

# THE LEGAL PROTECTION OF CLICKWRAP AGREEMENT IN THE ELECTRONIC CONTRACT OF ELECTRONIC COMMERCE TRANSACTIONS

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## *Abstract*

*E-contract is a new technology in online trading. It is a double-edged sword. Besides having advantages such as simplifying and speeding up transactions, it has shortcomings e.g. no legality regarding e-contract and substantive and procedural problems. One of them is in the application of clickwrap agreements, a standard agreement in e-commerce transactions. Buyers must agree with the requirements by clicking the "I agree" button. The research examines the legal protection and privacy policy for the users of smart contract clickwrap agreements in e-commerce transactions in Indonesia. This is normative research with a statute approach. This study teaches the readers to understand the shortcomings and to be more cautious about e-commerce transactions. The results reveal that privacy policy on the use of smart contract clickwrap agreement is based on the EIT Law meanwhile the international law aspect is UNCITRAL Model Law. It shows that e-contract basic guideline has law absence. Besides investigating the regulations, the researchers trace the principles of contract law which is applicable to realize justice and certainty of parties. To conclude, legal reformation is needed in managing the validity of the smart contract clickwrap agreement so there will be legal certainty in e-commerce transactions in Indonesia.*

*E-contract merupakan teknologi baru yang diterapkan dalam perdagangan online. E-contract merupakan pedang bermata dua. Di samping memiliki banyak keuntungan seperti mempermudah dan mempercepat transaksi, namun ia juga memiliki kekurangan, seperti tidak adanya legalitas mengenai e-contract dan permasalahan yang bersifat substantif dan prosedural. Salah satunya ialah penerapan clickwrap agreement, bentuk*

*perjanjian baku dalam transaksi e-commerce. Pembeli harus menyetujui persyaratan dengan mengklik tombol "I agree". Penelitian ini mengkaji perlindungan hukum dan kebijakan privasi bagi pengguna smart contract clickwrap agreement pada transaksi e-commerce di Indonesia. Metode yang digunakan ialah penelitian normatif dengan pendekatan perundang-undangan. Penelitian ini mengajarkan pembaca untuk lebih memahami kekurangan dan waspada dalam melakukan transaksi e-commerce. Hasil penelitian menunjukkan bahwa kebijakan privasi pada penggunaan smart contract clickwrap agreement berdasarkan UU ITE dan aspek hukum internasional yaitu UNCITRAL Model Law sebagai pedoman dasar e-contract masih memiliki kekosongan hukum. Selain menelusuri peraturan perundang-undangan peneliti juga menelusuri asas-asas hukum kontrak yang dapat diterapkan untuk mewujudkan keadilan dan kepastian para pihak. Dapat disimpulkan bahwa diperlukan pembaharuan hukum dalam pengaturan keabsahan smart contract clickwrap agreement agar terbentuk kepastian hukum dalam transaksi elektronik di Indonesia.*

**Keywords:** *clickwrap agreement, e-commerce, e-contract, legal protection*

## Introduction

The certainty of technical policy on consumer's legal protection in an electronic trading transaction among countries has no geographical boundaries. Hence, the customers, in this electronic transaction across countries, need legal protection and problem solving. The current information and communication technology development leads to convergence which encourages people to be the technology creators, developers, and users. This can be witnessed from the rapid advancement of internet media. Internet as an electronic information and communication media is massively used for various activities including browsing and obtaining data and news, receiving messages via e-mail, and also as a trading aids facility. Trading activities using internet media is called *electronic commerce* or abbreviated as *e-commerce*. *E-commerce* is a technology that can be used in *distance selling* and other services in global-scale businesses. *E-commerce* characteristic is global-scale without jurisdiction boundary across countries and dismisses distance constraint which is the common problem in communication. *E-commerce* development is significant which can be seen from the transaction quantity through the trading facility.<sup>1</sup>

E-commerce transactions use the Sales and Purchase Agreement the so-called electronic contract. Edmon Makarim states that an electronic contract is an agreement or a legal relationship done electronically through a network

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1 Abu Bakar Munir, *Cyber Law: Police and Challenges*, Malaysia, Singapore, Hongkong: Butterworths Asia, 1999 p. 205 in Huala Adolft, *Hukum Perdagangan Internasional* (Jakarta: PT. Raja Grafindo Persada, 2005) p. 484.

integrating a computer-based information system.<sup>2</sup> E-commerce is inseparable from an agreement. The agreement in e-commerce transactions is done between two or more parties. Since all are done online, the parties do not need a face-to-face meeting. The electronic contract is a standard one because the agreement content was made by the business actors beforehand. This standard contract tends to be beneficial for the business actors.

The legal base to do e-commerce transactions in Indonesia is regulated in Law No. 19 of 2016 on the Amendment to Law No. 11 of 2008 regarding Electronic Information and Transactions (hereinafter referred to EIT Law/UU ITE). It is written in the State Gazette of the Republic of Indonesia (*Lembaran Negara Republik Indonesia*) No. 58 of 2008 and the Supplement to the State Gazette of the Republic of Indonesia No. 4843.

