Artificial intelligence and e-contracts: A study

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Abstract: E-contracting has revolutionized modern business by streamlining and speeding up the contracting process, turning what traditionally took months into a matter of days or hours. Advances in artificial intelligence (AI) and widespread use of the Internet have greatly facilitated this transformation. E-contracts comply with all required legal requirements and transform traditional paperwork into a digital format, enabling seamless transactions in global markets. The advent of e-contracts has simplified purchasing processes, allowing consumers to order, cancel, return products and make warranty claims online with unprecedented ease. This flexibility transcends geographical boundaries, making both national and international transactions more simple and efficient. AI plays a key role in this new paradigm by providing tools that can review and manage large volumes of contracts faster and more accurately than human capabilities.

The integration of AI into e-contracts has introduced new dimensions to contract management, including the ability for AI systems to enter into contracts autonomously, a previously unimaginable concept. This development has sparked discussion over the future legal status of AI in contract law. Despite ongoing debates, the role of AI in contracting is increasingly being recognized, with new standards emerging to address the unique challenges and benefits it brings. Major online marketplaces such as Amazon, Flipkart and Alibaba exemplify the practical application of e-contracts, providing users with a straightforward and efficient means to purchase goods and services. Ease of use, instant confirmation, and comprehensive post-purchase support, including cancellations and returns, highlight the significant improvements that AI and the Internet have brought to the contracting process.

The integration of AI and e-contracts has fundamentally changed the way contracts are formed, executed and managed. This technological advancement delivers increased efficiency, accessibility, and reliability in modern business transactions, underscoring the profound impact AI will have on the future of contract law and commerce.

Keywords: *Acceptance; Artificial intelligence; Consideration; E- contract; Offer; Technology.*

1. Introduction

E-contract is a good tool in modern times. E-contracts have made things easier [1]. It has gone worldwide and made things easy. The contracts which used to take months are now happening in a short span of time. All this has been possible through e-contracts [2]. In the contract also all the conditions of the Contract Act are fulfilled. What was earlier done in paperwork, today is happening through artificial intelligence.

This has given a new dimension to the contract. Previously, you went to the market physically and purchased the required things. But now the time has been changed Today if you require any equipment, any product or any item, you can go to any online shop and order online. In a few days, it will be delivered to your address. On top of it, you can even cancel that order at any step. It has lots of options. You can also do the return, and the money will be returned to your account. if you buy that product, you can claim the warranty and also raise the complaint through online mode. In these kinds of modes, you can contract anywhere, Territories are not a boundation for E-contracts national and international E-Contracts have made it easier. Things have become very clear [3]. The Internet has given new dimensions to contracts.

Artificial intelligence continues to assume greater importance in the framework of performing contracts and reviewing contracts [4]. Due to the technology and artificial intelligence, there is no time limitation. It is available 24x7 throughout the world. There are already products on the market that use AI-driven technologies to review contract terms. Such tools can be used to review large numbers of contracts in a fraction of the time that it would take lawyers to review each one manually.

Some legal commentators would not even have thought of a contract like this in the future which is based on artificial intelligence, which has come true today. The advocates would never have imagined this time. When Artificial intelligence systems could be able to enter into contracts and would accordingly be granted an autonomous legal personality [5].

While the debate over Artificial intelligence's potential role in concluding contracts remains largely theoretical, new contract standards are being shaped to address and accommodate Artificial based products and services and the challenges and benefits they bring. Here we will explore a few issues to consider when it comes to contracting in relation to the purchase or use of Artificial intelligence technologies.

In world largest and biggest online sites like amazon, flipkart and alibaba or many other sites which are working internationally. The contracts are made up online and get consideration and delivered the things to the concerned address. it is very good for human being, earlier times things were not very easy. First instance a contract was framed in person either on telephonic or in writing and sent it for acceptance by post to other Party. The contracts are made up in that way. But now the internet and artificial intelligence has changed all the medium. Now things are online on site and they are direct offers to you and the amount has been shown on the screen. You have to click to buy option and then pay the amount also virtually after successful payment the item delivery will be made up to you at a prescribed time at the given address. The second thing is also very clear, you can cancel an order at any stage. You can claim warranty and guarantee and replacement as well that you can refuse the product after received or after the check and use for a week. These are offers that are given in the market by the concerned companies. So we can say that the internet and artificial intelligence has changed the contract a lot.

