



## Legal Review of the Misuse of Voice Changer Technology in the Dissemination of Hoaxes and Information Manipulation in Indonesia

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**Abstract.** *The spread of hoaxes through voice manipulation technology, such as voice changers, has become a significant issue in Indonesia in recent years. This technology allows perpetrators to manipulate someone's voice, which is then used to spread false information that can damage an individual's reputation, influence public opinion, and create social unrest. This study aims to analyze the legal aspects related to the misuse of voice changers in the spread of hoaxes, identify the challenges faced in law enforcement, and provide policy recommendations to improve legal protection for hoax victims. The methodology used in this research is normative legal research, with a normative approach focusing on the analysis of the Electronic Information and Transactions Law (UU ITE) and the Personal Data Protection Law (UU PDP), as well as other relevant regulations. The results show that although Indonesia has a sufficient legal framework to address hoax cases involving voice changers, law enforcement still faces challenges in terms of identifying perpetrators, proving voice manipulation, and the lack of more specific regulations. Additionally, victims have the right to legal protection, including compensation and clarification of false information. This study recommends enhancing the capacity of law enforcement, strengthening regulations, and improving digital literacy among the public to address the challenges posed by this technology.*

**Keywords:** *Voice Changer, Hoaxes, Legal Protection*

### 1. INTRODUCTION

The development of digital technology in recent decades has had a significant impact on various aspects of life, including communication, entertainment, and social interaction. One of the rapidly advancing technological innovations is voice-changing software, commonly known as a voice changer. A voice changer is a software or technology that allows users to modify or alter their voice, changing characteristics such as pitch, speed, and intonation and even digitally mimicking another person's voice (Hilman, 2024). Initially, this technology was widely used in the entertainment sector, such as in the production of animated films, video games, and audio production to create unique sound effects (Genelza, 2024; Miyamoto & Fukumoto, 2024). However, as access to technology and more affordable digital devices has expanded, voice-changer technology is now used by various groups, including individuals, with the intent to manipulate information or spread false content (hoaxes) more efficiently (Rifauddin & Halida, 2018).

The misuse of voice changer technology in the spread of hoaxes and manipulation of information has increasingly become a concern in Indonesia. Cases of information dissemination that lead to defamation or manipulated voices being spread through social media have raised concerns regarding the effectiveness of existing regulations in addressing this phenomenon. This technology, which was originally more widely known in the entertainment and media production sectors, is now at risk of being misused for harmful purposes, such as damaging individual reputations, spreading false propaganda, or even negatively influencing public opinion. The spread of hoaxes and manipulation of information has become a serious issue that has increasingly disturbed Indonesian society in recent years. Hoaxes, or false information intentionally created to mislead or harm certain parties, have rapidly proliferated due to the expanding access to the internet and the growing intensity of social media use. The development of digital technology, while providing many benefits, has also posed significant challenges in terms of information control (Sawitri, 2019). Information can be easily disseminated to millions of people in a matter of seconds, often without any prior verification or fact-checking (Juditha, 2018).

In Indonesia, the spread of hoaxes has become a widespread phenomenon, especially during significant events such as elections, natural disasters, or social crises (Ali, 2021; Sarjito, 2024; Ummah & Putri, 2024). Hoaxes often contain sensitive issues, such as religion, politics, race, and ethnicity, which can trigger social tensions and affect the stability of the state (Gani, 2023). In many cases, the circulating hoaxes are not merely misleading. However, they are intentionally created to achieve specific objectives, such as damaging an individual's reputation, manipulating public opinion, or even provoking unrest. This phenomenon is further exacerbated by the emergence of advanced technologies, such as voice changer technology, which allows for the manipulation of information in the form of voice that appears authentic but is, in fact, entirely fabricated. The spread of hoaxes involving voice manipulation using voice changer technology worsens the situation, as this technology enables individuals to mimic the voices of famous figures or public officials, which are then used to disseminate false information or incite fear and confusion (Schick, 2020). In this context, hoaxes are not only spread through text or images but also through voices that seemingly originate from trustworthy sources when, in fact, they are merely the result of technological fabrication (Hajli et al., 2022).

