Competition Law and Artificial Intelligence: Solution or Threat

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ABSTRACT

This article discusses the solutions and threats posed by artificial intelligence in the context of business competition law. The findings of this article indicate that artificial intelligence presents both challenges and opportunities in this field. While artificial intelligence can enhance competition by increasing efficiency and fostering innovation, it raises concerns about market dominance and collusion. Consequently, the KPPU must adapt to these complexities to ensure fair competition and protect consumers. Balancing innovation with competitive enforcement is essential to leveraging the benefits of artificial intelligence while mitigating potential threats as artificial intelligence becomes more prevalent in the market. Based on these findings, the authors recommend that the KPPU increase its oversight of artificial intelligence-related activities to ensure compliance with business competition laws. The KPPU should look for evidence of anti-competitive behavior driven by artificial intelligence, such as price collusion through price monitoring and algorithmic matching software, by amending Law No. 5 of 1999. The KPPU enforces laws and regulations to address the impact of artificial intelligence on business competition law. For instance, the European Union's Digital Markets Act empowers the European Commission to request algorithms, data about their testing, and explanations about their use from companies designated as competition gatekeepers.

Keywords: AI, Digital Market, Monopoly, Discrimination.

ABSTRAK

Artikel ini membahas terkait solusi dan ancaman yang ditimbulkan oleh kecerdasan buatan dalam konteks hukum persaingan usaha. Temuan menarik dari artikel ini menunjukkan bahwa kecerdasan buatan menghadirkan tantangan dan peluang dalam persaingan usaha. Meskipun kecerdasan buatan dapat meningkatkan persaingan dengan meningkatkan efisiensi dan mendorong inovasi. Di sisi lain kecerdasan buatan juga dapat menimbulkan kekhawatiran akan dominasi pasar dan kolusi. Oleh karena itu, KPPU harus dapat beradaptasi dengan kompleksitas ini untuk memastikan persaingan usaha yang sehat dan melindungi konsumen. Menyeimbangkan inovasi dengan penegakan hukum yang kompetitif sangat penting untuk meningkatkan manfaat dari kecerdasan buatan sambil mengurangi potensi ancaman karena kecerdasan buatan. Berdasarkan temuan-temuan ini, penulis merekomendasikan agar KPPU meningkatkan pengawasan terhadap kegiatan-kegiatan yang berhubungan dengan kecerdasan buatan untuk memastikan kepatuhan terhadap Undang-Undang Persaingan Usaha. KPPU harus mencari bukti perilaku anti-persaingan usaha yang didorong oleh kecerdasan buatan, seperti kolusi harga melalui pemantauan harga dan perangkat lunak pencocokan algoritma, dengan mengamandemen Undang-Undang Nomor 5 Tahun 1999 dengan memberikan kewenangan tersebut kepada KPPU. KPPU harus menegakkan hukum dan peraturan untuk mengatasi dampak kecerdasan buatan terhadap hukum persaingan usaha. Sebagai contoh, Undang-Undang Pasar Digital Uni Eropa memberikan wewenang kepada Komisi Eropa untuk meminta algoritma dan data mengenai pengujian algoritma tersebut, dan penjelasan mengenai penggunaannya dari perusahaan-perusahaan yang ditunjuk sebagai penjaga gerbang persaingan usaha.

Kata kunci: AI, Pasar Digital, Monopoli, dan Diskriminasi.
INTRODUCTION

Artificial intelligence and competition law are closely related, as artificial intelligence has the potential to reshape the dynamics of competition in the market and can lead to anti-competitive behavior. The European Union Competition Commission has recognized that algorithms can facilitate traditional collusion and can be used to reinforce and monitor collusion. It has also identified two situations involving different groups of algorithms, namely algorithmic conventional collusion facilitation and algorithmic alignment through third parties. Software monitoring tools and digital platforms can also have anticompetitive effects[1]. Therefore, in this era of technology and digitalization, competition authorities in the European Union are increasingly focusing on the potential impact of artificial intelligence on market competition. Enforcement agencies in the European Union are currently studying how artificial intelligence can facilitate collusion, exploit market power, and foreclose competitors. They also consider corporate liability for actions taken by artificial intelligence algorithms, even if the algorithms are not fully understood by the individuals who develop or implement them[2].