The buying and selling of products and availing services over a computer network are known as e-commerce. Technology, including IT, software, and Artificial intelligence, has changed the living standards of people.

Communication cannot be restricted within geographical conditions and time limits. With the growth of e-commerce, the use of e-contracts has increased rapidly. The use of IT has erased the limits of location, time, area, or distance in electronic commerce to make payments. E-commerce has made payments flexible, making business and e-contract access more widespread and faster than ever before. The conduct of business through the online platform has become a new norm in the digital era. However, the implementation of electronic contracts faces several challenges on three levels, namely (1). conceptual (2). logistical, and (3). implementation, as well as cyber safety [6]. An e-contract is a contract that is modelled, specified, executed, and deployed by a software system. It is pertinent to mention that the traditional (paper-based) business contracts are conceptually similar to e-contracts. In online shopping, the potential buyers are shown the vendors' products, pricing, and terms. Buyers think about their options, negotiate prices and terms (if possible), place orders, and pay. The vendors delivered the purchased items to the given address. However, unlike traditional commerce, internet commerce raises some novel and exciting technical and legal issues.

Research Objectives

- How technology is altering contract drafting?

• How existing regulations and judiciary have responded to the use of technology in contact.

2. Review of literature

2.1. Transformation of Contracting Processes

The literature highlights the revolutionary impact of e-contracts on the traditional contracting process. E-contracts, facilitated by AI and digital tools, have significantly accelerated the time required for drafting, reviewing, and finalizing agreements, turning months-long processes into mere hours or days. This transformation underscores the efficiency gains and streamlined workflows brought about by technology [7].

2.2. Legal Compliance and Digital Format

Studies emphasize that e-contracts adhere to all necessary legal requirements, ensuring that traditional contract law principles such as offer, acceptance, and consideration are met in a digital context [8]. The digitization of paperwork into e-contracts allows for seamless transactions across global markets, maintaining legal integrity while enhancing operational efficiency.

2.3. Consumer Convenience and Flexibility

The literature discusses how e-contracts have simplified consumer transactions, enabling easy ordering, cancellation, returns, and warranty claims online. This convenience is supported by AI-driven platforms that offer user-friendly interfaces and automated processes, thereby enhancing consumer satisfaction and broadening the scope of both national and international transactions [9].

2.4. AI's Role in Contract Management

AI's integration into e-contracts is a major focus, with AI tools being used to review and manage large volumes of contracts more quickly and accurately than human counterparts. This capability has sparked discussions about the future legal status of AI in contract law, with some suggesting the potential for AI systems to autonomously enter into contracts, thereby introducing new dimensions to contract management and legal standards [10].

2.5. Practical Applications and Market Examples

Case studies of major online marketplaces like Amazon, Flipkart, and Alibaba illustrate the practical application of e-contracts. These platforms exemplify how AI and the Internet facilitate straightforward, efficient purchasing processes, complete with features like instant confirmation and comprehensive post-purchase support. These examples underscore the significant improvements in the contracting process brought about by AI and digital technologies [11].

3. Methodology

This study on artificial intelligence and e-contracts primarily utilizes secondary data to explore the impact and benefits of e-contracting. The research draws from a variety of sources, including books, academic journals, articles, and reputable magazines. By analyzing existing literature and case studies, the study examines the technological advancements and legal frameworks that have facilitated the adoption of e-contracts. Additionally, it reviews data from major online marketplaces and industry reports to understand the practical applications and efficiency gains achieved through AI integration in contract management. This comprehensive analysis of secondary sources provides a well-rounded understanding of the current state and future potential of AI-driven e-contracts in modern business practices [12].

4. Discussion on E- Contracts

4.1. Meaning of E-Contracts

Electronic or e-contracts are paperless contracts and in electronic format. These contracts are generally made for speedy entering into a contract for the convenience of the parties. A digital signature is all they need to enter into a contract as a party even though both the parties to the contract are sitting miles away from each other. An E-contract is the most convenient method to enter into a contract without being physically exhausted.