The use of voice changers in the context of spreading false information or manipulating information can occur rapidly due to the rapid advancements in internet technology and social media. Social media platforms and instant messaging applications provide a vast space for anyone to disseminate information in an easy and fast manner (Rahadi, 2017). In some cases,

the false voices generated by voice changer technology are used to create deceptive audio recordings, which are then spread through various digital channels (Khanjani et al., 2021). For example, the voice of a known individual can be manipulated to convey a message that that person never spoke. This can lead to confusion and anxiety or even create unnecessary conflicts within society. One of the most significant impacts of the spread of hoaxes and manipulation of information is the erosion of public trust in legitimate and credible sources of information (Zannettou et al., 2019). When the public can no longer distinguish between true and false information, uncertainty arises, which can affect important decisions, both in personal and social life; for example, health-related hoaxes can lead the public to make risky decisions regarding their well-being, such as rejecting vaccination or following unproven therapies.

Given the significant impact caused by the spread of hoaxes and manipulation of information, it is high time for more structured and decisive efforts to address the misuse of technology, particularly voice changer technology. In this context, legal regulation becomes crucial to provide protection for the public and ensure that technology is not misused for harmful purposes. Existing laws, such as the Electronic Information and Transactions Law (UU ITE), already provide a framework to address some of these issues, but there are still many challenges in enforcement. One of the biggest challenges is the difficulty in detecting and proving the misuse of digital technology involving voice manipulation, primarily when false audio recordings are distributed anonymously via digital platforms. Therefore, there is a need for more straightforward and more specific regulations to govern the use of technologies like voice changers in the context of digital communication.

Given the significant impact caused by the spread of hoaxes and manipulation of information, it is high time for more structured and decisive efforts to address the misuse of technology, particularly voice changer technology. In this context, legal regulation becomes crucial to provide protection for the public and ensure that technology is not misused for harmful purposes. Existing laws, such as the Electronic Information and Transactions Law (UU ITE), already provide a framework to address some of these issues, but there are still many challenges in enforcement. One of the biggest challenges is the difficulty in detecting and proving the misuse of digital technology involving voice manipulation, primarily when false audio recordings are distributed anonymously via digital platforms. Therefore, there is a need for more straightforward and more specific regulations to govern the use of technologies like voice changers in the context of digital communication. Additionally, the public's involvement in enhancing digital literacy is essential. The public needs to be engaged in efforts to recognize the signs of false information and be trained to trust and disseminate information with quick

verification (Adelia, 2023). The importance of this legal regulation also includes strengthening cooperation between legal institutions, social media platform providers, and the public to develop more effective information verification mechanisms. The government must provide support through more explicit regulations, while digital platform providers need to play an active role in detecting and removing hoax content. On the other hand, the public should also be given a deeper understanding of the dangers of hoax dissemination and the importance of critically assessing any information received.

In Indonesia, although there are several regulations governing the spread of hoaxes, such as the Electronic Information and Transactions Law (UU ITE), the existing laws need to be more specific to address cases of voice manipulation involving technologies like voice changers. UU ITE regulates the dissemination of false information that can harm others. However, there currently needs to be a regulation that specifically addresses the new challenges arising from advancements in digital voice processing technology. Therefore, it is important to identify relevant regulations and propose policies that are more adaptable to these new technologies. The objective of this research is to analyze how the misuse of voice changers contributes to the spread of hoaxes, identify existing legal regulations related to the misuse of this technology, and provide policy recommendations that the government can implement to prevent the misuse of technology in the dissemination of false information. This study aims to provide a deeper understanding of the dynamics of hoax dissemination involving voice changer technology and suggest policy measures that can strengthen legal frameworks in this context.

## **2. METHODS**

In this study, the research method used is normative legal research, which focuses on the analysis of applicable legal norms and their application in the context of the misuse of voice changers in the spread of hoaxes and information manipulation in Indonesia. Normative legal research aims to analyze and understand existing legal regulations and how these regulations are applied in addressing legal issues arising from the use of digital technologies, such as voice changer technology (Benuf & Azhar, 2020). The approach used is the statute approach and the case approach. The legal materials used include primary legal sources such as Law of the Republic of Indonesia No. 1 of 2024 on the Second Amendment to Law No. 11 of 2008 on Information and Electronic Transactions, Law No. 27 of 2022 on Personal Data Protection, Law No. 8 of 1999 on Consumer Protection, the Criminal Code (KUHP), the Criminal Procedure Code (KUHP), and the Civil Code (KUHPerdata), as well as secondary legal materials consisting of legal doctrines, scholarly journals, and legal literature that provide more

