

NEED FOR DEDICATED LAWS ON SMART CONTRACTS

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ABSTRACT

This research paper underscores the pressing need for legal reforms in India to facilitate the adoption of blockchain technology and smart contracts. Such advancements can potentially revolutionize business transactions by enhancing efficiency, and transparency, and reducing the need for intermediaries. However, their integration into the Indian legal framework is hindered by outdated laws. The paper highlights critical deficiencies in existing legislation, particularly the Indian Contract Act of 1872 and the Information Technology Act of 2000, which are ill-equipped to address the unique challenges posed by smart contracts. These challenges include issues related to digital signatures, jurisdiction, and contract enforceability. The study emphasizes that the inflexible and traditional mindset of Indian lawmakers, coupled with their limited understanding of technology, has hindered the adoption of smart contracts. The imposition of a 30% tax on cryptocurrency, which aims to restrict its use rather than promote regulation, is a prime example of this reluctance towards technological advancements. This unwillingness undermines investor trust and also hampers India's potential to emerge as a leading global economic force. The paper examines the fundamental components necessary for a contract under Indian law and compares them to the operation of smart contracts, which utilize blockchain technology and are enforced through code rather than legal frameworks. Additionally, it investigates real-world applications of smart contracts across various industries, including real estate, healthcare, and government, highlighting their potential to transform conventional practices. To address the identified challenges, the paper proposes several solutions, such as creating specific legislation that recognizes blockchain-based digital signatures, establishing a robust and comprehensive data protection law, and fostering collaborations between public and private sectors to validate and manage smart contracts. It also recommends tax reforms and the regulation of digital assets, including cryptocurrencies, to ensure their legal status and stability. In conclusion, the paper emphasizes the urgent need for India to establish a favorable legal framework for smart contracts. Prompt implementation of these strategies is crucial to maximizing the benefits of

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smart contracts and maintaining India's competitiveness in the rapidly evolving technological landscape.

Keywords: Smart Contracts, Block Chain, Jurisdiction, Consideration, Enforceability.

INTRODUCTION

The emergence of blockchain technology and its blend with contracts and agreements resulting in the formation of smart contracts has been a remarkable feat in the technological discipline and is being encouraged by the developed countries who have moved ahead with their legislations on the regulation of smart contracts and blockchain technology which has boosted their usage due to the presence of remedial measures in case of discrepancies or irregularities in the formation and execution of smart contracts in the legal arena. Indian legal system has not always welcomed any innovation due to its rigid and conservative legislators, many of whom are not well-equipped with appropriate technological temper and knowledge. A major and remarkable example of this backward intelligentsia is the thirty percent tax imposed on cryptocurrency. Instead of regulating the cryptocurrency, the finance minister imposed taxation to reduce its circulation and discourage the involvement of investors. Such steps reduce people's confidence and prevent the advent and adoption of any such innovation, resulting in the backwardness of our laws and regulations. This ultimately holds back the capabilities of the Indian innovators and businesspersons which reduces the scope for development and employment creation thereby holding India back in comparison to the developed countries who are relatively quick to recognize the inefficiency of their laws and thus suitably adapt to the changes in the economic environment. The advent of smart contracts in the field of jurisprudence is being held back due to the insufficiencies of the Indian Contract law, thus preventing the facilitation of smooth adoption of Smart contracts which are based on blockchain technology. These smart contracts can provide for the speedy formation and execution of contracts in India and can revolutionize business transactions, which can improve the ease of doing business in the country and remove inefficiencies in the present physical contracts. This could be an impetus for the realization of the goal of becoming a developed economy by 2045. Currently, this concept of smart contracts is being governed by the Indian Contract Act of 1872¹ alongside the Information

¹ The Indian Contract Act 1872

Technology Act, of 2000². In addition to these, the Information Technology Rules 2021³ also govern the intermediary aspect of digital and e-commerce contracts in India. Therefore, this research paper aims to provide a critical and in-depth analysis of this concept along with some solutions for the successful implementation of smart contracts. Various aspects of the fulfillment of the essential conditions of a contract by a smart contract and the possibility of their suitability to the Indian market will be analyzed in detail.