On an international scale, e-commerce has been regulated in UNCITRAL Model Law on Electronic Commerce (MLEC) aiming to enable the commercial use of communication tools and modern information storage. In electronic media, the three basic principles are technological neutrality, non-discrimination, and functional equality. Meanwhile, for the paper-based concept, the principles are writing, signature, and original. UNCITRAL MLEC has also determined the rules of formation and contract validation made electronically and for attribution. However, international law on smart contract clickwrap agreement in e-commerce transactions has been yet regulated deeply but guided with the special connection theory such as what has been stated in Article 8 of The Hague Convention and Article 4 paragraphs (1) and (2) of The Rome Convention.

E-commerce transactions are informed through three agreement methods i.e. clickwrap, browse-wrap, and shrink wrap. Those three are how electronic contracts are made by producers, which are then given to the consumers to be agreed on. This agreement refers to Article 1320 Indonesian Civil Code on the Requirements of Agreement which must be fulfilled as there has yet regulation on electronic contract.

Generally, contract in e-commerce uses a clickwrap agreement system. It is a kind of contract for item purchasing or the use of goods or services offered online by merchants.<sup>3</sup> The application of smart contract clickwrap agreement in online sell and purchase aims to change the transaction of online sell and purchase to be more efficient, quick, and safe. Yet, this contract is

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2 Edmon Makarim, *Pengantar Hukum Telematika: Suatu Kompilasi Kajian* (Jakarta: PT. Raja Grafindo Persada, 2005) p.254.

3 Santoso, E.: "Tinjauan Hukum atas Clickwrap Agreement pada Kontrak Baku Elektronik Terkait Transaksi Elektronik" *Jurnal Living Law*, Vol. 7, No.1, (2015), pp. 1-9.

modified and the presentation has a slight difference from the conventional one. On a different side, the term “clickwrap agreement” is displayed directly on a computer screen on the website page before the consumer does the transaction. The consumer must click the “ ” or “*I Agree*” button. A clickwrap agreement is said as a standard clause in e-commerce transaction nationally and internationally because the contract content is unilaterally determined by the merchant. In this case, the consumer only has two options i.e. to accept or cancel the booking.

*A smart contract* enables to do a credible transaction without a third party. This transaction can be traced and cannot be changed. It contains all information about the contract terms and applies all acts automatically as imagined. One example of the potential of smart contract application is in the sale and purchase business in e-commerce. A smart contract can make e-commerce activities on the internet more efficient. This can be realized because a smart contract guarantees the certainty of the implementation of the sale and purchase agreement that has been made.

Along with e-commerce development, contract making in the cyber world also improves rapidly. Despite the advantages and the disadvantages offered by e-commerce transactions, many issues on law emerge leading to a crisis for contract, those are the relevant principles and the old law institutions which are re-questioned.

There are at least some problems causing crisis for contract in this digital era. The risks give disadvantages for some parties in e-commerce transactions because of the sale and purchase method which does not require merchant and buyer to meet. With a smart contract, the engagement in e-commerce is questionable regarding the fulfillment of subjective and objective requirements in an agreement. The advantages of e-commerce transaction can also be the weakness in confirming the agreement among parties in doing the transaction and process without direct contact or in distance.

There is also an issue called *binding commitment* that is regarding the agreement among several parties binding to form a clickwrap agreement contract. In the context of a conventional transaction, society generally considers that contract requires interaction and communication of the two parties. On the other hand, in the e-commerce context, the interaction which is the agreement basis is between humans and systems such as computers and the internet. This different point of view results in a dispute between the image of valid and binding contract formation and the current reality happening in e-commerce.

In this case, it does not mean that e-contract and e-commerce do not rule by the law. In the contract context, particularly in the formation, law infrastructure is still needed.

In Indonesia, for example, there has yet specific regulation which guarantees legal certainty and protection for consumers in electronic transactions. In the e-commerce context, the needed regulations are mainly related to e-contract on consumer protection, jurisdiction, and digital signature. Specific regulations on smart contract clickwrap agreement in e-commerce transactions are needed because, in the current improvement of information technology, Indonesia must be able to solve the law issues which commonly happen in e-commerce and the regulations about the basic terms and conditions in a smart contract should be reviewed, mainly on contract as legal purposes.

The privacy policy of smart contract clickwrap agreement in e-commerce transactions needs the law which can fill the absence of law in this transaction. Ahmad Miru states the theory of legal protection for consumers is an attempt to guarantee the legal certainty of consumer protection and to ensure the realization of legal protection for consumer interests.<sup>4</sup>

The digitalization of payment system results in the rapid improvement of the digital economy transaction via e-commerce amid the Covid-19 pandemic. In 2020, the nominal for e-commerce transactions is 29.6%, which grows from IDR 205.5 Trillion in 2019 to IDR 266.3 Trillion. The databox counted statistics on the users and the rate of e-commerce penetration in Indonesia in the 2017-2021 period. In 2017, the number of Indonesian e-commerce users is 139 million which increases 10.8% to be 154.1 million users in 2018. In 2019, it is predicted that the users reach 168.3 million, furthermore, it will be 212.2 million by 2023. Seeing the elevation of e-commerce users, there should be legal certainty for the users of smart contract clickwrap agreement of e-commerce transactions. The common thing is that the law is always one step behind the development of society's activities.

This research also compares with the previous article entitled "*Tinjauan Hukum atas Clickwrap Agreement pada Kontrak Baku Elektronik terkait Transaksi Elektronik*" written by Edy Santoso.<sup>5</sup> He discusses the law aspect of the clickwrap agreement, the law review and its interpretation on whether the signature is needed in an electronic contract. The article only discusses the agreement

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4 Salamiah, "Perlindungan Hukum bagi Konsumen dalam Kegiatan Jual Beli", Al'Adl: Jurnal Hukum, Vol.VI, No.12 (2014), pp. 39-52.

