



# INTERNATIONAL JOURNAL FOR LEGAL RESEARCH AND ANALYSIS

Open Access, Refereed Journal Multi Disciplinary  
Peer Reviewed Edition :

[www.ijlra.com](http://www.ijlra.com)

## **DISCLAIMER**

No part of this publication may be reproduced or copied in any form by any means without prior written permission of Managing Editor of IJLRA. The views expressed in this publication are purely personal opinions of the authors and do not reflect the views of the Editorial Team of IJLRA.

Though every effort has been made to ensure that the information in Volume 2 Issue 7 is accurate and appropriately cited/referenced, neither the Editorial Board nor IJLRA shall be held liable or responsible in any manner whatsoever for any consequences for any action taken by anyone on the basis of information in the Journal.

Copyright © International Journal for Legal Research & Analysis

IJLRA

## **EDITORIAL TEAM**

### **EDITORS**

#### **Megha Middha**



*Megha Middha, Assistant Professor of Law in Mody University of Science and Technology, Lakshmangarh, Sikar*

*Megha Middha, is working as an Assistant Professor of Law in Mody University of Science and Technology, Lakshmangarh, Sikar (Rajasthan). She has an experience in the teaching of almost 3 years. She has completed her graduation in BBA LL.B (H) from Amity University, Rajasthan (Gold Medalist) and did her post-graduation (LL.M in Business Laws) from NLSIU, Bengaluru. Currently, she is enrolled in a Ph.D. course in the Department of Law at Mohanlal Sukhadia University, Udaipur (Rajasthan). She wishes to excel in academics and research and contribute as much as she can to society. Through her interactions with the students, she tries to inculcate a sense of deep thinking power in her students and enlighten and guide them to the fact how they can bring a change to the society*

#### **Dr. Samrat Datta**

*Dr. Samrat Datta Seedling School of Law and Governance, Jaipur National University, Jaipur. Dr. Samrat Datta is currently associated with Seedling School of Law and Governance, Jaipur National University, Jaipur. Dr. Datta has completed his graduation i.e., B.A.LL.B. from Law College Dehradun, Hemvati Nandan Bahuguna Garhwal University, Srinagar, Uttarakhand. He is an alumnus of KIIT University, Bhubaneswar where he pursued his post-graduation (LL.M.) in Criminal Law and subsequently completed his Ph.D. in Police Law and Information Technology from the Pacific Academy of Higher Education and Research University, Udaipur in 2020. His area of interest and research is Criminal and Police Law. Dr. Datta has a teaching experience of 7 years in various law schools across North India and has held administrative positions like Academic Coordinator, Centre Superintendent for Examinations, Deputy Controller of Examinations, Member of the Proctorial Board*



## Dr. Namita Jain



*Head & Associate Professor*

*School of Law, JECRC University, Jaipur Ph.D. (Commercial Law) LL.M., UGC -NET Post Graduation Diploma in Taxation law and Practice, Bachelor of Commerce.*

*Teaching Experience: 12 years, AWARDS AND RECOGNITION of Dr. Namita Jain are - ICF Global Excellence Award 2020 in the category of educationalist by I Can Foundation, India. India Women Empowerment Award in the category of "Emerging Excellence in Academics by Prime Time & Utkrisht Bharat Foundation, New Delhi.(2020). Conferred in FL Book of Top 21 Record Holders in the category of education by Fashion Lifestyle Magazine, New Delhi. (2020). Certificate of Appreciation for organizing and managing the Professional Development Training Program on IPR in Collaboration with Trade Innovations Services, Jaipur on March 14th, 2019*

