

The Legal Protection for Consumers in the Digital Economy Era in Facing Challenges and Opportunities

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Abstract. *This research aims to examine the legal aspects of regulating the digital economy in Indonesia, analyze the challenges faced, and identify opportunities that can be utilized to strengthen the existing legal framework. The digital economy in Indonesia is growing rapidly along with advances in information and communication technology. However, this development presents significant legal challenges, ranging from personal data protection, cyber security, to E-commerce and fintech regulations. The research method used is normative juridical analysis with a statutory approach and case studies. The research results and findings show that although there are several regulations governing the digital economy, there are still legal gaps and uncertainties that require further attention from policy makers. This research recommends strengthening regulations and increasing the capacity of law enforcement in dealing with the dynamics of the digital economy.*

Keywords: *Data; Digital; Economy; Protection.*

1. INTRODUCTION

In the era of rapid development of information and communication technology, information technology systems such as electronic commerce (E-commerce), electronic education (E-education), electronic health (E-health), electronic government (E-government), and other fields have brought many opportunities and challenges. However, this progress also causes new problems, including the ease of collecting and transferring someone's personal data without the knowledge and consent of the data subject. This situation threatens the constitutional rights of personal data subjects and emphasizes the importance of personal data protection in response to these challenges¹ Human rights encapsulate a series of universal rights inherent in every individual, including political, social, economic and culture. There are several human rights that are relevant when discussing the protection of personal data. One of them is the right to privacy which allows every individual to maintain confidentiality and control the use of their personal data. Everyone has the right to determine whether, how and to whom their personal data will be disclosed. Personal data protection has the main aim of preventing unauthorized or unwanted access, use and disclosure of an individual's personal

¹ Explanation of the Republic of Indonesia Law No. 27 of 2022 concerning Personal Data Protection.

data.² Privacy is a very complex concept. Samuel Warren and Louis Brandeis first called it the "Right to Privacy," defining privacy as the right to enjoy life and the right to be alone. This legal development is inevitable and demands recognition and protection.

Laws to protect privacy, while legal protection is a necessity that can answer this need. The definition of the right to privacy and protection of personal data are two things that are related to each other, namely personal data, which is the property of every individual that needs to be protected and is part of universally recognized human rights, both in international and regional legal instruments such as UDHR, ICCPR, ILC.³ Protection of individual privacy, although not explicitly mentioned in the 1945 Constitution, is clearly recognized in Article 28G paragraph (1) of the 1945 NRI Constitution. It is important for the government and related institutions to implement policies and regulations that ensure adequate protection of personal data. This protection of personal data should be considered an integral part of human rights. Thus, this effort aims to achieve the right balance between developments in information technology and individual rights, as well as ensuring that data management is carried out ethically in accordance with applicable human rights standards. Personal data can be defined as "any information relating to an identified or identifiable natural person".⁴

Personal data when referring to the EU GDPR is any information relating to a natural person ('data subject') who can identify or be identifiable; directly or indirectly recognize a person, especially by reference to an identifier such as a name, identity number, location data, online identification data or to one or more factors about the person's physical, psychological, genetic, mental, economic or social identity.⁵ Digital personal data is often described as the resource of the future, even referred to as a "new asset class" according to the World Economic Forum, which argues that greatly increasing amounts of personal data are "generating a new wave of opportunities for economic and social value creation."⁶ In connection With the development of the digital economy in Indonesia, personal data protection has become a very central issue considering that currently Indonesia is a promising place for the digital economic market. This can be seen from Indonesia's total population of 265.4 million, of which 50 percent is 132.7 million. residents are already using the internet This number means that mobile device users reached 177.9 million people and active mobile social media (social

² Sekaring Ayumeida Kusnadi, Andy Usmina Wijaya, (2021), *Perlindungan Hukum Data Pribadi Sebagai Hak Privasi*, JA: Jurnal Al-Wasath 2 No.1: 19-32 Journal homepage <https://journal.unusia.ac.id/index.php/alwasath/index> ISSN 2721-6160 (Online)

³ Haganta, R. (2020). Legal Protection of Personal Data as Privacy Rights of E-Commerce Consumers Amid the Covid-19 Pandemic. *Lex Scientia Law Review*, 4(2), 77-90. <https://doi.org/10.15294/lesrev.v4i2.4090>