RESEARCH METHODOLOGY

This paper aims to identify the challenges to the enforcement of smart contracts in India and explore the possible options and solutions for the smooth implementation of Smart contracts. The research comprised of majorly qualitative analysis alongside some support by the data outsourced from some reputed news portals and articles.

REVIEW OF LITERATURE

To understand the term Smart Contract, one must understand what a contract means between two or more parties even mean and what its features and characteristics are to properly delineate the concept of the smart contract. A contract is a legally binding agreement between two or more parties with the intention of fulfillment of obligations and a series of reciprocal promises by the parties to a contract with the mutual consent of the parties. Each form of contract shares a few common essential characteristics and requirements for it to qualify as a contract. These include;

- Free consent
- Two or more competent parties
- Lawful consideration
- Lawful object
- Not void by law

These are the main essentials of a typical contract in the Indian context along with some

² Information Technology Act 2000

³ The Information Technology Rules 2021

other requirements like offer and acceptance, intent to create a legal obligation, terms not to be vague or uncertain, the possibility of performance, etc. for the formation of a legal and valid contract.

A Smart Contract is a software application that automatically handles the transfer of digital assets between parties according to set conditions. Like traditional contracts, smart contracts ensure compliance with the agreed terms, but they do so through programming rather than legal enforcement. They operate exactly as programmed by their developers, relying on code for their enforcement rather than legal mechanisms. They operate on blockchain nodes and are unchangeable, ensuring their immutability. Essentially, any agreement qualifies as a smart contract if it contains rules, verifies them, executes actions automatically, and functions in a decentralized way.

The main features of a smart contract are as follows:

- There is no need to submit physical documents to finalize the transaction.
- The transaction details are logged on a decentralized ledger, ensuring user anonymity and privacy.
- Once a transaction is completed, the contract terms are set and cannot be changed, i.e. immutable.
- Additionally, transactions executed through smart contracts are permanent and cannot be reversed.

To qualify as a valid contract, the smart contract must fulfill the essentials prescribed in Section 10 of the Indian Contract Act, of 1872⁴. Thus, if the essential prerequisites are verified, the smart contract can be enforceable and legally binding.

EVOLUTION OF THE LINK BETWEEN SMART CONTRACT AND BLOCKCHAIN

Smart contracts are automated programs that execute exactly as defined by their developers. Just as traditional contracts are enforced by legal frameworks, smart contracts are enforced through their coding. In 1994, legal expert and cryptographer Nick Szabo recognized the

⁴ The Indian Contract Act 1872, s 10.

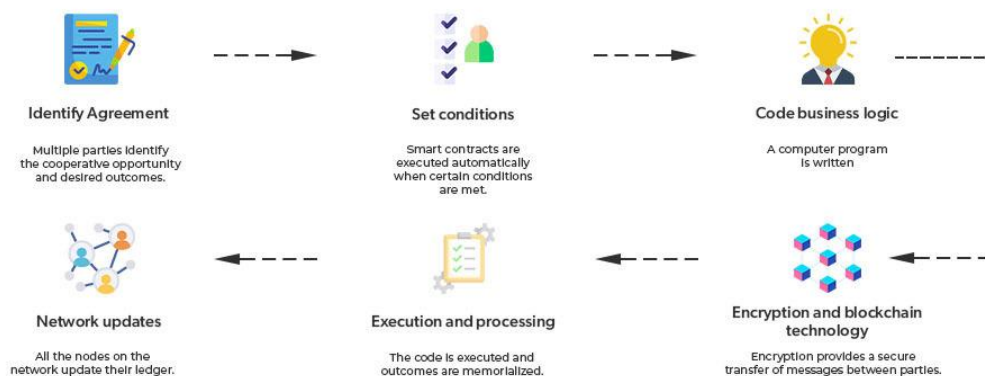
ability of decentralized ledgers to enable smart contracts. He suggested that these contracts could be encoded, saved, and replicated within the system, with the network of computers in the blockchain providing oversight. Furthermore, these smart contracts could help facilitate the transfer of digital assets between parties according to predetermined conditions. The Bitcoin network was the first to implement a type of smart contract to enable value transfers between people. The smart contract discussed performs basic validations, such as checking if the sender has enough funds for a transaction. Then, the Ethereum platform was introduced, which allows for more advanced functionalities because developers can create custom contracts using a Turing-complete programming language. In comparison, smart contracts on the Bitcoin network are constrained by a Turing-incomplete language, limiting their capabilities. Notable smart contract platforms include Ethereum, Solana, Polka-dot, and Hyperledger Fabric, among others.