## Mrs.S.Kalpana

*Assistant professor of Law*

*Mrs.S.Kalpana, presently Assistant professor of Law, VelTech Rangarajan Dr. Sagunthala R & D Institute of Science and Technology, Avadi. Formerly Assistant professor of Law, Vels University in the year 2019 to 2020, Worked as Guest Faculty, Chennai Dr. Ambedkar Law College, Pudupakkam. Published one book. Published 8 Articles in various reputed Law Journals. Conducted 1 Moot court competition and participated in nearly 80 National and International seminars and webinars conducted on various subjects of Law. Did ML in Criminal Law and Criminal Justice Administration. 10 paper presentations in various National and International seminars. Attended more than 10 FDP programs. Ph.D. in Law pursuing.*



## Avinash Kumar



*Avinash Kumar has completed his Ph.D. in International Investment Law from the Dept. of Law & Governance, Central University of South Bihar. His research work is on "International Investment Agreement and State's right to regulate Foreign Investment." He qualified UGC-NET and has been selected for the prestigious ICSSR Doctoral Fellowship. He is an alumnus of the Faculty of Law, University of Delhi. Formerly he has been elected as Students Union President of Law Centre-1, University of Delhi. Moreover, he completed his LL.M. from the University of Delhi (2014-16), dissertation on "Cross-border Merger & Acquisition"; LL.B. from the University of Delhi (2011-14), and B.A. (Hons.) from Maharaja Agrasen College, University of Delhi. He has also obtained P.G. Diploma in IPR from the Indian Society of International Law, New Delhi. He has qualified UGC - NET examination and has been awarded ICSSR - Doctoral Fellowship. He has published six-plus articles and presented 9 plus papers in national and international seminars/conferences. He participated in several workshops on research methodology and teaching and learning.*

## **ABOUT US**

INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS ISSN 2582-6433 is an Online Journal is Monthly, Peer Review, Academic Journal, Published online, that seeks to provide an interactive platform for the publication of Short Articles, Long Articles, Book Review, Case Comments, Research Papers, Essay in the field of Law & Multidisciplinary issue. Our aim is to upgrade the level of interaction and discourse about contemporary issues of law. We are eager to become a highly cited academic publication, through quality contributions from students, academics, professionals from the industry, the bar and the bench. INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS ISSN 2582-6433 welcomes contributions from all legal branches, as long as the work is original, unpublished and is in consonance with the submission guidelines.

# **THE IMPACT OF EMERGING TECHNOLOGIES ON COMPETITION LAW**

AUTHORED BY - HANAH VARGHESE

## **Abstract**

Competition law is an ever-present force, constantly evolving and introducing new dimensions over time. Since the enactment of the Indian competition act in 2002, amendments have been necessary to keep up with the changing dynamics driven by the market economy. A prime example of such transformation is the revolutionary impact of blockchain technology, which has significantly altered various markets. As a result, markets have become more intelligent, efficient, and intensely competitive. This shift has also given rise to dominant players that cannot be disregarded in the digital market landscape. In response, the international legal framework has introduced laws to regulate digital markets. However, upon closer examination of Indian legislation, it becomes apparent that there is a lag in keeping pace. The decentralized and transparent nature of blockchain's distributed open ledger system poses new challenges related to privacy and raises concerns about collusive practices. Thus, it becomes imperative to establish legislation that governs these aspects and ensures a fair and secure environment in the digital market space.

**Key Words:** Blockchain, competition, decentralized network, technology, data, privacy, market, collusive agreements.

## **Introduction**

The digital era has ushered in a plethora of new technologies and innovations, necessitating legislative changes to keep pace with the evolving landscape. Among these advancements, blockchain stands out as one of the most transformative technologies to emerge in the late 2000s, exerting a profound impact on currencies, record keeping, sharing of information, contracting and verifying identities today<sup>1</sup>. Its rapid growth and adoption cannot be underestimated. The World Economic Forum predicts that by 2027, around 10% of the global gross domestic product will be

---

<sup>1</sup> Chinmaya Goyal, Jincy Francis, Navneeraj Sharma, Natasha Nayak and Sakshi Gupta, Discussion paper on blockchain technology and competition, Ernst and Young and Competition Commission of India, April 2021

stored in blockchain<sup>2</sup>, igniting unparalleled excitement about its boundless possibilities.

