

Competition Law in the Digital Era: Perspective on Startup Companies in Indonesia

**Abraham Reyhand Mustafa, Rommy Hardyansah, Arif Rachman Putra,
Agung Satryo Wibowo, Dharma Setiawan Negara**

Universitas Sunan Giri Surabaya, Indonesia

Email: dr. rommyhardyansah@gmail.com

ABSTRACT – Business competition in the digital era presents new challenges for startups in Indonesia, such as the dominance of large platforms, algorithmic discrimination, and the lack of digital infrastructure. Law Number 5 of 1999 as the legal basis for business competition has not fully accommodated technological developments such as algorithms, big data, and the digital ecosystem. This research analyzes the application of competition regulations to startups in the digital era, focusing on challenges such as market access inequality and the lack of legal education. Additionally, this research explores opportunities such as the use of disruptive technology and collaboration between startups and regulators. With a normative-empirical approach, this research examines the relevance of current regulations and provides strategic recommendations to create a fair and sustainable digital business ecosystem. The research results indicate that revising regulations to be responsive to the digital era is essential to support healthy competition and innovation in the startup sector.

Keywords: competition law; digital startups; digital era; big data; algorithms; adaptive regulation; sustainable business ecosystem.

A. INTRODUCTION

The digital era has brought significant changes to market structures and competition dynamics, especially in the startup sector in Indonesia. Startups that leverage digital technology face unique challenges that conventional companies do not encounter. Nevertheless, regulations governing business competition often do not align with these developments, creating legal gaps that negatively impact fairness in competition (Afriana et al., 2020).

Several successful startups that have achieved unicorn status often dominate the market through control of certain digital ecosystems (Prayuda, 2022). This dominance raises concerns about the

possibility of monopoly practices and abuse of dominant positions, which contradict the principles regulated in Law Number 5 of 1999 concerning the Prohibition of Monopolistic Practices and Unfair Business Competition.

The adaptation of regulations that are more responsive to changes in the digital ecosystem is highly necessary. Nugroho (2018) emphasizes the importance of policy updates in competition law to address the challenges of the dynamic digital era. Revisions and updates to policies are essential to create a fair and healthy competitive environment that supports innovation without sacrificing the principle of economic justice. Ibrahim (2007) added that adaptive regulation not only maintains market stability but also contributes to sustainable and inclusive economic growth, especially in an era marked by the dominance of digital platforms.

The use of algorithms and big data management by startups often leads to information asymmetry in the market. Acemoglu et al. (2022) note that uneven data utilization can create inefficient prices and reduce the overall benefits of the data market. Existing regulations, including the role of the Business Competition Supervisory Commission (KPPU), face significant challenges in understanding and regulating the rapidly evolving technology-based activities. Posner & Weyl (2018) argue that a more radical and innovation-based regulatory approach is necessary to ensure healthy competition in the ever-changing digital market.

Emerging startups often face discrimination by larger digital platforms, either through algorithmic regulation or contract exclusivity. Johnson (2017) explains that the agency model and the use of Most-Favored-Nation (MFN) clauses often exacerbate market imbalances, giving unfair advantages to dominant platforms. The agency model is a way of working where digital platforms act as intermediaries between buyers and sellers. The MFN clause grants privileges to large platforms to receive the best

treatment, such as the lowest prices or exclusive benefits (Rachman, 2022). As a result, large platforms benefit and the market becomes unfair. They receive special treatment that makes them more competitive compared to smaller competitors. Startups or small platforms find it difficult to compete because they do not receive the same rights. In short, this clause makes large platforms even stronger and makes it difficult for new players to enter and compete in the market. Significant entry barriers for new startups are created, which further disrupt healthy business competition. This reinforces the urgency to revise competition regulations, as proposed by Nugroho (2018), to protect innovation and promote inclusivity in the digital market.

Although competition regulations in Indonesia have a strong foundation, as stipulated in Law No. 5/1999, the development of international law indicates the need for a more dynamic approach to address competition issues in the digital realm. The gap between existing regulations and on-the-ground practices places Indonesian startups at a disadvantage in the global market (Calvin, 2021). Therefore, it is important for regulators to evaluate and update their policies to be more responsive to the challenges faced by startups in the digital era. An adaptive and proactive approach will contribute to the creation of fairer competitive conditions and support innovation growth in the startup sector, aligning regulations with technological developments to create a sustainable and competitive business ecosystem (Sumartik et al., 2023).

Many startups rely on disruptive business models that sometimes clash with existing regulations. For example, price wars that often occur in the digital market can be viewed as predatory pricing practices, which violate the principles of business competition (Panjaitan, 2021). Additionally, many startup founders lack an understanding of competition law provisions, leading them to inadvertently commit violations that could potentially harm others (Handayani & Sulistiyono, 2020). The lack of socialization and legal education regarding business competition regulations is one of the main causes of this situation.

The technical challenges of collecting digital evidence, such as metadata or algorithm logs, also complicate law enforcement in this sector (Romadhon & Fitri, 2020). These difficulties create a gap between existing regulations and their implementation in the field, making law enforcement ineffective.