WORKING OF THE SMART CONTRACTS

A smart contract is a digital form of contract, with the security of the code being backed with blockchain technology. It contains the details and conditions written in the code which require the fulfilment of the specified conditions for triggering the execution of the terms and conditions prescribed in the smart contract. The idea is simple and based on the If-Then condition of the program development.

For example: By sending object A, you will receive a cryptocurrency payment. If you transfer a designated amount of digital assets like ether or bitcoin, object A will be delivered to you. After I finish the work, the digital assets specified in the contract will be paid to me.

How does a Smart Contract Work?



The given image⁵ describes the working of the smart contract in the form of a flow chart.

- **Identify Agreement:** Multiple parties identify the cooperative opportunity and desired outcomes and agreements could include business processes, asset swaps, etc.
- **Set conditions:** Smart contracts could be initiated by the parties themselves or when certain conditions are met like financial market indices, events like GPS locations, etc.
- **Code business logic:** A computer program is written that will be executed automatically when the conditional parameters are met.
- **Encryption and blockchain technology:** Encryption provides secure authentication and transfer of messages between parties relating to smart contracts.
- **Execution and processing:** In blockchain iteration, whenever consensus is reached between the parties regarding authentication and verification, then the code is executed, and the outcomes are memorialized for compliance and verification.
- **Network updates:** After smart contracts are executed, all the nodes on the network update their ledger to reflect the new state. Once the record is posted and verified on the blockchain network, it cannot be modified, it is in append mode only.

Journal of Legal Research and Juridical Sciences

APPLICATIONS OF SMART CONTRACTS

Vehicle Ownership

A blockchain-based smart contract can oversee vehicle maintenance and ownership, requiring maintenance every six months and allowing for license revocation if not followed.

Government Elections

Using blockchain to record votes prevents alterations to voter information and tampering, thereby increasing confidence in the election process. It can ensure smooth, free, and fair elections in the world's largest democratic exercise and improve the quality of elected leaders, thereby contributing to the growth of India.

⁵ Parikshit Hooda, 'Smart Contracts in Blockchain' (2024) <<https://www.geeksforgeeks.org/smart-contracts-in-blockchain/>>, accessed 4th September 2024.

Real Estate

The need for intermediaries can be eliminated by directing payments straight to the relevant parties. For example, a smart contract can facilitate the transfer of ownership of a flat once the agreed payment is made to the seller.

Music Industry

Music ownership can be tracked on a blockchain, where smart contracts automatically distribute royalties to the owner whenever a song is used commercially, helping resolve ownership disputes.

Management

Blockchain can improve management by automating decision-making processes, making them transparent and accessible to authorized individuals. For instance, a smart contract could trigger the delivery of materials once a production milestone is achieved.

Healthcare

In the healthcare sector, smart contracts can automate payment procedures to minimize fraud. Each treatment is recorded in a ledger, with the smart contract calculating total charges, ensuring that patients cannot leave the hospital until their bills are paid. This idea can also support the latest Ayushman Bharat mission where the insurance is provided to the household of up to five lakh rupees and also serve in the creation of the digital IDs of the patients for keeping a better record of their medical history.

