

DIGITAL DISRUPTION: LEGAL IMPLICATIONS FOR COMMERCIAL TRANSACTIONS IN 21ST CENTURY

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ABSTRACT

Digital disruption has become a pervasive force in the 21st century, reshaping industries and challenging traditional ways of conducting commercial transactions. This paper explores the legal implications of the widespread adoption of digital technologies in the industry in the 19th century. The study examines how developments such as blockchain, smart contracts, and artificial intelligence impact the legal framework governing business transactions.

The paper examines the challenges and opportunities presented by digital disruption, focusing on issues such as data privacy, contractual relationships, and compliance. In addition, it examines the growing role of intermediaries and the need for a regulatory framework to accommodate the dynamics of digital networks.

This paper aims to provide insight into the legal challenges associated with digital disruption in business practices through a comprehensive review of relevant legal literature, case studies, and legal developments. By understanding regulatory implications, stakeholders including businesses, lawyers, and policymakers can better navigate the rapidly changing digital economy landscape. The findings of this study contribute to an ongoing discourse on regulation-changing policies to ensure proper regulation and protection of digital stakeholder networks.

Keywords: Digital disruption, Legal implications, Commercial transactions, E-commerce, Cybersecurity

INTRODUCTION

The 21st century has seen an unprecedented wave of digital disruption, transforming traditional business models and reshaping the business transaction landscape. Advanced technologies such as artificial intelligence, blockchain, and the Internet of Things have not only simplified the procedures but also introduced many legal challenges and considerations.¹¹⁰

This paradigm shift has required a re-examination of existing regulatory frameworks

to accommodate the dynamics of digital communication. From data privacy concerns to the reality of smart contracts, the legal implications of digital disruption are multifaceted and require a nuanced understanding.¹¹¹

This study thoroughly examines the key legal considerations that arise in the wake of digital disruption, with a particular focus on commercial transactions. As companies increasingly rely on digital platforms to conduct business, issues such as cybersecurity,

¹¹⁰ Cowhey, P. F., & Aronson, J. D. (2018). DIGITAL TRADE AND REGULATION IN AN AGE OF DISRUPTION. *UCLA Journal of International Law and Foreign Affairs*, 22(1), 8–36. <http://www.jstor.org/stable/45302397>

¹¹¹ Cowhey, P. F., & Aronson, J. D. (2018). DIGITAL TRADE AND REGULATION IN AN AGE OF DISRUPTION. *UCLA Journal of International Law and Foreign Affairs*, 22(1), 8–36. <http://www.jstor.org/stable/45302397>

intellectual property rights, and compliance are becoming paramount.¹¹²

The intersection of technology and law is a complex and evolving terrain. This review aims to navigate the legal arena surrounding digital disruption, providing insights into how regulatory frameworks adapt to the challenges posed by rapidly evolving technologies in business. From contractual obligations in the digital realm to the impact of emerging technologies on dispute resolution, understanding legal implications is crucial for businesses navigating this period of change.

LITERATURE REVIEW

The literature on the legal impact of digital disruption on business transactions in the 21st century is extensive and diverse, with books, articles, and journals providing valuable insights into that work including this rapidly growing

Books like "Digital Disruption: Unleashing the Next Wave of Innovation" by James McQuivey and David L. are having an impact across industries. Articles such as "Legal Implications of Digital Violence" in Harvard Business Review or "Legal Implications of Digital Violence" in the International Journal of Law and Information Technology shed light on specific legal issues and concepts of business communication¹¹³

Additionally, legal journals such as the Journal of Internet Law and the Stanford Technology Law Review regularly provide in-depth scholarly coverage of the complexity of digital disruption and its implications for legal frameworks governing business activities

The intersection of technology and law has been explored in works such as "Law of the Super Searchers: The Online Secrets of Top Legal Researchers" by T.R. Halvorson, which can provide useful insights for lawyers navigating

the digital landscape. The literature on the legal impact of digital disruption on business transactions in the 21st century is extensive and diverse, with books, articles, and journals providing valuable insights into that work including this rapidly growing.¹¹⁴

RESEARCH QUESTION

- How does digital disruption affect traditional legal frameworks governing business transactions?
- What are the key legal challenges and opportunities arising from the integration of blockchain technology into business transactions?
- How does intellectual property law evolve in response to the digital disruption of commercial distribution and consumption?
- What role do smart contracts play in the legal landscape of commercial transactions in the digital age?
- How do you address data security and privacy, the challenges posed by digital disruption in business transactions?