The European Union's Competition Commission believes that businesses are responsible for the actions of their automated systems, including artificial intelligence algorithms, and they must ensure that they understand how these systems work to avoid breaching competition law. The Competition & Markets Authority (CMA) has published proposed principles to guide a competitive artificial intelligence market and protect consumers in the United Kingdom. The European Union’s Digital Markets Act (DMA) authorizes the European Commission to request algorithms, data on testing, and an explanation of their use from companies designated as gatekeepers under the Act, which can assist in monitoring the use of algorithms.[3] The potential risk of artificial intelligence in competition law is that it facilitates price collusion through price monitoring and algorithmic matching software, allowing companies to adjust prices to align with their competitors’ prices without direct communication. Artificial intelligence can also exploit market power, resulting in discrimination or foreclosure of competitors. This can occur through mergers, exclusive cooperation agreements, or the use of large amounts of big data. [4]

Artificial intelligence can enable collusion without direct communication between competitors, as sophisticated algorithms can facilitate anti-competitive behavior. Artificial intelligence algorithms operate without human intervention, making it difficult to assign responsibility for their actions, especially in cases where companies do not directly control the algorithms.[5] Artificial intelligence’s increased transparency can make it easier for companies to communicate and coordinate, potentially leading to anti-competitive behavior. Artificial intelligence poses new challenges for competition enforcement agencies, including adapting to new forms of anti-competitive behavior and difficulties in determining liability for actions driven by artificial intelligence.

Regulatory artificial intelligence in competition law presents several challenges. Artificial intelligence is a rapidly evolving technology, and governments must keep up with the latest developments and adapt their regulations accordingly. Artificial intelligence algorithms operate without human intervention, making establishing liability for their actions difficult, especially in cases where companies do not control the algorithms directly. [6] The increased transparency provided by artificial intelligence can make it easier for companies to communicate and coordinate, potentially leading to anti-competitive behavior. The government, in this case, the KPPU, faces challenges in determining which companies are relevant to cross-market competition and identifying dominant players in the market. Liability for the actions of artificial intelligence still needs to be defined as who should be liable for the actions of artificial intelligence algorithms, mainly when such algorithms are used in strategic decision-making processes. The use of artificial intelligence in the cloud sector may harm competition, thereby strengthening the position of cloud providers. Some models and application developers may integrate their artificial intelligence-powered applications with other services, potentially creating anti-competitive practices.[7]

In Indonesia, awareness of artificial intelligence’s dangers still needs to be implemented. In developed countries like the United States, the European Union, and the United Kingdom, authorities sought solutions to benefit business competition. This is because Law No. 5/1999 on the Prohibition of Monopolistic Practices and Unfair Business Competition (Law No. 5/1999) has not regulated the mechanism for monitoring digital-based companies. This is undoubtedly a challenge for business competition law enforcement in Indonesia. The Indonesia Competition Commission (KPPU), as the regulator to oversee monopolistic practices and unfair business competition, needs complete authority and instruments to conduct surveillance and take
firm action against business actors who violate business competition. This moment is also an opportunity for business actors to utilize artificial intelligence to streamline their business for profit in today's digital era.

In the era of digitalization, many digital companies are leveraging artificial intelligence to gain market share. In Indonesia, potential unfair business practices by Google over the use of proprietary payment services by its software distribution platform, Google Play Store[8][TikTok-Shop invested US$1.5 billion in Tokopedia, a local e-commerce platform.[9] This has the potential to impact competition in the Indonesian e-commerce market, as Tokopedia is one of the largest e-commerce companies in Indonesia.[10] The potential impact of unfair competition can lead to market dominance by utilizing artificial intelligence. Indonesian tech giants, such as Tokopedia’s acquisition and merger by Gojek into GoTo, reject acquisition and merger talks with their competitor Grab and emphasize the company’s solid fundamentals and financial position. [11] This potential share/asset acquisition or merger could significantly impact the ride-hailing market in Southeast Asia. The merger between Gojek and Tokopedia in Indonesia is the largest deal in the history of technology companies in Indonesia. Combining the two most prominent tech companies creates a digital behemoth spanning e-commerce, ride-hailing, and financial services. This merger could impact competition in the Indonesia and Southeast Asia sectors.[12]

In the European Union, the corporate action of merging or acquiring the digital shares of Google and Fitbit took place in 2020. This created two tech companies operating in the e-commerce and fitness sectors.[13] While in the United States in 2022-2023s occurred between Apple and Google companies which were carried out in 2023 [14] In China, between 2022 and 2023, the same thing happened between Alibaba and Tencent.[15] These mergers can increase the company’s business value, expand market share, and accelerate digital transformation. Assessment of acquisitions and mergers of app-based companies with the help of artificial intelligence with an impact on unfair competition. In China, the United States, and the European Union, this involves analyzing various aspects of the deal, including the size of the investment, the companies involved, and the potential impact on competition. These regulatory and supervisory mechanisms provide legal certainty and fairness in business competition due to the effects of artificial intelligence, which results in monopolistic practices and unfair business competition.

Indonesia should learn from China to face the challenges of artificial intelligence in competition law in the digital era. The Standing Committee of the National People’s Congress, in 2022, amended the Anti-Monopoly Law for the first time. The amendments to China’s Anti-Monopoly Law took effect in August of the same year. Meanwhile, one of the focuses of the amendment is adjustments in the face of business development in the digital era. This can be seen in Article 9:

“Undertakings shall not use data, algorithms, technology, capital advantages, and platform rules to engage in monopolistic acts prohibited by this Law.”