These developments evoke a mix of fascination and concern. On one hand, there is immense enthusiasm for the infinite potential of blockchain. On the other hand, there is uncertainty surrounding its future as an emerging technology. Various institutions, such as the Organization for Economic Cooperation and Development (OECD), have recognized the need to address the antitrust challenges posed by blockchain<sup>3</sup>. This article aims to address the following key questions: Firstly, it seeks to delve into the enigmatic nature of blockchains. This decentralized network has experienced a technological boom in the past decade, yet its intricacies remain understood by only a few. Gaining a deeper understanding of blockchain is crucial for effective governance.

Secondly, from the perspective of competition law enforcement, this paper deems it imperative to explore blockchains in their various forms, including smart contracts, which have led to a gradual increase in blockchain litigation. The author aims to highlight the concerns associated with this phenomenon.

Lastly, the article acknowledges the effectiveness of the proposed Digital India Act in regulating entities within the digital market. However, only time will truly reveal the act's sufficiency. To provide context, the author offers a comparison with complementary legislations in the United States and Europe. This comparative analysis will shed light on the strengths and weaknesses of the Indian legal framework.

## 1. What are blockchains?

A blockchain can simply be understood as an open and distributed ledger recording all sorts of transactions between users<sup>4</sup>. It uses a peer to peer network to connect the computers of all the blockchain users. Blockchain is decentralized, meaning no entity controls the transaction process; and the work is divided among several computers<sup>5</sup>. All blockchains aim to create a database system in which agents or institutions record and maintain information, with no single entity

---

<sup>2</sup> WORLD ECON. FORUM, TECHNOLOGY TIPPING POINTS AND SOCIETAL IMPACT, SURVEY REPORT 24 (Sept. 2015)

<sup>3</sup> OECD Competition Division, Blockchain and Competition Policy, OECD (June 2018)

<sup>4</sup> Sebastien Meunier, Blockchain 101: *What is Blockchain and how does this revolutionary technology work?* Transforming Climate Finance and Green Investment with Blockchains, Academic Press, 2018, Pages 23-34,

<sup>5</sup> Ibid

exercising persistent market control or power<sup>6</sup>. Introduced by Satoshi Nakamoto, it gained relevance around 2008, with the boom of the bitcoin. The paper titled “Bitcoin: A Peer-to-Peer Electronic Cash System” released by Nakamoto created the first modern blockchain, the cryptocurrency<sup>7</sup>. In his words, Satoshi Nakamoto stated that blockchain is based on “cryptographic proof instead of trust”<sup>8</sup>. The next major success attributed to blockchains is the Ethereum technology introduced in 2015. It is introduced as a platform for running various decentralized applications. It allows users to record assets such as slogans. A hallmark in the history of the blockchain which led to the growth of many other applications used today such as NFTs and smart contracts.

Blockchain is a type of Distributed Ledger Technology (DLT), a data archive shared by several entities which operate on a distributed network of sites, countries or institutions<sup>9</sup>. This data is structured into blocks and each block contains a series of transactions or a bundle of transactions. Each time new information is received following a transaction, it is added to the existing chain, which forms a chain-like structure of blocks (hence, the name blockchain). These blocks are recorded with an immutable cryptographic signature called ‘hash<sup>10</sup>.’ The hash stores the transactions in a secure and unique format to prevent tampering. The hash must not allow tracing of the text of each block in the chain. This level of security provided by blockchains makes it desirable in many industries. The blockchain uses a process of verification to prevent frauds and attacks in the network by using a process of verification passed on the *proof of work (PoW)*<sup>11</sup> It revolves around the idea that before being allowed to use the service, the author must first solve a very specific work puzzle (which is often a complex mathematical problem)<sup>12</sup>.