E-contract has grown so ubiquitous in day-to-day affairs of life, that one cannot imagine his life without it. Everything from hiring a cab, to purchasing plane tickets, and daily use essentials can be purchased online in a few clicks and entered into the contract. Contracts govern a wide range of aspects of our everyday lives. In an electronic contract, the offer, counter-offer, and acceptance are all done electronically, and this type of communication results in a contract.

4.2. Recognition of E-Contract

Section 10A of the Information Technology (Amendment) Act, 2008 gives legislative authority to E-contracts. It says that "where in a contract formation, the communication of proposals, the acceptances of proposals, the revocation of proposal and acceptances, as the case may be, are expressed in electronic form or by means of an electronic record. Such contract shall not be deemed to be unenforceable solely on the ground that such electronic form or means was used for that propose." (Section 10A in The Information Technology Act, 2000). Replica, Telex, and other similar technology-based e-contracts are already legally recognized everywhere. An agreement between the parties is legally valid if it meets the legal requirements for formation, that is a contract, the parties intended to form a contract first and foremost. His intention is demonstrated by his adherence to three classical essentials: (i) proposal, (ii) acceptance, and (iii) consideration. (Indian Contract Act, 1872).

One of the first steps in contract formation is for the contracting parties to reach an agreement through an offer and its acceptance. A website advertisement may or may not constitute an offer because an offer and an invitation to treat are two different concepts. (S. Indian Contract Act, 1872).

This kind of invitation is to treat as an offer to the world at large (Carbolic Smoke Ball Co. Case), unless otherwise stated on the website, by phone call, or by app, either by email or in writing (Personal Contract or invitation to agreement). The intention of the parties will determine, whether the person giving the information wants to be legally bound by it. When customers send an e-mail or submit an offer via an online form embedded on a website. The seller may expressly or implicitly accept this offer. The followings are the essentials of a valid e-contract and these are in the same line as other forms of valid contracts has to fulfill-

i. There must be a Proposal /offer

ii. It must be accepted.

iii. Legal consideration must be present there.

iv. Parties must be capable to contract

v. Free consent must be there

vi. Law full objects

4.3. E-contracts must answer the following questions in order to be recognised

- Is an e-contract legally binding?

- Is a provider considered to have made an offer if he or she posts descriptions of goods and services with prices on a website?

- Whether e-contracts satisfy the legal requirements for reducing agreements to signed papers.

- Do e-contracts interpret, adopt, and compile additional legal standards that apply to electronic transactions?

4.4. Acceptance

To create a valid e-contract, a clear unconditional communication of acceptance is required in the context of the offer. While acceptance is required in e-contracts, it is more important in determining where and when a contract is made. The acceptance takes effect as soon as it is received, according to the standard receipt rule. When it comes to contracts, there are no hard and fast rules.

The reasonable certainty of the message determines the applicable communication rule. Parties connecting directly without using the server will be notified of message failure or partial receipt. Frequently, technical errors affect the e-contract, causing the e-contract to fail.

4.5. Consideration and performance

When a promise is made in exchange for something else, a contract is formed. This is what is referred to as a 'idea.' The existing terms of consideration apply to e-contracts. Consumers are concerned about the Internet's transitional security.

Distance E-Direction By minimising buyer and supplier misuse, selling aims to build trust. The consumer should be given a clear and understandable summary of key points. By providing a seven-day cooling-off period to return goods or reimburse the cost of services without penalty or reason, consumers can avoid deals made unintentionally or without sufficient information [13]. The display must be delivered within thirty days of the order, unless otherwise agreed. Reimbursement for funds lost as a result of fraudulent credit card use. It puts the credit card company at risk of fraud, necessitating safeguards to safeguard their position. On the other hand, sellers must be protected from dishonest buyers. It is recommended that 'charge-back clauses' be included, as well as encouraging buyers to pay in advance. As a result, against unknown sellers, this Directive adequately protects both consumers and sellers' rights.