⁴ Edwards L. "Data Protection: Enter the General Data Protection Regulation". In: Edwards L (ed.) *Law, Policy and the Internet*. Oxford: Hart, p.77– 117. Crossref. (2018) dalam Birch, K., Cochrane, D., & Ward, C. "Data as asset? The measurement, governance, and valuation of digital personal data by Big Tech." *Big Data & Society*, 8 no. 1. <https://doi.org/10.1177/20539517211017308>

⁵ Article 4 (1) EU General Data Protection Regulation

⁶ Birch, K., Cochrane, D., & Ward, C. "Data as asset? The measurement, governance, and valuation of digital personal data by Big Tech." *Big Data & Society*, 8 no. 1. <https://doi.org/10.1177/20539517211017308>

media) users reached 120 million people. The results of Google and Temasek research in 2018, it is predicted that the Indonesian Digital Economy Market Size will reach USD 100 billion in 2025.⁷ In April 2021, 88.1% of internet users in Indonesia used E-commerce services to buy certain products in the last few months. This percentage is the highest in the world in the We Are Social survey results.⁸

E-commerce transactions make the largest contribution to Indonesia's digital economy, where in 2021 the value reached US\$53 billion. This amount is predicted to increase to US\$104 billion in 2025, with a growth rate of 18%⁹. To support the growing climate for the digital economy and fulfill the availability of data/information quickly, easily and accurately, the government has issued several regulations related to eCommerce such as: Economic Policy Package XIV which regulates the electronic-based economy, Presidential Regulation (Perpres) no. 74 of 2017 concerning System Roadmap, Electronic-Based National Trade or SPNBE, Government Regulation (PP) Number 80 of 2019 concerning Trade Through Electronic Systems (PMSE) and Minister of Trade Regulation (Permendag) Number 50 of 2020 concerning Provisions for Business Licensing, Advertising, Guidance and Supervision of Business Actors in Trading Through Electronic Systems.

The development of the digital economy in Indonesia has changed many aspects of life, including the way of doing business, transactions and communication. The digital economy includes various sectors such as E-commerce, fintech, digital payments and other technology-based services. This transformation encourages governments and stakeholders to develop adequate regulatory frameworks to be able to manage emerging opportunities and challenges.¹⁰ Dubbed the largest digital economy among Southeast Asian countries,¹ Indonesia has shown significant digital economic growth in the last three years, from US\$ 40 billion in 2019 to US\$ 70 billion in 2021.¹¹ With the internet in Indonesia increasing by 20% since the emergence of the Coronavirus Disease 2019 (COVID-19) pandemic, the Indonesian Government is increasingly optimistic that the digital economy can

⁷ Ananthia Ayu D, Titis Anindyajati, Abdul Ghoffar. (2019). *Perlindungan Hak Privasi atas Data Diri di Era Ekonomi Digital*. (Makhkamah Konstitusi : Pusat Penelitian & Pengkajian Perkara, & Pengelolaan Perpustakaan Kepaniteraan & Sekretariat Jenderal, 2019), 9.

⁸ Penggunaan E-Commerce Indonesia Tertinggi di Dunia. <https://databoks.katadata.co.id/datapublish/2021/06/04/penggunaan-e-commerce-indonesia-tertinggidi-dunia>. accessed on 18 July 2023

⁹ Siaran Pers. HM.4.6/179/SET.M.EKON.3/4/2022. *Akselerasi Ekonomi Digital pada e-Commerce & Online Travel Menjadi Salah Satu Strategi Efektif Mendorong Kinerja Perekonomian Nasional Jakarta*, 1 April 2022. <https://www.ekon.go.id/publikasi/detail/3978/aksel-erasi-ekonomi-digital-pada-e-commerce-danonline-travel-menjadi-salah-satu-strategi-efektifmendorong-kinerja-perekonomian-nasional>

¹⁰ E. W. Prastyaningtyas et al., "Perkembangan Ekonomi Digital Indonesia (the Development of Indonesia' S Digital Economy)," *J. Lentera Bisnis*, vol. 1, no. 2, p. 245–259, (2021), [Online]. Available: <http://repository.unpar.ac.id/handle/123456789/837>

¹¹ M. N. Audrine Pingkan, "Pingkan Audrine : Menagih Perlindungan Konsumen Digital Indonesia - Opini Katadata.co.id." Aug. 12, 2022. [Online]. Available: <https://katadata.co.id/indepth/opini/61fcf3a2d4cf7/menagihperlindungan-konsumen-digital-indonesia>

contribute up to US\$ 150 billion to Indonesia's economic growth in 2025.¹² Appropriate legal arrangements are needed to ensure that the digital economy can develop healthily, provide protection to consumers, and maintain economic stability. However, on the other hand, implementing regulations in this fast-moving sector poses challenges, especially regarding the speed of adapting regulations to technological developments.

