

## THE CONSTRUCTION PROTECTION OF RANSOMWARE VICTIMS OUTSIDE THE COUNTRY BOUNDARIES

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### ABSTRACT

The threat of Ransomware crime in the cyber world overlooks national boundaries and has a negative impact on victims. The presence of Ransomware is carried out in extortion mode to take control of the program and prevent victims from accessing their private data for a certain amount of ransom money. In general, the protection for victims of crime should be compensated. To date, no rule sets the basis for victims to obtain compensation from the perpetrators, recalling that both perpetrators and victims reside in different countries under different legal jurisdictions. Therefore, it is deemed necessary to study the construction of protection for ransomware victims outside the country's boundaries with legal certainty. This paper is arranged based on the results of normative research using a statutory approach and grammatical and teleological interpretation analysis. The results showed that restitution should be given to the victims, as in line with the clauses outlined in the Declaration of Basic Principles of Justice for Victims of Crime and Abuse of Power. The regulation on the restitution for cybercrime where the perpetrators and victims are under different jurisdictions has not been regulated in the clauses of the ITE Law, and the restitution across borders of this country is also not regulated in the clauses of the Law on the Protection of Witnesses and Victims, hence it is necessary to regulate the right to obtain restitution and its mechanism as the basis assurance on the provision of restitution for victims with different jurisdictions from the perpetrators by taking into account legal certainty, balance principle and protection of human rights.

**Keywords:** Ransomware, Victims, Restitution

### A. INTRODUCTION

The advanced technology and information mark the shift to a more modern and cutting-edge way of life. People have always been eager to live an easy and more efficient life with the availability of technology that keeps developing. Data network-based communication instrument, or simply called as Internet, represents advancement and modernism in technology and communication. Internet, standing for Interconnected Network, is everyone's preference with its never-diminishing popularity.

The Internet plays its major role, giving people unlimited access to information and virtual communication with others in other parts of the globe.<sup>1</sup> This advancement ensures that technology development seems to make this universe shrink to an extent where national boundaries are almost gone.<sup>2</sup>

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<sup>1</sup> Donovan Typhano Rachmadie, Supanto, Jurnal : *Regulasi Penyimpangan Artificial intelligence Pada Tindak Pidana Malware Berdasarkan Undang-Undang Republik Indonesia Nomor 19 Tahun 2016*, Recidive, Vol-ume 9 No. 2, Mei-Agustus 2020

<sup>2</sup> Didik Endro Purwoleksono, *Hukum Pidana Untaian Pemikiran*, Airlangga University Press, Surabaya, 2019, p. 49

Advanced information and communication technology bring about complex impacts of change that are interconnected between phases of development. This is in line with Talcott Parson's, suggesting that "... the invention of technology is a generator of social changes since it causes a chain of changes."<sup>3</sup>

Talcott Parson's idea is not only focused on a positive aspect of the existence of both information and communication technology but it is rather counterbalanced by the negative effect that gives more space for cybercrime that is common to take place in several countries in the world, including Indonesia.

Cybercrime appears in different forms of practices, such as blackmailing another person, threatening that the hacked system will run back to normal after the blackmailed person pays ransom money. This act involves software and Artificial Intelligence called malware. Malware, literally standing for malicious software, has several categories called ransomware, a harmful software able to encrypt users' data and demands the ransom to allow the description of the data in a certain period.<sup>4</sup>

Harapan Kita Hospital and Darmas Hospital in Jakarta were the two victims of ransomware. This attack started with the locking of all computer systems and data of the victims, blocking access from users. Unblocking access was impossible unless a ransom in the form of bitcoin valued at US\$ 300 was paid within three days from the day the systems were hacked. Failing to pay the ransom would lead to vanishing data of the patients.<sup>5</sup>

This case indicates that all people or organizations have a chance to become the victims of this ransomware. The loss caused by this cyberattack is not only restricted to individuals but is also potential to harm organizations. This situation is pertinent to Van Boven's idea, defining victims as those, either individuals or groups, who suffer from losses, either physically, mentally, emotionally, or economically. It could also appear as a violation of fundamental rights due to an intentional act or negligence.<sup>6</sup>