profound understanding of the application of law concerning the misuse of voice changer technology. The analytical technique used in this research is qualitative analysis with a descriptive-analytical method. The researcher will analyze the content of relevant legislation and identify articles that can be applied (Tan, 2021), in cases of the misuse of voice changers to spread hoaxes, with the aim of providing a deeper understanding of how Indonesian law addresses the issues arising from the misuse of this technology.

### **3. RESULTS AND DISCUSSIONS**

#### **Legal Regulations in Indonesia regarding Misuse of Digital Technology**

The Electronic Information and Transactions Law (UU ITE) serves as the legal framework used in Indonesia to address various issues related to the dissemination of information and electronic transactions, including the spread of hoaxes through digital platforms. The Electronic Information and Transactions Law (UU ITE) in Indonesia underwent significant changes with the enactment of Law No. 19 of 2016, which revised the previous UU ITE (Law No. 11 of 2008). This revision better accommodates the development of technology and the increasingly complex trends in cybercrime, including issues related to the spread of hoaxes and manipulation of information using digital technologies such as voice changers. In 2024, the Indonesian government made further updates to the UU ITE (see: Law No. 1 of 2024), aimed at enhancing the effectiveness of regulation in the digital era. Although no major changes have been made to the provisions specifically addressing hoax dissemination through voice manipulation (voice changers), the UU ITE 2024 focuses on strengthening provisions related to cybercrimes, the spread of false information, and the more stringent enforcement of laws against the misuse of technology. Below are some key aspects relevant to the misuse of voice changers in the spread of hoaxes:

#### **1. Emphasis on Criminal Offenses Related to the Dissemination of False Information and Hoaxes**

The amendments to the provisions in UU ITE 2024 further emphasize the importance of regulating the dissemination of false information that harms the public. The spread of hoaxes using technologies such as voice changers to manipulate the voices of public figures or government officials can now be subject to stricter criminal penalties. In this regard, the relevant provisions are found in Article 28 Paragraph (1) of UU ITE, which states: "Any person who deliberately distributes and/or transmits electronic information and/or electronic documents containing false or misleading information that causes material loss to consumers in electronic transactions." Additionally, Article 28 Paragraph (1) of UU ITE

also stipulates: "Any person who deliberately disseminates electronic information and/or electronic documents known to contain false information that causes public unrest."

This article explains that the misuse of voice changers to create false voices that spread misleading or false news can lead to confusion or unrest in society. Therefore, the penalties provided in this article are increasingly relevant in the context of using voice changers to disseminate false information.

## 2. Strengthening Sanctions for Cybercrimes

UU ITE 2024 emphasizes the strengthening of sanctions for criminal offenses related to cybercrimes. This is highly relevant to the spread of hoaxes through voice manipulation technology, which is one of the rapidly growing forms of cybercrime. In this regard, the relevant provisions are found in Article 45A Paragraph (1) of UU ITE, which states: "Any person who deliberately distributes and/or transmits electronic information and/or electronic documents containing false or misleading information that causes material loss to consumers in electronic transactions as referred to in Article 28 Paragraph (1) shall be punished with imprisonment for a maximum of 6 (six) years and/or a fine of up to Rp1,000,000,000.00 (one billion rupiahs)." Additionally, Article 45A Paragraph (3) of UU ITE stipulates: "Any person who deliberately disseminates electronic information and/or electronic documents known to contain false information that causes public unrest as referred to in Article 28 Paragraph (3) shall be punished with imprisonment for a maximum of 6 (six) years and/or a fine of up to Rp1,000,000,000.00 (one billion rupiahs)."

This article expands the definition of cybercrimes, including the use of voice manipulation technology to deceive or harm individuals or specific groups. In this case, the use of voice changers to create false voices and then spread them over the internet can be considered an act that harms others.