IMPORTANCE OF SMART CONTRACTS AND THEIR POTENTIAL IN THE INDIAN ASPECT

Record Keeping

India has been a nation known for its inefficiency and lack of ease of doing business for the new entrants to explore the Indian market. These problems can be attributed to the red tape and a huge number of licensing and restrictions in business transactions as enforced by the Government of India. These licenses were introduced in the Industrial policy⁶ of the 20th

⁶ The Industrial Policy Resolution 1956.

century. These issues can be thoroughly resolved via the introduction of smart contracts, as all the transactions and dealings are saved in chronological order in the blockchain database. These records can be systematically secured via cryptography to prevent any sort of data leaks and breaches.

Employment Opportunities

The development and implementation of smart contracts require skilled blockchain developers, programmers, and engineers. Thus, the issue of rising unemployment will receive some relief due to the emergence of demand for engineers and developers in the service sector, which will improve the per capita income and household welfare in India and help in the achievement of becoming a five trillion dollar economy. As smart contracts are the backbone of many decentralized Apps, the growth of this sector will create demand for developers specializing in decentralized App creation. Smart contracts have the potential to create new business models and industries, including those in supply chain management, financial services, and digital identity verification. The emergence of these industries will necessitate a workforce with specialized skills to fulfill different positions. As the legal framework for smart contracts continues to develop, there will be an increasing demand for attorneys who focus on smart contract law and regulatory compliance. With the increasing demand for knowledge in smart contracts, there will be a rising need for trainers and educators to instruct individuals on blockchain technology and smart contract development. Additionally, independent auditors will be essential for ensuring the accuracy and compliance of smart contract transactions, while technical support engineers will be necessary to manage and resolve issues within smart contract systems.

Elimination of Intermediaries

Another problem that can be resolved in the Indian business area via these smart contracts is the elimination of intermediaries and middlemen who take their shares and commissions and hold unregulated and unchecked authority in the dealings. These contracts can facilitate direct transactions among the parties via the code-based execution where both the parties can themselves set and negotiate the conditions of the contract thereby ensuring much-needed transparency in the economic forum allowing for direct deals also with the customers thus enhancing consumer outreach and network which can help in building a trust-based relationship between the business dealers and the consumers. It can significantly reduce the

scope of violation and sale of customer data to third parties via intermediaries as noticed in the Facebook data sale scandal where the company leveraged the data to the developers and sacrificed the data privacy of the users for its personal and monetary gains.

Reduction of Fraud

The Blockchain backend makes it very difficult for hackers to alter or manipulate the information and record, as it is immutable due to the secure nature of blockchain nodes. Blockchains based on consensus-based verification at each step to proceed further where it requires sufficient evidence to proceed further. These mechanisms require a majority of network participants to agree on the validity of a transaction before it's added to the blockchain. This makes it computationally intensive and resource-consuming to attempt to modify the blockchain without consensus. When a transaction takes place, the smart contract checks whether the specified conditions are satisfied. If any violation is found, the contract can be set up to automatically decline or reverse the transaction. This minimizes human involvement, thereby decreasing the risk of mistakes or fraudulent activities.

No Single Point Failure and Cheaper Cost

The decentralized structure of blockchain eliminates the risk of a single point of failure. If a node identifies a fraudulent transaction, it can notify the network, prompting the consensus mechanism to reject the invalid transaction. This complexity makes it hard for fraudsters to compromise the system. Therefore, it saves time as the single point failure makes it difficult to identify the specific issue, and it takes more time to resolve since the identification is itself to debug the fault line. Also, repairing a specific fault line makes it cheaper to resolve, as fewer resources are required for identification and resolution. Also, the elimination of brokers and intermediaries makes it cheaper to form the contract and execute it without any hurdles or financial hurdles.

ISSUES REGARDING THE ENFORCEABILITY OF SMART CONTRACTS

Smart contracts lie in the grey area of the Indian legislative system due to the absence of laws and regulations regarding their enforcement and execution. Smart contracts are still measured in the same vein as traditional contracts which is a major flaw in the conception of Indian administration due to the difference in their nature and methodology of execution as the former is based on the presence of brokers and intermediaries while the latter is based

on the blockchain nodes and algorithms. Therefore, there is the absence of any legal precedents for their enforcement in India, which makes it difficult to neutralize and regularize their usage in business transactions in India. However, the difference between smart contracts and traditional contracts makes it difficult to use the same clauses and provisions as those used in traditional contracts. The implementation of concepts like the force majeure clause is difficult in smart contracts. It faces barriers and hurdles in various stages of contract formation which results in the realization of the absence of dedicated legislation for the blockchain-backed smart contract facility. Some of the hurdles are being discussed below-