Article 9 of the China Antimonopoly Law is considered urgent because, in this era, we can see dominated by new companies that are starting to emerge and grow and dominate in the e-commerce market that have used technology that can be said to be vulnerable to monopolistic practices and other unfair business competition. Another article that also relates to the digital sector is Article 21:

“For concentrations of business operators that meet notification standards prescribed by the State Council, operators shall notify the anti-monopoly law enforcement agency of the State Council in advance, and the concentration shall not be implemented if the notification is not made. “Where the concentration of business operators falls below notification thresholds stipulated by the State Council, but there is evidence that the concentration has or may have the effect of excluding or restricting competition, the anti-monopoly enforcement agency of the State Council can request business operators to notify.” If the business operators fail to notify by the provisions of the preceding two paragraphs, the anti-monopoly law enforcement agency of the State Council shall investigate by law.”

However, artificial intelligence can also positively impact the progress of competition law in Indonesia if used wisely and responsibly. Artificial intelligence can increase competition and improve decision-making in today’s technological and digital era. Artificial intelligence can contribute to helping businesses by improving their operations, reducing costs, and increasing competitiveness, which can lead to better outcomes for consumers and the market as a whole. In addition, artificial intelligence can also assist in making better decisions by analyzing large amounts of data and providing insights that humans may not be able to identify independently, resulting in more informed and competitive business practices. Therefore, Law
No.5 of 1999 must accommodate it to avoid monopolistic practices and unfair business competition. In response to these challenges, this paper discusses artificial intelligence’s impact, challenges, and opportunities on competition law in the era of technological advancement and digitalization.

**DISCUSSION**

**Is Artificial Intelligence a Threat to Competition Law in the Age of Technology?**

Artificial intelligence is a computer science discipline that focuses on developing intelligent systems that can execute tasks that generally require human abilities, such as understanding visuals, recognizing sounds, making decisions, and translating languages. Artificial intelligence systems are designed to learn from data and improve their performance over time, allowing them to adapt to new situations and environments. [16] Artificial intelligence includes machine learning, deep learning, neural networks, natural language processing, and computer vision. These technologies enable artificial intelligence systems to recognize patterns, make predictions, and learn from data. Artificial intelligence is used in various industries, including healthcare, finance, transportation, and retail, to automate tasks, increase efficiency, and improve decision-making. [17]

Artificial intelligence has limitations, such as difficulty understanding context, low transparency, and lacking the same sense of intelligence as humans. [18] Artificial intelligence systems need to fully understand the context of a situation, which can result in incorrect decisions or actions. The scope of artificial intelligence is rapidly expanding, with ongoing research and development in areas such as deep learning, reinforcement learning, and quantum computing. Artificial intelligence is expected to continue transforming various industries and aspects of daily life. Still, it is essential to address limitations and ethical issues to maximize benefits while minimizing potential risks. Artificial intelligence is indeed a new thing in business competition, especially in Indonesia; until now, the challenge of artificial intelligence has threatened law enforcement in Indonesia and other countries. This technological advancement brings both opportunities and risks, with potential issues ranging from regulatory gaps to ethical concerns, requiring a balanced approach to leverage its benefits while mitigating its drawbacks.

The use of artificial intelligence in business competition law in Indonesia has also emerged with the enactment of Law No. 19/2016 on the Amendment to Law No. 11/2008 on Electronic Information and Transactions (UU ITE), which regulates the regulation of artificial intelligence technology in Indonesia.

From data collection, then proceed to data processing. Artificial intelligence and big data can help process data faster and more effectively. However, if not done correctly, the data collected may contain unnecessary or unauthorized personal information of customers. In addition, artificial intelligence technology can detect unusual security threats to data, accurately identify users, and prevent unauthorized access to sensitive data. However, if not done appropriately, the data collected may contain unnecessary or impermissible personal information of customers. Law No. 27 of 2022 on Personal Data Protection (PDP) has set the legal basis for the four subjects, namely individuals, corporations, public bodies, and international organizations, which must protect consumers’ data, particularly in using artificial intelligence. [25] However, if not done appropriately, the data collected may contain unnecessary or impermissible personal information of customers.