5 Edy Santoso, "Tinjauan Hukum atas Clickwrap Agreement pada Kontrak Baku Elektronik terkait Transaksi Elektronik". Jurnal Living Law Volume 7 No. 1 (2015), p. 1.

without signature in a clickwrap agreement which is a legal discovery. The second previous article is entitled “*Keabsahan Kontrak Elektronik (e-contract) dalam Perjanjian Bisnis*” written by David and Wayan Wiyawan.<sup>6</sup> This article discusses the form of e-contract and its legality in a business agreement based on the Indonesia Civil Code and UNCITRAL Model Law. The result of the mentioned article only states whether the electronic contract is valid and binding based on the perspective of the Indonesian Civil Code. The title of the third article is “*Keabsahan Kontrak Elektronik dalam Transaksi E-Commerce Ditinjau dari Hukum Perikatan*” by Wahyu and Nyoman Budiana.<sup>7</sup> The result of their research is about a standard clause in an electronic contract made unilaterally by the business actors without considering the applicable legislation which affects the consumers’ legal protection.

From those three aforementioned articles, the authors conclude that they only discuss the validity and the verification of electronic contracts from the perspective of several laws and regulations, and international conventions. Unlike the previous ones, this article discusses and reviews the privacy policy of smart contract clickwrap agreement in e-commerce transactions based on Indonesian law’s perspective and the users’ legal protection of smart contract clickwrap agreement in e-commerce transactions in Indonesia.

From the above explanation, the initial purpose of smart contract clickwrap agreement is to cut the transaction process to be easier, and to be more flexible and efficient. In fact, it causes law issues, particularly on the Legal Certainty of Clickwrap Agreement in E-Contract of E-commerce Transactions. Hence, the authors are interested in analyzing the agreement of several parties in smart contract from the perspective of Indonesian contract law construction.

This article will elaborate on some relevant research problems: 1) How is the privacy policy of smart contract clickwrap agreement in e-commerce transactions based on the perspective of national and international laws? 2) What kind of consumers’ legal protection is applied in the use of smart contract clickwrap agreement in e-commerce transactions?

## Research Methods

The approach used in this study is normative legal research or often called doctrinal research to explain the issues on legal certainty and protection related

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6 David Herianto Sinaga and I Wayan Wiryawan, “Keabsahan Kontrak Elektronik (*E-contract*) dalam Perjanjian Bisnis”. *Jurnal Kertha Semaya*, Volume. 8 No. 9.(2020), p. 1385.

7 Wahyu Suwena Putri and Nyoman Budiana, “Keabsahan Kontrak Elektronik dalam Transaksi *E-commerce* ditinjau dari Hukum Perikatan”. *Jurnal Analisis Hukum*, Volume 1, No. 2 (2018), p. 300.

to e-contract in e-commerce transactions in Indonesia. This study also uses the statute approach, which is an approach done by reviewing all legislation related to the discussed law issues and using comparison to determine the reconstruction of the legal protection of e-commerce transactions regarding the privacy policy of the smart contract clickwrap agreement. There are three sources of legal material. The primary legal materials include 1) The Indonesian Civil Code; 2) Law No. 19 of 2016 on the Amendment to Law No. 11 of 2008 on EIT Law. The secondary and tertiary legal materials are those to help analyze and understand the primary materials related to the implementation of e-commerce activities in giving legal certainty dan legal protection for the stakeholders.

### Discussion

E-commerce is a multidisciplinary field covering engineering such as network and telecommunications, security, and data storage and retrieval from multimedia. E-commerce is a business sector, such as marketing, billing and payment, procurement and purchasing, and supply chain management. It also has information privacy law aspect, rights of ownership, intellectual property rights, taxing, contract making and legal settlement.<sup>8</sup>

E-commerce is a trading transaction between merchant and buyer to provide items, services, or take over rights. E-commerce transaction uses a Sell and Purchase Contract called electronic contract (abbreviated as *e-contract*). E-contract was done via electronic/digital media, in which the parties do not need to meet physically and the media is on a public network using an open system called the internet or World Wide Web (WWW).

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8 Sharman et al., "Influence of Conditional Holoentropy-Based Feature Selection on Automatic Recommendation System in E-Commerce Sector". Journal of King Saud University Computer and Information Sciences, Vol. 12, No.10 (2021), p. 1.

Figure 1. Mechanism of e-commerce transactions



The transaction in e-commerce nowadays is equipped with a *bearing risk* that can guarantee security as seen in the above illustration. Several steps to buy items via e-commerce are shown below: (1) consumer and business actor meet in cyber global through server rented based on *Internet Server Provider (ISP)* by e-merchant; (2) an e-commerce transaction is attached with *terms of use* or *terms of service* which is a standard clause/smart contract clickwrap agreement, provided by e-merchant/business actor on the website, meanwhile, the consumers can just click the "Accept" button or close it if they find the terms are not beneficial; (3) by clicking the mentioned button, the consumer is said to agree with the terms determined by the merchants. It automatically binds the two parties; (4) when the two parties reach an agreement/convention, the payment process then proceeds with the help of the third party i.e. banks from each party called as *acquiring merchant bank* and *issuing customer bank*. The process is elaborated as the consumer transfer the payment amount based on the agreed price to the *acquiring merchant bank* which then proceeds to the business actors; (5) after the payment process is completed, the merchant must proceed to the next step that is delivering the items as agreed in terms of how to receive the items and its specification.