Therefore, efforts are needed to improve legal understanding among startup actors through socialization and education, as well as the development of more effective methods in digital evidence collection. This approach will help bridge the gap between regulations and practices on the ground, as well as create a healthier and fairer competitive environment. This requires a synergy between legal understanding and regulatory implementation to support the growth of a sustainable startup ecosystem (Purba et al. 2023).

Startups often rely on funding from large investors, who sometimes lead them to engage in business practices that potentially violate competition regulations (Wahjono et al., 2021). This situation creates a difficult-to-resolve conflict of interest and can undermine market integrity. Moreover, until now, there are no specific derivative regulations from Law No. 5/1999 that explicitly govern business competition in the digital sector. This legal vacuum creates a loophole that large companies exploit to avoid sanctions, even though they engage in practices that harm competition.

This condition highlights the need for the development of more specific and responsive regulations to the dynamics of the digital market. With clear regulations in place, it is hoped that unethical business practices can be prevented, better protection can be provided for startups, and healthy competition can be maintained (Lah, 2023).

Studies on competition law in Indonesia have been extensively conducted, but most of them focus on the traditional sector. Studies on the application of competition law to digital startups are still very limited, especially concerning the challenges of technology and globalization. This research contributes to that gap by analyzing the phenomenon.

This research focuses on the analysis of the application of competition law in the digital sector with special attention to startups in Indonesia. By highlighting the unique characteristics and business dynamics of startups that differ from traditional companies, this research examines how existing regulations are applied and the extent to which they are relevant in accommodating changes in the digital market. Additionally, this research also identifies the challenges and opportunities faced by startups in the digital business competition, such as the dominance of large platforms, infrastructure limitations, and low

regulatory literacy. On the other hand, this research explores opportunities such as the growth of the digital economy, government support, and consumer preference for local digital solutions. With an approach that highlights the role of technology, algorithms, and big data in market structure, this research provides insights into the need for regulatory revisions to better align with digital developments and encourages the ethical and fair use of technology in business competition. The results of this research are expected to provide strategic recommendations to support the development of startups and create a fair digital business ecosystem in Indonesia.

B. METHOD

This research is a normative-empirical legal study. The normative approach is used to analyze regulations related to business competition in Indonesia, such as Law Number 5 of 1999 and other policies. Meanwhile, an empirical approach is used to understand the real practices faced by startup companies in the digital sector through case studies. The analysis was conducted by examining legal documents, academic journals, and policy reports related to digital business competition as secondary data sources. Data is analyzed qualitatively through a descriptive-analytical approach. Descriptive analysis is used to describe the phenomenon of business competition in the digital sector, while normative analysis is used to assess the conformity of field practices with the applicable regulations. With this approach, the research aims to provide comprehensive insights into the dynamics of competition in the digital sector and its implications for existing regulations.

C. RESULTS AND DISCUSSION

The Application of Competition Law to Startup Companies in Indonesia in the Digital Era

Law Number 5 of 1999 concerning the Prohibition of Monopolistic Practices and Unfair Business Competition serves as the main foundation in regulating competition in Indonesia (Susanto et al., 2019). However, in the digital era, the implementation of this law faces new and unexpected challenges, such as market monopolies by major technology platforms. In the digital business, economic power is now measured based on physical assets, as well as control over data, algorithms, and user networks (Utami & Alamsyah, 2019). However, this law has not explicitly accommodated these elements, creating a gap in regulation.

This condition demands a revision and update of regulations to better align with the current dynamics of the digital market. By taking into account the new emerging aspects, it is hoped that a fairer and healthier competitive environment can be created, thus requiring regulatory adaptation to maintain market integrity and protect the interests of all business actors in the digital ecosystem (Astuti et al., 2023).

Startups that have developed into unicorns often dominate the market with their immense economic power. This practice creates a significant imbalance in competition, especially against startups that are still in the early stages (Setiawan et al., 2023). Market dominance is related to market share control and also includes control over the technology ecosystem, such as platforms, applications, and other supporting services.

In Indonesia, regulations related to business competition are governed by Law Number 5 of 1999 concerning the Prohibition of Monopolistic Practices and Unfair Business Competition. However, this regulation does not yet explicitly cover the use of algorithms in digital business. As one of the essential elements in the digital ecosystem, algorithms can influence the distribution of information, product marketing, and even automatic pricing, which has the potential to create unhealthy business competition practices (Andani & Indarta 2023).

The use of unsupervised algorithms can involve practices such as price discrimination, collusive pricing, or exclusionary practices, which are difficult to identify by traditional regulatory frameworks (Lee, 2022). The absence of oversight mechanisms for algorithms makes it difficult for competition authorities, such as the Business Competition Supervisory Commission (KPPU), to detect and address violations occurring in the digital market.

Although the KPPU has started addressing competition issues in the digital realm, such as in cases of e-commerce platform and marketplace dominance, the existing approach is still focused on conventional market structure analysis (Andani & Indarta, 2023). Additional regulations or revisions are needed to ensure that the use of algorithms in digital businesses does not harm small business operators, consumers, or create barriers to market entry.