In addition to the regulation of the dissemination of information and electronic transactions, consumer protection is also an aspect affected by the development of digital technology, which facilitates transactions, communication, and the spread of information (Dewatana, 2021). However, this advancement also presents new challenges, one of which is the spread of manipulated information through advanced technologies, such as voice changers. The misuse of this technology can threaten consumers' rights, manipulate their perceptions, and harm consumers both materially and non-materially. Therefore, regulations related to the protection of consumers from manipulated information and the misuse of technology are of utmost importance (Rusdi, 2023).

In this context, the Consumer Protection Law in Indonesia plays a vital role in safeguarding consumers from the impact of the misuse of digital technology, particularly in terms of information manipulation. In Indonesia, consumer protection is regulated under Law No. 8 of 1999 on Consumer Protection (Consumer Protection Law). This law aims to protect consumers from all forms of abuse committed by business actors, whether related to products or services provided. Several key principles in the Consumer Protection Law that are relevant to the regulation of information manipulation include:

1. Right to Accurate Information

One of the consumer rights regulated in the Consumer Protection Law is the right to receive accurate, clear, and honest information about the goods and/or services offered. When the information received by consumers is manipulated (for example, through false voices created by a voice changer), consumers are unable to make decisions based on accurate information. This law grants consumers the right to be protected from fraudulent practices or information manipulation that harms them. This aligns with what is stated in Article 4 Paragraph (c) of the Consumer Protection Law, which states that consumers have the right to receive accurate, clear, and honest information about the conditions and guarantees of goods and/or services. If consumers receive false or misleading information generated through voice manipulation (voice changer), their right to accurate information has been violated.

2. Prohibition of Fraudulent Practices and Misuse of Information

In cases of misuse of technology to alter information or voices, business actors or individuals who utilize such technology to manipulate consumers may be subject to sanctions under the provisions of the Consumer Protection Law. This is in line with what is stated in Article 8 Paragraph (1) Letter (j), which clarifies that business actors are prohibited from producing and/or selling goods and/or services that do not include information and/or instructions for the use of goods in Indonesian, as required by applicable regulations. The dissemination of false information using a voice changer that mimics the voice of a public official or a prominent figure, which is then used to spread hoaxes, can be categorized as a violation of consumers' rights, as the information received by consumers is false and can mislead them.

### **Misuse of Voice Changer in the Spread of Hoaxes and Information Manipulation**

In recent years, Indonesia has faced significant challenges related to the spread of hoaxes and manipulation of information through digital technology. One of the technologies that has increasingly been misused for this purpose is the voice changer, a device used to

modify or mimic someone's voice in a highly convincing manner. This technology allows individuals or groups to create false voice recordings, which are then used to disseminate false or misleading information, whether for political, social, or economic purposes. In the past three years, the development of deepfake technology and voice changers has created new challenges in the realm of information (Juditha, 2018). The spread of hoaxes through voice manipulation using this technology not only adds complexity to efforts to combat hoaxes but also intensifies the severity of the resulting impacts. Several significant cases that can serve as examples in this study include:

#### 1. Hoax Cases Related to Elections and Politics

During the 2024 Presidential Election period in Indonesia, several hoaxes emerged that used voice changers to create fake voices imitating prominent political figures. One well-known case involved the dissemination of a fake voice recording that mimicked a government official's voice, containing instructions to influence voters or incite conflict between political groups. Although many of these voice recordings could be identified as fake by experts, a large portion of the public was unable to distinguish them and believed them to be legitimate information.

For instance, a recording claimed to be the voice of the 7th President of Indonesia, Joko Widodo (Jokowi), instructing the replacement of Ahmad Luthfi by Kaesang Pangarep to lead Central Java, circulated on social media. The voice recording was shared by a Facebook account on Monday, December 2, 2024. In the recording, Jokowi was claimed to have instructed Ahmad Luthfi to join President Prabowo Subianto's Cabinet after being elected as the Governor of Central Java, and Kaesang would replace Luthfi in leading Central Java (Fakta, 2024c). Another example is a video recording of Prabowo Subianto posted on an Instagram account on February 16, 2024, where his voice was modified, narrating that Prabowo Subianto was promoting a watch after winning the quick count of the Presidential Election votes (Fakta, 2024d). The most recent case involved a video recording featuring a modified voice of Rano Karno on TikTok, dated October 16, 2024, claiming that he would distribute Rp 50 million to anyone who supported him in the Jakarta Regional Election (Fakta, 2024b).