2. RESEARCH METHODS

This research uses a normative juridical method with a literature, legislation and case study approach. This data is obtained from a variety of legal sources, including statutes, government regulations, as well as academic literature and industry reports. This analysis was carried out using a descriptive method by examining the suitability of existing regulations and practices in the field with the potential for future development.

3. RESULT AND DISCUSSION

3.1. The Challenges in Regulating the Digital Economy

Existing laws in a country aim to protect human rights, without distinguishing between one another. These human rights enable humans to develop themselves, play an active role, and contribute to the overall welfare of human life.¹³ The basis for formulating the principles of legal protection in Indonesia refers to Pancasila as the state ideology and philosophy. The principle of legal protection in this country includes recognition and protection of human status and dignity, which is rooted in Pancasila.¹⁴ Soetjipto Rahardjo stated that legal protection refers to efforts to protect an individual's interests by giving him the authority to act according to his wishes. Therefore, legal protection for society must be ensured through the establishment of clear and definite legal rules.¹⁵ Means for obtaining legal protection are divided into 2 (two), namely means of preventive legal protection and means of repressive legal protection.¹⁶

Means for obtaining legal protection are divided into 2 (two), namely means of preventive legal protection and means of repressive legal protection. Leaking information at a social level will cause harm to individuals to a certain extent. "Personal data" refers to objective material records attached to the electronic information system carrier, and constitutes original, unprocessed personal records; and the latter refers to the useful information of the content with use value formed after the processing of personal data. Because data itself has no meaning, it only becomes information when it has an impact on the behavior of an entity. Data is the form and carrier of information; Information is the meaning of the data,

¹² Idxchannel, "2025, Ekonomi Digital Makin Vital Perannya Bagi Ekonomi RI," <https://www.idxchannel.com/>. Aug. 12, 2024. [Online]. Available: <https://www.idxchannel.com/economics/2025-ekonomi-digital-makinvital-perannya-bagi-ekonomi-ri>

¹³ Bernard L.Tanya, Yoan N. Simanjuntak, Markus Y. Hage, *Teori Hukum*, p. 72

¹⁴ I Dewa Gede Atmadja & I Nyoman Putu Budiarta, (2018), *Teori-Teori Hukum*, Setara Press, Malang, p. 165

¹⁵ Soetjipto Rahardjo, (1983), *Permasalahan Hukum di Indonesia* Bandung: Alumni, p. 121

¹⁶ Paulus Effendie Lotulung, (1993), *Beberapa Sistem Tentang Kontrol Segi Hukum Terhadap Pemerintah*, Citra Aditya Bakti, Bandung, p. 25

contained in the data, and has an interpretation of the data. I argue that personal information is a legal object with independent protection assigned to the data carrier, and data privacy is directly related to the protection of the privacy of personal information.¹⁷ The European Charter of Human Rights (ECHR, 2000) and the ASEAN Human Rights Declaration (AHRD, 2012) have recognized the right to protection of personal data as a form of human right. This right is the result of combining the right to information and the right to privacy which has developed since being recognized in the Universal Declaration of Human Rights (UDHR, 1948). Personal data refers to information that accurately describes an individual and can be used to identify him or her. The importance of protecting personal data is to ensure that data collected about an individual is used in accordance with the purpose for which it was collected, thereby preventing misuse of that data.¹⁸

Protection of Personal Data in E-Commerce Platforms Can Influence the Improvement of National Economic Development Economic improvement includes the process of increasing total income and per capita income in a country, which also takes into account population growth, and is supported by fundamental changes in economic structure and efforts to reduce income gaps among the population. Economic development and economic growth are interrelated; Economic development spurs economic growth, and conversely, economic growth facilitates the process of economic development. Economic growth refers to an increase in the production capacity of the economy which is reflected in an increase in real national income. Economic growth is an indicator of success in economic development. The difference between the two lies in their nature; Economic growth is more quantitative, involving increases in income standards and production levels, while economic development is more qualitative, involving changes in the structure of production and allocation of inputs in various economic sectors, such as institutions, knowledge, social, and technology.