Indonesia can learn from the experiences of other countries, such as the European Union, which has adopted the Digital Markets Act (DMA) to regulate large platforms and prevent the misuse of

algorithms to influence business competition (Lee, 2022). Thus, regulations in Indonesia need to adapt to address this challenge, either through the amendment of Law Number 5 of 1999 or by designing specific policies that focus on algorithm oversight within the digital business ecosystem.

Big data has become an important asset in digital business. Companies that have access to large amounts of data can create significant competitive advantages (Yulianti et al., 2023). However, managing this data often involves practices that conflict with the principles of business competition. For example, large companies can use data to predict competitors' moves and pressure them through pricing strategies or promotions that are hard to match.

Business competition regulations in Indonesia, governed by Law Number 5 of 1999 concerning the Prohibition of Monopolistic Practices and Unfair Business Competition, aim to create a fair business climate for all business actors. However, the complexity of these regulations often poses a challenge for newly emerging digital startups. Many startup founders in Indonesia focus more on product innovation and business growth, resulting in a lack of understanding of the legal regulations related to business competition. The lack of legal education for small business operators further exacerbates this condition (Putri & Ganindha, 2022).

The Business Competition Supervisory Commission (KPPU) as the supervisory body has the responsibility to ensure that business actors understand the applicable regulations. However, the socialization and education about competition regulations often do not reach digital startups or small businesses that need special guidance (Bachtiar et al., 2020). As a result, the violations that occur are often not due to bad intentions, but rather due to ignorance of regulations such as the prohibition of closed agreements, abuse of dominant positions, or price fixing that harms consumers or other businesses.

The complexity of regulations also becomes a barrier for digital startups to prioritize legal compliance. Startups are often under pressure to innovate quickly and turn a profit, leaving them with neither the resources nor the time to understand regulatory details. In many cases, they also do not have access to competent legal advisors to provide guidance on business competition (Disemadi, 2022).

To address this challenge, simpler regulations and targeted legal education need to be pursued. KPPU can develop specialized training programs for digital startups, collaborating with business

incubators or startup associations such as the Indonesian Digital Entrepreneur Association (ADEI). With this approach, startups can understand their legal obligations without feeling burdened by regulatory complexities. Additionally, providing legal guidance in a more practical format, such as online modules or webinars, can help small business owners recognize potential legal risks without disrupting their focus on product innovation (Maulana, 2023).

Simplifying the complaint or consultation process is also important so that startups wanting to ensure compliance can easily obtain assistance (Herdinata et al., 2019). With these measures, business competition regulations in Indonesia can be more inclusive and encourage the growth of digital startups without sacrificing market fairness principles.

Emerging startups often struggle to compete with established large companies (Marpuang et al., 2023). This is due to the disparity in access to markets, capital, and technology. Large companies have the capacity to close off the market to newcomers through strategies such as contract exclusivity, massive discounts, or even the acquisition of small startups.

Even though regulations are in place, their implementation is often not optimal. One of the main challenges in enforcing competition law in the digital sector is the difficulty in gathering evidence. Practices such as algorithmic discrimination or data manipulation are often difficult to detect and prove in court (Setyawati & Pradana, 2022).

Regulations in Indonesia often lag behind legal practices in developed countries. For example, the European Union has developed the Digital Markets Act, which explicitly regulates competition in the digital market. Indonesia does not yet have similar regulations, making it difficult to compete on the international stage (Lee, 2022).

Startups often rely on venture capital to finance their operations. Kiley et al. (2015) highlight that the pressure from venture capital often drives startups to take aggressive steps, such as extreme pricing strategies or unmeasured market expansions, in order to achieve profitability in a short period of time. However, this approach can lead to unhealthy practices in business competition, creating conflicts of interest between venture capitalists and the long-term vision of the startup. This situation highlights the need for stricter regulations to protect the principle of fair competition.

Some large companies create closed ecosystems that make it difficult for small businesses to compete. Liu et al (2020) note that in the digital ecosystem, the use of exclusive policies and control over consumer data can exacerbate the disparity between large companies and new startups. For example, certain e-commerce platforms only allow specific partners to sell their products on the platform. This practice creates significant entry barriers for new startups, limiting their opportunities to grow and compete fairly.

Furthermore, Jamaluddin et al. (2013) explain that in technology-based organizational structures, startups often face challenges in efficiently managing human and technological resources to remain competitive. Without regulatory support that ensures equal market access, small companies risk falling behind in the competition (Cahyadi, 2016). Therefore, collaboration between regulators and industry players becomes important to create an inclusive and sustainable business ecosystem.

Thus, the application of competition law to startup companies in Indonesia in the digital era is regulated by Law Number 5 of 1999. However, its implementation faces challenges because startups often operate with innovative business models that have not yet been fully accommodated by existing regulations. The Business Competition Supervisory Commission (KPPU) has begun to monitor startup practices, particularly regarding issues such as abuse of dominant position, exclusive agreements, and price regulation on digital platforms.

Startups often face difficulties in understanding and complying with these regulations due to a lack of legal education and the complexity of the rules. Their focus on innovation also makes compliance with regulations a secondary priority. Therefore, the KPPU needs to strengthen outreach and provide simple guidelines to help startups understand their obligations, while updating regulations to be more relevant to digital developments.