4.6. Liability and Damage

A party in breach of contract can be held liable under contract law in various ways [14]. Due to the nature of the systems and networks used by businesses to conduct e-commerce, the parties may be held liable for contracts that technically arose with them but the actual intent of the party as a result of the programming or were executed, issued or issued without authority. error, employee error, or intentional misconduct. In order to legally attribute the sender of a message, voice policies require that the party receiving the message rely on legal expressions of authority from the sender's computer.

Techniques to limit liability risk, in addition to using information security mechanisms and other controls, include:

1. Conflicts with business partners and legal issues;

2.Following pre-determined procedures, policies, and practise;

3. Programmer control and auditing, as well as reviews;

4. Expertise and Certification in Technical Fields;

5. Human Resource Management that Works;

6. Invest in insurance;

7. Improvements to notification and disclosure mechanisms, as well as the enactment of relevant secure electronic commerce legislation and regulations.

Digital signatures are defined in Section 2(p) of the Information Technology Act of 2000 as the authentication of any electronic record by a subscriber using an electronic method or procedure. A digital signature for electronic documents performs the same function as a handwritten signature for printed documents. The signature is a non-forgeable piece of information that certifies that a specific person wrote or agreed to the document to which it is attached. When compared to a handwritten signature, a digital signature is more secure.

The recipient of a digitally signed message can verify that it was sent by the person whose signature is attached and that it has not been altered since it was signed, either intentionally or unintentionally. Furthermore, secure digital signatures cannot be revoked; a document's signer cannot later claim the signature was forged and deny signing it. In other words, digital signatures allow for the "authentication" of digital messages, ensuring both the sender's identity and the message's integrity to the recipient. The main disadvantage of online contracts is that, without any other means of identifying the other party other than digital signatures or a public key, it is possible to misrepresent one's identity and pass as someone else.

4.7. Benefits of E-contract

E-contracts significantly reduce time and costs associated with drafting, reviewing, and finalizing agreements, eliminating the need for physical meetings and paper documentation. They offer 24/7 accessibility, enabling seamless international transactions and continuous contract management. The process is streamlined and user-friendly, with automated tools ensuring efficiency and accuracy. Additionally, e-contracts enhance transparency and reduce disputes, promoting higher rates of agreement and fulfillment.

4.7.1. Time Saving

E-contracts significantly reduce the time required to draft, review, and finalize agreements. Traditional contracts often involve lengthy processes including back-and-forth negotiations, physical meetings, and postal delays. E-contracts, facilitated by digital tools and AI, streamline these steps, enabling near-instantaneous exchange and modification of documents. Automated workflows ensure that approvals and signatures can be obtained quickly, often within minutes rather than weeks or months.

4.7.2. Energy Saving

E-contracts eliminate the need for physical meetings, travel, and paper documentation, thereby conserving energy and reducing the carbon footprint associated with traditional contract management. Digital communication and cloud storage minimize the physical resources required, making the entire process more energy-efficient. This shift not only benefits businesses by reducing operational costs but also supports environmental sustainability initiatives.

4.7.3. Cost Saving

E-contracts help businesses save money by reducing expenses related to printing, mailing, storage, and administrative overhead. Automated systems cut down on labor costs associated with manual data entry, contract review, and compliance monitoring. Additionally, faster turnaround times mean that transactions can be completed more quickly, improving cash flow and reducing opportunity costs.

4.7.4. Paperless Work

By transitioning to digital formats, e-contracts reduce the reliance on physical paper, promoting a more sustainable and environmentally friendly approach. This paperless workflow also enhances document management, making it easier to store, retrieve, and archive contracts electronically. Digital records are less susceptible to loss or damage, ensuring better preservation and security of important documents.

4.7.5. No Time Limits

E-contracts can be executed and accessed at any time, 24/7, from anywhere in the world. This eliminates the constraints of business hours and time zones, allowing for continuous and uninterrupted contract management. This flexibility is especially beneficial for international transactions and for businesses operating in multiple regions, facilitating smoother and more efficient operations.

4.7.6. Easy Process

The user-friendly interfaces of e-contract platforms make the process straightforward and accessible, even for those without extensive technical expertise. Step-by-step guidance, templates, and automated tools simplify the creation, negotiation, and execution of contracts. E-signature capabilities further enhance the ease of finalizing agreements, making the entire process seamless and efficient.