Digital Signature

To qualify as a valid electronic contract, the smart contracts are to fulfill the requirements as specified in Section 35 of IT Act 2000⁷ and Section 67 A of the Indian Evidence Act 1872⁸ which specify the requirement of digital signature to be certified by a government authorized and backed entity or authority. The problem arises with smart contracts as they generate digital signatures as a hash rather than a government-certified signature, which disables them from fulfilling the requirement of a government-authorized digital signature. Therefore, Smart contracts need this requirement to be bypassed to function in India. So there is a need to accept the blockchain-generated hash signature as a valid form of digital signature for the enforcement of smart contracts.

Communication of Acceptance

As per Section 3 of the Indian Contract Act 1872⁹, the communication of acceptance is required for the formation of a valid contract. The communication of acceptance is complete when the acceptance letter or information is communicated and heard or read by the proposer, and then it imposes an obligation upon the proposer to fulfill his obligations, thereby making it mandatory. In the case of smart contracts, when the conditions of if-then clauses are met in the code, it is executed by itself upon the verification of the conditions and then executes the contract. This makes it impossible to communicate the acceptance since the execution and acceptance take place simultaneously in smart contracts so it is not capable of fulfilling the same conditions as those highlighted in the Indian Contract Act, of

⁷ Information Technology Act 2000, s 35

⁸ The Indian Evidence Act 1872, s 67A

⁹ The Indian Contract Act 1872, s 3

1872 which reinforces the need for dedicated legislation for its smooth and paced implementation.

Autopay Issue

As per the RBI guidelines, the limit of autopay in the Indian economy is capped at 15 thousand rupees without mandate or one-time-password but the digital smart contract execution requires a higher limit for the purchase and execution of amounts bigger than 15000. The OTP or mandate requirement serves as a hurdle for the execution of conditions of smart contracts. However, the removal of the limit will also increase the chances of fraud and scams in payment or increased unauthorized payments, which will prove a big downside to the removal of the auto-pay limit.

Lack of Data Regulations

This is one of the biggest threats to online contracts as the scope for scams like phishing is very large given the feeble data security and privacy in a country like India where people are not that aware of the data breaches and appropriate methods to prevent such breaches. The absence of stringent regulations on the business provides them with the opportunity to use and manipulate user data and use it for their business gains. The upcoming digital data bill of India provides a ray of hope for the protection of digital users. If passed and implemented, it can cover some aspects of data privacy and can provide some immediate assistance in the enforcement of smart contracts in India.

Issue of Jurisdiction

Smart contracts are based on blockchain technology, which is supported and sustained on the digital nodes. A digital node is a device or a server that serves as the carrier and transmitter of information. These nodes are spread all over the world and in various countries across the digital network. A blockchain consists of linked nodes that continuously share the latest blockchain information, ensuring that all nodes remain current. These nodes share information, store and together distribute and handle data, therefore a blockchain that backs a smart contract can be based out of any node across the globe. This proves to be a headache to the judicial system as it creates the issue of jurisdiction of the arbitration and hearing in case of violation or breach of contract or an agreement, thereby making it difficult for the parties to resolve the disputes. One solution that arises in this scenario is the clause of

exclusive jurisdiction, where the parties come together to a conclusion to decide and restrict the adjudicating process to one of some available and suitable courts of their convenience. But there exists an issue of unequal bargaining power as highlighted by the Supreme Court in LIC vs Consumer Education and Research Centre¹⁰ that the standard form of contracts by large corporations like LIC must be scrutinized for fairness and the unjust clauses can be overridden due to the unequal nature of negotiating power of the framing of the contract. This would make it difficult for the parties to resolve the disputes as a single party may draft the contract and have singular and unequal bargaining power, which would result in a possibility of injustice to the non-drafting party to the contract.