Challenges and Opportunities in Digital Business Competition by Startups in Indonesia

The challenge of the uneven digital infrastructure across Indonesia is highly relevant to government policies and regulations, particularly concerning the development of the digital economy (Bangsawan, 2023). Presidential Regulation Number 95 of 2018 on the Electronic-Based Government System (SPBE) emphasizes the

importance of equitable digital infrastructure as a foundation to support digital transformation across all regions of Indonesia. In addition, Law Number 11 of 2020 on Job Creation through the telecommunications cluster also encourages the improvement of telecommunications infrastructure to support broader digital access, including for startup entrepreneurs in remote areas (Bowo, 2022).

However, despite regulations outlining commitments to build digital infrastructure, its implementation is often slow and uneven. Startups operating in remote areas face significant challenges due to limited access to high-speed internet, the absence of local data centers, and minimal technological support (Saptia et al., 2021). This contradicts the goals of the National Industrial Development Master Plan (RIPIN) 2015-2035, which aims to strengthen the digital economy sector as a driver of national economic growth.

To address this issue, government programs such as the Indonesia Broadband Plan 2014-2019 and the development of the Palapa Ring project aim to accelerate the equitable distribution of internet access across all regions of Indonesia (Jayanthi & Dinaseviani, 2022). However, the effectiveness of these programs still requires evaluation and acceleration so that startups in remote areas can access digital infrastructure equivalent to their counterparts in urban areas. The equalization of digital infrastructure is key for regulations and policies that promote the inclusion of startups in Indonesia's digital economy ecosystem.

Global companies like Amazon, Google, or Facebook often dominate the digital market, leaving little room for local startups. Fuady (2003) emphasizes that such dominance can create imbalances in the market that require regulatory intervention to ensure healthy competition. This dominance creates a challenge for regulators to protect the domestic market while still keeping the door open for foreign investment. Nugraha (2018) added that effective regulation must involve synergy between business actors and regulators to create balanced policies.

Startups can see opportunities to collaborate with regulators in creating more inclusive policies. Takada et al. (2009) stated that this collaboration can produce regulations that consider the needs of the local market while also protecting the principles of fair competition in the global era. By involving business actors, regulations can be formulated to support innovation while creating a fair competitive environment (Haris, 2023).

Startups also have the opportunity to create a digital ecosystem that empowers local SMEs. Nugraha (2018) explains that the development of this ecosystem not only helps SMEs compete in the digital market but also strengthens the foundation of the local economy. Thus, competition not only becomes a challenge but also a strategic opportunity to strengthen national competitiveness.

KPPU has the opportunity to enhance their capacity to oversee the digital sector. One way is to adopt technologies such as artificial intelligence to analyze data and detect anti-competitive practices more effectively (Prananingtyas et al., 2017).

Regulations in Indonesia provide room for revision to be more relevant to the challenges of the digital era, especially in regulating algorithms, big data, and platform dominance. Law Number 5 of 1999 concerning the Prohibition of Monopolistic Practices and Unfair Business Competition currently still focuses on traditional competition models (Andani & Indarta, 2023) and does not yet specifically cover digital issues such as the use of algorithms to dominate the market or the misuse of big data by large platforms.

On a global scale, regulations such as the Digital Markets Act (DMA) in the European Union can serve as a reference for Indonesia to design more relevant rules. DMA regulates the oversight of large platforms (gatekeepers), data misuse, and algorithm transparency to ensure healthy competition in the digital ecosystem (Petit, 2021). In Indonesia, regulatory revisions carried out through a new legal framework or the amendment of Law Number 5 of 1999 could encompass similar aspects to effectively oversee digital business practices.

Government Regulation Number 71 of 2019 on the Implementation of Electronic Systems and Transactions can be strengthened with additional rules to ensure that the use of big data and algorithms by digital companies is conducted transparently and does not harm small business operators. Revising regulations that govern platform dominance is also important to prevent the abuse of dominant positions that could harm consumers or other businesses (Rusianto et al., 2023).

This revision presents a strategic opportunity for the government to ensure regulations that are adaptive to technological developments and to create a fair and sustainable digital ecosystem (Wibowo et al., 2021).

Technologies like blockchain and open-source can be utilized by small startups to compete with large companies that dominate the market. Lerner & Tirole (2015) highlight that disruptive technologies like these provide opportunities for startups to access the market more efficiently and transparently, thereby creating opportunities for fair competition. This innovation offers better transparency and accessibility for all business actors, allowing them to operate in a more equitable environment. With the implementation of this technology, small startups can create more efficient and innovative business models, enhancing their competitiveness in the market (Bahauddin, 2019; Setiawan, 2019).

The use of this technology can also democratize access to resources and information, which is crucial for innovation. Posner & Weyl (2018) note that data-driven technology can create a fairer business ecosystem by reducing access disparities among entrepreneurs. Therefore, it is important for regulators to support the adoption of this new technology in order to create an inclusive and sustainable business ecosystem. The utilization of disruptive technology can change the dynamics of competition and provide opportunities for startups to thrive amidst the challenges posed by large companies, as outlined by Ibrahim (2007) in the context of competition law.