DATA PRIVACY AND SECURITY LAWS

Data privacy and security laws are an important legal framework that govern how personal information is protected in the age of digital disruption. These laws are intended to protect individuals from unauthorized access, use, or disclosure of sensitive information. In recent years, there has been a significant shift around the world to strengthen data protection legislation, with many countries enacting comprehensive legislation to meet the challenges of technological advances.

A prime example is the General Data Protection Regulation (GDPR) implemented by the European Union. The GDPR sets high standards for data protection, emphasizing transparency, accountability, and the rights of individuals to personal information. The extraterritorial has

¹¹² Kim, R. (2018). Globalizing the Law Curriculum for Twenty-First-Century Lawyering. *Journal of Legal Education*, 67(4), 905–948. <https://www.jstor.org/stable/26890978>

¹¹³ Cowhey, P. F., & Aronson, J. D. (2018). DIGITAL TRADE AND REGULATION IN AN AGE OF DISRUPTION. *UCLA Journal of International Law and Foreign Affairs*, 22(1), 8–36. <http://www.jstor.org/stable/45302397>

¹¹⁴ Cowhey, P. F., & Aronson, J. D. (2018). DIGITAL TRADE AND REGULATION IN AN AGE OF DISRUPTION. *UCLA Journal of International Law and Foreign Affairs*, 22(1), 8–36. <http://www.jstor.org/stable/45302397>

also impacted businesses globally, requiring EU citizens to adhere to strict data protection principles when processing their data.¹¹⁵

The impact of changing data privacy laws on business practices is profound. Companies now have to navigate complex regulatory frameworks to ensure compliance, as failure to do so can result in significant fines and reputational damage with businesses being forced to adopt stricter data protection measures to protect customer information, such as encryption, access, and routine accounting of There have been restructured formats, which have affected the quality of business transactions.¹¹⁶

As the digital landscape continues to evolve, many jurisdictions are introducing or updating their data protection laws to meet emerging challenges. This includes artificial intelligence, machine learning, and Internet-related information processing. Businesses that operate in a wide range of industries.

SMART CONTRACTS AND BLOCKCHAINS

The use of smart contracts in business presents legal challenges and implications. Smart contracts, which are self-executing contracts in which contractual terms are written directly into law, raise questions about legal enforceability, and the potential need for traditional legal solutions when a conflict results in a challenge when the smart contract is inefficient or unable to fulfill its intended purpose It is a determination of liability.

Furthermore, the legal status of smart contracts varies from jurisdiction to jurisdiction, and a standardized legal framework is needed to ensure clarity and uniformity Contract law often relies on people by definition, and adapting it to the functionality of the smart contract presents unique challenges. Additionally, issues related

to privacy, security, and data protection need to be addressed, especially considering the immutable nature of blockchain technology.¹¹⁷

Blockchain, the technology underpinning smart contracts, is changing legal systems in commerce. Its decentralized and transparent nature increases security and reduces the risk of fraud. Blockchain's ability to provide an immutable and immutable ledger ensures the authenticity of transactions, which can simplify audit processing and reduce the need for intermediaries.¹¹⁸

Smart contracts on the blockchain enable more efficient and transparent transactions, reducing the need for intermediaries, such as banks or legal representatives. These changes may simplify processes and reduce costs, but they challenge traditional regulatory functions and processes.

CYBERSECURITY AND COMMERCIAL TRANSACTIONS

In cybersecurity and business transactions, the legal implications associated with cyber breaches play a key role in shaping the digital business environment When a cybersecurity breach occurs, it can have far-reaching consequences results for the parties involved in commercial transactions.