#### 2. Hoax Cases in the Social Context

In addition to politics, the misuse of voice changers also occurs in the social context, where fake voices are used to create tension or unrest among the public. One such phenomenon is the circulation of a video recording of Prabowo Subianto, where the voice in the video was modified after a presidential candidate debate, containing a conversation suggesting



that Indonesian leaders should not be clean and strong so that the Indonesian people remain ignorant (JACX, 2024). Another example is a video posted on social media claiming that celebrity Raffi Ahmad was distributing social assistance (bansos) through a gambling site with his voice altered (Fakta, 2024a). Lastly, a short video surfaced on Facebook, modifying the voice of the Head of the Indonesian Migrant Worker Protection Agency (BP2MI), Benny Rhamdani, claiming that he was assisting worth Rp 1.5 billion Indonesian Migrant Workers (PMI) (News, 2024).

Based on the cases outlined above, the spread of hoaxes using voice changers can lead to significant impacts in the social, political, and economic spheres. The dissemination of hoaxes through voice changers can cause widespread social distrust, especially when the public begins to doubt the authenticity of information, whether from official or private sources. This can lead to the breakdown of social relationships and increased polarization. Society has become more challenged to distinguish between fact and fiction, thereby increasing the tendency to believe unverified news (Amalliah, 2018). Another social impact is the social tension caused by hoaxes that damage the reputation of individuals or specific groups. For example, a fake voice spreading lies about a public figure or celebrity can quickly ruin their reputation. When the public feels betrayed or deceived by the information they receive, it can trigger mass outrage and tensions at both local and national levels.

The political impact of hoaxes spread using voice changers is particularly significant, especially in the context of elections or politically tense periods. The manipulation of information for political purposes can incite conflict between groups, create deeper social divisions, and undermine the political stability of the country. Hoaxes targeting the credibility of public officials or political candidates, or those attempting to divert public attention from important issues, can lower political participation and even alter election results. The spread of hoaxes during elections using voice changers can reduce public trust in the integrity of the electoral system, worsen political polarization, and lead to voter confusion, which will affect their decision-making based on false information (Putra & Patra, 2023).

In the economic sector, hoaxes disseminated through voice manipulation using voice changers can cause significant financial losses. For instance, fraud involving the manipulation of a bank official's or a large company's voice can result in material losses for the companies and individuals involved. Additionally, companies involved in such hoaxes may experience long-term reputational damage, which can impact consumer trust and decrease their market value. On the other hand, the digital economy sector is also negatively affected. Hoaxes spread through digital platforms can impact advertising revenue and undermine trust in digital

platforms, which in turn disrupts the growth of the digital economy in Indonesia (Sudibyo, 2019). The spread of false information through voice manipulation can also damage the online trading ecosystem, which is rapidly growing in Indonesia.

### **Analysis of Law Enforcement on the Misuse of Voice Changers, Legal Protection for Victims, and the Challenges Faced**

The misuse of voice changers for the spread of hoaxes and manipulation of information poses significant legal challenges, given the impact it can have on the integrity of information circulating in society. In this context, Indonesia has regulations that can be used to address the misuse of this technology, particularly within the framework of the Electronic Information and Transactions Law (UU ITE) and the Criminal Code (KUHP). Voice changers, as technology that allows for the alteration of voices to resemble the original voice of an individual closely, can be used to disseminate false information or deceive the public in a highly effective manner, especially in the context of spreading hoaxes.

Within the framework of Indonesian law, several provisions in the Electronic Information and Transactions Law (UU ITE) can be used to address the misuse of this technology. For example, Article 45A Paragraph (1) of UU ITE regulates the dissemination of information containing false or misleading notifications that result in material losses to consumers in electronic transactions. In this case, anyone who uses voice changers to create false voice recordings containing hoaxes or misleading information can be subject to criminal penalties. This provision imposes a maximum sentence of 6 years in prison and/or a fine of up to Rp1,000,000,000.00. Additionally, Article 45A Paragraph (3) can also be applied to cases of hoax dissemination that cause public unrest. For example, when someone uses a manipulated voice to spread false information related to government policies, health issues, or natural disasters. Perpetrators of such hoaxes can face up to 6 years in prison and a fine of Rp1 billion. Apart from the UU ITE, Article 378 of the Criminal Code (KUHP) on fraud can also serve as a legal basis. If a voice changer is used to deceive an individual or group for unlawful gain, the perpetrator can be prosecuted under criminal fraud provisions. This article imposes a maximum sentence of 4 years in prison.

