



Analysis of Civil Liability for Artificial Intelligence which Causes Losses According to Law in Indonesia

Agus Satory; Eka Ardianto Iskandar; Komarudin

Legal Studies Program, Postgraduate School, Pakuan University, Bogor, Indonesia

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Abstract

The existence of Artificial Intelligence (AI) can cause losses to victims due to output errors it makes. The research aims to analyze the forms of losses caused by AI, forms of civil liability for AI that cause losses according to Indonesian law, and the development of civil law regulations. The research method is normative juridical research, analytical descriptive research, normative juridical approach, data in the form of secondary data through library and field research, data analyzed qualitatively juridically. The research findings show that the losses caused by AI include economic losses, physical losses, data and privacy losses, legal and regulatory losses, social and ethical losses, emotional and psychological losses. The form of civil liability for AI is based on Article 1367 of the Civil Code. Developing civil law regulations requires identifying types of losses, determining the subject of liability, adapting civil law, implementing international standards, developing dispute resolution mechanisms, and ensuring legal certainty.

Keywords: *Artificial Intelligence; Indonesian Law; Loss; Civil Liability*

Introduction

Artificial intelligence or better known as Artificial Intelligence (AI) is a technological development that is of concern to several countries, including Indonesia. Apart from that, the development of AI is a new challenge that must be faced from its various impacts, as stated by the President of Indonesia, Joko Widodo, on 1-4 November 2018 at the opening of the Indonesia Science Expo (ISE).

Semuel A. Pangerapan, who serves as Director General of Informatics Applications at the Ministry of Communication and Information of the Republic, said that the application of AI can be emulated in several developed countries as a special basic consideration in the development of regulations and policies. With this statement, the Indonesian state needs policies and regulations that can adapt to current technological developments, namely Artificial Intelligence. Even Law Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Information and Electronic Transactions must be updated to regulate AI which is already present in social life.

The term AI itself was originally coined in 1956, but has become increasingly popular thanks to increasing data volumes, sophisticated algorithms, and improvements in computing storage. Several countries have implemented AI in their legal systems. The application of AI in the legal field does not only occur abroad, but also in Indonesia in the form of the Legal Intelligence Assistant (LIA) platform which uses AI technology to assist users in obtaining information related to the law. Apart from that, there is also AI which functions for contract design via electronic contracts.

The existence of AI certainly cannot prevent errors from occurring. AI can cause losses to victims due to output errors it makes. For example, the results of an agreement review by AI cause errors in writing clauses and have an impact on the implementation of the agreement. The legal system in Indonesia does not yet have regulations that clearly regulate legal protection for victims who suffer losses due to output errors made by AI. According to the Civil Code (KUHPperdata), losses can originate from breaches of contract or unlawful acts (PMH). Default can occur due to failure to fulfill achievements as agreed by the parties. Different from breach of contract, liability resulting from unlawful acts departs from Article 1365 of the Civil Code.

Considering that the use of AI in Indonesia has spread and is increasingly developing in various public and private sectors, it is necessary to carry out a comprehensive analysis regarding the form of civil liability for AI that causes losses. This topic was raised because it contributes to the development of civil law knowledge and policy development. Dynamic and open arrangements are needed to anticipate and handle any risks in the future.

There is research that raises themes around the legal position of AI. From previous research, a state of art has been proposed to analyze the forms of liability that can be imposed if AI causes harm to its users. The analysis will be based on the provisions of Article 1367 of the Civil Code. AI is not considered a legal subject, but will be considered a good.

Based on the description above, the aim of this research is to analyze the losses caused by Artificial Intelligence; analyze the form of civil liability for Artificial Intelligence which causes losses according to Indonesian law; and analyzing the development of civil law regulations related to civil liability for Artificial Intelligence which causes losses according to Indonesian law.

Research Methods

The research method used is normative juridical research, analytical descriptive research, normative juridical approach, data in the form of secondary data through library and field research, data analyzed qualitatively juridically.