The principle of a trading transaction using e-commerce technology is actually a similar contract model to the conventional one done in Indonesian society. The

conventional transaction in Indonesian society is based on the Civil Code. So, the e-contract validity is also managed by Article 1320 Indonesian Civil Code: 1) consent of individuals who are bound thereby; 2) the capacity to conclude an agreement; 3) a specific subject matter; and 4) an admissible cause. Contract requirements in Article 1320 Indonesian Civil Code and UNCITRAL (United Nations Commission on International Trade Law) only have a slight difference. In UNCITRAL, the valid requirements of a contract are:<sup>9</sup> 1) there must be an offer; 2) the offer should be responded by an acceptance; 3) the people in the contract must have legal capacity; 4) there must be a consideration (reciprocal performance); 5) having *lawful causa*; and 6) there is an intention to legal relation.

The aforementioned requirements are almost similar to the four requirements written in Article 1320 Indonesian Civil Code, except on the “consideration” and the “intention to create legal relation” parts. The mentioned article decides that *agreement* becomes one of the four valid fundamental requirements of a contract. This is different from UNCITRAL (common law) which does not consider the *agreement* as the legal basis. It emphasizes more on the elements of an agreement such as *offer* and *acceptance*. However, if it is reviewed deeper, both meanings are just no different because *offer* and *acceptance* will result in an agreement.

The establishment of an enforceable smart contract is the main requirement for the growth and development of electronic commerce on the internet. Generally, it is said that an enforceable contract can be established through written and spoken agreements among the parties and also can be the implication of actions done by the related parties.<sup>10</sup> Some of the main requirements which should be fulfilled for the establishment of enforceable e-contract are delivery, offer, and acceptance. The offer and acceptance are done in spoken form, written document, or via electronic communication e.g. e-mail.

UNCITRAL Model Law approves every party's autonomy principle and freedom of contract. Every party has the right to make their own contract through the offer and acceptance stated electronically. Making contracts via e-commerce is valid and binding. The affirmation on contract validity and legal certainty in this rule is stated in Article 11 Section (1) which says the relation of a contract establishment, unless it has been determined otherwise, an offer and/or an acceptance can also be applied on message data. If message data are used in contract making, the contract cannot be considered invalid or has no enforceability just because it is based on the use of message data for that purpose.

9 David Herianto et al., "Keabsahan Kontak Elektronik dalam Perjanjian Bisnis" Jurnal Kertha Semaya, Vol. 8 No. 9 (2020), pp. 1385-1395.

10 M. Arsyad Sanusi, *Hukum dan Teknologi Informasi* (Bandung: Mizan, 2005), p. 378.

Likewise, the letter of intent or the like stated in the form of data from the *originator* and the *addressee* of a message must have legal consequences, validity, enforceability, and legal certainty.<sup>11</sup>

In Islamic law perspective, contract and *akad* are similar in meaning. All valid contracts (*akad*) should be free from excessive uncertainty (*gharar*) in terms of subject or consideration (price) in the exchange. To avoid the uncertainties, the valid sale demands the traded commodities should exist at the trading moment; the merchant must hold possession of the commodity. *Salam* and *istishna'* are the two exceptions on sharia principles and the absence of both is allowed as long as there are other valid conditions where *gharar* is deleted and the possibility of the emergence of dispute or rights exploitation are minimized. Those conditions are related to the proper determination of quality, quantity, price, time, and place in which the items are handed.<sup>12</sup>

In the perspective of Islam, e-commerce has a similar definition to conventional trade. However, there are several rules and laws regulating this transaction to meet the requirements of Islamic sharia, as stated in Fatwa of National Sharia Board-The Indonesian Council of Ulama (DSN-MUI) No. 110/DSN-MUI/IX/2017 on Sale and Purchase Contract (*Akad*). According to the *fatwa*, *transaction* means *akad*, which is a contract between merchant and buyer resulting in the changing of object owner exchanged with a certain price. In the second part related to clauses of *Shigat al-Aqd*, it states: 1) The Sales and Purchase Contract must be explicitly and clearly stated and it is also understood by merchant and buyer; 2) The Sales and Purchase Contract can proceed in the forms of spoken, written, sign, and action, as well as in the electronic form based on sharia and the applicable legislation.

Allah states in the Quran, "And when the prayer has been concluded, disperse within the land and seek from the bounty of Allah, and remember Allah often that you may succeed," (Q.S. al-Jumuah [62]: 10). This verse explicitly states that Allah gives freedom to His servants to do any kind of activity on earth as long as it is in accordance with Islamic sharia. There is no dichotomy between spiritual and material since all behaviors are a form of worship to Allah SWT.<sup>13</sup> Based on this rule, the electronic transaction is allowed in Islamic law and considered valid as long as it abides by the applicable law.

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11 Ibid.

12 Muhammad Ayub, *Understanding Islamic Finance: A-Z Kenangan Syariah*, (Yogyakarta: Magistra Insania Press, 2004), p. 34.