Indonesian digital startups have the opportunity to target the global market, especially in underdeveloped sectors such as agricultural technology or digital-based financial services. Nugroho (2018) emphasizes the importance of regulatory support that allows local startups to explore global potential while maintaining sustainability principles. However, in the intense competition, startups are often forced to prioritize short-term profits over innovation. Acemoglu et al. (2022) explain that this short-term pressure often hinders the development of innovations that can provide long-term value to the market.

Moreover, startups often do not consider long-term sustainability in their business strategies. Johnson (2017) mentioned that regulations promoting sustainability can be an opportunity for startups to create healthier and more competitive business models. The right regulations can help startups overcome reliance on short-term profits and focus their efforts on sustainable innovation that supports overall market growth.

Thus, startup companies in Indonesia face various challenges in the digital business competition. One of the main obstacles is the uneven digital

infrastructure, especially in remote areas, where access to fast internet and supporting technology is still very limited. Moreover, the lack of digital literacy and understanding of business competition regulations often makes startup founders prone to unintentional violations. The dominance of large platforms also poses a significant challenge, as startups must compete with established companies that have broader access to data, technology, and resources. Capital constraints also pose a significant obstacle, as many startups struggle to secure funding to develop their businesses in a highly competitive market.

There are many opportunities that can be leveraged by startups. The rapid growth of the digital economy in Indonesia creates an ecosystem that supports innovation and offers a wide market. Government support through regulations such as the Job Creation Law and various startup incubation programs provides significant encouragement for the development of digital businesses. The increase in internet penetration, bolstered by infrastructure projects like the Palapa Ring, opens new access for startups to reach consumers in areas that were previously hard to serve. Additionally, local consumers' preference for locally-based digital solutions presents a significant opportunity for startups to offer services that are specific, innovative, and relevant to the needs of Indonesian society.

D. CONCLUSION

The implementation of Law Number 5 of 1999 on startup companies in Indonesia in the digital era faces various challenges. The development of technologies such as algorithms, big data, and digital ecosystems has created new spaces that are not yet fully accommodated in the current regulations. These regulations tend to be more suited for traditional markets than for the dynamic digital market, creating legal gaps that allow practices such as algorithmic discrimination and market domination through data dominance. Startup companies face major challenges such as domination by large corporations, gaps in market access, and a lack of equitable digital infrastructure. However, opportunities still exist, such as leveraging technology to support SMEs, collaborating with regulators, and expanding into global markets. Strengthening the capacity of the KPPU and revising regulations to encompass digital aspects has become an urgent need to support healthy competition in the digital era.

The government needs to revise Law Number 5 of 1999 to encompass new phenomena in digital business, such as algorithm regulation, data dominance, and technology-based discrimination. In addition, derivative regulations specifically governing competition practices in the digital sector need to be issued promptly to reduce legal uncertainty.

The KPPU must be equipped with tools and capabilities to analyze competition cases in the digital sector. This includes training experts in technology, using artificial intelligence to monitor the market, and strengthening collaboration with international regulators to handle cross-border cases.

The government and relevant parties must create an inclusive ecosystem for new startups. This step can include incentives for small startups, regulations that prohibit market exclusivity, and support for digital infrastructure in underdeveloped areas.

Startups need to be encouraged to leverage open technologies such as open-source to reduce dominance by large companies. Regulations also need to provide incentives for startups that develop technology supporting sustainability and the empowerment of local communities.

A fast, cheap, and fair arbitration system needs to be developed to resolve disputes between business actors in the digital sector. This approach can include the development of a transparent and technology-based online arbitration system.

The government must continue to promote the development of digital infrastructure throughout Indonesia. Equal internet access and other supporting technologies will enable startups from remote areas to compete in a broader market.

REFERENCES

- Acemoglu, D., A. Makhdoomi, A. Malekian, & A. Ozdaglar. 2022. Too Much Data: Prices and Inefficiencies in Data Markets. *American Economic Journal: Microeconomics*, 14(4), 218-256.
- Afriana, A., A. M. Karsona, & S. A. Putri. 2020. Kemitraan dalam Perspektif Persaingan Usaha dan Penyelesaian Sengketa. *Acta Diurnal Jurnal Ilmu Hukum Kenotariatan*, 4(1), 1-17.
- Andani, D. K. & D. W. Indarta. 2023. Pengawasan Hukum Platform E-Commerce Tiktok dan UMKM oleh KPPU berdasarkan UU Nomor 5 Tahun 1999. *Al-Manhaj: Jurnal Hukum Dan Pranata Sosial Islam*, 5(2), 2393-2408.

Astuti, A. W., S. Sayudin, & A. Muharam. 2023. Perkembangan Bisnis di Era Digital. *Jurnal Multidisiplin Indonesia*, 2(9), 2787-2792.

Bachtiar, P. P., R. A. Diningrat, A. Z. D. Kusuma, R. A. Izzati, & A. Diandra. 2020. Ekonomi Digital untuk Siapa? Menuju Ekonomi Digital yang Inklusif di Indonesia. Edisi pertama. SMERU Research Institute, Jakarta.

Bahauddin, A. (2019). Aplikasi Blockchain dan Smart Contract untuk Mendukung Supply Chain Finance UMKM Berbasis Crowdfunding Syariah. *Journal Industrial Servicess*, 5(1), 107-111.