Businesses must ensure that the data used by artificial intelligence is defined as personal data, which can be stored securely and protected from harmful threats. [26] From an economic perspective, using artificial intelligence and big data may threaten competition, particularly regarding economic data collection. Artificial intelligence may carry anti-competitive risks if financial data is not required or allowed. To date, business competition law in Indonesia, Law No. 5 of 1999, uses the Rule of Reason and Illegal Per Se approach to prevent anti-competitive practices. [27] The Rule of Reason approach is an analysis method that includes an action’s influence on creating obstacles and anti-trust practices. [28] While Per Se Illegal is where a specific business action is deemed to violate the law without further proof of the impact that occurs [29]. Using artificial intelligence and big data in business competition also requires appropriate and effective governance to prevent anti-competitive risks. Good artificial intelligence governance can help manage risks, reduce operational costs, and speed up business processes. However, using this technology also requires special attention to data security and collecting personal data so as not to create anti-competitive risks. [30]

Artificial intelligence in competition law in the European Union and the United States has emerged since the early 2000s. [19] This is due to the rapid development of artificial intelligence technology, which allows the use of artificial intelligence in various fields, including information processing, decision support, and
recommendation making.[20][21] Using artificial intelligence in business has become a growing trend in the European Union. Artificial intelligence approaches are attractive, especially for retailers, and have been used extensively in creating pricing and marketing algorithms for company effectiveness.[22]

In the United States, the use of artificial intelligence in competition law has also become an increasingly common trend, such as in the correctional system, which aims to help people answer complex challenges. [23] The use of artificial intelligence in competition law in the European Union and the United States continues to grow and is expected to be increasingly used in various fields. This is inevitable with the advancement of technology. Undeniably, the use of artificial intelligence in business competition in Indonesia can affect the security of customer data. Data misuse can occur by utilizing data collection with artificial intelligence and big data, allowing companies to collect more extensive and faster data.[24] However, if not done appropriately, the data collected may contain unnecessary or impermissible personal information of customers.

In the context of the impact of artificial intelligence on competition, businesses have competitive risks by using pricing algorithms to monitor and adjust their prices. Competitors subscribing to the same third-party pricing tools using commercially sensitive information from competitors, such as future prices, could result in an unlawful exchange of information. This artificial intelligence has the potential to facilitate collusion, exploit market power, and reduce competitive pressures. [31]. Some critical challenges and risks of facilitating collusion between competitors through price monitoring and algorithmic matching software make it easier for companies to adjust their prices to align with those of their competitors without direct communication.[32]

In this context, the use of technologies such as algorithmic matching software can allow for unauthorized coordination between competitors, which can be detrimental to free and fair competition in the market. This highlights the need for strict regulation to oversee the use of these technologies so that they are not misused for unfair advantage and harm consumers and competitors who are not involved in such collusion practices.

Additionally, businesses use artificial intelligence to exploit market power, resulting in discrimination or foreclosure of competitors. This can happen through mergers, acquisitions, exclusive cooperation agreements, or the use of large amounts of big data.[33] It becomes complicated because Artificial intelligence algorithms operate without human intervention, making it difficult to assign responsibility for their actions, especially in cases where the company does not control the algorithms directly.[34] The government, in this case, the KPPU, faces challenges in determining which companies are relevant to cross-market competition and identifying dominant players in the market. Who should be responsible for the actions of artificial intelligence algorithms, mainly when such algorithms are used in strategic decision-making processes? Law No. 5 of 1999, as the primary basis for business competition law in Indonesia, can threaten companies that do so. Using artificial intelligence in data use laws can be a threat in using artificial intelligence to carry out anti-competitive practices. If artificial intelligence is used to carry out anti-competitive practices, then Indonesia's data use laws could threaten companies that do so. To prevent anti-competitive risks, companies in Indonesia must ensure that the data used by artificial intelligence is defined as personal or economic data, which can be stored safely and protected from detrimental threats. [35]

Competition law in the European Union and the United States recognizes that the negative impact of artificial intelligence in the European Union and the United States is becoming a concern as technology and digitalization advance. In the context of competition law, use in the European Union and the United States in the market raises the potential risk of anti-competitive behavior, such as algorithmic collusion, where companies may act in a way that distorts competition without direct communication. Draft laws in the European Union and the United States aim to regulate artificial intelligence systems to prevent systemic risks and ensure the safety and trustworthiness of artificial intelligence applications, especially applications that are classified as high risk due to their potential harm to various aspects such as health, safety, and rights. The basics of these regulations have been created to provide a clear and comprehensive framework for overseeing and controlling the use of artificial intelligence. This includes the implementation of ethical standards, transparency, and accountability so that these technologies can be used responsibly and provide maximum benefits without ignoring the risks that may arise.

On the negative side, the spread of artificial intelligence poses challenges in effectively enforcing business competition laws. The rapid development and application of artificial intelligence systems, such as generative artificial
intelligence models, may outstrip regulators’ ability to keep up with these technological advances, making it more difficult to detect and sanction competition law violations. This dynamic landscape raises concerns regarding the enforcement of business competition law in the face of developments in artificial intelligence technology. [36]. Thus, while artificial intelligence offers transformative potential, it also carries complexities and risks that require careful regulation and enforcement to ensure fair competition and mitigate negative impacts on markets and society. [37] In business competition law, two issues concern the influence of artificial intelligence in business competition: market control and monopoly, as well as price discrimination and anti-competitive practices.