A marketplace is a place where sellers and buyers can interact through a platform. This sales place can be a website owned by the business itself, as a means for buying and selling. Apart from that, many companies also use social media and instant messaging as a means of online sales.¹⁹

It is hoped that the emergence of online trading or E-commerce platforms will open up new economic opportunities for individuals to become entrepreneurs which will create additional jobs in the future. An online trading platform or E-commerce is a business model that provides convenience for consumers and entrepreneurs or companies to carry out purchase or sale transactions for products and services via the internet. The main advantage in online business is that entrepreneurs only

¹⁷ XueYijun, Zhou Zhid (2021). Research on Personal Information Protection System of Network Information Platform under the Background of Big Data 3S Web of Conferences 235, ISSN 2555-0403, DOI 10.1051/e3sconf/202123503033

¹⁸ Ananthia Ayu D, Titis Anindyajati, Abdul Ghoffar.(2019). Perlindungan Hak Privasi atas Data Diri di Era Ekonomi Digital. (Makhakamah Konstitusi : Pusat Penelitian & Pengkajian Perkara, & Pengelolaan Perpustakaan Kepaniteraan & Sekretariat Jenderal. p. 9

¹⁹ Renaldo Marcellino Pelengkahu, Willem J.F.A Tumbuan, Ferdy Roring, THE EFFECT OF PROMOTION, PHISICAL EVIDENCE, DIGITAL MARKETING PRICE ON PURCHASE DECISIONS AT E-COMMERCE SHOPEE IN MANADO CITY, Jurnal EMBA Vol. 11 No. 1 February 2023, Hal. 786-797

need internet access to stay connected to websites or online media²⁰According to the 2022 E-commerce survey conducted by the Central Statistics Agency, almost all businesses (93.98 percent) have utilized sales online via instant messaging applications such as WhatsApp, Line, and Telegram. More than half, around 48.65 percent of businesses, choose to sell via social media such as Facebook, Instagram and Twitter. Meanwhile, only around 20.64 percent of businesses use digital marketplaces/platforms as a means of sales. This situation is of concern to the government to encourage more E-commerce businesses in Indonesia to switch to digital marketplaces/platforms, because there are still 79.36 percent of businesses that have not utilized it. Furthermore, around 4.92 percent of businesses chose to use E-mail as a medium for selling online, while the use of websites was only adopted by 2.05 percent of businesses.²¹

With the increasing use of E-commerce in Indonesia, the government is responding enthusiastically and taking advantage of this opportunity to optimize tax revenues. As a result, PMK No. 210/PMK.010/2018 which regulates the Tax Treatment of Trade Transactions via Electronic Systems (E-commerce), which came into effect on April 1 2019. In this regulation, the government does not determine new types or rates of tax specifically for business actors and E-commerce. Instead, these regulations focus on procedures and methods that facilitate administration and encourage compliance by business and E-commerce actors. The aim is to ensure that there is no difference in tax treatment between E-commerce transactions and other conventional trade transactions.

The government is trying to encourage the use of digital technology in Micro, Small and Medium Enterprises (MSMEs) to support national economic growth. Based on the 2021 report from the Ministry of Cooperatives and Small and Medium Enterprises (Ministry of KUKM), there are around 64.2 million MSMEs in Indonesia. MSMEs contributed 61.07 percent to Gross Domestic Product (GDP), equivalent to IDR 8,573.89 trillion. In addition, MSMEs provide jobs for 97 percent of the workforce and contribute around 60.4 percent of total investment in Indonesia. This fact confirms Indonesia's strong national economic potential thanks to the large number of MSMEs and their ability to create jobs. The increasing growth of MSMEs every year also plays a role in reducing the unemployment rate in Indonesia. However, there are several challenges that MSME stakeholders must overcome in the future. These challenges include aspects of innovation and technology, digital literacy, productivity, legality and licensing, financing, branding and marketing, human resources, standardization and certification, equal distribution of guidance, training, facilitation and development of integrated databases.

In order to support the development of home industries in accordance with the strategic plan of the Ministry of Economy and SMEs for 2020-2024, an E-commerce platform is needed which can be an effective means for marketing home industry products in Indonesia. This E-commerce platform is designed to resemble a conventional market with various shops selling products from home industries,

²⁰ Vera Maria, PERAN E-COMMERCE DALAM KEWIRAUSAHAAN DI ERA SOCIETY 5.0, Jurnal Inovasi Penelitian Vol.4 No.1 June 2023 ISSN 2722-9475 (Cetak) ISSN 2722-9467 (Online)

²¹ Badan Pusat Statistik, (2022). *Statistik eCommerce*. No. Publikasi: 06300.2219 Katalog: 8101004, p. 21.