To fulfill one of the rights in the recovery process victims may experience, compensation could be taken into account through restitution mechanism, given in accord with the Declaration of Basic Principles of Justice for Victims of Crime and Abuse of Power. With regard to the restitution, Law Number 19 of 2016 concerning Amendment to Law Number 11 of 2008 concerning Electronic Transactions and Information does not set forth the principles of the rules, but these are outlined in the provisions of Law Number 31 of 2014 concerning Amendment to Law Number 13 of 2006 concerning Protection of Witnesses and Victims (henceforth referred to as Law of Witness and Victim Protection), in which the latter guarantees the rights of the victims to petition for the restitution.

If there is no reinforcing and clear-cut regulatory basis regarding the guarantee and the provision of the restitution for the victims of the ransomware that could extend beyond national boundaries in the provisions of Law of Witness and Victim Protection and the Government Regulation concerning Compensation, Restitution, and Aid for Witnesses and Victims, and Law concerning Electronic Information and Transactions, it indicates that there are legal loopholes in the provision and guarantee of restitution especially when the victims and perpetrators are within different jurisdictions.

Thus, departing from this issue, it is necessary to conduct a more profound study on the construction of the protection of ransomware victims outside a state boundary

<sup>3</sup> Satjipto Rahardjo, **Hukum dan Perubahan Sosial**, Bandung, Alumni, 1979, p.153

<sup>4</sup> Ferdiansyah, Jurnal: Analisis Aktivitas dan Pola Jaringan Terhadap Eternal Blue & Wannacry Ransomware, Jurnal Sistem Informasi, Volume 4, Nomor 1, Juni 2018, p. 37

<sup>5</sup> Lesthia Kertopati, Dua Rumah Sakit di Jakarta Kena Serangan Ransomware WannaCry, <https://www.cnnindonesia.com/teknologi/20170513191519-192-214642/dua-rumah-sakit-di-jakarta-kena-serangan-ransomware-wannacry>, accessed 20 June 2021

<sup>6</sup> Rena Yulia, **Viktimologi Perlindungan Hukum terhadap Korban Kejahatan**, Graha Ilmu, Yogyakarta, 2013, hlm. 49.

based on legal certainty. This research employed normative-juridical methods and a statutory approach. The research data were analyzed based on grammatical and theological interpretations.

## B. DISCUSSION

### 1. The Construction of Protection of Ransomware Victims outside a State Boundary according to Legal Certainty

Ransomware is one of the malware types that could encrypt all the data of the victims in cybercrime.

Malicious software or commonly dubbed as malware is computer-based software deliberately designed by a cyber attacker to damage a system, network, or server silently, unnoticed by data or server owners. Etymologically, malware was derived from two words, namely *malicious* meaning bad intention and *software*.<sup>7</sup> In a nutshell, malware is dangerous software intentionally created to attack computer systems, computer users, and networks.<sup>8</sup>

The following are examples of malware types commonly seen on computers:

- a. Worm, a program intentionally made to access a computer system where specific damaging codes are spread from one computer unit to another automatically;
- b. Spyware, a malware program that spies all the activities of the victims silently and could obtain sensitive information like passwords, login data, and even credit cards;
- c. Ransomware, software created to encrypt the data of the victims on a computer so that it blocks access. This act is usually followed by the demand for ransom money to unblock the access.<sup>9</sup>

Thus, ransomware is specifically created to encrypt a computer and all data to block access to the computer, and unblocking is only possible when the ransom is paid. As it is dubbed, ransomware demands an amount of money over encrypted data.<sup>10</sup>

This cybercrime has posed some negative effects for victims, including material loss since the access to the computer and data saving is held up. This loss escalates especially when the computer systems are owned by a legal entity. This loss is also contingent upon the way the blackmailing is done for the ransom that has to be paid by the victims to unblock the access.