13 Norazlina Zainul, "E-Commerce from an Islamic perspective", *Electronic Commerce Research and Applications* 3, accessed from [www.sciencedirect.com](http://www.sciencedirect.com)

To know the compatibility of an e-commerce transaction and the validity of *akad* in Islamic law contracts, there are several things that need further review on this matter. The *rukun akad* (the pillars of contract) explains that an *akad* is valid if the subject, the items, and *sighat* meet the standard of some provisions.<sup>14</sup> (1) requirement for the subject doing transactions. In Islam, there are two requirements for people doing transactions: (a) they are sensible and *mumayyiz*, so those who are insensible and still kids are invalid in performing *akad*, and; (b) they do it independently without force. It means that the *akad* will be invalid if there is an intermediary or representative for both parties, unless they are the parents or the appointed judge. (2) objective requirements, Ulama have agreed that there are some requirements to fulfill by *akad*'s object: (a) the item is available at the moment of *akad*, except in the *akad salam*; (b) the selling item is valuable; (c) the item is a personal possession. So, it will be invalid if the selling item is a public property such as water of a river and a meadow; (d); (e) the right of the selling item is fully on the merchant, or the person who got permission from the original owner to sell the item as a representative; (f) the item can be handed over; (g) the description of the item's characteristics is clearly delivered to the buyer, either it is done by direct watching or by explanation in detail; (h) the selling item can be used in *syara*; (i) the selling item is not a forbidden one.

The two crucial aspects of e-commerce regulation in the law are: a) the acknowledgment of electronic transactions and electronic documents on the engagement rules framework and rules verification, so the legal certainty of electronic transactions is guaranteed; b) the action description classified to rule violation related to IT abuse and the use of criminal law.

The acknowledgment of electronic transactions and documents makes e-commerce activities as the law basis and gives protection for the consumer doing e-commerce transactions. Law No. 8 of 1999 on Consumer Protection (hereinafter written as UUPK) Article 1 Section 1 mentions that "Consumers' protection is all means which guarantee the legal security to protect the consumers".

Every e-commerce transaction has provisions to obey, including terms of payment and delivery method. These rules should be applied with the privacy concept to provide legal protection for both parties.

Data is a prominent asset and getting it is even easier. When the buyers make an account on a website, they will be asked to input personal data. Those data will be inserted into the system managed by the e-commerce business operator or the e-commerce merchant. Personal data, including acquisition, usage, process,

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14 Gemala Dewi, *Hukum Perikatan Islam*, (Jakarta: Prenada Kencana Group, 2007), p. 34.

distribution, and data destruction, must be protected. This rule can be accommodated as a privacy policy. When the buyers do the transaction via a website or electronic media managed by an e-commerce operator, at that moment they have signed an agreement with the operator.

### Privacy Policy of Smart Contract Clickwrap Agreement in the E-Commerce Transaction Based on the Law Perspective in Indonesia

Smart Contract Clickwrap Agreement technology nowadays is commonly used in e-commerce transactions all around the world. However, not all e-commerce transactions can be applied in the smart contract technology because the smart contract clickwrap agreement is a decentralized system for an electronic agreement on the internet. A smart contract clickwrap agreement is a contract that can be automatized and is enforceable. Although it can be automatized by computer, some parts may need manual input and control by humans. A smart contract clickwrap agreement is a computer protocol aiming to supervise, implement, or validate the performance or contract negotiation.<sup>15</sup>

The implementation of smart contract clickwrap agreement in an online sales and purchase aims to turn the online transaction to be more efficient, faster, and safer. However, since the smart contract clickwrap agreement is considered as a new technology to apply in online trading, there may be errors in its development which results in the loss for the buyers. On another side, the privacy policy of smart contract clickwrap agreement in e-commerce transaction has yet been regulated specifically in the system of national and international laws.

The privacy policy needed by the merchant and service provider in the e-commerce transactions gives full description stating the responsibility and the provision implementation. This is to protect the rights to privacy of someone who revealed his or her personal data in the e-commerce activity. The privacy policy in every e-commerce transaction can be accessed easily because this provision has become nonactive e-commerce which is urgent as an ethical code that should be respected by all parties.<sup>16</sup>

The privacy policy on smart contract clickwrap agreement in e-commerce transaction is urgently needed to avoid the misuse of personal data. Basically, a smart contract clickwrap agreement is in the form of code saved in a blockchain system and can only be accessed by people on the network.

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15 Estevam, et al., "Accurate and decenrealized times tamping using smart contract on the Ethereum blockchain" Information Processing & Management (2021) p. 1014.

16 Indriyani et al., "Perlindungan Privasi dan Data Pribadi Konsumen Daring pada Online Marketplace System" Justitia: Jurnal Hukum, Vol.1, No.2 (2017), pp. 191-208.

The protection of personal data is a form of the right to privacy which is also included in the personal rights, so it must be guaranteed by the country. The concept of personal data protection implies that everyone has the right to decide if they will share their personal data or not. Privacy rights, in personal data protection, are urgent and even become the key element to individual freedom and dignity.

The legal protection of privacy policy for parties in smart contract needs to be explored to realize justice and legal certainty in a contract. In this case, the protection of privacy policy in e-commerce transactions in Indonesia still refers to the EIT Law. One of main sectors of the Indonesian government handling e-commerce is the Ministry of Communication and Informatics (usually called as *Kemenkominfo*).