Bangsawan, G. 2023. Kebijakan Akselerasi Transformasi Digital di Indonesia: Peluang dan Tantangan untuk Pengembangan Ekonomi Kreatif. *Jurnal Studi Kebijakan Publik*, 2(1), 27-40.

Bowo, F. A. 2022. Peran E-Commerce dan Strategi Promosi Ditinjau dari Kebijakan Klustering UMKM di Era Digital. *Jurnal Studi Interdisipliner Perspektif*, 22(1), 59-74.

Cahyadi, I. 2016. Tantangan Internasionalisasi UKM di Indonesia dalam Menghadapi Masyarakat Ekonomi ASEAN. *Kajian*, 20(2), 129-143.

Calvin, A. V. 2021. Pengelolaan Bisnis Start-Up Bidang Jasa didasarkan Kapabilitas Sumber Daya Manusia yang Unggul di dalam Dunia Digital. *Jurnal Indonesia Sosial Sains*, 2(5), 695-711.

Darmawan, D. & E. Grenier. 2021. Competitive Advantage and Service Marketing Mix, *Journal of Social Science Studies*, 1(2), 75-80.

Darmawan, D. 2021. Implementation of Agile Project Management in a Dynamic Business Environment, *Journal of Social Science Studies*, 1(1), 275 – 280.

Disemadi, H. S. 2022. Titik Lemah Industri Keuangan Fintech di Indonesia: Kajian Perbandingan Hukum. *Jurnal Pembangunan Hukum Indonesia*, 4(3), 471-493.

Evans, D. S. & R. Schmalensee. 2016. Matchmakers: The New Economics of Multisided Platforms. Harvard Business Review Press, Brighton.

Ezrachi, A. & M. E. Stucke. 2016. Virtual Competition: The Promise and Perils of the Algorithm-Driven Economy. Harvard University Press, Brighton.

Fariz, F. A. B. M., & F. Issalillah. 2021. Narrowing the Economic Gap: The Impact of Technological Innovation on Access and Welfare of the Poor, *Journal of Social Science Studies*, 1(1), 111 – 116.

Fuady, M. 2003. Hukum Anti Monopoli Menyongsong Era Persaingan Sehat. PT Citra Aditya Bakti, Bandung.

Garon, J. M. 2019. Digital Disruption: Innovation and Competition in the Digital Economy. Cambridge University Press, Great Britain.

Graef, I., M. Husovec, & N. Purtova. 2018. Data Portability and Data Control: Lessons for an Emerging Concept in EU Law. *German Law Journal*, 19(6), 1359-1398.

Handayani, O. & A. Sulistiyono. 2020. Pembadanan Hukum Fintech sebagai Instrumen Pengaturan Persaingan Usaha yang Sehat. *Masalah-Masalah Hukum*, 49(3), 244-255.

Hardyansah, R., N. H. Pakpahan, A. S. Wibowo. 2021. The Ramifications of Banking Monopoly on Consumer Trust, Customer Satisfaction, and Industry Competition Dynamics, *Journal of Social Science Studies*, 1(2), 105 – 110.

Hardyansah, R. 2023. Assessment of the Efficiency of Government Licensing Services in Supporting the Development of Micro and Small Enterprises. *Bulletin of Science, Technology and Society*, 2(2), 5-12.

Haris, R., S. Sartika, N. Subair, F. L. B. Tarigan, S. Nur, A. Y. Rukmana, & H. Syamsul. 2023. Digitalpreneur Berwawasan Lingkungan. Get Press Indonesia, Padang.

Herdinata, C. & F. D. Pranatasari. 2019. Panduan Penerapan Financial Technology Melalui Regulasi, Kolaborasi, dan Literasi Keuangan pada UMKM. Leutikaprio, Yogyakarta.

Hotana, M. S. 2018. Industri E-Commerce dalam Menciptakan Pasar yang Kompetitif berdasarkan Hukum Persaingan Usaha. *Jurnal Hukum Bisnis Bonum Commune*, 1(1), 28-38.

Ibrahim, J. 2007. Hukum Persaingan Usaha. Bayumedia Publishing, Malang.

Jamaluddin, A., L. C. Hoe, A. A. Mohamed, D. Darmawan, A. T. Hannan, M. Ismail, & N. Ahmad. 2013. Human Resource Management Implications of Technology-Based Organizational Forms. *Academy of Management Journal*, 23(2), 83-94.

Jayanthi, R. & A. Dinaseviani. 2022. Kesenjangan Digital dan Solusi yang Diterapkan di Indonesia Selama Pandemi COVID-19. *Jurnal Iptekkom (Jurnal Ilmu Pengetahuan & Teknologi Informasi)*, 24(2), 187-200.

Joekrom, J., D. S. Negara, & A. S. Wibowo. 2024. Protecting consumers and sustaining economic balance between traditional markets and modern retailers. *Legalis et Socialis Studiis*, 2(2), 10-20.

Johnson, J. P. 2017. The Agency Model and MFN Clauses. *The Review of Economic Studies*, 84(3), 1151-1185.

Khan, L. M. 2017. Amazon's Antitrust Paradox. *Yale Law Journal*, 126(3), 710-805.