Issue of Immutability

Smart contracts are self-executing contracts with terms directly written into lines of code. This code is deployed onto a blockchain network, making it immutable, meaning it cannot be altered or modified once deployed. This immutability is a fundamental characteristic of smart contracts. The immutability of the Smart contracts makes it difficult to edit and interpret the contract with its essence and motives and therefore is not capable enough to establish itself to replicate the physical contract, especially in case of void or voidable agreements and makes it difficult to invoke the forced majeure clause. So equating smart contract and physical contract to make the former enforceable on the same essentials as that of the latter does not seem a wise scenario to apply in real life. There are some challenges due to this immutability, like:

- **Up gradability:** In some cases, it may be necessary to update or upgrade a smart contract. This can be challenging due to the immutability principle. However, techniques like versioning and upgradeable contracts can be used to address this limitation.
- **Security Vulnerabilities:** Despite their immutability, smart contracts can still be vulnerable to security vulnerabilities like bugs or exploits. Careful coding practices and thorough testing are essential to mitigate these risks.

¹⁰ [1995] SCC(5) 482

The issue with the Requirement of Competent Parties

The need for competent parties is essential for the formation of a valid contract as prescribed in Section 11, The Indian Contract Act 1872. This requirement is difficult to fulfill in smart contracts, as the identification of the legal age of the parties is easy to bypass with the ease of forging legal documents and creating fake documents in India. Also, the requirement of not barred by law is difficult to identify digitally due to the absence of any such provision to incorporate in the smart contracts. There is the absence of any certificate or digital ID as of now for proving that a person is not barred by law and linking it to the blockchain nodes is a big task that has not yet been explored or tried. These loopholes together make it tumultuous to enforce smart contracts in India.

Impossibility of Performance

There can arise scenarios and unforeseen situations that can create the possibility of difficulty or creation of barriers in the performance of the contract, but these circumstances can be very tedious to take care of given the immutability of the smart contract. These situations like the death of the musician who was contracted to perform in the concert or the breaking of the bilateral ties among the countries result in the emergence of circumstances that can lead to the closure of trade facilities between the countries thus making it impossible for the traders to import or exports goods and services amongst these bilateral nations and republics. Thus, such circumstances make it difficult for the smart contracts to replace the traditional contracts.

Determination of lawful consideration

According to the Indian Contract Act 1872, offer, acceptance, lawful consideration and mutual consent of the competent parties of the contract are the essential components of a valid contract. Section 10 of the Contract Act mandates the requirement of lawful consideration. Therefore, the consideration is to have monetary value and legal backing to be considered appropriate for economic transactions. This can be a serious issue given the rise of Non-Fungible Tokens and Cryptocurrency and their usage in the Indian economy as a legitimate source of consideration as these are in the grey area. These are considered taxable assets as virtual digital assets, with a whopping 30% tax rate on these assets. Therefore, these cryptocurrencies lie in the unregulated zone of the economy and the Cryptocurrency Bill 2021 is also yet to be introduced and passed to provide some clarity on the

recognition of these assets as lawful. This bill seeks to prohibit private cryptocurrencies and introduce a digital currency backed by the Reserve Bank of India. Therefore, the intention of this bill is a clear indication of the ban on these virtual digital assets and thus intensifies the problem of lawful consideration.

The image¹¹ below describes the distribution of the investments of the Indians over the varied cryptocurrencies with the largest singular share being held by Bitcoin (12.12%), followed by Dogecoin (11.54%), Ethereum (9.43%), Shiba Inu (6.92%), Polygon (4.13%), etc.

This depicts the share of the portfolio of 115 million Indians, with a significant share held by the Indian youth aged between 18 and 45 years. Therefore, this issue is of significance and demands adequate attention given the risk to the youth as their value is highly volatile and its relevance as a legal tender in the Indian economy.



All the above challenges together voice for dedicated legislation to regulate smart contracts due to the hurdles and barriers created by the existing laws which are outdated to incorporate the resolution and implementation of smart contracts.