Market domination and monopolies carried out by companies using artificial intelligence can threaten fairness and balance in the market because such companies can control prices and hinder the entry of new competitors. Meanwhile, price discrimination and other anti-competitive practices facilitated by artificial intelligence can create injustice for consumers and harm other businesses that do not have the same access to such technology. Therefore, it is important to develop regulations that are able to anticipate and overcome these challenges in order to maintain healthy and fair business competition.

Market Control and Monopoly Practices

Increasing efficiency and productivity
Artificial intelligence offers various solutions to improve efficiency and productivity in multiple industries. One example concerns the automation of repetitive tasks, such as data analysis and customer service, optimization of production and logistics processes, and personalization of products and services to improve customer experience. [38]. The potential for market domination with increased efficiency and productivity driven by artificial intelligence could give some companies a competitive advantage. This could encourage market concentration, where a few large companies control most of the market share. Triggering monopolistic practices, where one company has complete control over the market and can determine prices and output. Google dominates the search engine and online advertising services market. Amazon dominates the e-commerce market. Facebook dominates the social media market. [39]

According to the theoretical view, market control by a company or group of companies reflects monopolistic actions or practices, which refer to the efforts of a company or group of companies to maintain or increase monopoly advantage or dominance in the relevant market. [40] A monopoly or dominant position gives a company or group of companies the power to regulate or control critical market factors. These key factors include price, production, service level, quality, and distribution of goods or services. [41] Market control and monopoly are essential concepts in business competition law. Market control occurs when a company or individual can control a product or service's price, quality, and availability. Monopoly, an economic condition where one company has the power to determine the cost and quality of a product or service that the market cannot decide, is one form of market control. [42]. The prohibition of monopolistic practices is regulated in Article 17 of Law No. 5 of 1999, which explains that:

“Business actors are prohibited from exercising control over the production and marketing of goods or services, thereby resulting in monopolistic practices or unfair competition.”

Furthermore, the business actor should be suspected or considered to be controlling or producing and marketing goods or services as mentioned in paragraph (1), namely as follows:

1. There is no substitute for the goods and/or services concerned; or
2. Causing other business actors to be unable to enter into the same business competition or
3. Business actors can control more than 50 percent of the market share of a particular type of goods or services.

The consequences of a market monopoly include:

1. Resulting in relatively high buying and selling prices while less is being sold, which can often result in losses for consumers;
2. Resulting in what is produced not being more efficient;
3. Production capabilities and natural resources cannot be used comprehensively;

Apart from the provisions regarding monopolistic practices, artificial intelligence can potentially violate the provisions prohibiting market control as regulated in Article 19 of Law 5/1999. Article 19 sets out restrictions on company behavior contrary to Law Number 5 of 1999. These restrictions include refusing or preventing certain business actors from operating in the same market, preventing competitors’ consumers or customers from interacting with their competitors, limiting the distribution or sale of goods or services in that
market, and discriminating against certain business actors. In particular, several impacts on business competition could result from violations of Article 19 of Law no. 5 1999, including and not only limited to [43]:

1. The presence of competitors in the market that will undergo reduction or complete elimination;
2. The role of competitors in a market whose proportion has decreased significantly;
3. One or more business actors who have the power to enforce their will in the market;
4. The emergence of competitive barriers, such as difficulties in entering the market or difficulties in developing markets in the region;
5. Decreasing the level of healthy competition in the relevant market;
6. A decrease in the choices available to consumers in those markets.

Companies can use artificial intelligence to use monopolistic practices, such as predatory pricing (Article 21 of Law 5/1999) or facial recognition technology to detect citizens’ movements in offices, schools, or other public places. [44] The use of artificial intelligence in large-scale data collection and analysis can be a threat to privacy. The excessive use of facial recognition and surveillance technology can also threaten privacy. Aside from its direct impact on competitors, artificial intelligence could increase social inequality if used to help companies with tremendous economic power. This can make the company smaller and lower its chances of market survival. Companies with artificial intelligence can more easily form monopolies because they can use artificial intelligence to effectively control the price, quality, and availability of products or services. Artificial intelligence can be used to develop anti-competitive innovations, making it easier for companies to control the market.