Kiley, A. M., B. Evans, M. Ismail, R. Saeed, D. Darmawan, L. C. Hoe, & A. T. Hannan. 2015. Strategic Flexibility and the Virtue of Innovation in Responding to the Dynamics of Change. *The Journal of Management Studies*, 31(3), 865-878.

Lah, R. A. D. 2023. Implikasi Hukum Bisnis terhadap Praktik Etika Bisnis di Indonesia. *Jurnal Bisnis dan Kewirausahaan*, 19(2), 163-172.

Lee, C. 2022. Competition Policy in the Age of Algorithms: Challenges for Indonesia. *Bulletin of Indonesian Economic Studies*, 58(3), 297-312.

Lerner, J. & J. Tirole. 2015. Standard-Essential Patents. *Journal of Political Economy*, 123(3), 547-586.

Liu, Z., M. Sockin, & W. Xiong. 2020. Data Privacy and Temptation. *National Bureau of Economic Research*, Cambridge.

Makarim, E. 2014. Kerangka Kebijakan dan Reformasi Hukum untuk Kelancaran Perdagangan Secara Elektronik (E-Commerce) di Indonesia. *Jurnal Hukum & Pembangunan*, 44(3), 314-337.

Mardikaningsih, R. & D. Darmawan. 2021. Business Sustainability Strategies in the Facing of Regulatory Uncertainty and Managerial Challenges, *Journal of Social Science Studies*, 1(2), 111 - 118

Mardikaningsih, R., S.N. Halizah, R. Hardiyansah, J. Jahroni, & D. Darmawan. 2024 Strategic Approach to Enhancing MSME Competitiveness through the Implementation of Sharia Economic Principles, *International Journal of Service Science, Management, Engineering, and Technology*, 5(1), 1-6.

Marpaung, S. F., H. Z. Siregar, F. Abdillah, H. Fadilla, & M. A. P. Manurung. 2023. Dampak Transformasi Digital terhadap Inovasi Model Bisnis dalam Start-up Teknologi. *Innovative: Journal Of Social Science Research*, 3(3), 6111-6122.

Maulana, A. 2023. Tinjauan Hukum tentang Kebijakan Persaingan Usaha dan Implikasinya pada Bisnis Startup. *Koaliansi: Cooperative Journal*, 3(1), 25-32.

Negara, D. S., D. Darmawan, B. Gardi. 2021. The Approach of Consumer Reviews to Product Competitiveness and Management Strategies, *Journal of Social Science Studies*, 1(2), 149 - 154.

Nugroho, S. A. 2018. Hukum Persaingan Usaha di Indonesia Teori dan Praktik Penerapan Hukum. *Preanadamedia*, Jakarta.

Panjaitan, Y. A. 2021. Indikasi Predatory Pricing pada Praktik Perang Harga antara Pelaku Usaha Financial Technology (Fintech) Ditinjau berdasarkan Hukum Persaingan Usaha di Indonesia. "Dharmasiswa" *Jurnal Program Magister Hukum FHUI*, 1(3), 1615-1630.

Pemerintah Indonesia. 2018. Peraturan Presiden Nomor 95 Tahun 2018 tentang Sistem Pemerintahan Berbasis Elektronik (SPBE). Jakarta.

Petit, N. 2020. Big Tech and the Digital Economy: The Moligopoly Scenario. *Oxford University Press*, Great Britain.

Petit, N. 2021. The proposed digital markets act (DMA): a legal and policy review. *Journal of European Competition Law & Practice*, 12(7), 529-541.

Posner, E. & E. Weyl. 2018. Radical Markets: Uprooting Capitalism and Democracy for a Just Society. *Princeton University Press*, New Jersey.

Prananingtyas, P., A. F. Lubis, A. M. T. Anggraini, & K. Toha. 2017. Hukum Persaingan Usaha. *KPPU*, Jakarta.

Prayuda, J. R., Z. Zakiyuddin, & A. Firmansyah. 2022. Skema Ponzi: Indikasi Kecurangan pada Valuasi Startup Menggunakan Gross Merchandise Value. *Jurnal Ilmiah Manajemen*, 10(1), 35-50.

Purba, O., M. U. Muhammadiah, A. Syamil, A. Nooraini, S. Sepriano, S. D. Sa'dianoor, & A. F. Gunawan. 2023. Dasar Hukum & Analisis Tata Kelola Ibu Kota Negara dari Berbagai Bidang. *PT. Sonpedia Publishing Indonesia*, Jambi.

Putra, A.R. & D. Darmawan. 2022. Competitive Advantage of MSMEs in Terms of Technology Orientation and Entrepreneurship Competence, *International Journal of Service Science, Management, Engineering, and Technology*, 2(1), 15-20.

Putra, A. R., & S. Arifin. 2021. Supply Chain Management Optimization in the Manufacturing Industry through Digital Transformation: The Role of Big Data, Artificial Intelligence, and the Internet of Things, *Journal of Social Science Studies*, 1(2), 161 – 166.

Putri, Z. F. D. H. & R. Ganindha. 2022. Pengembangan Potensi Produksi Usaha Mikro, Kecil, dan Menengah di Pondok Pesantren Melalui Pendampingan Hak Kekayaan Intelektual. *Jurnal Hukum Bisnis Bonum Commune*, 5(1), 67-83.