Research Results and Discussion

1. Forms of Loss Caused by Artificial Intelligence

Artificial intelligence is already having a profound impact on society, an impact that promises to be even greater as technology becomes more sophisticated. However, not all of them are guaranteed to be positive. LibertiesEU has compiled a list of seven weaknesses of artificial intelligence, to be aware of, namely unemployment, lack of transparency, biased and discriminatory algorithms, profiling, disinformation, environmental impact, and domination by big tech companies.

The presence or artificial intelligence is like two sides of a coin. On the one hand AI can provide benefits, but on the other hand it can pose a threat to humans and humanity. UGM Professor, Prof. Dr. Ir.

Ridi Ferdiana, S.T., M.T., IPM., said that the presence of AI makes human work easier, helps to be more creative and more productive. However, AI can pose a big threat when there are parties who develop new variants of AI that violate ethics.

AI becomes dangerous when there are smart people who understand AI and create new variants of AI that violate ethics such as mistakes related to privacy such as changing faces and so on. This lecturer at the UGM Department of Electrical Engineering and Information Technology said that this condition could not be prevented. Therefore, there must be a counter measure to overcome this problem. For example, there are AI researchers who are able to identify deviations that occur and include responsible regulations related to AI. That way, when incidents of irregularities arise, legal action can be taken.

The development of AI is progressing quite rapidly and this is difficult to prevent. Because, several AI concepts are open and developed by anyone. However, access to AI can be limited, such as AI face recognition.

Based on interviews with staff from the Ministry of Communication and Information, the losses caused by AI can vary greatly, depending on the context of its use and the nature of the AI technology. The following are several types of losses that may arise from the use of AI, including economic losses which include errors in transactions, loss of income, and business damage; physical losses including accidents and injuries, as well as property damage; data and privacy losses including data loss and privacy breaches; legal and regulatory losses including regulatory violations and litigation; social and ethical harm including discrimination and bias, as well as reputational damage; and finally emotional and psychological harm.

In the context of civil law, the harm caused by AI may involve several aspects that need to be considered. The following are several types of losses that can arise, including: a. Material loss. AI can cause direct financial loss through errors in transactions, fraud, or damage to property. For example, errors in trading algorithms can cause huge losses for investors. If AI causes physical damage to goods or property, for example through an accident caused by an autonomous vehicle; b. Immaterial loss. Losses resulting from loss of personal or business data caused by AI system failure or cyber attacks. AI errors in making decisions or processing data can damage an individual's or company's reputation; c. Contractual loss. If AI fails to fulfill the terms of a contract, for example in an automated business agreement, it could cause losses to other parties. For example, an AI system that manages the delivery of goods automatically miscalculates or delays delivery, causing harm to the injured party; d. Losses from legal action. Determine who is responsible for the AI's actions, whether the AI creator, owner, or operator. This may involve legal considerations regarding civil liability. Parties harmed by AI can file a lawsuit for compensation, and the judiciary will decide based on civil law principles such as fault, breach of duty, or product liability. Civil law must adapt to technological developments to deal with various problems arising from the use of AI and establish fair principles to protect injured parties.

2. Forms of Civil Liability for Artificial Intelligence that Cause Losses According to Indonesian Law

In general, responsibility can be assigned to legal subjects who act against the law. As previously explained, liability arises from errors committed by legal subjects that result in losses. Responsibility lies with the legal subject for losses he himself causes. Article 1365 of the Civil Code is the general formulation that regulates provisions regarding unlawful acts. This article states that every action that is contrary to the law and causes other people to suffer losses, there must be compensation.

