Act. The guidelines released by the Department of Banking Regulation (DBR), RBI, on Know Your Customer (KYC)/Anti-Money Laundering (AML)/Combating Terrorism Financing (CFT) shall extend mutatis mutandis to all agencies that issue PPIs and their employees. This solution will require suitable exemptions in the RBI Circular, as RBI-regulated organizations are currently totally barred from dealing with, or encouraging, virtual currency trading under the circular.
- c) **Non-Banking Finance Companies (NBFC)** – It puts crypto-asset market operation into a well-established regulatory framework, which requires licenses, financial adequacy, KYC / AML laws, audits, reports and other consumer-focused criteria. The business of an NBFC is defined in Section 45-I of the RBI Act. An NBFC is defined as a variety of categories of ‘financial institutions’ excluding undertakings of mainly buying or distributing products or delivering services and businesses collecting deposits as their main business. This provision grants RBI the authority to designate any class of entities as NFBCs, with the prior approval of the Central Government. The RBI and the Central Government can, therefore, consider NBFCs to be notifying entities carrying on ‘crypto-asset business activities’.
- d) **Consumer Protection Act, 2019** – Under Section 30A of the Consumer Protection Act, the National Consumer Disputes Redressal Commission has the authority to make regulations “to provide for all matters for which coverage is required or expedient to give effect to the provisions of this Act”. The Consumer Protection Act 2019 protects consumers from ‘unfair trade practices,’ ‘deficiencies’ in facilities and

‘defects’ in goods. The word ‘unfair marketing practices’ requires a false or misleading advertisement. Hence, the National Commission is open to developing laws (e.g., establishing a regulatory regime) taking into account the crypto-asset industry’s specific consumer security issues. We suggest this path should also be considered. As a result, customers have redress under the Consumer Protection Act, 2019 where every crypto-asset company renders misrepresentations to customers or offers defective services.

- e) **Foreign Exchange Management Act, 1999** – FEMA notes that ‘international currency’ is any currency other than Indian currency. The currency of India is limited to any currency expressed in Indian rupees. Consequently, if any crypto-asset can be used to “build a financial risk,” it will amount to “international currency”. The RBI may control the drawing of these FEMA crypto-assets such that only ‘registered persons’ can trade in foreign currency. This would have the benefit of having an increasingly well established regulatory framework for those concerned with these forms of crypto-assets since they will be subject to all the protections that apply to approved persons. Since certain crypto-assets are called ‘goods’ under FEMA, the regulatory consequences under FEMA (e.g., export compliance) will flow accordingly. However, the RBI did not explain the classification of crypto-assets under FEMA, which confused the issue. The RBI can determine to amend the rules and guidelines on the sale and import of products to clarify their operation concerning crypto-assets.
- f) **Information Technology Act, 2000** – Any providers of virtual currencies gets information and details about their customers. Platforms that allow credit card transactions in virtual currency must also recognize these laws when processing information about credit cards. These data must be maintained and stored with strict levels of confidentiality and security. Otherwise, the Virtual Currency provider can violate data protection and security laws. The Information Technology Act reads with the Rules on Information Technology, 2011 requires that all those responsible for using data follow strict rules. Such laws require the fact and intent for which the information is gathered, the creation and dissemination of privacy policy and the safeguarding of data. It establishes relatively strict cyber security standards for every organizational entity managing confidential personal data, and the Central Government that, if it seems appropriate, recommend clear additional steps for crypto-asset business activities. A new Data Privacy Bill is set to be adopted, and when enacted, the same safety requirements will also be recommended under this Law.
- g) **Credit Information Companies Regulation Act** – There is some suggestion that due to its tremendous growth, the Credit Information Companies Regulation (CICRA) Act, which became law in India in 2005, is likely to be extended to crypto currencies. Since crypto currency networks are ubiquitous for many activities such as processing, distributing, redeeming, trading, and exchanging crypto currency values, the specifications of the CICRA Act may be implemented. According to this Act, Indian individuals’ credit details must be obtained in compliance with such legislation as set out in this Act. In the case of illegal data theft, organizations which collect financial information may be held liable. Offshore financial transfers are very common in today’s cyberspace, so taking into account the vast amount of persons involved with them, these activities are useful for the security of the individual’s concerned personal data.
- h) **Prize chits and Chits Fund Act** – Both the Prize Chits Act and the Chit Funds Act, 1982 refer to the idea of ‘monies’/‘money’ and ‘cash’ in the terms ‘prize chit,’ ‘chit’ and ‘capital exchange scheme’ in their meanings. Since crypto-assets are not technically ‘money’ under Indian law, these meanings must be revised to include the word ‘valuable item’ (as used in Section 2(c) of the Prize Chits Act, so that, among other valuable items, the aims of these Acts can be applied to the crypto-asset schemes.
- i) **Taxation laws** – In the virtual currency business taxation legislation ranges from country to country. Many countries place taxes on income produced by virtual currency transactions and some others have only proposed taxation legislation. In India, where RBI notifies any such law, any trade therein would be subject to the Foreign Exchange Management (FEMA) Act, 1999. Crypto-asset-related transaction taxes would fall generally into two headings: Goods and Services Tax (GST), and Income Tax. The Crypto like bitcoins is called a capital asset if bought for profit. Any income resulting from a bitcoin trade shall be treated as a capital gain.

Conclusion

Crypto currency especially Bitcoin offers a new, effective and attractive model of payment methods that can boost companies and operators revenues. It also provides alternative method of payment, apart from real money, that enables users to make financial activities such as buying, selling, transferring and exchanging easily. Crypto currency can bring more positive changes to e-Business and e-Payment sector. However crypto currency doesn't get that much of trust yet. Many concerns, challenges and issues are existing in many crypto currency platforms. Until crypto currency is being well regulated and controlled, users need to take extra precautions of using such virtual money. So the lack of legislations is considered as the main concern in crypto currency systems. An industry has grown around Bitcoins in India- traders, exchanges and merchants who accept payments in Bitcoins. Bitcoins have already gained wide acceptance around the world- hence banning them would not be an option in India. Instead, this industry would need to be regulated. The sooner this is done, the better. The future of Crypto currency concept is promising, revealing more opportunities to bring positive changes and progress to e-Business and e-Payment sectors. With the rapid progress and improve of technology, crypto currency will not stop progressing.

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