The data protection through a mechanism of privacy policy of smart contract clickwrap agreement in e-commerce transactions is getting better because there are two particular laws regulating privacy rights. Those are the Draft of Ministry Regulation on the Personal Data Protection which is a mandate of the Government Regulation No. 82 of 2012 and the Draft Bill (*Rancangan Undang-Undang* or RUU) on Personal Data Protection. The two regulations are encouraged by government to answer society's needs related to consumers' privacy protection which is far from the spontaneous process of the original market power and consumer's interest. The purpose of this regulation is to encourage the standard clause in e-commerce application to be fair and open for the two agreed parties.

Aiming at protecting the rights to privacy and for the e-commerce provider to not violate the smart contract clickwrap agreement made by some parties, the legal efforts should be accessible for online consumers. It is also should be visible from two processes i.e. adjudicative process (litigation and arbitration) and consensus process (mediation and negotiation). UNCTAD in the 2003 Report of E-Commerce and Development gives general image about the elements in adjudicative and consensus resolutions.

Regarding the available law for privacy rights violation, according to EIT Law and the Government Regulation No. 82 of 2012 concerning Electronic System and Transaction Operation, the victims can file a civil lawsuit for the compensation. It means that the law mechanism for compensation claim from online users to the e-commerce provider is a new mechanism to ask for civil compensation. Although the data privacy violation is broad and unlimited only on civil elements, it still needs a more specific regulation in order to widen the law attempt done by the consumer whose privacy rights is violated.

The policy of smart contract clickwrap agreement in the e-commerce transaction is a complete description stating responsibility and the implementation of the terms to protect one's rights who has revealed his/her personal data in the e-commerce activity. The privacy policy in each transaction can be easily accessed because this term is very povital in e-commerce activity. This needs legal protection so it has legal power which is needed to review in relation with the privacy policy of smart contract clickwrap agreement in e-commerce transaction.

The privacy policy protection for international e-commerce transaction on smart contract clickwrap agreement needs applicable legal instrument, either in the forms of law or new rules or regulations adjusted to this media needs. Without the legal protection and certainty for consumers, Indonesia will only be the disposal place for lower quality goods and services. The most worrying thing is that the people's aspirations will be very difficult to achieve. In the internet trading transaction, where the relationship of business actors and consumers is more open and binding, state's intervention, inter-countries, and international cooperation are demanded. It is to manage the relation pattern among business actors, consumers, and the system of legal protection for consumers.

### **The Law Protection on the Use of Smart Contract Clickwrap Agreement in E-Commerce Transactions**

Legal protection is dignity protection, as well as the acknowledgment of human rights owned by legal subjects based on the rule of law from the arbitrariness or as a set of rules or the regulations that will protect something from others.<sup>17</sup> Regarding the consumer, it means that law gives protection for the consumers' rights from something resulting in the fulfillment of these rights.

The protection of people's privacy and personal data constitutionally is done by the government based on Article 28 G, Section (1) The 1945 Constitution of the Republic of Indonesia stating "Every person shall be entitled to protection of his/her own person, family, honor, dignity, and property under his/her own control, as well as be entitled to feel secure and be entitled to protection against threat of fear to do or omit to do something being his/her fundamental rights."

The aforementioned article implies that the Country has an obligation as a personal protector of each citizen. The population's personal data which must be protected covers the information about physical and/or mental disability, fingerprints, iris, signature, and other data elements included in one's ignominy.

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17 Benuf et al., "Perlindungan hukum terhadap Keamanan Data konsumen Data Financial Teknologi di Indonesia" *Refleksi Hukum: Jurnal Ilmu Hukum*, Vol.3, No.2, (2019) pp. 145-160.

Article 48 Section (1) Government Regulation No. 40 of 2019 states the ministry/institution and Indonesian legal entity that got Resident Personal Data or Resident Data are prohibited: a) to use the data or Population Personal Data outside their authority or; b) to publish the Personal Data or Resident Data as public information material before getting the approval from the ministry.

The protection of privacy policy in e-commerce transactions in Indonesia is based on EIT Law. The use of any information through electronic media regarding personal data must have approval from the related person. In using information technology, personal data protection is part of personal rights (right to privacy).

The derivative regulation of EIT Law and its amendments, which particularly regulates personal data protection, is written in the Regulation of Minister of Communication and Informatics of the Republic of Indonesia (called as *Permenkominfo*) No. 20 of 2016 on Personal Data Protection in Electronic System. It states that personal data protection in an electronic system covers the protection of acquisition, collection, processing, analysis, storage, display, announcing, sending, dissemination, and destroying of personal data.

From the above description, personal data is a matter of secret that not anyone can access, share, or even spill other's personal information to the public as they wish. In this case, various rules have regulated it and guaranteed its security.

Smart contract clickwrap agreement can be considered as the reliable third party between the business actor and consumer that does not believe. It consists of the storage of contract, balance, and program code. Mark Giancaspro explains the smart contract clickwrap agreement as a computer program that verifies and runs the terms after the occurrence of a predetermined event. After being coded and inserted into the blockchain, the contract cannot be changed and it operates as the programmed instruction.<sup>18</sup>

The algorithm of smart contract clickwrap agreement and protocol are particularly designed to facilitate, verify, and implement the negotiation, as well as to do the contract, and enable to do transactions which are unchanged without the third party's participation.<sup>19</sup> Based on the function and implementation, smart contract clickwrap agreement is grouped into 5 (five) types, those are based token contract, crowd sale contract, mintable contract, refundable contract, and terminable contract. Of these five, the first four types are the smart contract clickwrap

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18 Giancaspro, M. "Is A Smart Contract Really A Smart Idea? Insights from A Legal Perspective" *Computer Law & Security Review*, Vol.33, Issue 6 (2017), pp. 825-835.