The nature of blockchains allows absolute anonymity to be achieved by using a pseudonymous address. It is a unique string of characters representing a user’s identity on the blockchain. This identity may not be related to a person’s real-world address, thereby maintaining his anonymity.

---

<sup>6</sup> Lin William Cong and Zhiguo He, Blockchain disruption and smart contracts, NBER Working Paper No. w24399, 2018

<sup>7</sup> Lucas Waldem Zanforlini, Blockchain and competition law, Threats and opportunities of the new disruptive technology, Master’s thesis in European and International Trade law, Lund University: School of Economics and Management, Spring 2021.

<sup>8</sup> SATOSHI NAKAMOTO, BITCOIN: A PEER-TO-PEER ELECTRONIC CASH SYSTEM (2008), <https://bitcoin.org/bitcoin.pdf> [<https://perma.cc/TGE8-H4DQ>].

<sup>9</sup> Id at 7.

<sup>10</sup> Sebastien Meunier, Blockchain 101: *What is Blockchain and how does this revolutionary technology work?*

<sup>11</sup> Marcella Atzori, Blockchain Technology and Decentralized Governance: Is the State Still Necessary? 6 J. GOVERNANCE & REGULATION 45 (2017)

<sup>12</sup> Giovanna Massarotto, From Digital to Blockchain Markets: What Role for Antitrust and Regulation (January 26, 2019). Available at SSRN: <https://ssrn.com/abstract=3323420> or <http://dx.doi.org/10.2139/ssrn.3323420>

This ensures that the privacy of the user is protected making it difficult to trace the activities of a particular user on the blockchain back to their real-life identity.

Blockchain is deeply beneficial in reducing costs and delivering more business benefits. It reduces significant work overload by executing smart contracts which reduces paperwork and errors. Streamlining processes reduces time, increases efficiency and omits third party intervention<sup>13</sup>.

Finally, blockchain can be used as a means to monitor colluders. It allows transparency as information is freely available on the web. This allows law enforcement to keep a watchful eye to prevent any illegal activities from taking place. From a competition aspect, law enforcement can detect colluding and predatory behavior of enterprises and penalize them before it leads to losses in the market.

## **2. Is blockchain a cause of worry from a competition perspective?**

With the introduction of any technology, the pros and cons must be weighed to ascertain the effectiveness of the technology. While blockchain has many positives, this untapped technology could also have possible negative impacts.

### **2.1. Can lead to collusive agreements**

*Seven enterprises create a cartel to divide the relevant market between them. They set up numerous smart contracts that are accessible to all companies and ensured that the colluders comply with them. The smart contract being a public blockchain is accessible to all companies on the market. They use this information to create the most profitable agreement possible, and to ensure that none of the participants sell products in a territory that has not been allocated to them.*

This illustration reflects how smart contracts can form collusive agreements. Collusive agreements are a type of joint profit maximization strategy that is deliberately put in place by competing firms that might harm consumers<sup>14</sup>. Collusive practices allow firms to exert market power that they otherwise would not have, and artificially restrict competition and increase prices<sup>15</sup>. Collusion may be overt, in which firms agree on price, output, and other decisions aimed at achieving monopoly profits; or tacit, which is an unwritten, unspoken understanding through which firms

---

<sup>13</sup> Blockchain and Distributed Ledger Technology, <https://www.geeksforgeeks.org/blockchain-and-distributed-ledger-technology-dlt/>

<sup>14</sup> OECD, Algorithms and Collusion: Competition Policy in the Digital Age, 2017

<sup>15</sup> Massimo Motta, Competition Policy, Theory, and Practise, Cambridge University Press, 05<sup>th</sup> August, 2015

agree to limit their competition<sup>16</sup>. The collusive nature of the firms can also form a cartel.