SUGGESTIONS

The above challenges can be resolved via the introduction of new provisions and legislations

¹¹ Sohini Mitter, '89% of India's crypto investors fall in 18-35 age group; Delhi tops in investments' (2023) <<https://www.businesstoday.in/crypto/story/89-of-indias-crypto-investors-fall-in-18-35-age-group-delhi-tops-in-investments-study-359902-2023-01-12>> accessed 4th September 2024

which have to be implemented pan India to provide the platform and serve as a prerequisite to the dedicated legislation.

1. The possibility of involving a government-authorized party or organization for the drafting of the smart contract can ensure the equality of bargaining power, with neither of the parties being in a position to manipulate or tweak the contract in their favor. Also, the approval of a legal professional to oversee the contract can help in the fulfillment of the requirement or need for legal wisdom over the drafting procedure.
2. Evolving a solid data protection law that can encrypt the information of the user in a coded and secure language can prevent data leaks and introduce a form of end-to-end encrypted transaction with the requirement of biometric information like retina scan for payment approval which can be encoded in the smart contract can provide a safeguard against financial frauds and scams based out of the OTP system.
3. to resolve the competent parties, a new ID can be created for verification which will be backed by a database containing information regarding the criminal record, lawful nature, age, sound-mindedness, etc. Thus, the smart contract will be executed after the code verifies the ID from the digital database, which can then help ease the process of fulfilling the requirements of the smart contract.
4. The government should reduce the tax imposed on digital assets and should change its approach of banning virtual digital assets like crypto and NFTs and try to regulate and cap their volatility by pegging the cryptocurrency with the new digital currency that the RBI sought to introduce. This way, the issue of recognition of the legality and lawful consideration will be resolved.
5. To solve the problem of digital signature, the government can try and effectively partner with third parties producing the hash signature in the smart contracts. This public-private partnership can together provide a hash signature that will already be verified by the government entity thus resulting government a verified, and blockchain-generated digital signature thus resolving the issue of lack of government verification of the digital signature.
6. The issue of impossibility of performance can be resolved via the introduction of the

If- The then clause in the smart contract as the execution will be aborted in case of the fulfillment of the condition of death, illness, wars, etc.

These suggestions can help improve the conditions for the implementation and regularization of smart contracts in India, as they provide the possible solutions for the challenges and barriers highlighted above in this research paper.

CONCLUSION

This paper provides a detailed analysis of the inefficiencies in the implementation of smart contracts and provides the solutions for the same. The combination of blockchain technology and smart contracts holds great promise for transforming business transactions in India. However, the existing legal framework is insufficient to support the widespread use of these technologies. The Indian legal system, primarily based on the Indian Contract Act of 1872 and the Information Technology Act of 2000, is not equipped to tackle the specific challenges presented by smart contracts, such as the requirements for digital signatures, jurisdictional issues, and contract enforceability. To promote the use of smart contracts, there is an urgent need for specialized legislation that addresses these challenges. The government should consider revising current laws or creating new regulations that acknowledge blockchain-based digital signatures, verify the competence of contracting parties, and clarify the use of digital assets like cryptocurrencies and NFTs as legitimate considerations in contracts. Additionally, updating data protection laws and encouraging public-private partnerships can enhance the security and reliability of smart contracts. By implementing these measures, India can foster an environment conducive to the adoption of smart contracts, improving the business landscape and establishing the country as a leader in the global digital economy. Timely action in this area is essential to harness the potential advantages of smart contracts and ensure that India remains competitive in technological advancements. This change is also required to provide a leap to the Indian economy, and it will also help in contributing towards the Digital India program launched by the Government of India in the year 2015 to reduce the red tape issue in the functioning of Indian industry. It will also serve as an example of the dynamic functioning of the Indian economy and can help in inviting foreign companies and multinationals who will then recognize the potential of the latent Indian economy by contributing towards the growth through their foreign direct and foreign institutional investments and create job opportunities in the field of Information Technology and law. Therefore, it can revolutionize the contract-making of Indian law and

can introduce a new face to the Indian legislators infused with profound dynamism and intellectual innovative thinking.