4.7.7. Majority is Confirm in E-Contracts

E-contract platforms often provide real-time updates and tracking, ensuring that all parties are informed and engaged throughout the process. The transparency and clarity of digital contracts reduce misunderstandings and disputes, leading to higher rates of agreement and fulfilment [15]. Automated notifications and reminders help ensure that deadlines are met and obligations are fulfilled, contributing to the overall reliability of e-contracts.

4.8. Drawbacks of E-contract

Technical errors can significantly impact the effectiveness of e-contracts, potentially leading to misinterpretations, disputes, or even contract failure. Issues such as system malfunctions, data breaches, or software glitches may compromise the integrity and reliability of e-contracting processes. Additionally, reliance on digital platforms and electronic signatures may raise concerns regarding security and authenticity, particularly in cases of identity theft or fraudulent activities. These drawbacks underscore the importance of robust cybersecurity measures and careful consideration of potential technical vulnerabilities when implementing e-contracting systems.

4.8.1. Technical Errors and Glitches

E-contracts are susceptible to technical issues such as system malfunctions, software bugs, or data breaches, which can disrupt the contracting process and compromise the integrity of agreements.

4.8.2. Security Concerns

E-contracts may raise security concerns related to the protection of sensitive information, authentication of electronic signatures, and safeguarding against cyber threats such as hacking or identity theft.

4.8.3. Legal Uncertainties

The legal framework surrounding e-contracts may still be evolving, leading to uncertainties regarding enforceability, jurisdictional issues, and compliance with regulatory requirements in different jurisdictions.

4.8.4. Legal Uncertainties in E-Contracts

In both India and abroad, the legal landscape surrounding e-contracts is marked by significant uncertainties. Enforceability of e-contracts, jurisdictional issues, and compliance with regulatory requirements pose substantial challenges.

a. Enforceability: Indian and international laws are continually evolving to accommodate e-contracts. While legislation such as the Information Technology Act, 2000 provides a legal framework for electronic transactions, nuances in contract formation, authentication, and dispute resolution remain ambiguous [16].

b. Jurisdictional Issues: With e-contracts transcending geographical boundaries, determining the appropriate jurisdiction for dispute resolution can be complex. Varying legal interpretations and enforcement mechanisms across jurisdictions further complicate matters.

c. Compliance Challenges: E-contracts must adhere to diverse regulatory frameworks across different jurisdictions, adding layers of complexity to contract management. Ensuring compliance with data protection, consumer rights, and electronic signature laws presents formidable challenges for businesses operating in multiple regions.

d. Navigating these legal uncertainties requires careful consideration of jurisdiction-specific laws, proactive risk mitigation strategies, and expert legal counsel to ensure the enforceability and validity of e-contracts in India and abroad.

4.8.5. Dependency on Technology

E-contracts rely heavily on technology infrastructure and internet connectivity, making them vulnerable to disruptions or failures in digital systems, which could potentially delay or impede contract execution.

4.8.6. Lack of Personal Interaction

The absence of face-to-face interactions in e-contracting may result in challenges related to trust-building, negotiation, and resolving disputes, potentially leading to misunderstandings or breakdowns in communication.

4.8.7. Legal Uncertainties

The legal framework surrounding e-contracts may still be evolving, leading to uncertainties regarding enforceability, jurisdictional issues, and compliance with regulatory requirements in different jurisdictions. in India and abroad lot of legal implantation and territory implications.

5. Conclusion

Because it involves a combination of technologies, processes, and business strategies that aid in the immediate exchange of information, e-contracts are suitable for facilitating the re-engineering of business processes occurring across multiple firms. E-contracts have both advantages and disadvantages. On the one hand, they save money and time while improving service quality by reducing paperwork and increasing automation. By providing unprecedented access to a global marketplace with millions of customers and thousands of products and services, e-commerce is expected to boost the productivity and competitiveness of participating businesses. On the other hand, because electronic contracts do not involve humans making decisions on specific transactions, the proposal focuses on how risk should be structured in an automated environment. As a result, the goal is to create a default rule for conveying a party in order to prevent contract fraud and inconsistency.

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