Article 1365 only applies to losses that arise as a result of the error of the legal subject itself. If Artificial Intelligence is given responsibility, this is not appropriate because Artificial Intelligence is not a legal subject that is juridically recognized. If "something" has the same rights and obligations as humans

as legal subjects, then "something" that has rights and obligations is included in the legal subject which is included in the category of legal entity. However, Artificial Intelligence cannot carry rights and obligations because its character depends on humans. Artificial Intelligence cannot carry out legal actions independently. Even now, Indonesia does not provide legitimacy to Artificial Intelligence which is considered a legal subject. Therefore, Artificial Intelligence that causes losses cannot be subject to Article 1365 of the Civil Code because Artificial Intelligence is not a legal subject that can be held responsible.

Responsibility is not only charged for losses caused directly by himself, but can be charged to someone for losses that arise as a result of the actions of people in his charge or items under his supervision. Responsibility for wrongdoing arising from the actions of dependents or goods or pets that are under their supervision is responsibility without fault or what is commonly known as absolute responsibility. This absolute responsibility is contained in Article 1367 paragraph (1) of the Civil Code.

Two forms of absolute liability can be drawn from Article 1367 of the Civil Code, namely a. There are losses arising from the actions of people who are dependent on them. According to Van Apeldoorn, in a juridical sense, a person is any party who has legal authority. Apeldoorn further stated that it is natural that only humans can have subjective rights. Apart from individuals, the law also recognizes the existence of legal entities as legal subjects. Artificial Intelligence is neither a person nor a *rechtspersoon*. Therefore, Artificial Intelligence does not fulfill the first form of accountability. b. There is loss caused by goods under his control. The second form of liability under Article 1367 of the Civil Code is liability for losses caused by goods under someone's control. This form of liability has several elements, including the existence of a loss, caused by goods, and being under the supervision of a legal subject. To be able to find out whether the Artificial Intelligence that caused the loss fulfills the form of liability as regulated in Article 1367, part two of the Civil Code or not, it will be explained element by element. 1) There is a loss. As explained previously, the party whose rights and interests are violated suffers several losses which can be material or immaterial. Losses arising from Artificial Intelligence can vary depending on the type of Artificial Intelligence. For Artificial Intelligence which provides the output of creations such as music and paintings, it is possible for losses to arise for the creator if the creation produced by Artificial Intelligence resembles the creation of another party. Another example of loss is when the results of an agreement review by Artificial Intelligence cause errors in writing clauses and have an impact on the implementation of the agreement. It can also be an error caused by the inaccuracy of Artificial Intelligence in carrying out detection. For example, facial recognition results state that they are accurate even though the objects are different, thus causing misuse of the data by someone. 2) Caused by goods. The losses that arise to a person as described in point a above are caused by goods. In this context the item in question is Artificial Intelligence. However, you need to know first whether Artificial Intelligence is really included in the goods category or not.

If you refer to the Big Indonesian Dictionary, goods are the same as objects. According to the rules contained in Article 499 of the Civil Code, property is every item and right that can be controlled by means of property rights. Based on the terminology of objects, objects are the same as objects which are the opposite of the form of subjects in law, namely person and *rechtspersoon*. Thus, the definition of objects based on law is only anything that can be vested with rights or can be owned by people. By a *contrario*, anything that cannot be vested with rights or is owned by a person is not included in the definition of objects as intended in the Civil Code.

Subekti explained that objects (*zaak*) can include items that can only be seen. However, there are also those who link it to a person's wealth. A person's wealth includes rights. Then Abdulkadir Muhammad differentiated objects into several categories, including tangible objects and intangible objects; moving objects and immovable objects; objects in trade and outside trade; things are used up and things that are not used are used up.

Regarding objects, it is regulated in Book II of the Civil Code. Book II of the Civil Code contains various provisions regarding objects, namely goods and rights. Goods are objects of property rights, as are rights that can be used as objects of property rights. So, objects are objects of property rights. Article 503 of the Civil Code divides objects into tangible/tangible objects and non-bodied/intangible objects. Tangible/tangible objects include movable objects that can be spent or cannot be spent. Materials are said to be expendable if they are used continuously they can run out. Apart from that, there are immovable objects including land, trees, planes.