In the European Union and the United States, market control and monopoly have influenced the use of artificial intelligence and business competition. Artificial intelligence can influence market competitive dynamics, leading to anti-competitive risks such as algorithmic collusion. Companies’ use of artificial intelligence can help control the prices of products and services, which can influence market share. This can threaten business competition, as companies can use artificial intelligence to form monopolies or engage in anti-competitive practices. Competition law oversight in the European Union and the United States can help prevent anti-competitive practices in the artificial intelligence market. This oversight can use data from artificial intelligence algorithms to identify and prevent anti-competitive practices. European Union Antitrust Chief Margrethe Vestager has warned about the impact of artificial intelligence on merger control policy, which could lead to market domination and monopoly risks. [45]

The European Commission is also drafting a European Union Artificial Intelligence Act, which will strengthen competition law and clarify the actions competition law supervisors can take against anti-competitive practices in the artificial intelligence market. [46]. The European Union could also use existing powers in the Digital Markets Act to help prevent market capture and monopoly in the artificial intelligence market. This can help control prices of products and services, as well as prevent anti-competitive practices such as algorithmic collusion. Therefore, it is essential for KPPU that Law No.5/1999 still needs to accommodate digital algorithms. Consequently, it is necessary to amend the law and include rules governing digital markets and algorithms, as implemented in several countries such as the UK, United States, EU, and China. This is certainly in the common interest of KPPU and other stakeholders, such as different business actors, consumers, and the Indonesian state.

Price Discrimination and Anti-Competitive Practices

Article 6 states that price discrimination refers to a company's ability to charge different prices for the same product or service of the same quality to other consumers. A price fixing action considered prohibited price discrimination occurs when the following conditions are met: the seller or producer has monopolistic power, at least in one market. [47]. There is a separation between markets that do not allow buyers to resell (no arbitrage). The basis for price discrimination:

1. Business actors draw up agreements regarding price discrimination and are not unilateral agreements, carried out in a structured and ongoing manner;
2. The relationship is vertical;
3. There is no significant difference in costs in preparing goods and services until they are ready for use by final consumers or producer consumers;
4. Negative impact on business competition and result in losses for consumers.

Discrimination is treatment directed at certain business actors to eliminate competitors from the market or prevent potential competitors from entering the market. [48]. According to KPPU Regulation Number 3 of 2011 concerning the Interpretation of Article 19 Letter D (Discriminatory Practices) of Law Number 5 of
Although differences in the willingness to pay of each monopolistic seller/producer can take advantage of different levels of demand and demand elasticity. 

Robinson defined selling the same article as produced under a single control at different prices to different buyers. Above price discrimination occurs when the act satisfies the requirement that different prices be charged for the same good. Two articles in Law Number 5 of 1999 regulate price discrimination agreed to in the agreement, namely Article 5, paragraph 1, and Article 6. The prohibition against price discrimination is regulated in Article 6 of Law No. 5 of 1999, which states that:

“Business actors are prohibited from making agreements that result in one buyer having to pay a different price from the price that other buyers have to pay for the same goods and/or services.”

Business actors are not permitted to enter into agreements that result in one buyer paying a different price than another for the same goods or services. A company can enter into an anti-competitive deal if it can prove that:

1. The agreement provides benefits in terms of technology, efficiency, and social aspects by the provisions contained in Section 5 of the 2010 Competition Act;
2. These benefits can only be achieved through participation in such anti-competitive agreements;
3. The impact on competition is balanced with the benefits expected to be obtained;
4. The agreement does not eliminate the competitive process [50].

The elements of price discrimination are as follows. [51]:

1. Traders carry out sales actions for two or more sales with price discrimination;
2. Carried out by a seller to two or more different consumers;
3. The same quality and quantity and type of goods;
4. Products for use, consumption;
5. Carried out in a relatively short period;
6. Price discrimination has an impact on business competition.

Buyers in different markets have different levels of demand and demand elasticity. Monopolistic sellers/producers cannot take advantage of differences in the willingness to pay off each consumer. When these conditions occur, when a company sets different prices for the same goods and services with the same quality and quantity to other buyers, it has undoubtedly committed price discrimination, which is prohibited by Article 6. Price discrimination with artificial intelligence allows companies to personalize product and service prices based on consumer data, such as purchase history, demographics, browsing habits, and location [52]. This price personalization aims to increase revenue, attract and retain customers, and increase the potential efficiency of price discrimination. However, price personalization risks fueling price discrimination, where consumers with different profiles are charged different prices for the same product or service. Consumers with low purchasing power or minority groups are disadvantaged.

The problem of price discrimination still attracts considerable attention because the act of differentiating the nominal price of identical products or services is easily found everywhere, from advertisements in the mass media to subscription offers in various publications. [49] Price discrimination can be a part of anti-competitive practices, such as selling products at prices below production costs to exclude competitors and setting different prices for consumers in various markets to maximize profits.