19 Ivanova, Y. & Khirankov, "A Regular Mutator: A Mutatio Testing Tool for Solidity Smart Contracts" *Procedia Computer Science*, Vol.178 (2020) pp. 75-83.

agreement commonly used in buying and selling cryptocurrency. Meanwhile, the mentioned contract is a type of smart contract clickwrap agreement that can be used for blockchain system in buying and selling items online and executing blockchain program in financial services.

A smart contract clickwrap agreement is a protocol of an electronic transaction aiming at facilitating, verifying, or holding a negotiation. The implementation of smart contract clickwrap agreement terms which become the basis is designed to fulfill the condition of general contract consisting of payment, legal duty, and law enforcement without the third party.

The purpose of smart contract clickwrap agreement is to make the e-commerce transaction safer and more efficient. Hence, it needs human resources and blockchain having the security level which has been examined and trusted to protect all parties both the buyer and the merchant. Because of its novelty for online trading, there might be errors caused by human or *human error* in the creation of smart contract clickwrap agreement that negatively affects the parties, mainly the consumer. Besides, the clarification of legal relationship of all parties is necessarily done when there is a loss, so each party can determine the dispute resolution mechanism if all parties experience loss in the implementation.

Looking at the rapid development of the smart contract clickwrap agreement to date, its use in Indonesia has yet found. However, there are several laws regulating blockchain in financial technology or *Fintech* i.e. in Article 23 the Financial Services Authority Regulation (POJK) No. 77/POJK.01/2016 on Information Technology-Based Lending Services ruling that fintech operator can exchange the data with the provider of fintech service support in the form of information technology including big data analytics, aggregators, robo advisors, blockchain, etc.

EIT Law regulated the electronic contract in Article 1 Section 17 stating: “the agreement of parties made by an electronic system”. The electronic system is then defined in Article 1 Section 5 as a set of electronic devices and procedures that serves to prepare, collect, process, analyze, store, display, announce, send, and/or disseminate electronic information. From the definition of electronic contract by EIT Law, we can conclude that smart contract clickwrap agreement in Indonesian laws and regulations considers as the electronic contract because it is the one made by an electronic system.

The technology of smart contract clickwrap agreement is increasingly used in business and trading sectors all over the world. There are several examples of smart contract clickwrap agreement implementation, such as Fizzy

AXA that utilizes it to pay compensation for commercial flight cancellation or delay which can be solved at certain times.<sup>20</sup> There is also Etherisc, a kind of agricultural insurance, using smart contract clickwrap agreement as a system to automatically pay the compensation claim in less than one day.<sup>21</sup>

The use of smart contract clickwrap agreement technology is not limited to insurance, but also covers online trading through a platform in a marketplace implemented in QuuBe. QuuBe is a marketplace developed by Qoo10 which is one of the biggest online markets in Asia originated from Singapore.<sup>22</sup> QuuBe uses blockchain technology which includes in smart contract clickwrap agreement, in each transaction, so the buyer can shop safely with the most competitive price. QuuBe uses *escrow* in smart contract clickwrap agreement to ensure that the item is delivered safely to the buyer and that the buyer paid to the merchant before smart contract confirms that the buyer has received the item receipt through the company of cargo delivery service.

In the online market, the use of smart contract clickwrap agreement, particularly as an e-contract that has been agreed by the two parties, is then noted in the blockchain system. The note makes the contract of parties safer because it has been saved in the blockchain and it can be changed or ended only if the parties agree or meet the terms and conditions to end the agreement. Smart contract clickwrap agreement will apply the agreed requirements, including the requirements for payment, delivery, guarantee or item compensation, *force majeure*, and the requirement which limits the responsibility of all parties. In an online sell and purchase transaction, the fund disbursement paid by the buyer will be given to the seller if the item has reached the buyer proven by the receipt and the tracing system from the delivery company. So, in some minutes, the paid fund based on the agreed price between the two parties can be forwarded to the seller.

E-commerce is a commercial activity that is used to get goods and services, between seller and buyer without a face-to-face meeting. They are connected via electronic media. However, not all e-commerce can be applied using a smart contract clickwrap agreement because it is a decentralized system for an electronic protocol placed on the internet. Smart contract clickwrap agreement consists of programming code. It is needed so that the requirements in an agreement can

20 Fizzy AXA Official Website. 'AboutUs' <https://fizzy.axa/> accessed on May 1, 2021.

21 Etherisc, "Make Insurance Fair and Accessible" Etherisc: Reinventing Insurance' <https://etherisc.com/> accessed on May 1, 2021.

22 QuuBe: The Ubiquitous Blockchain Economy, 'About Qoo10' <https://www.quube.xyz/gmkt.inc/Company/AboutCompany.aspx>. Accessed on May 1, 2021.

be automatically executed through the code. Therefore, the e-commerce that is suitable for implementing smart contract clickwrap agreement is a marketplace or market platform on the internet as QuuBe.