Objects that are intangible are a group of objects that are not visible to the eye, but can be made into reality. For example, intellectual property rights such as brands and copyrights. Although the Civil Code tends to define intangible objects as having certain rights, the Civil Code does not actually cover other characteristics of intangible objects. Apart from rights, the form of intangible objects is anything that has another form, namely its physical form is not visible/touchable.

Intangible objects also experienced an expansion of meaning as explained in Arrest Hoge Raad der Nederlanden dated the twenty-third of May 1921 which categorized electrical power or energy as intangible objects. Apart from that, according to Nieuwenhuis in his dissertation in 1916, he classified gas as an intangible object because it can be moved and costs money to produce it.

From the explanation in question, it can be concluded that the elements of intangible objects include legal objects; has economic value; can be owned; and has no body/is not palpable. Artificial Intelligence is directed at computers that can carry out tasks that humans do and even the results can be as good as those produced by humans. Apart from that, there are those who define Artificial Intelligence as a collection of algorithms created by humans. Physical Artificial Intelligence cannot be seen, therefore the author will try to decipher whether Artificial Intelligence fulfills the elements of intangible objects or not.

3) It is a legal object. Legal objects are anything that can be controlled, so that it has a use for the legal subject and becomes the subject of a legal relationship. As explained in the previous section, Artificial Intelligence is created to follow human intelligence and is even expected to be able to surpass human intelligence. The goal is that Artificial Intelligence can help human jobs to be completed more efficiently. It was also explained that Artificial Intelligence was created by involving humans as legal subjects. The parties involved in creating Artificial Intelligence include data scientists, strategic consultants, domain experts, software developers and business experts. Therefore, Artificial Intelligence fulfills the first element of intangibles.

4) Has economic value. Artificial Intelligence has economic value. Making Artificial Intelligence requires quite high costs, so transferring ownership requires costs. The cost of creating Artificial Intelligence "depends" on the character of the Artificial Intelligence you want to build. This character will affect the price of developing, implementing and maintaining an Artificial Intelligence system which is different from case to case. The following are the five highest cost factors required to build Artificial Intelligence: the type of software created; intelligence level targets such as systems that are weak, strong, or exceed human intelligence; the amount and quality of data to be entered into the system; algorithm accuracy to be achieved; and complexity of Artificial Intelligence solutions/outputs. In fact, according to several jurisprudence such as Arrest Hoge Raad der Nederlanden dated 28 April 1930, Arrest Hoge Raad der Nederlanden dated 25 July 1933, Arrest Hoge Raad der Nederlanden dated 21 February 1938, Arrest Hoge Raad der Nederlanden dated 27 November 1939, goods are not only limited to something. only those that have economic value, but also goods that do not or no longer have has economic value such as hair or used tickets.

5) Ownable. Something that is classified as an object can be owned. In other words, an object is anything that can have a right placed on it, one of which is property rights. Referring to Article 570 of the Civil Code, property rights are the right to freely enjoy the use of something. Acquisition of property rights can be done in several ways, including taking, handing over, expiring or inheriting.

56 Something that can be controlled with a right or that can be owned by a person is an object. On the other hand, things that cannot be owned by people do not fall within the scope of the definition of objects contained in the Civil Code.

As previously explained, Artificial Intelligence is a system based on computer machine technology whose creation is based on algorithms and big data to produce output like human decisions. Artificial Intelligence is a human creation based on big data. Because Artificial Intelligence is a creation, the creator of Artificial Intelligence has the right to own the object of his creation. Therefore, Artificial Intelligence can be attached to property rights.