especially focusing on culinary products and handicrafts. This research focuses on analyzing E-commerce platform designs using various methods to collect data and identify business needs in the market. The platform caters to both private shops and business communities, giving flexibility to sellers. Through this application, both sellers and buyers can easily search and select the products they want. The advantage is that this application can be accessed via the website and smartphone devices, providing convenience for users according to their preferences. One of the superior features offered is the option to filter products by city, which makes it easier for buyers to find products according to their location. Apart from that, this feature also helps facilitate interaction between sellers and buyers from inside and outside the city. It is hoped that with this innovative E-commerce platform, home industries in Indonesia will continue to experience positive developments in accordance with government directions to support economic growth and SMEs in the future.²²

To continue to increase income in the digital sector, it is not only a matter of taxation, the availability of goods and services through digital platforms and the MSME digitalization program that is prioritized. The challenge of personal data security must also be a concern considering that personal data leaks can be caused by the inability of personal data management systems or electronic system administrators to secure their systems and can also occur due to hacker attacks.

Personal data leaks can have a significant negative impact on national economic development. Some of the negative impacts that can occur are as follows:

1. Loss of consumer confidence.
2. Threats to individual privacy.
3. Disruption to business activities
4. Decline in foreign investment.

Consumer Trust Aspects that are now a benchmark for a company's sustainability are often referred to as environmental, social and corporate governance (ESG). One important element in the good governance category is protecting customer data privacy, which is part of customer human rights and has a role in company sustainability. This ESG report is important reading for investors. They not only consider the company's financial quality, but also look at ESG aspects. If the quality of customer data protection declines, investors will pay particular attention to this as it can have an overall impact on the company. [33] Protection of personal data in E-commerce platforms can increase consumer trust. With a guarantee that their personal data will be processed safely and in accordance with applicable regulations, as is known, currently there are several regulations that have been implemented and are used to protect the privacy data of consumers, such as:

1. Law No. 27 of 2022 concerning Protection of Personal Data

²² N. Agitha. (2023). The Design of E-Commerce System to Increase Sales Productivity of Home Industry in Indonesia International. *Journal on Informatics Visualization* 7 (1), p. 70-76, ISSN 2549-9904 DOI 10.30630/joiv.7.1.1589

2. Law No. 19 of 2016 concerning Information and Transactions and Electronic Transactions.
3. Public Information Openness Act
4. PP No. 71 of 2019 concerning Implementation of Electronic Systems and Transactions
5. Minister of Communication and Information Regulation No. 20 of 2016 concerning Protection of Personal Data in Electronic Systems.

Meanwhile in Indonesia, one example of a legal incident related to personal data issues is the hacking case in September 2019. Thai Lion Air and Malindo Air consumer data was leaked. Around 21 million passenger data was leaked. This data includes name, address, telephone number, date of birth, complete passenger ID card information, passport number and passport validity date.²³

then regarding the Tokopedia E-commerce data leak²⁴, from the results of information that there have been 94 cases of data leaks in Indonesia since 2019. A total of 62 cases of which were related to private or private Electronic System Operators (PSE), details of which were 3 cases of data leaks in 2019, 21 cases in 2020, 20 cases in 2021, 35 cases in 2023 with June being the highest with 15 cases [36] The Privacy Policy is a commitment made by the platform to maintain the confidentiality of its users' personal information. Generally, in marketplaces, the privacy policy discloses some or all of the ways in which the Marketplace platform organizes, collects, uses, discloses, and manages the personal information of its customers. When registering an account on an electronic trading platform, users are required to fill in the personal information required for administrative purposes before they can use the services of the platform. This personal information includes complete identity data and telephone number, along with other required information. As part of the feature development and progress of the electronic trading platform, users are also asked to upload a photo of their ID card and a selfie with their hand holding the KTP, as well as signing online. All of this information is part of the user's personal data that must be protected. The role of the marketplace in efforts to protect personal data is in several ways: preventive, namely providing several layers of security that users can activate, such as OTP and encryption.²⁵

1. Adaptive, namely carrying out regular checks on the platform's data security system, such as privacy impact assessment (PIA).