The spread of hoaxes using voice changers not only harms society at large but also has damaging effects on individuals who become victims. Victims of the misuse of this technology have the right to legal protection, both through civil and criminal channels, within the framework of Indonesian law. In this regard, the rights of individuals who are victims of hoaxes include the right to protect their reputation, privacy, and emotional well-being, as well as the right to seek compensation for the damages incurred. For example, an individual whose voice

has been manipulated using a voice changer and used to spread false information may suffer reputational damage, which could result in job loss, a decrease in income, or psychological harm.

Victims have the right to seek legal protection based on the provisions in the Electronic Information and Transactions Law (UU ITE), as outlined in the formal legal substance of the UU ITE, regarding the investigation provisions found in Articles 42 to 44 of UU ITE. The victim's right to resolve the case, in addition to being regulated by UU ITE, is closely related to the Criminal Procedure Code (KUHAP) in the criminal case resolution process. The victim's right to the prosecution of the perpetrator of electronic transaction crimes under UU ITE is marked by the penal provisions found in Articles 45 to 52 of UU ITE. In relation to the victim's right to the prosecution of the perpetrator of voice changer misuse, this is provided for in Article 45 Paragraph (1) of UU ITE, which imposes penalties on the perpetrator in the form of imprisonment and fines. The victim's rights under KUHAP that are relevant to the rights of victims in cases of voice changer misuse are as follows:

1. The Right to File a Report (Article 108 Paragraph (1) of the Criminal Procedure Code - KUHAP).
2. The Right to Supervise the Investigator and Public Prosecutor (Articles 77 and 80 of the Criminal Procedure Code - KUHAP).
3. The Right to Claim Compensation for Damages Resulting from a Criminal Act Through the Consolidation of Civil and Criminal Cases (Articles 98 to 101 of the Criminal Procedure Code - KUHAP).

On the other hand, the civil route also provides the victim with the opportunity to claim compensation for the damages incurred. Based on the Civil Code (KUHPerdata), the victim can file a lawsuit against the perpetrator of the hoax dissemination, grounding the claim on unlawful acts that have caused harm. Article 1365 of the Civil Code (KUHPerdata) states that anyone who commits an unlawful act and causes harm to others is obligated to compensate for the damage. In this case, the victim may claim compensation for both material and immaterial damages, such as reputational loss or psychological suffering caused by the hoax (Kamagi, 2018).

Furthermore, victims of hoaxes related to voice manipulation also have the right to protection of their privacy and personal data. In this case, the Personal Data Protection Law (UU PDP) provides a legal basis for individuals who feel their privacy rights have been violated due to the misuse of voice changers to record or disseminate unauthorized personal information. This law provides protection for personal data and grants victims the right to

request the deletion of their data that has been misused as a result of becoming victims of voice changer abuse, which led to the disclosure of their personal information. Victims also have the right to receive legal assistance in dealing with the legal consequences of the spread of hoaxes, either through personal attorneys or institutions providing legal services. In some cases, the Ministry of Communication and Informatics (Kominfo) and other related agencies play a role in providing complaint services and protection for individuals who have become victims of harmful false information. With this mechanism, victims can assert their rights to justice and recovery after being impacted by the misuse of voice changers for information manipulation.

The technical and legal challenges in addressing hoax cases that involve voice manipulation technology, such as voice changers, are complex issues that involve difficulties in identifying perpetrators and effectively enforcing the law. One of the main challenges faced by law enforcement is the identification of the perpetrators. Voice manipulation performed using a voice changer can be very difficult to detect, especially when the voice generated closely resembles the original voice of an individual with high accuracy. This makes tracking the identity of the perpetrator more complicated, mainly if the perpetrator intentionally uses tools to conceal their identity, such as hiding their IP address or using anonymous accounts on social media or communication applications (Subki et al., 2018). Another technical difficulty lies in proving that the voice used in the hoax has indeed been manipulated. In this digital era, where audio editing technology is increasingly sophisticated, altered, or fabricated, voices can be highly realistic and convincing, thus confusing victims and the public. Evidence in the form of voice recordings presented in court may not be sufficient to prove that the voice has been manipulated unless forensic digital tools are available to accurately identify these alterations (Sayid, 2024). Therefore, law enforcement must rely on additional evidence, such as digital footprints or metadata, which can help uncover the origin of the manipulated voice recordings.