Apart from creation, property rights can be attached through transfer. Handover can be done by buying and selling or by gift. When a person or legal entity wants to buy Artificial Intelligence, the Artificial Intelligence can be purchased from an Artificial Intelligence development company or Artificial Intelligence programmer. In contrast to the delivery of tangible goods, the delivery of Artificial Intelligence as intangible goods is carried out by handing over the source code which is part of the agreement. However, the case is different if Artificial Intelligence has been embedded in the hardware. Artificial Intelligence which has become an integral part of the hardware, for example a camera for the attendance system, will be delivered simultaneously with the hardware. 6) has no body/not palpable. Not having a body, what is meant here is that the object's form cannot be touched physically. These objects are virtual, unreal and intangible. This object does not have a physical form that can be captured by human senses in the real world, its manifestation only exists in the virtual world where it cannot be touched, only seen. If you look at it, the abstract form is in the form of codes. The existence of Artificial Intelligence cannot be felt with human senses. Artificial Intelligence only exists in cyberspace and its use only exists in cyberspace, even though its function is to help human performance. Because Artificial Intelligence does not have a tangible form that can be felt, Artificial Intelligence fulfills the element of not having a body/not being felt. 7) Be under supervision. The owner of an object has a legal obligation to supervise and maintain the object. Article 584 of the Civil Code contains provisions which essentially state that ownership rights to an object can be obtained by expiration, ownership, attachment, inheritance, based on law, or referring to a will, and due to appointment or delivery. Conveyancing is a method of obtaining property rights that is often found in society. Surrender is a form of legal action by transferring ownership rights to objects that are actually controlled from the original owner to the new owner. Regarding Artificial Intelligence, as previously explained, delivery can be done by buying and selling.

Legal delivery of a buying and selling transaction can be done by handing over the object of sale and purchase from the seller to the buyer. When the goods are delivered, at the same time the ownership rights to the goods are transferred to the buyer. Not only that, the transfer of ownership rights can be done without the need to hand over the object directly, but is done by making an authentic deed or private agreement containing the delegation of rights over the object to another party. Artificial Intelligence as an intangible object is handed over by making a deed. After ownership rights are transferred, responsibility for supervision shifts to the buyer as the party who has full control over Artificial Intelligence. Developers who create and develop Artificial Intelligence no longer have ownership of the Artificial Intelligence after buying and selling with the buyer.

Based on the descriptions regarding the elements of Article 1367 of the Civil Code, it can be said that in the event that Artificial Intelligence causes losses, the form of civil liability that is imposed is Article 1367 of the Civil Code. Artificial Intelligence is considered an intangible object so that the owner of Artificial Intelligence who exercises control over Artificial Intelligence can be held liable for losses caused by the Artificial Intelligence in question.

3. Development of Civil Law Regulations Regarding Civil Liability for Artificial Intelligence which Causes Losses According to Indonesian Law

AI was created by humans/developers to be intelligent and able to carry out tasks that humans normally do because AI itself was created to be able to work like a human brain, with general knowledge, reasoning and problem solving. With the development of AI that is input like humans, it is very possible for AI to be able to receive knowledge through a reasoning process. AI can use its knowledge and can

think like humans in general to be able to solve existing problems. The presence of various types of AI cannot avoid the possibility of errors. AI can result in harm to individuals due to the potential for incorrect results. However, it is unfortunate that until now, the legal system in Indonesia does not have clear regulations on how to protect victims who suffer losses due to erroneous results produced by AI.

Claims of responsibility for losses can only be applied to legal subjects which include individuals and legal entities who of course have rights and obligations. This can be a problem when technology that resembles human intelligence and has AI-like capabilities causes harm. The position of AI as a legal subject or not as a legal subject can be a legal consideration as to whether AI can be held legally responsible if it commits a criminal act and causes loss.