²³ Data Penumpang Lion Air Bocor, UU Perlindungan Data Pribadi Dibutuhkan, <https://www.hukumonline.com/berita/a/datapenumpang-lion-air-bocor--uu-perlindungan-datapribadi-dibutuhkan-lt5d8947d7aa783/>

²⁴ Muhammad Raihan, Perlindungan Data Diri Konsumen & Tanggungjawab Marketplace Terhadap Data Diri Konsumen (Studi Kasus: Kebocoran Data 91 Juta Akun Tokopedia). Jurnal Inovasi Penelitian, ISSN: 2722-9475, ISSN 2722- 9467

²⁵ Baca artikel CNN Indonesia "35 Kebocoran Data 2023, Kominfo Akui Cuma Beri Rekomendasi & Teguran" selengkapnya di sini: <https://www.cnnindonesia.com/teknologi/20230619141948-192-963776/35-kebocoran-data-2023- kominfo-akui-cuma-beri-rekomendasi-dan-teguran>

2. Collaborative Cooperate and consult with the government in efforts to realize personal data protection in accordance with applicable regulations in Indonesia.²⁶

Consumers will feel more comfortable and confident in making online transactions. This can result in an increase in consumer participation, increased sales volume, and national economic growth. With the enactment of the Personal Data Protection Law, the focus is on Personal Data Protection standards in general, whether processed in part or in whole by electronic and non-electronic means, where each sector can implement Personal Data Protection according to the characteristics of the sector. Personal Data Regulations aim to, among other things, protect and guarantee the basic rights of citizens related to personal protection, guarantee that the public can receive services from corporations, public bodies, international organizations and the government, encourage the growth of the digital economy and the information and communications technology industry, and support increasing the competitiveness of domestic industry.²⁷

When consumers feel that their privacy and personal data are well-protected, they are more likely to share relevant and valuable information with E-commerce platforms. This presents companies with the opportunity to conduct in-depth data analysis, understand consumer preferences, and develop more effective business strategies. Innovation that emerges from the use of personal data can have a positive impact on national economic growth. As technology evolves, the concept of big data is becoming increasingly popular. In the big data era, citizens' information can be stolen through technologies like data filtering and mining. Consequently, legal protection for personal information in the context of big data becomes increasingly challenging.²⁸ The use of big data in business processes begins with identifying customer needs. By utilizing big data, businesses can engage in data-driven marketing. Companies can map out customers based on segmentation by identifying their needs. This way, companies can gain insights into the market share for the products they plan to create and identify existing competitors.²⁹

In the world of E-commerce, big data plays a vital role in analyzing consumers, operations, market potential, and product innovation. This data analysis provides a comprehensive view of consumer profiles and business development opportunities. One implementation is the collection of consumer data from their interactions on E-commerce websites, which is then analyzed to improve sales conversion strategies. This is closely related to how E-commerce companies determine ideal pricing to attract consumers to buy products. Businesses aiming to implement

²⁶ Tokopedia & CfDS , 2021. Modul Literasi Digital Seri 1: Kenali Berbagai Cara Melindungi Data Pribadimu di Marketplace, https://assets.tokopedia.net/asts/helpcenter/%7B2022%7D/%7B12%7D/Modul-Literasi-Digital_-Kenali-Berbagai-Cara-Melindungi-DataPribadimu-di-Marketplace.pdf

²⁷ Badan Pusat Statistik, Op.cit

²⁸ Xianghua Deng and Meiyuan Yan. (2021). J. Phys.: Conf. Ser. Research on the Legal Protection of Personal Information in the Big Data Era. DOI 10.1088/1742-6596/1883/1/012081

²⁹ Muhammad Wali, dkk, (2023). *PENERAPAN & IMPLEMENTASI BIG DATA DI BERBAGAI SEKTOR (Pembangunan Berkelanjutan Era Industri 4.0 & Society 5.0)* Jambi : PT. Sonpedia Publishing Indonesia. p. 41

personalized pricing strategies can gather data on consumer characteristics using various mechanisms, such as:³⁰

1. **Voluntarily provided data** (e.g., consumer name, date of birth, professional occupation, shipping address, email address, phone number), collected via forms filled out voluntarily by consumers.
2. **Observed data** (e.g., browsing history, website visits, past purchases, IP address, operating system, location, social media “likes”), collected through cookies on consumers' electronic devices.
3. **Referred data** (e.g., health, income, response to ads, risk profile, customer loyalty, hobbies, behavioral biases, political ideology), analyzed by machine learning to infer specific consumer characteristics and behaviors.

After personal data is collected, companies use it to estimate consumers' willingness to pay. Based on these estimates, companies should set optimal prices for consumers. Logically, a company should set prices according to the full value of consumers' willingness to pay³¹.