The application of smart contract clickwrap agreement in an online sell and purchase aims to change the online transaction to be more efficient, quicker, and safer. Yet, since the mentioned technology is still considered new to apply in online trading, there might be errors in the creation of smart contract clickwrap agreement which can be disadvantages for the buyers.

The legal relationship of parties needs to be clarified, so, when the parties are at loss, each can take accountability in bearing the loss they experienced. It is done so all parties in a smart contract clickwrap agreement can get their legal guarantee and protection. In an online sell and purchase with smart contract clickwrap agreement mechanism, there is a difference in the forms of legal relationship of all parties if compared to the conventional one. This is because in online activity with the smart contract clickwrap agreement, there is a third party besides seller and buyer.

The third party in the sell and purchase relationship here is the developer of smart contract clickwrap agreement designing the algorithm for the items' sell and purchase purposes. The seller and buyer have a legal relationship. Meanwhile, between the smart contract clickwrap agreement developer and the seller is a cooperation in providing and using the mentioned system. There is an agreement that separates the developer of a smart contract clickwrap agreement and the buyer. This agreement emphasizes that the developer only provides the function of the smart contract clickwrap agreement to facilitate the sell and purchase transaction. Meanwhile, there is another Sell and Purchase Agreement between seller and buyer written in the smart contract clickwrap agreement in which it regulates things about purchasing, purchase cancellation, product exchange and return.

The principle of proportionality aims at giving benefits to parties in an agreement. So, the function of that principle is to guarantee the fairness realization in exchanging rights and obligations of parties in an agreement from the pre-contract stage to the contract execution. Furthermore, it creates a balanced burden of proof if the contract is failed to execute or there is a dispute, so, there is also no misuse of the clause when the contract is failed.

In an online sell and purchase with a smart contract clickwrap agreement mechanism, the principle of proportionality can be realized by establishing the mentioned mechanism that can balance the offer position between seller and buyer. The offer position of the two parties needs to be balanced because, in terms of

relationship, between consumer and business actor, there often found subordinate relation that makes consumer in a weak position and the business actor is more dominant. This condition is the basis of the establishment of UUPK to balance the offer position in the relationship of consumers and business actors. So, the process of smart contract clickwrap agreement from pre-contract to the end of the agreement must consider the balance of all parties in order to be beneficial for all and to avoid dispute.

Achieving justice, balance, and proportionality in e-commerce transactions is difficult because the business actor in offering their product gives some standard requirements to the consumers or buyers. The buyers have no right to do bargaining or negotiation with the seller. However, the understanding of justice, balance, and proportionality can be interpreted that the standard agreement is in accordance with the terms ruled in Article 18 UUPK, as well as Article 1320 and Article 1338 of the Indonesian Civil Code.

### Conclusion

In terms of the legal protection of parties in an online sell and purchase with a smart contract clickwrap agreement mechanism, both seller and buyer can apply preventive legal protection such as applying the principles of good intention and proportionality in establishing the smart contract clickwrap agreement so, the probability of loss is minimized. In the implementation of the mentioned mechanism in an online sell and purchase transaction, buyers can sue the seller for the loss. The seller can also sue the developer if there is an error from the smart contract clickwrap agreement mechanism. All parties should pay attention to the UUPK, in which not only does it regulate things on buyers' rights, businessmen's obligations, and the agreement clauses which cannot be applied to the agreement with the consumer, but also buyers' obligations and sellers' rights in an online sell and purchase transaction.

The privacy policy on smart contract clickwrap agreement in e-commerce transaction has yet been regulated clearly in national and international laws. There is still a law absence in national law aspect (referring to Law No. 19 of 2016 on the Amendment to Law No. 11 of 2008 regarding Electronic Information and Transactions (EIT Law) and the Regulation of Indonesian Minister of Communication and Informatics No. 20 of 2016 on Personal Data Protection in Electronic System) and in international law aspect (referring to Uncitral Model Law on Electronic Commerce (MLEC)). The mentioned regulations also establish the rules to form and validate contracts made electronically and for attribution

purposes. International law does not yet have detailed regulations about smart contract clickwrap agreement in an e-commerce transaction. However, they are guided by the special connection theory as ruled in The Hague Convention Article 8 and The Rome Convention Article 4 Section (1) and (2). In this case, the legal protection taken by someone against violation of privacy policy on smart contract clickwrap agreement in e-commerce transactions can be to file a lawsuit for a loss of civil. Furthermore, international law protection can be seen from two processes i.e. adjudicative process (litigation and arbitration) and consensus process (mediation and negotiation). UNCTAD in the Report of E-Commerce and Development 2003 gives a general image of the elements in adjudicative resolution and consensus.

This recent study is conducted to give a beneficial suggestion for the business actors and e-commerce sellers to start adopting the smart contract clickwrap agreement technology in the online sell and purchase process in Indonesia. This implementation aims to make the transactions easier, more efficient, and safer. This is one of the potential technology products used to support the growth of the economy in Indonesia. This is in line with e-commerce platform which is growing rapidly. For the business actors who will implement the mentioned technology in their platform, they are suggested to adjust with the laws and regulations in Indonesia, particularly on the implementation aspects of requirements of skills and deals of parties in agreement. They are also expected to refer to the laws and regulations related to online sell and purchase in Indonesia.

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