AI in relation to law in Indonesia is of course a big question mark whether AI is a legal subject or not. Legal subjects in Indonesian positive law are divided into two, namely humans (*natuurlijke person*) and legal entities (*recht person*). Humans as legal subjects in Indonesia have the authority and right to have, and exercise rights and obligations in legal matters, where humans are able to exercise their rights and are guaranteed by law. Every human being as a legal subject is considered worthy of acting as a legal subject unless this is prohibited by law. Then a legal entity is considered a legal subject in Indonesia because it consists of a combination of several people where these people are given the status of a person by law who have rights and obligations.

Legal subjects have human or non-human capacities determined by law, then according to him also during the era of slavery, humans were not viewed as legal subjects or persons by the law itself, while non-humans but determined by law could be viewed as legal subjects or persons who had a obligations and rights equal to humans themselves. According to L. J Van Apeldoorn, to be able to carry out legal acts certain conditions are required, namely legal subjects who have the capacity to hold rights, where the ability to hold a right in question must be differentiated from their capacity in legal acts such as minors and minors. -People who are under guardianship are called legal subjects because these people have rights but from a legal perspective, these people are declared incompetent in carrying out legal actions.

The development of AI technology which cannot be avoided by all levels of society in every country, of course this is the basis for a country to have special legal regulations related to AI. In Indonesia, regulations related to technology are specifically regulated in Law Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Electronic Information and Transactions (UU ITE). However, the ITE Law does not clearly explain the definition of AI itself, whereupon the increasingly rapid development of AI technology has given rise to many opinions from various groups to interpret AI in accordance with the ITE Law that applies in Indonesia.

The interpretation related to AI in the ITE Law can be referred to as electronic systems and electronic agents. Where it can be seen in article 1 point 5 of the ITE Law that states that an electronic system is a series of electronic devices and procedures that function to prepare, collect, process, analyze, store, display, announce, transmit and/or disseminate electronic information. Then, Article 1 point 8 of the ITE Law states that an electronic agent is a device from an electronic system that is created to carry out an action on certain electronic information automatically which is held by a person. In this case, AI is an electronic system that is controlled by someone to do something. AI will work to solve a problem just like humans, but AI does not carry out these actions independently or does not do it itself, there still needs to be human intervention itself to order AI to carry out an action.

The operation of this AI is connected to the electronic system operator, who has responsibility as a legal subject for the operation of the electronic system, in accordance with the provisions in Government Regulation Number 71 of 2019 concerning Implementation of Electronic Systems and Transactions (PP 71/2019). Based on this, AI is not included as a legal subject, because in reality AI

cannot be held responsible, because basically the actions carried out by AI are controlled or ordered by humans/individuals as an absolute legal subject in Indonesian law.

Based on the regulations in force in Indonesia, AI is actually not a legal subject, but is a legal object where AI is an electronic device operated by humans in its implementation, and humans are absolute legal subjects in Indonesia. AI is not categorized as a legal subject like humans who can take legal action. However, along with the development of increasingly sophisticated technology over time, AI can be categorized as a legal subject or has a proper position as a legal subject that can carry out legal actions like humans and legal entities. If this happens, to clarify the position of AI as a legal subject, the government must prepare rules or regulations related to AI which is part of people's lives.

AI actions that violate legal provisions and cause harm to other parties must be held accountable. Unfortunately, in positive law in Indonesia, AI is not recognized as a subject of positive law. The use of AI in the online business sector is currently without special regulations which can create legal uncertainty in society. Until now, the legal system in Indonesia only recognizes humans and legal entities as valid legal subjects, without including AI within the scope of legal subjects. Therefore, legal responsibility only applies to humans and legal entities as legitimate legal subjects regulated by law. However, legal doctrine emphasizes that AI actions that violate and conflict with regulations can still be held accountable.

In relation to AI, the problem is whether AI can be held responsible for losses incurred which are certainly against the law. It has been explained previously that those who can be held responsible are legal subjects consisting of humans (natural persons) and legal entities (corporations). Regulations relating to AI in Indonesia have not been specifically regulated so that interpretation is needed to determine whether AI is a legal subject or not. Viewed from the perspective of Indonesian law, if an AI commits an act against the law, it returns to the concept of responsibility, namely that those who can be held accountable are legal subjects, in this case humans as legal subjects because AI is ordered to do something in accordance with the wishes of its creator. AI cannot do things independently and needs human help to operate it to do things.