Rachman, Y. 2022. Gerakan Buruh Indonesia Perlawanan di Era Transisi Demokrasi terhadap Neoliberalisme-Jejak Pustaka. Jejak Pustaka, Yogyakarta.

Rizky, M. C., A. Herisasono, R. Hardyansah, P. Saktiawan, & R. Saputra. 2021. The Effectiveness of the Legal System in Guaranteeing Equal Rights of Minority Groups in Constitutional Structures, *Journal of Social Science Studies*, 1(2), 193 – 196.

Romadhon, F. & Fitri, A. 2020. Analisis Peluang dan Tantangan Penggunaan Financial Technology sebagai Upaya optimalisasi Potensi UMKM (Studi Kasus UMKM di Gresik). *Jurnal Technobiz*, 3(1), 30-44.

Rusianto, R., R. Hardyansah, & D. Darmawan. 2023. Application of the Elements of Money Laundering Crime in Indonesian Jurisprudence, *Bulletin of Science, Technology and Society*, 2(3), 44-50.

Saptia, Y., A. E. Nugroho, & M. Soekarni. 2021. Perluasan Akses Keuangan UMKM Berbasis Tekfin di Indonesia dan Pengalaman Negara Tetangga. Yayasan Pustaka Obor Indonesia, Jakarta.

Setiawan, B. 2019. Edukasi Blockchain Sebagai Solusi Bisnis Masa Depan Bagi Pelaku Usaha Mikro, Kecil dan Menengah (Umkm) Di Kota Palembang. *Jurnal Abdimas Mandiri*, 3(2), 131-136.

Setiawan, Z., M. R. Aulia, I. Adhicandra, M. P. Ariasih, S. Antesty, R. D. L. P. Dewi, & H. Afriyadi. 2023. Kewirausahaan 5.0: Membangun Keberhasilan Wirausaha pada Era Society 5.0. PT. Sonpedia Publishing Indonesia, Jambi.

Setyawati, R. & R. A. Pradana. 2022. Penyalahgunaan Posisi Dominan oleh Pelaku Usaha Dominan Melalui Penggunaan Algoritma Harga. *UIR Law Review*, 6(2), 103-120.

Suhartono, S. & S. Sulistiowati. 2019. Tantangan Penerapan Hukum Persaingan Usaha di Era Ekonomi Digital. *Jurnal Hukum Ius Quia Iustum*, 26(3), 435-457.

Sumartik, S., R. Ambarwati, R. Febriani, & W. E. Prasetyo. 2023. Manajemen Talenta dan Implementasinya di Industri. Umsida Press, Sidoarjo.

Susanti, A. N. 2018. *Hukum Persaingan Usaha Di Indonesia*. Kencana, Jakarta.

Susanto, I., M. Meilia, & D. Anisa. 2019. Persaingan Usaha Tidak Sehat di Indonesia Menurut Hukum Ekonomi Islam dan Undang-Undang Nomor 5 Tahun 1999 tentang Larangan Monopoli dan Persaingan Usaha Tidak Sehat. *Syar Iqtishadi: Journal of Islamic Economics, Finance and Banking*, 3(2), 80-101.

Takada, H., C. Chattalas, & T. Kramer. 2009. *International Marketing and Communication*. Edition 10. The McGraw-Hill Companies, New York.

Republik Indonesia. 1999. Undang-Undang Nomor 5 Tahun 1999 tentang Larangan Praktik Monopoli dan Persaingan Usaha Tidak Sehat.

Republik Indonesia. 2020. Undang-Undang Nomor 11 Tahun 2020 tentang Cipta Kerja.

Republik Indonesia. 2019. Peraturan Pemerintah Nomor 71 Tahun 2019 tentang Penyelenggaraan Sistem dan Transaksi Elektronik.

Utami, A. & A. Alamsyah. 2019. Analisis Karakteristik Strategi Konten E-commerce Indonesia Menggunakan Pendekatan Social Network Analysis untuk Market Intelligence. *Jurnal Manajemen dan Bisnis: Performa*, 15(2), 116-123.

Wahjono, S. I., A. Marina, & T. Kurniawati. 2021. *Crowdfunding Untuk Danai UKM dan Bisnis Start-Up*. Syiah Kuala University Press, Banda Aceh.

Wibowo, A. S., D. S. Negara, A. P. Marsal, E. B. Da Silva. 2021. Contractual Instruments' Effectiveness in Preventing Business Disputes and Ensuring Business Law Stability, *Journal of Social Science Studies*, 1(2), 209 – 214.

Wiyandarini, G., M. Hariani, & R. Mardikaningsih. 2021. Community-based Institutional Financing Model through Cooperatives for Micro and Small Enterprises, *Journal of Social Science Studies*, 1(1), 263 – 268.

Yulianti, P., R. Fahmy, H. Rahman, & H. A. Rivai. 2023. Analisis Knowledge Management Menggunakan Model Big Data di Media Sosial UMKM. *Jurnal Manajemen Informatika (JAMIKA)*, 13(1), 24-39.