From a legal perspective, the existing regulatory framework, such as the Electronic Information and Transactions Law (UU ITE), does provide a basis to address hoax cases and information manipulation; however, the regulations often lack sufficient specificity to address the new challenges posed by voice manipulation technology. One of the obstacles is the need for more expertise and adequate tools to handle cases involving audio manipulation, which results in slower and less effective investigations. Law enforcement requires specialized training and technological tools that can assist them in verifying the accuracy of digital information, including voice recordings. In this context, the role of law enforcement is crucial, but it is also fraught with difficulties. Police and other law enforcement agencies must collaborate with information technology experts, digital forensic laboratories, and other

relevant institutions to conduct effective investigations. Although UU ITE provides a legal basis to prosecute perpetrators of hoax dissemination, effective law enforcement is still hindered by the limited technical capacity to identify voice manipulation. Therefore, law enforcement in such cases requires a multidisciplinary approach involving technology, law, and inter-agency cooperation. Additionally, another legal challenge lies in the enforcement of penalties. In Indonesia, although there are provisions in UU ITE that regulate sanctions for the spread of hoaxes and defamation, the implementation of the law often faces obstacles. Many hoax cases remain unresolved due to insufficient strong evidence and perpetrators who cannot be clearly identified or located. This is due to the prevalence of anonymous accounts used to spread hoaxes and the use of technologies such as VPNs that conceal the perpetrators' locations (Rizkiyanto et al., 2024).

#### **4. CONCLUSION**

The misuse of voice changer technology in the dissemination of hoaxes in Indonesia has resulted in various negative impacts, both socially, politically, and economically. This technology allows perpetrators to manipulate voices and spread false information that can damage individual reputations, influence public opinion, and cause unrest within society. Although Indonesia has a firm legal framework through the Electronic Information and Transactions Law (UU ITE) and the Personal Data Protection Law (UU PDP), law enforcement against the misuse of this technology still faces several challenges. The main challenges include difficulties in identifying perpetrators, limited forensic tools to detect voice manipulation, and the lack of more specific regulations to address this issue. Victims of hoaxes are entitled to legal protection, both through criminal and civil channels, including the right to compensation and clarification of false information. To address the misuse of voice changers in the spread of hoaxes, there is a need to enhance the capacity of law enforcement through training and better digital forensic tools. Legal regulations also need to be updated to address voice manipulation issues more precisely and strengthen provisions related to personal data protection. Furthermore, digital literacy among the public must be improved, focusing on how to recognize hoaxes and verify information, as well as strengthening cooperation between the government, digital platform providers, and the public to combat hoaxes. Finally, awareness of privacy and personal data rights should be promoted more actively to protect individuals from the misuse of this technology.