A smart contract can be a hub for collusive contracts. It is a programmable code executed after meeting certain pre-defined terms and conditions. It is based on the 'if and then' logic in which parties execute the smart contract when they agree to the pre-defined terms and conditions. It can be digitally enforced by the nodes, which can verify and enforce the performance of the contract<sup>17</sup>. This technology allows the users to simply insert the relevant information into an already pre-defined agreement. Companies can use the medium of blockchain to exchange information among them. As a result, commercially sensitive information about the prices, sales, discounts etc., are accessible to all due to the decentralized nature of the blockchain. The US Supreme Court has held that enterprises have entered into an illegal agreement when 'the possibility of independent action is excluded' and 'when they have a conscious commitment to a common scheme'<sup>18</sup>. When two enterprises have agreed to create and use a blockchain for an illegal purpose it forms a cartel which is prohibited.

This disclosure of sensitive information is prone to misuse by competing firms. In the case of *Builders Association of India v. Cement Association of India and ors*<sup>19</sup>, it was held that the availability of commercially sensitive information to any competing firms could result in anti-competitive agreements as provided under section 3 of the Act<sup>20</sup>. They could form an anti-competitive agreement with respect to the production, supply, distribution, storage, acquisition, or control of goods/ services which will lead to an appreciable adverse effect on competition (AAEC) in the relevant market. The open and permissionless nature of public blockchains itself can act as a cartel<sup>21</sup>.

It can discourage small companies from growing in the relevant market as their information is accessible to all. Hence, the very creation of a public blockchain can be construed to form future anti-competitive practices. *Cartelisation in Industrial and Automotive Bearings*<sup>22</sup> emphasized that

---

<sup>16</sup> Libby Rittenberg and Tim Tregarthen, Economic Principles v.1.1,

<sup>17</sup> Chinmaya Goyal, Jincy Francis, Navneeraj Sharma, Natasha Nayak and Sakshi Gupta, Discussion paper on blockchain technology and competition, Ernst and Young and Competition Commission of India, April 2021

<sup>18</sup> *Monsanto v. Spray-Rite Serv. Corp.*, 465 U.S. 752, 768 (1984).

<sup>19</sup> *Builders Association of India v. Cement Association of India and Ors.*, Case No. 29 of 2010

<sup>20</sup> Section 3, Competition Act, 2002.

<sup>21</sup> Dr. Thibault Schrepel, COLLUSION BY BLOCKCHAIN AND SMART CONTRACTS, Harvard Journal of Law & Technology Volume 33, Number 1 Fall 2019

<sup>22</sup> *Cartelisation in Industrial and Automotive Bearings, Suo Motu Case No. 05 of 2017*

Section 3 of the Competition Act, 2002<sup>23</sup> prohibits contracts that are likely to cause an appreciable adverse effect on competition. This simply means that public blockchains that are likely to form a cartel are also prohibited.

However, the American and European jurisprudence differ on this aspect. The Horizontal Guidelines of Europe<sup>24</sup> provide that the genuine exchange of public information is unlikely to cause an infringement of Article 101. When the agreement reduces the parties' decision-making independence due to the influence on the market conduct, it is said to cause an AAEC. Therefore, when the information shared on the blockchain is likely to restrict independent decision-making power, it is said to infringe Article 101. European jurisprudence also held that public information sharing can only constitute a cartel when the information concerns future prices.

## ***2.2. Questions of Privacy in big data***

*A large retail company with a network of hypermarkets, discount stores and grocery stores, uses big data to improve operational efficiency. They collect consumer data about the purchases, locations, information about social networks and analyze this information using Big Data to send personalized recommendations on various social networks. The dominant position of the retail company can be attributed to the use of big data.*

This illustration reflects how the personal data of consumers can be used by dominant market enterprises to maintain their position. Big data in the market use blockchain networks to store the personal data of consumers. Therefore, questions of privacy in anti-competitive behaviour must be raised.