Uber and Grab use artificial intelligence algorithms to personalize prices for online taxi services. [53] Amazon and Lazada use artificial intelligence algorithms to personalize e-commerce product prices. [54] Concerns about discrimination and Anti-Competitive Practices can harm consumers with higher prices and fewer choices, stifle innovation and competition, and create economic inequality. [55] Pricing algorithms using prices as input and/or computational procedures to determine prices as output have been under intense scrutiny by competition authorities for some time. Software to track competitors’ prices and, in response, adjust a company’s prices is widely used, especially in e-commerce. Many platforms, such as Amazon Marketplace and Airbnb, offer pricing algorithms to users on the supply side. [56][57] Although pricing algorithms can produce pro-competitive effects, such as improving business decision-making, enabling faster and better decisions, or helping them develop more customized services, the main concern is that they can facilitate collusion between competitors. [49]

In 2020, companies in the European Union and the United States raised €6.7 billion from investments in artificial intelligence start-ups, which is one of several levels of rigor imposed
by competition law to help prevent unfair behavior in the marketplace. The use of artificial intelligence and the strength of competition between the United States, China, and the European Union in the development of artificial intelligence have become the main focus of competition in the technology field. China has become one of the leaders in the development of artificial intelligence and plans to become a global leader before 2030. Europe has several high technical and industrial strengths, as well as high digital infrastructure and basic regulations based on fundamental values to become a global leader in innovation and application of artificial intelligence. This will help the well-being of all European societies and economies through an artificial intelligence ecosystem for citizens, businesses, and public services. [58]

Is Artificial Intelligence a Solution in Business Competition Law in the Technological Era?

Business competition law is vital in forming business ethics for business actors. Ensuring competition in artificial intelligence is very important to maintaining the democracy of business actors in business competition. Enforcement of business competition law in artificial intelligence complements preserving democratic values. Additionally, artificial intelligence applications’ pro-competitive and anti-competitive impacts underscore the need to identify and address critical challenges and opportunities in this field. [59] Overall, the European Union and the United States are actively engaged in shaping policies regarding the regulation of artificial intelligence in competition law and recognize the importance of encouraging innovation while mitigating the potential risks associated with advanced technologies such as artificial intelligence. [60]

Artificial intelligence is not only considered to hurt business competition law in any part of the world. On the other hand, artificial intelligence can also solve business competition law in the era of technology and digitalization because it can potentially increase competition and improve decision-making. Artificial intelligence can contribute to driving progress in business competition law. In this regard, artificial intelligence can help businesses improve their operations, reduce costs, and increase competitiveness, leading to better outcomes for consumers and the market as a whole. [61] Additionally, artificial intelligence can help in making better decisions by analyzing large amounts of data and providing insights that humans may not be able to identify on their own [62]. This can lead to more informed and competitive business practices, impacting healthy competition in the business world.

Business actors can respond more effectively to artificial intelligence’s positive impact by targeting their marketing efforts. This can increase competition and improve customer service. In addition, it can help businesses respond to market changes and customer needs more quickly, thereby increasing competitiveness and improving consumer outcomes. [63] In other respects, artificial intelligence can help ensure compliance with competition laws by monitoring and analyzing business practices, which can help prevent anti-competitive behavior.

This presence of artificial intelligence should be used in a pro-competitive manner in businesses to monitor trends, track competitor performance, and produce in-depth reports on competitors’ strengths, weaknesses, and market share. This information can be used to improve products and services and remain competitive, analyzing market data and grouping target markets into different groups based on shared characteristics. This helps business actors make the right decisions regarding product suitability for the market and market potential. On the other hand, it can also analyze unstructured data to flag abnormalities, reduce the possibility of human error in data analysis, improve data integrity, and help project teams analyze previous project schedules, resource allocation, and problem tracking, making it easier to identify potential risks and predict project delays.

The use of artificial intelligence and big data in Indonesia’s businesses has the potential to help create effective and competitive markets. Still, it can encourage anti-competitive practices, such as price discrimination, using several unique qualifications, such as network effects, radical scale economies, data-driven markets, privacy, and token impact [62]. Business competition law in Indonesia creates market efficiency by preventing monopoly, both productive and allocative efficiency. Law Number 5 of 1999, concerning the prohibition of monopolistic practices and unfair business competition, uses a Rule of Reason and Per Se Illegal approach to guarantee freedom of competition without obstacles. [64] Artificial intelligence governance is essential to protecting monopolistic practices and unfair business competition and promoting healthy business competition. Law enforcers in business competition, both substantially and structurally, need to receive preparation, attention, and improvements. [65][66]

Artificial intelligence-based predictive analytics can make forecasts and predict risks
based on external factors, market trends, and historical data. This can help businesses make the right decisions and stay competitive. [67] Artificial intelligence systems can predict customer preferences and trends, enabling companies to offer personalized experiences and increase customer engagement. By automating routine tasks and customer service, artificial intelligence can optimize processes, efficiency, and productivity, saving time and reducing costs.

Personalizing services, product recommendations, and predictions and improving customer experience and satisfaction can leverage artificial intelligence and detect fraud and auto-respond, increasing security and trust in online transactions. Other benefits include the following: it can provide automated insights for data-driven industries, helping businesses make data-driven decisions; it can also be used for news feeds and content personalization, improving user experience and engagement. [68] Companies must ensure that their use complies with existing competition laws and regulations. Educating and training employees on the proper use of artificial intelligence can help prevent unintended anti-competitive consequences. Regularly reviewing and updating artificial intelligence systems to ensure they do not lead to anti-competitive practices can help businesses stay compliant.