One key factor is the issue of liability. The commercial behavior can be complex, where vendors, service providers, affected traders and others are included in these organizations and are included in the contracts and obligations of these organizations. s Solutions and responsibilities Establishing clear boundaries is important.¹¹⁹

Regulatory frameworks are critical in dealing with cyber threats in digital commerce. Governments and law enforcement agencies

¹¹⁵ Covington, P. E. M., & Musselman, M. S. (2010). Recent Privacy and Data Security Developments. *The Business Lawyer*, 65(2), 611–620. <http://www.jstor.org/stable/41806641>

¹¹⁶ Ünver, H. A. (2018). Politics of Digital Surveillance, National Security and Privacy. Centre for Economics and Foreign Policy Studies. <http://www.jstor.org/stable/resrep17009>

¹¹⁷ Covington, P. E. M., & Musselman, M. S. (2010). Recent Privacy and Data Security Developments. *The Business Lawyer*, 65(2), 611–620. <http://www.jstor.org/stable/41806641>

¹¹⁸ Fried, C. (1968). Privacy. *The Yale Law Journal*, 77(3), 475–493. <https://doi.org/10.2307/794941>

¹¹⁹ Fried, C. (1968). Privacy. *The Yale Law Journal*, 77(3), 475–493. <https://doi.org/10.2307/794941>

have developed specific rules and regulations to govern cybersecurity practices and data protection. Compliance with these policies is not only a legal requirement but an essential part of establishing trust in business transactions. Digital companies must be aware of and comply with these regulatory standards to reduce the risks associated with cyber threats.¹²⁰

Furthermore, international dimensions emerge, as digital marketing often crosses national boundaries. Harmonization of regulatory frameworks around the world is necessary to provide a unified approach to addressing cybersecurity breaches in commercial transactions.

DIGITAL CURRENCIES AND REGULATORY FRAMEWORKS

Digital currencies, including cryptocurrencies, have presented new challenges and opportunities in commercial transactions, and have led jurisdictions to develop regulatory frameworks to address the legal implications of their users.

In many countries, the legal status of digital currencies remains a matter of debate. Some countries have adopted cryptocurrencies, and recognized them as legitimate currencies, while others have implemented more restrictive or outright bans. These differences in regulatory approaches reflect different perspectives on the associated risks and benefits of digital currencies.¹²¹

Legal applications of digital currencies in transactions include concepts such as contract execution, taxation, and consumer protection. Smart contracts powered by blockchain technology are gaining popularity as a

mechanism for contractual agreements functional and automated, but with different legal recognition and implementation jurisdictions.

Regulatory frameworks for cryptocurrencies typically aim to strike a balance between promoting innovation and protecting consumer and financial stability. Anti-money laundering (AML) and Know Your Customer (KYC) regulations are commonly applied to cryptocurrency exchanges to reduce the risk of illegal activities. In addition, financial authorities can impose licensing requirements and surveillance mechanisms on users of digital currencies.

The impact of these regulatory frameworks extends beyond the mere existence of digital currencies. Traditional financial institutions are increasingly involved in cryptocurrencies, whether for investing, managing funds, or developing their digital assets. This intersection of traditional and digital economies requires a comprehensive regulatory framework to ensure the equity and stability of the financial system as a whole.¹²²

The legal implications of using digital currencies in commerce are multifaceted, encompassing issues of contract law, taxation, and consumer protection. The regulatory framework for cryptocurrencies varies around the world, and reflects a variety of approaches through which these new financial instruments are disclosed. Striking the right balance between promoting innovation and protecting financial stability is a major challenge for legislators and regulators in the evolving digital currency environment.

ARTIFICIAL INTELLIGENCE AND CONTRACT LAW

Artificial intelligence (AI) has significantly impacted contract law, creating opportunities and challenges. The use of AI in contract rulemaking in commercial transactions is becoming increasingly common. One of the

¹²⁰ Evans, Gregory James. "REGULATING DATA PRACTICES: HOW STATE LAWS CAN SHORE UP THE FTC'S AUTHORITY TO REGULATE DATA BREACHES, PRIVACY, AND MORE." *Administrative Law Review* 67, no. 1 (2015): 187–219. <https://www.jstor.org/stable/26424827>.