#### **REFERENCES**

- Adelia, F. (2023). *Strategi penguatan literasi digital berbasis komunitas dalam melawan hoaks pada media sosial di Gerakan Masyarakat Peduli Literasi Digital Kota Bekasi*. FITK UIN Syarif Hidayatullah Jakarta.
- Ali, M. (2021). Penguatan literasi digital dalam mencegah penyebaran hoaks di era milenial. *Jurnal Ar-Rahmah*, 1(1), 66–79.
- Amalliah, A. (2018). Persepsi masyarakat terhadap fenomena hoax di media online pada era post truth. *Akrab Juara: Jurnal Ilmu-Ilmu Sosial*, 3(4), 1–15.
- Benuf, K., & Azhar, M. (2020). Metodologi penelitian hukum sebagai instrumen mengurai permasalahan hukum kontemporer. *Gema Keadilan*, 7(1), 20–33.
- Dewatana, H. (2021). *Efektivitas penegakan hukum dalam kasus penyebaran informasi bohong (Studi kasus di Kabupaten Grobogan)*. Universitas Islam Sultan Agung (Indonesia).
- Fakta, T. C. (2024a). [HOAKS] Raffi Ahmad bagikan bansos melalui situs judi. *Kompas.com*. [https://www.kompas.com/cekfakta/read/2024/07/29/100100282/-hoaks-raffi-ahmad-bagikan-bansos-melalui-situs-judi#google\\_vignette](https://www.kompas.com/cekfakta/read/2024/07/29/100100282/-hoaks-raffi-ahmad-bagikan-bansos-melalui-situs-judi#google_vignette)
- Fakta, T. C. (2024b). [HOAKS] Rano Karno bagikan Rp 50 juta lewat TikTok. *Kompas.com*. <https://www.kompas.com/cekfakta/read/2024/11/06/132200582/-hoaks-rano-karno-bagikan-rp-50-juta-lewat-tiktok>
- Fakta, T. C. (2024c). Cek fakta: Hoaks rekaman suara Jokowi instruksikan Ahmad Luthfi diganti Kaesang pimpin Jawa Tengah. *Liputan6.com*. <https://www.liputan6.com/cek-fakta/read/5817351/cek-fakta-hoaks-rekaman-suara-jokowi-instruksikan-ahmad-luthfi-diganti-kaesang-pimpin-jawa-tengah?page=3>
- Fakta, T. C. (2024d). Cek fakta: Rekaman suara Prabowo Subianto promosikan jam tangan usai raih kemenangan hasil hitung cepat ini hasil modifikasi AI. *Liputan6.com*. <https://www.liputan6.com/cek-fakta/read/5531078/cek-fakta-rekaman-suara-prabowo-subianto-promosikan-jam-tangan-usai-raih-kemenangan-hasil-hitung-cepat-ini-hasil-modifikasi-ai?page=4>
- Gani, T. A. (2023). *Kedaulatan data digital untuk integritas bangsa*. Syiah Kuala University Press.
- Genelza, G. G. (2024). A systematic literature review on AI voice cloning generator: A game-changer or a threat? *Journal of Emerging Technologies*, 4(2), 54–61.
- Hajli, N., Saeed, U., Tajvidi, M., & Shirazi, F. (2022). Social bots and the spread of disinformation in social media: The challenges of artificial intelligence. *British Journal of Management*, 33(3), 1238–1253.
- Hilman, R. (2024). Apa itu voice changer AI? Fungsi dan manfaatnya untuk bisnis. *Pointstar.co.id*. <https://www.pointstar.co.id/artificial-intelligence/voice-changer-ai/>
- JACX, T. (2024). Hoaks! Rekaman suara Prabowo sebut orang Indonesia harus bodoh. *Antaraneews.com*. <https://www.antaraneews.com/berita/3976509/hoaks-rekaman-suara-prabowo-sebut-orang-indonesia-harus-bodoh>

- Juditha, C. (2018). Hoax communication interactivity in social media and anticipation (Interaksi komunikasi hoax di media sosial serta antisipasinya). *Pekommas*, 3(1), 261723.
- Kamagi, G. A. (2018). Perbuatan melawan hukum (*Onrechtmatige Daad*) menurut Pasal 1365 Kitab Undang-Undang Hukum Perdata dan perkembangannya. *Lex Privatum*, 6(5).
- Khanjani, Z., Watson, G., & Janeja, V. P. (2021). How deep are the fakes? Focusing on audio deepfake: A survey. *arXiv preprint arXiv:2111.14203*.
- Miyamoto, T., & Fukumoto, M. (2024). Making English voices similar to user's voices using voice changer and interactive differential evolution. *International Symposium on Affective Science and Engineering (ISASE2024)*, 1–4.
- News, T. (2024). BP2MI: Video bantuan Rp1,5 M dari Kepala BP2MI Benny Rhamdani untuk pekerja migran Indonesia itu hoaks. *Liputan6.com*. <https://www.liputan6.com/news/read/5695465/bp2mi-video-bantuan-rp15-m-dari-kepala-bp2mi-benny-rhamdani-untuk-pekerja-migran-indonesia-itu-hoaks>
- Putra, F., & Patra, H. (2023). Analisis hoax pada pemilu: Tinjauan dari perspektif pendidikan politik. *Naradidik: Journal of Education and Pedagogy*, 2(1), 95–102.