One of the biggest innovations in recent times, the blockchain has the ability to transform the way businesses are conducted today. The internet made the digital transfer of information available on a decentralized network while the blockchain makes the transfer of assets possible by providing a decentralized database for recording transactions. It, therefore, collects massive amounts of data in huge data sets commonly referred to as 'big data'. Big data guarantees data-driven innovation, allowing companies to improve upon their products and services and targeting consumer needs<sup>25</sup>.

---

<sup>23</sup> Section 3, Competition Act, 2002

<sup>24</sup> Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Co-operation Agreements, ¶ 92, COM (2011) C 11/1 (Jan. 14, 2011).

<sup>25</sup> Pedro Gonzaga and Ania Thiemann, Big Data: Bringing Competition Policy To The Digital Era, Organisation for Economic Cooperation and Development, DAF/COMP(2016)14 (27 October, 2016)

Big data analytics extracts useful information and patterns from the dataset, which are then used for different purposes<sup>26</sup>. They forecast market needs which help in sending personalized recommendations.

However, due to the enormous data utilization and data transmission, big data security is a major challenge. There is a high risk of a data breach or tampering of the records while depending on external, third-party services such as cloud for the security of the data. This can be tackled by blockchains. The encrypted and decentralized storage of the data by the blockchain can ensure the security of the data<sup>27</sup>. A public blockchain, which is also called a 'permission less' or 'open blockchain', is a blockchain that anyone can read and which can be used to propose new transactions<sup>28</sup>. This kind of blockchain act as a platform to store a large number of transactions.

Therefore, public blockchains can store the big data of consumers since the data is in an encrypted form. But, the nature of public blockchain is such that it is prone to data breach. Anyone can access the public blockchain without 'even' entering the blockchain<sup>29</sup>. The public blockchain is based on anonymity and consensus mechanism reached through built-in security (*proof of work or proof of stake*<sup>30</sup>) which makes it very difficult to trace the transactions. However, despite the promises of blockchain, it is still a huge competition concern that needs to be addressed immediately.

### **3. Whether the competition framework of India is suitable to tackle blockchain?**

In the late 2010s, the importance of privacy was raised all around the world. In India, privacy was designated as a fundamental right guaranteed under Article 21 of the Constitution<sup>31</sup>. This led to many laws that regulate privacy of the individuals. Even in competition law, a new dimension of anti-competitive behaviour was observed, with big Tech Giants like Facebook (now Meta), Apple using personal data of consumers as a method to establish dominant market. An example would

---

<sup>26</sup> Deepa N, Quoc-Viet Pham, Dinh C. Nguyen, Sweta Bhattacharya, B. Prabadevi, Thippa Reddy Gadekallu, Praveen Kumar Reddy Maddikunta, Fang Fang, Pubudu N. Pathirana, A Survey on Blockchain for Big Data: Approaches, Opportunities, and Future Directions, arXiv:2009.00858v2 [cs.CR] 5 Feb 2021

<sup>27</sup> Ibid

<sup>28</sup> Dr. Thibault Schrepel, Is Blockchain the Death of Antitrust Law? The Blockchain Antitrust Paradox, Georgetown Law Technology Review, 3 GEO. L. TECH. REV. 281 (2019)

<sup>29</sup> Dylan Yaga et al, 'Blockchain Technology Overview,' NIST Interagency/ Internal Report 8202 (2018): 44

<sup>30</sup> Proof of stake means that the creator of a new block is defined in a deterministic way, for example depending of its wealth (the so-called stake) IBM, BLOCKCHAIN FOR DUMMIES 16 (John Wiley & Sons, 2 ed. 2018).

<sup>31</sup> K. S Puttaswamy v. Union of India, WP (C) 494/2012

be Facebook acquiring Whatsapp<sup>32</sup> and establishing a dominant market that escaped the existing competition law framework<sup>33</sup>. The antitrust authorities were primarily focused on the quantifiable aspect of the merger, such as the material impact the merger would have on the market. They did not focus on the importance of privacy in the digital economy which led to the greenlighting of the acquisition<sup>34</sup>. These data giants thus use their platforms to exploit their market power by extracting the personal data of the consumers.