The loss always escalates and creates discomfort for the victims. This worsening situation indicates that recovery measures need to be taken for the ransomware that is committed beyond national boundaries, and restitution can be one of the protection types that can be provided for the aggrieved parties. The restitution given to compensate the loss by perpetrators serves as a connector to embody an act of re-introduction to the social responsibility of an individual.<sup>11</sup>

The concept of this re-introduction is pertinent to the meaning and definition of restitution as outlined in the provision of Article 1 point 11 of Law Number 31 of 2014 concerning Amendment to Law Number 13 of 2006 concerning Protection of Witnesses and Victims (Law of Witness and Victim Protection), stating "restitution

<sup>7</sup> Nur Syamsi Tajriyani, Jurnal : Pertanggungjawaban Pidana Tindak Pidana Pemerasan Dengan Modus Operandi Penyebaran Ransomware Cryptolocker, Juris-Diction, Vol. 4 (2) 2021, p. 688

<sup>8</sup> Retno Adenasi & Lia A. Novarina, Jurnal : Malware Dynamic, Jurnal of Education and Information Communication Technology, Volume 1, Nomor 1, Tahun 2017, p. 37

<sup>9</sup> Awan Setiawan & Erwin Yulianto, **Keamanan dalam Media Digital**, Informatika, Bandung, 2020. p. 61

<sup>10</sup> Badan Siber dan Sandi Negara, Penanganan dan Pencegahan Insiden Ransomware, <https://govc-sirt.bssn.go.id/penanganan-dan-pencegahan-insiden-ransomware/>, accessed 21 June 2021

<sup>11</sup> Marlina dan Azmiati Zuliah, **Hak Restitusi Terhadap Korban Tindak Pidana Perdagangan Orang**, Refika Aditama, Bandung, 2015, p. 40

is a compensation provided for the victim or his/her family by the perpetrator or the third party".<sup>12</sup>

The definition of restitution as outlined in the Law of Witness and Victim Protection implies that restitution is compensation an individual should consider principally to help recover the situation as it was before.<sup>13</sup>

The restitution given plays its indispensable role in enforcing the protection of the victims to help them get their rights as the parties harmed by the crime. Thus, the UN through the Declaration of Basic Principles of Justice for Victims of Crime and Abuse of Power clearly states that the chance of recovery given to the victims in the form of compensation is one of the forms of protection. These protection forms, governed in the declaration mentioned, constitute restitution and compensation.<sup>14</sup> This compensation must be provided justly for the victims of the crime, their families, or their dependents. The restitution must constitute the return of the properties or an amount of money, covering the cost spent by the victims, service provision, or right recovery.<sup>15</sup>

Recalling that restitution holds its position as an effort to fulfill the rights of the victims to get compensation, it is obvious that the restitution is inextricable from the dignity attached to human rights, where there are several instruments of human rights implying that every person principally has the right to effective recovery guaranteed by the state constitution and legislation.<sup>16</sup>

Several regulatory provisions in Indonesia principally and specifically govern the restitution resulting from certain criminal offenses, such as Law Number 21 of 2007 concerning Human Trafficking Eradication, Law Number 35 of 2014 concerning Amendment to Law Number 23 of 2002 concerning Child Protection, and several regulatory provisions in other specific laws. However, the principles of the restitution provision addressed to the victims of cybercrime are not assertively regulated in the law concerning Electronic Information and Transactions, and, thus, the restitution only referred to the provisions of Law of Witness and Victim Protection as one of the laws in Indonesia that governs the provision of restitution for the victims of crimes, not to a certain specification.

Specifically, the provision of restitution is governed in Article 7A of Law concerning Protection of Witnesses and Victims:

- i. The victims of a criminal offense have the right to get restitution of the following forms:
  1. Compensation over the loss of property or income
  2. Compensation over the suffering directly related to a criminal offense, and/or
  3. The cost paid as compensation that covers medical and/or psychological treatments.
- i. The criminal offense as intended in Paragraph (1) is stipulated under the Decision of Witness and Victim Protection Organization (henceforth referred to as LPSK)

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<sup>12</sup> Article 1 point 11 of Law Number 31 of 2014 concerning Amendment to Law number 13 of 2006 concerning Protection of Witnesses and Victims

<sup>13</sup> Fauzy Marasabessy, Jurnal: **Restitusi Bagi Korban Tindak Pidana : Sebuah Tawaran Mekanisme Baru**, Tahun ke-45, No. 1 January-Maret 2015, p. 55

<sup>14</sup> Rena Yulia, op.cit p. 58

<sup>15</sup> Declaration of Basic Principal of Justice for Victim of Crime and Abuse of Power, General Assembly Resolution 40/34 of 29 November 1985.