Companies must collaborate with the KPPU to understand their concerns and work together to address potential anti-competitive practices. By following these guidelines, businesses can use artificial intelligence pro-competitively, ensuring that their artificial intelligence systems do not lead to anti-competitive practices. Companies must be transparent about using artificial intelligence and disclose the data, models, and algorithms used in decision-making. This will help the Commission and competitors understand how artificial intelligence is used and detect potential discriminatory or anti-competitive practices. Developing ethical guidelines for using artificial intelligence in business can help ensure that algorithms are designed and utilized relatively and non-discriminately. Meanwhile, from the government side, the KPPU can carry out supervision and regulations to ensure that the application of artificial intelligence in business complies with business competition laws and does not lead to unfair market practices. Encouraging competition by preventing large firms’ accumulation of market power can help prevent anti-competitive practices. Protecting customer data and privacy rights can help avoid discriminatory and anticompetitive practices. Companies should monitor their artificial intelligence systems for potential anti-competitive behavior and report any such behavior to competition authorities. The KPPU mentioned in 35 Law No.5 of 1999 is crucial in ensuring fair business practices and preventing monopolistic behavior in Indonesia. As detailed in Articles 35 and 36 of Law No. 5 of 1999, the KPPU is entrusted with several important duties:

1. Assessing agreements that could lead to monopolistic practices and/or unfair business competition (Articles 4 to 6).
2. Evaluating business activities and actions of business actors that may result in monopolistic practices and/or unfair business competition (Articles 17 to 24).
3. Investigating potential abuses of dominant positions that could result in monopolistic practices and/or unfair business competition (Articles 25 to 28).
4. Taking appropriate actions in line with the commission's authority (Article 36).
5. Suggestions and considerations regarding government policies related to monopolistic practices and/or unfair business competition.
6. Preparing guidelines and publications related to this law.
7. Reporting regularly on the commission's work to the President and the House of Representatives.

Given these extensive responsibilities, the KPPU must adapt and address the challenges posed by artificial intelligence in the business sector. By enhancing oversight and collaborating with technical experts, the KPPU can effectively balance innovation with competitive enforcement, ensuring that AI contributes positively to market efficiency and innovation while mitigating potential risks to fair competition.

Business competition law and the positive impact of artificial intelligence in the European Union and the United States are essential discussion topics to become an example for Indonesia in responding to artificial intelligence. In the European Union and the United States, efforts to regulate artificial intelligence are intensifying, focusing on balancing the risks associated with artificial intelligence systems with the economic and social benefits they generate. [69] The European Union and the United States cooperate in artificial intelligence under the Trade and Technology Council (TTC), implementing a joint roadmap on artificial intelligence and trustworthy risk management. [70] They have
also agreed to increase collaboration on artificial intelligence research in the public interest.

In anticipation of the use of artificial intelligence in business competition, the European Union and the United States have taken steps to face the challenges of artificial intelligence in business competition law. The European Union has made comprehensive regulations regarding the development and use of artificial intelligence technology. This includes regulating the use of biometric data and limiting the use of facial recognition technology. The European Union uses a solid legal and regulatory approach in responding to developments in artificial intelligence, such as bypassing the Artificial Intelligence Act, which imposes fines of up to 7.5 million euros on violators [71].

As the KPPU is at the forefront of activating and fighting monopolies and unhealthy business competition, international cooperation is expected to support the use and development of artificial intelligence globally. This is important for establishing norms and standards that regulate and manage artificial intelligence. In addition, a preventive approach is taken by creating general guidelines for the development and use of artificial intelligence, such as the Ethics Guidelines for Trustworthy Artificial Intelligence, with the aim that each country can help each other in formulating the best solutions in dealing with the negative impacts of the development of artificial intelligence. With comprehensive regulations, a robust regulatory approach, international cooperation, and a preventive approach, Indonesia can strive to anticipate the impact of artificial intelligence in business competition effectively [72][73].

CONCLUSION

Based on the discussion above, due to inadequate regulations, artificial intelligence may harm business competition law, especially in Indonesia. Law No. 5 of 1999 still does not address the negative impacts of artificial intelligence. These negative impacts, such as monopolistic practices, market dominance, price discrimination, and anti-competitive behaviors, can arise through using big data, data collection, and data processing by business actors to enhance their interests and profits.

Therefore, companies need to understand how their algorithms function. Collaboration between the KPPU and technical experts is essential to conducting risk assessments and comprehending AI’s capabilities. As the use of algorithms continues to grow, competition law enforcers must become more sophisticated in addressing the associated risks. Businesses must proactively implement procedures to identify and address evolving risks and issues. Taking algorithm compliance with competition law seriously will help avoid future burdensome competition investigations or worse consequences.

REFERENCES