In addition to innovative strategies, investment in data processing can also increase efficiency, profits, and customer loyalty. The Personal Data Protection Act outlines classifications of personal data, which include specific and general personal data. Specific personal data includes health information, biometric data, genetic data, criminal records, child data, personal financial data, and other data as regulated by law. General personal data includes full name, gender, nationality, religion, marital status, and/or other combined data that can identify an individual. With access to individuals' personal data, E-commerce platforms can offer products and services that align with these personal data classifications. Additionally, with embedded algorithms, E-commerce platforms can easily identify consumer needs.

To ensure the security of both consumers and electronic system operators, it is important to consider reliability certification, as stated in Article 76, clauses (1) and (2) of the Government Regulation on Electronic Systems and Transactions, covering three categories that determine the level of reliability certification:

1. **Identity registration** – a reliability certificate ensuring the security of the identity of business actors.
2. **Electronic system security** – a reliability certificate that ensures the secure transmission or exchange of data on business websites.
3. **Privacy policy** – a reliability certificate that guarantees consumer personal data is adequately protected.

³⁰ Christophe Samuel Hutchinson & Diana Treščáková (2021): The challenges of personalized pricing to competition and personal data protection law, *European Competition Journal*, DOI: 10.1080/17441056.2021.1936400

³¹ Ibid

For example, an "online buying and selling" business that facilitates electronic transactions has received a Category 2 reliability certificate (electronic system security). This means that the "online buying and selling" business can be trusted or considered safe when consumers exchange data on this service. Reliability certificates are often recognized as electronic documents or symbols displayed on electronic service interfaces.

Personal data protection on E-commerce platforms also involves the security and protection of business actors. With clear regulations on data protection, business actors can safeguard their own sensitive business data, such as marketing strategies, pricing policies, and product innovation. This provides a critical competitive advantage for businesses in facing global market competition, which in turn can contribute to national economic development. By protecting their own business data, companies can avoid the risk of valuable information falling into the hands of competitors or unauthorized parties. In a competitive business environment, confidential business information can provide significant competitive advantages. Thus, protecting business data through clear policies and robust security measures can help maintain competitive advantage and business continuity.

In the era of globalization and the digital economy, businesses operate on a broader scale and compete in global markets. By adhering to data protection regulations, business actors demonstrate compliance with international standards, which is crucial for building trust and strong business relationships with international partners and customers. A strong data protection framework also enhances consumer trust and strengthens the overall business climate. Consumers are more likely to trust and feel secure transacting with companies that can adequately protect their personal data. This can drive business growth and investment, as well as positively impact national economic development. Therefore, personal data protection in E-commerce platforms not only involves consumer security and protection but also serves the interests of business actors. By safeguarding business confidentiality and complying with data protection regulations, business actors can gain competitive advantage, drive economic growth, and build robust business relationships globally.

What supports the development of the internet economy in Indonesia is the large number of internet users in Indonesia. Several other facts that support the development of the digital economy in Indonesia include the following³²:

1. Indonesia is estimated to have an online trading market of 5 billion for formal online trading, and more than 3 billion for informal online trading.
2. Indonesia is estimated to have 30 million online shoppers in 2017 with a total population of around 260 million.
3. By 2025, the digital economy in Indonesia is expected to create 3.7 million additional jobs.

³² T. Permana and A. Puspitaningsih, (2021), "Studi Ekonomi Digital Di Indonesia," J. Simki Econ., vol. 4, no. 2, p. 161–170, doi: 10.29407/jse.v4i2.111.

4. Generate up to 80% higher revenue growth for small and medium enterprises (SMEs). 3.2. Equations, formulas and codes.

5. Provide an additional 2% per year in GDP growth by increasing broadband penetration rates and use of digital technology by SMEs.

The digital economy in Indonesia can indeed have many positive impacts, but this is also a challenge for the government in making policies. The development of the digital economy can enable the emergence of new business models, integration between business sectors, as well as changes to business models in existing sectors. In 2016, the Human Resources Research and Development Agency (Balitbang SDM) of the Ministry of Communication and Information conducted a study related to the digital economy in Indonesia.

One of the results of this study shows that there are visible changes in business models that may occur in various sectors. The emergence of various digital applications as a means of payment is evidence that shows the development of the financial sector in this digital economy era, not only payment systems, digital applications related to financing systems are also starting to be widely developed and used by the public.