Meanwhile, in civil law, a person can be held responsible for an unlawful act, namely an act that violates another person's rights, the perpetrator's obligations, or (in the Indonesian context) even moral and social norms. If the perpetrator can be blamed for the act, then the perpetrator can be held accountable. In general, legal responsibility requires legal subjects to know the consequences of doing or not doing that action. The perpetrator must intend his actions. In this case, the doctrine of vicarious liability can be applied. This doctrine basically explains that other people can be held responsible for actions or mistakes committed or caused by someone.

Vicarious liability is a form of secondary or indirect liability that can be imposed on parties who have a special relationship. In civil law in Indonesia, AI's legal liability can be seen whether it meets the elements of an unlawful act or not. An act can be said to be an unlawful act, if it violates the rights of other people, the obligations of the perpetrator, or (in the Indonesian context) even morals and social norms. If the perpetrator can be blamed for the act, then the perpetrator can be held accountable. In general, legal responsibility requires legal subjects to know the consequences of the action by carrying out or not carrying out the action, the perpetrator must intend the action.

Article 1365 of the Civil Code which regulates unlawful acts states that for every act that is against the law and causes harm to another person, there must be compensation. Article 1365 only applies to losses arising as a result of the legal subject's own wrongdoing which is against the law. Regarding AI being held criminally responsible if it causes harm to other people, this is not appropriate because AI is not a legal subject that is juridically recognized in Indonesia. If something has the same rights and obligations as humans who are absolutely legal subjects, then something that has rights and obligations is

included in the legal subject and includes legal entities. As previously explained, AI cannot carry out legal actions independently and requires or depends on humans, so AI cannot have equal rights and obligations.

According to the author, the development of civil legal regulations regarding responsibility for AI in Indonesia involves several important steps to ensure that the law can address losses arising from AI actions. The following is an approach to developing these regulations, namely the development of civil law regulations related to responsibility for AI in Indonesia requires identifying the type of loss, determining the subject of liability, adjusting civil law, applying international standards, developing dispute resolution mechanisms, and ensuring legal certainty. With this approach, Indonesia can create a fair and effective legal framework to deal with harms arising from AI.

Conclusion

The losses caused by Artificial Intelligence include economic losses, physical losses, data and privacy losses, legal and regulatory losses, social and ethical losses, as well as emotional and psychological losses. In the context of civil law, the harm caused by AI may involve several aspects that need to be considered. The following are several types of losses that can arise, including material losses, immaterial losses, contractual losses, and losses from legal action. The form of civil liability for Artificial Intelligence which causes losses according to Indonesian law is based on Article 1367 of the Civil Code. Artificial Intelligence is assumed to be an item that is under the supervision of legal subjects. Because Artificial Intelligence is an artificial intelligence in the form of a program and cannot be felt or seen by human senses, Artificial Intelligence can be categorized as an intangible object. As an intangible object, Artificial Intelligence fulfills the elements of being a legal object, having economic value, can be owned, and has no body/is not palpable. However, this element is only intended for pure Artificial Intelligence which has not been applied to machines and hardware. Because Artificial Intelligence has been applied to hardware, it will become a tangible object, for example a robot with an Artificial Intelligence system. For losses caused by Artificial Intelligence, the responsibility lies with the owner who exercises control over Artificial Intelligence. The development of civil law regulations regarding civil liability for Artificial Intelligence which causes losses according to Indonesian law requires identifying the type of loss, determining the subject of liability, adjusting civil law, applying international standards, developing dispute resolution mechanisms, and ensuring legal certainty. With this approach, Indonesia can create a fair and effective legal framework to deal with harms arising from AI.

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