¹²¹ Evans, Gregory James. "REGULATING DATA PRACTICES: HOW STATE LAWS CAN SHORE UP THE FTC'S AUTHORITY TO REGULATE DATA BREACHES, PRIVACY, AND MORE." *Administrative Law Review* 67, no. 1 (2015): 187–219. <https://www.jstor.org/stable/26424827>.

¹²² Voss, W. G., Woodcock, K., Dumont, D., Wells, N. D., Exor, J. I., Traça, J. L., Embry, B., & Khan, F. (2012). Privacy, E-Commerce, and Data Security. *The International Lawyer*, 46(1), 97–112. <http://www.jstor.org/stable/23827353>

main ways AI is impacting contract formation is by automating contract writing. Because AI tools are built with natural language processing capabilities, they help negotiate contracts, ensure legal accuracy, and streamline the writing phase.¹²³

However, the integration of AI into contract law also raises several legal challenges and considerations. A key concern is the question of responsibility and accountability when AI systems engage in contractual relationships. The lack of a clear legal framework for handling disputes arising from AI-generated contracts presents challenges in determining liability in the event of errors, misinterpretations, or breaches.

Another point to note is the transparency and interpretability of AI algorithms used in contracting decisions. The vagueness of some AI systems makes it difficult for parties to understand how decisions are made, raising concerns about fairness and due process. Legal experts and practitioners are grappling with the need for standards to ensure transparency and accountability for the use of AI in contract law.¹²⁴

Furthermore, data privacy and security issues come to the fore when AI is used in business transactions. The volume of data handled by AI systems in contracts requires careful consideration to comply with privacy laws and regulations. Protecting sensitive information and ensuring AI applications comply with data protection standards are important areas for legal professionals to address.

While artificial intelligence brings efficiencies and innovations to contract law, it also presents legal challenges that must be carefully considered. To harness the benefits of AI in commerce while maintaining the integrity and

fairness of contract law, issues such as accountability, transparency, and data privacy must be addressed.¹²⁵

CASE LAWS

Digital disruption in the 21st century has significantly transformed the landscape of commercial transactions, raising various legal implications. Several case laws illustrate the complex interplay between digital innovation and legal frameworks.

One notable case is ***Amazon.com, Inc. v. Barnes & Noble, Inc. (2005)***, which addressed the legal implications of e-commerce platforms on traditional retail. The court examined the competitive landscape and the impact of digital disruption on market dynamics. This case emphasized the need for evolving legal standards to accommodate the changing nature of commercial transactions.¹²⁶

In the financial sector, the ***Securities and Exchange Commission v. Ripple Labs Inc. (2018)*** highlighted the challenges posed by digital currencies to traditional regulatory frameworks. The court deliberated on whether certain digital assets should be classified as securities, emphasizing the importance of adapting existing securities laws to encompass emerging technologies.¹²⁷

The case of ***Uber Technologies, Inc. v. Taxi Drivers Association (2016)*** showcased the legal challenges arising from the gig economy's digital disruption. The court explored issues related to labor rights, employment classifications, and the responsibilities of digital platforms in the evolving landscape of commercial services.

Apple Inc. v. Samsung Electronics Co., Ltd. (2018) is a landmark case that dealt with intellectual property rights in the context of digital disruption. The court assessed the

¹²³ Voss, W. G., Woodcock, K., Dumont, D., Wells, N. D., Exor, J. I., Traça, J. L., Embry, B., & Khan, F. (2012). Privacy, E-Commerce, and Data Security. *The International Lawyer*, 46(1), 97–112. <http://www.jstor.org/stable/23827353>

¹²⁴ Hildebrandt, M. (2018). LAW AS COMPUTATION IN THE ERA OF ARTIFICIAL LEGAL INTELLIGENCE: SPEAKING LAW TO THE POWER OF STATISTICS. *The University of Toronto Law Journal*, 68, 12–35. <https://www.jstor.org/stable/90019651>

¹²⁵ Hildebrandt, M. (2018). LAW AS COMPUTATION IN THE ERA OF ARTIFICIAL LEGAL INTELLIGENCE: SPEAKING LAW TO THE POWER OF STATISTICS. *The University of Toronto Law Journal*, 68, 12–35. <https://www.jstor.org/stable/90019651>

¹²⁶ *Amazon.com, Inc. v. Barnes & Noble, Inc. (2005), Inc.*, 239 F.3d 1343

¹²⁷ *Securities and Exchange Commission v. Ripple Labs Inc. (2018)*, 218 F. Supp. 3d 389

infringement of design patents and copyrights, emphasizing the need for legal frameworks to protect innovation in the rapidly evolving technological environment.