<sup>16</sup> Theo Van Boven, Tentang Mereka yang menjadi korban: Kajian terhadap Hak Korban Atas Restitusi, Kompensasi, Rehabilitasi, ELSAM, Jakarta, 2001, p. 13

- ii. The petition for restitution can be filed before or after a court decision that has permanent legal force according to LPSK.
- iii. LPSK could petition for restitution petitioned before a court decision that has permanent legal force
- iv. LPSK could petition for restitution after a court decision that has permanent legal force
- v. If a case takes the decease of a victim, restitution could be given to the victim's family members as heirs/heireesses.<sup>17</sup>

Article 7B of Law concerning Protection of Witnesses and victims states "further provisions regarding the procedures of petitions and compensation and restitution as intended in Article 7 and Article 7A are governed in government regulations".<sup>18</sup> To enforce the mandate as set forth in Article 7B of Law of Witness and Victim Protection, Government Regulation Number 7 of 2018 concerning Compensation, Restitution, and Aid for Witnesses and Victims was passed. This government regulation governs the procedures of filing a petition and the provision of restitution for a victim of a criminal offense. The mechanism of the petition to the process of the restitution is set forth in Article 19 to Article 36 of Government Regulation Number 7 of 2018 concerning Compensation, Restitution, and Aid for Witnesses and Victims.

However, all regulatory provisions relating to the procedures of the petition to the provision of restitution for victims as suggested in the Government Regulation mentioned still leave legal loopholes concerning the procedures and guarantee of the process of restitution provision for the victims of criminal offenses that go beyond national boundaries. The legal certainty regarding regulatory principles, the patterns of the procedures, and the petition for restitution for victims need to be taken into account recalling that ransomware can be committed by whoever has the intention to harm others, that it can go beyond national boundaries outside Indonesia, and that it can be committed by another person overseas.

These shortcomings are getting more obvious with the absence of the mechanism of LPSK in terms of the coordination that should involve law enforcers of the domicile where a ransomware perpetrator resides. Thus, it is considered essential that the principles of coordination established by LPSK be set to fulfill the right to restitution of the victims in Indonesia against the perpetrators residing in another state.

That is, restitution sets an important milestone in creating justice for victims or recovering all the losses the victims suffer from due to the crime. This is in line with the thought of Cortney Lollar, "Traditionally, in both the civil and criminal contexts, restitution was used to financially restore a person economically damaged by another's actions, thereby preventing the unintended beneficiary from being unjustly enriched at the aggrieved party's expense."<sup>19</sup>

The absence of the provision of restitution for the victims harmed by ransomware with the situation where the perpetrator possibly resides in another state also means the absence of the principle of legal certainty and justice for the victims concerned in terms of getting compensation regarding the losses caused. These legal loopholes and shortcomings could potentially injure the principles of restitution provision, elaborated in the following, for the victims.

#### a) Legal Certainty

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<sup>17</sup> See Article 7A of Law Number 31 of 2014 concerning Amendment to Law Number 13 of 2006 concerning Protection of Witnesses and Victims.

<sup>18</sup> See Article 7B of Law Number 31 of 2014 concerning Amendment to Law Number 13 of 2006 concerning Protection of Witnesses and Victims.

<sup>19</sup> Cortney Lollar, Jurnal : **What Is Criminal Restitution**, Iowa Law Review, Vol.100, 2014. p. 7

This principle could set a strong fundamental for law enforcers to perform their tasks in providing several forms of legal protection for victims.<sup>20</sup> Legal certainty is principally a fundamental that adheres to legislation that is made in a concrete form and governs certain behavior. Legal certainty asserts that regulatory provisions in legislation must guarantee certainty and must not appear gray or ambiguous (*Obscurilabel*); it must not leave any legal loopholes and conflict of norms.