It is not surprising that currently, topics related to financial technology or often referred to as Fintech are one of the topics frequently discussed by digital economy players. The culture, tourism and creative economy sectors are among the sectors that make extensive use of digital technology in product innovation. Through the E-commerce platform, many products resulting from the culture and creativity of local Indonesian communities are bought and sold. Not only that, digital technology is also being used to build digital platforms that can be used to promote Indonesian tourism. Applications such as Traveloka, Pegi-Pegi, and Tiket.com are examples of innovation and development in the culture, tourism and creative economy sectors in the current digital economy era.³³

3.2. The Conditions of Legal Regulation of the Digital Economy in Indonesia

The PDP Bill groups personal data into two groups, namely:

1. General personal data, which includes:
 - a. full name;
 - b. gender;
 - c. citizenship;
 - d. religion; and/or
 - e. other personal data that can be combined to identify an individual.
2. Specific personal data, including:
 - a. health data and information;
 - b. biometric data;
 - c. genetic data;

³³ McKinsey & Company, (2018), "Unlocking success in digital transformations," McKinsey&Company, no. October, p. 1–17, [Online]. Available: <https://www.mckinsey.com/capabilities/people-and-organizationalperformance/our-insights/unlocking-success-in-digital-transformations#/>

- d. sexual life/orientation;
- e. political views;
- f. criminal record;
- g. child data;
- h. personal financial data; and/or)
- i. other data in accordance with statutory regulations

These provisions demonstrate that the PDP Bill provides a more comprehensive scope of personal data by accommodating the various types of data covered under the previously discussed statutory regulations, while also adding some new ones (i.e. sexual life/orientation, political views).

Apart from the things above, it is important to note that the personal data protection regulations in the PDP Bill also apply to individuals or corporations, public bodies, and institutions/organizations that carry out legal actions regulated in the PDP Bill, both in Indonesia and abroad. provided that these actions give rise to legal consequences in the territory of Indonesia or against Indonesian citizens (as owners of personal data) who are domiciled abroad. ³⁶ These extraterritorial application provisions are similar to the provisions stipulated by the GDPR, which requires that the GDPR also applies to the following:

1. Processing of personal data of data subjects located in the European Union by controllers or processors who are not established in the European Union, provided that the processing activities are related to the offer of goods or services or monitoring the behavior of data subjects that require location within the European Union; And
2. Processing of personal data in places where the law of a European Union member state applies, by a controller that is not established in the European Union.

The regulatory framework for personal data protection in Indonesia, as discussed previously, does not currently include these implementation provisions. Therefore, it can be assumed that personal data protection for extraterritorial or cross-border transactions involving Indonesian consumers is still lacking. As a result, consumers are encouraged to be more careful when providing their personal data to foreign parties due to the lack of control over where the data provided will end up.³⁴

3.3. The Opportunities for Strengthening the Legal Framework

1. Regulatory Updates: Opportunities to update existing regulations to be more responsive to technological and market changes.
2. International Collaboration: Strengthening cooperation with other countries in developing international standards and regulations.
3. Increasing Law Enforcement Capacity: Training and capacity building for law enforcement officers in facing new challenges in the digital economy.

³⁴ Konsumen Cerdas, (2022). "Perlindungan Konsumen & Data Pribadi di Era Ekonomi Digital," Konsum. Cerdas, no. 2, p. 1–27

4. Regulatory Innovation: Utilization of technology such as blockchain and smart contracts to create more efficient and transparent regulations.

5. Regulatory Innovation: Utilization of technology such as blockchain and smart contracts to create more efficient and transparent regulations.

4. CONCLUSION

Legal regulations in the digital economy in Indonesia face various complex challenges, ranging from personal data protection to cyber security. However, there are significant opportunities to strengthen the existing legal framework, including through regulatory updates, increased international cooperation, and innovation in regulation. With the right arrangements, Indonesia can maximize the potential of the digital economy while protecting the interests of all parties involved. Personal Data Protection in E-Commerce Platforms and Its Impact on National Economic Development Personal data protection in E-commerce platforms can influence national economic growth due to several factors, including consumer trust, business innovation, and the security and protection of business actors. Personal data protection in E-commerce platforms not only involves consumer security and protection but also serves the interests of business actors. By maintaining business confidentiality and complying with data protection regulations, businesses can gain a competitive advantage, stimulate economic growth, and establish strong business relationships globally. Challenges in protecting personal data on E-commerce platforms, which may hinder national economic growth, include several factors: users' lack of awareness and understanding of the importance of personal data security, misuse of personal data, data leaks and privacy violations, and technical challenges related to the security and certification of services for organizations that process personal data.

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