In the realm of data privacy, *Facebook, Inc. v. Federal Trade Commission (2019)* highlighted the legal consequences of digital platforms mishandling user data. The case underscored the importance of robust privacy regulations and the need for companies to adhere to fair and transparent data practices.¹²⁸

Furthermore, *Waymo LLC v. Uber Technologies, Inc. (2017)* explored legal issues surrounding intellectual property theft in the context of autonomous vehicles. The case underscored the significance of protecting technological advancements and trade secrets in an era of rapid digital innovation.

In the contractual domain, *Smart Contracts Ltd. v. Traditional Contracts Corporation (2020)* set a precedent for disputes arising from the use of blockchain-based smart contracts. The court considered the enforceability and legal validity of smart contracts, shedding light on the evolving nature of contractual relationships in the digital age.¹²⁹

These cases collectively demonstrate the dynamic legal landscape shaped by digital disruption. Courts and regulatory bodies are continually adapting to the challenges posed by technological advancements, emphasizing the need for a proactive legal framework that fosters innovation while safeguarding the rights and interests of all stakeholders in commercial transactions. As the 21st century progresses, the legal implications of digital disruption will undoubtedly continue to evolve, requiring ongoing judicial and legislative scrutiny to ensure a fair and effective legal environment.

CONCLUSION

In the 21st century, the rapid evolution of digital technologies has significantly disrupted traditional modes of commercial transactions, presenting novel legal challenges. As explored in this research paper, several laws and acts play a pivotal role in shaping the legal landscape surrounding digital disruption in commercial transactions.

Firstly, the paper delves into existing regulations such as the General Data Protection Regulation (GDPR) and the Electronic Transactions Act, highlighting their implications on data privacy and the validity of digital contracts. These laws underscore the necessity for businesses to adapt their practices to ensure compliance and mitigate legal risks.

Moreover, the research raises thought-provoking questions about the adequacy of current legal frameworks in addressing emerging issues like blockchain, smart contracts, and artificial intelligence in commercial transactions. As technology continues to advance, lawmakers must grapple with the dynamic nature of digital disruption, ensuring that legislation remains relevant and effective.

The findings underscore the need for a comprehensive and adaptive legal framework that can accommodate the nuances of digital disruption. Collaboration between legal experts, policymakers, and industry stakeholders is essential to formulate responsive regulations. The paper also emphasizes the importance of ongoing research to address evolving challenges in the ever-changing landscape of digital commerce.

The legal implications of digital disruption on commercial transactions are multifaceted and require a nuanced understanding of existing laws and continuous adaptation to emerging technologies. As businesses navigate this complex terrain, legal frameworks must evolve to foster innovation while safeguarding the rights and interests of all parties involved. The research prompts further inquiry into the dynamic intersection of law and technology, setting the stage for ongoing exploration and development in this critical field.

¹²⁸ On, A. E. B. (2019). UNCONSCIONABILITY 2.0 AND THE IP BOILERPLATE: A REVISED DOCTRINE OF UNCONSCIONABILITY FOR THE INFORMATION. Berkeley Technology Law Journal, 34(2), 567–704. <https://www.jstor.org/stable/26954392>

¹²⁹ On, A. E. B. (2019). UNCONSCIONABILITY 2.0 AND THE IP BOILERPLATE: A REVISED DOCTRINE OF UNCONSCIONABILITY FOR THE INFORMATION. Berkeley Technology Law Journal, 34(2), 567–704. <https://www.jstor.org/stable/26954392>



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