In concerns of privacy, the General Data Protection Regulation (GDPR) is the primary legislation that seeks to safeguard the privacy of individuals. Blockchain that expressly records the personal data of individuals are subject to the laws governing personal data<sup>35</sup>. However, with respect to the rigorous method of securing privacy under blockchain, there are no legislations in place. As an emerging technology, blockchain is still in its nascent stage and proper legislation is required to protect the interests of the users.

The Indian Competition Act, 2002 is still in the developing stage with respect to the digital markets. It is still deliberating on the passing of a Digital Markets Act for the regulation of growing digital economy. The Standing Committee has recommended the passing of *ex-ante regulations* to regulate the competition in digital markets and deter possible monopolisation<sup>36</sup>. Under this framework, the leading market players with 'significant influence over competition in the digital ecosystem' will be designated as 'Systematically Important Digital Intermediaries' ('SIDI'). These SIDI's will have to comply with the predetermined set of obligations and prohibitions<sup>37</sup>. All potential mergers and acquisitions of these SIDI's along with regulation of their internal advertising, data, and search policies are proposed by the Standing Recommendations<sup>38</sup>.

However, whether the proposed Digital Markets Act will apply to blockchains and all emerging technology is a question to be deliberated only after the passing of the Act. Currently, there are no

---

<sup>32</sup> Leonor Bentes de Oliveira Costa, Mergers and Acquisitions: The Facebook and WhatsApp Case, April 2018.

<sup>33</sup> Maurice E. Stucke, The Relationship between Privacy and Antitrust, Notre Dame Law Review, June 2022

<sup>34</sup> Ibid

<sup>35</sup> Pritesh Shah, Daniel Forester et al, Blockchain Technology: Data Privacy Issues and Potential Migration Strategies, Thomson Reuters, 2019.

<sup>36</sup> Fifty third report, Anti-Competitive Practices by Big Tech Companies, Standing Committee on Finance, December 2022.

<sup>37</sup> EX-Ante Regulation- Should India Sprint or Thread with Caution? AZB Partners, 28<sup>th</sup> April, 2023. Available at <https://www.azbpartners.com/bank/ex-ante-regulation-should-india-sprint-or-tread-with-caution/>

<sup>38</sup> Naval Chopra and Yaman Verma et al, Does India require ex- ante competition regulation in digital markets?,Shardul Amarchand Mangaldas, 3<sup>rd</sup> April, 2023. Available at <https://www.amsshardul.com/insight/does-india-require-ex-ante-competition-regulation-in-digital-markets/>

legislation that comprehensively address blockchains as a whole. With the gradual increase in blockchain litigation around the world, it is important that the laws keep with the changing atmosphere.

## **Conclusion**

With the growth of technology, the digital economy is rapidly progressing in all spheres of life. Between 2014 and 2019, the digital economy (which includes digital technologies, products and services across different sectors) grew 2.4 times faster than the Indian economy as a whole. These statistics indicate a positive impact on the future of many emerging technologies. This could lead to the amendment of the existing competition act. However, this is only possible after an in-depth understanding of blockchain technology.

Blockchain is still a new and little-explored territory that needs proper research and understanding. It is still in its nascent stage and its uses still need to be explored. It has the potential to make the market extremely competitive due to its cost-effective and time-saving applications. This will make the data-driven economy extremely complex. However, it also leads to negative outcomes as well. Many collusive agreements will be created as a result of the data driven economy, with an increase in their profitability. In such a state, proper legislation and compliance have to be put in place to regulate these entities.

With the advent of these emerging technologies, the nature of the competition act is likely to change as well. It will have to adopt a more progressive and pragmatic role to keep up with the explosion of collusive agreements. Many new dominant players will also enter the market and it is advised that the competition regulators be armed with adequate laws to govern these players.