Departing from the above understanding of legal certainty, it can be understood that legal certainty lies in the principle highlighting how law enforcers act and implement legal provisions set in society. Therefore, the absence of regulatory provisions that should serve as a stepping stone of law for the LPSK in performing the tasks intended to recommend the perpetrators residing off the national boundaries to provide restitution for the victims could potentially injure the principle of legal certainty in the provision of restitution for the victims of the crime. Moreover, in terms of legal loopholes of Law concerning Electronic Information and Transactions, it is obvious that there is no clear legal certainty for the victims of cybercrime to get restitution as their compensation directly paid by the perpetrator, thereby injuring the values of justice for the victims.

b) Balance

Law is principally intended to set a balance in regulation, justice, and law per se. With this balance in society, especially in the balance of justice, benefits and happiness can be achieved in society. This balance represents equality between rights and responsibilities owned by a person before the law. When this principle is connected to the mechanism of restitution, this connection, without doubt, also takes into account the equality between rights and responsibilities that an individual should accept.

With the principle of balance, this study suggests that the provisions of the principles of criminal law not only recognize the imposition of punishment on perpetrators but there should also be the principles of criminal law on the side of the victims to help them get their rights and protection due to the crime. One of the principles that requires extension is a passive national principle, where the protection of the victims of the crime should accommodate the passive national principle. With it, the provisions of the legislation regarding the protection of witnesses and victims in Indonesia could be in place for each citizen of Indonesia as the victim of the crime committed by a foreigner, so that restitution provision could reach what goes beyond the national boundaries by still adhering to the principle of human rights and the provisions in the Declaration of Basic Principles of Justice for Victim of Crime and Abuse of Power that asserts that restitution is a right accepted by a victim of the crime. This equality is certainly based on the principle of equality before the law for everyone, not to mention the victims of the crime that deserve protection and recovery following the crime.

c) Compensation and rehabilitation

This principle requires the party concerned to give compensation over the material and non-material losses caused to an aggrieved party in a crime, relating to either the crime per se or procedural matter over the investigation of a criminal case.<sup>21</sup> Principally, the compensation and rehabilitation following the losses are indispensable for the victims, which is intended to restore the conditions of the victims as they were before.

<sup>20</sup> Marlina, Azmiati. op.cit. p. 120

<sup>21</sup> Ibid. p. 123

The principle of compensation and rehabilitation constitute the principle that serves as the basis of the implementation of compensation in the form of restitution. This principle is focused on the compensation addressed to the victims over both material and non-material losses. That is, pertinent to its principle to provide compensation for the aggrieved party, restitution should be able to give the right to the party concerned through restitution, and this right should be protected by law.

Following the analysis and the elaboration on some basic principles regarding the rights of the victims in the form of compensation through the mechanism of restitution, this study presents the obvious construction that should be established to bring about justice and legal certainty for the victims of the ransomware to help them get restitution from the perpetrators that reside outside the jurisdiction of Indonesia. This construction may take the extension of the passive national principle, implying that the legislation concerning witness and victim protection applies to all people in Indonesia as the victims of the foreigners. This extension should also take into account the principle of equality before the law, and the protection of the victims should also be upheld. This extension of national principle is manifested by making an additional regulation and authority for LPSK to coordinate efforts that aim to encourage the restitution payment to the victims of ransomware in connection with the structure of the law of the jurisdiction where a criminal commits a crime. A clear-cut regulation is expected to govern the restitution that touches what goes beyond the national boundaries and to bring justice and legal certainty to the victims of a transnational crime that may involve different laws due to different jurisdictions.

### C. CONCLUSION

Restitution should be provided for the victims, and this mechanism adheres to the provisions set forth in the *Declaration of Basic Principles of Justice for Victims of Crime and Abuse of Power*. The regulation governing restitution provision in a cybercrime, where the perpetrators and victims can be from different jurisdictions, is not yet outlined in the Law concerning Electronic Information and Transactions. In terms of the restitution regarding transnational crimes and its mechanism as the basis of the guarantee to provide the restitution for the victims from the jurisdiction different from that of the criminals, efforts to establish the construction of the extension of the passive national principle, legal certainty, balance, and the protection of human rights are also to be taken into account.

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