

The Urgency of Reformulating The Narcotics Law in Response to The Digital Modus Operandi of Drug Trafficking Syndicates Using The Zangi App

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Abstract. *The development of information technology has driven a transformation in the modus operandi of illicit drug trafficking from conventional methods to digital methods through encrypted communication applications, such as Zangi, which complicates the tracking and evidence gathering processes for law enforcement agencies. This study aims to analyze the modus operandi of narcotics trafficking syndicates through digital media and to examine the urgency of reformulating Law No. 35 of 2009 on Narcotics. This study is a normative legal research employing legislative, conceptual, and case based approaches. The findings indicate that current regulations do not explicitly address drug trafficking based on electronic systems, rendering them ill suited to the evolution of digital technology. Although electronic evidence is recognized under criminal procedure law, its implementation still faces technical challenges and limitations in law enforcement capacity. Therefore, a reformulation of the Narcotics Law is necessary, encompassing the expansion of the legal definition of digital based criminal offenses, the strengthening of cyber oversight authorities, and the regulation of electronic platform liability to achieve an adaptive and effective criminal law policy in the digital era.*

Keywords: *Digital Modus Operandi; Electronic Evidence; Narcotics; Reformulation.*

1. Introduction

The rapid development of information and communication technology has facilitated new modus operandi in narcotics trafficking crimes. Narcotics transactions can now be conducted via the internet using disguised methods, such as shipping in the form of packages, so that perpetrators and buyers do not need to meet in person a risk of detection by law enforcement. Additionally, smuggled narcotics are packaged in various forms to evade security checks. This phenomenon highlights the weakness of controls over cross border narcotics trafficking, thereby facilitating the entry of illegal narcotics from abroad into Indonesian territory (Fransiska Panggabean, 2024).

Drug related crimes have multidimensional impacts on public health and socioeconomic stability. The distribution and use of narcotics outside of medical and research purposes which

are regulated under the Narcotics Law can harm the state and cause both psychological and physical damage to the individuals who use them. Nevertheless, these facts are often ignored by certain groups, particularly drug trafficking syndicates that treat this illegal activity as a lucrative business venture, without considering the destructive impact it has on society and the state (Dewa Ayu Risma Pranasita, 2023).

Digital based *modus operandi* is one method criminals use to commit criminal acts via the internet or digital technologies, such as encrypted applications. Based on this definition, the digital based *modus operandi* of drug trafficking syndicates refers to the criminal methods employed by these syndicates in committing drug related offenses, such as conducting transactions, communicating for the buying and selling of drugs, and scheduling deliveries through digital technologies, such as encrypted applications (Loso Judijanto, 2025). According to the BNN's annual report, there has been a drastic increase in the use of digital channels in drug trafficking, rising from approximately 35% in 2020 to over 60% in 2023 (BNN, 2023).

Drug trafficking syndicates are demonstrating increasingly complex adaptation patterns to evade detection by law enforcement. One method used is the utilization of digital communication apps like Zangi, which serves as a coordination medium among drug trafficking syndicates. The Zangi app employs a proprietary handshake encryption system and dynamic channel encryption as its primary security measures in every communication session, which are active by default in every interaction between users. These two encryption systems ensure that all forms of communication including conversations as well as audio and video calls are protected by an encryption layer inaccessible to third parties, including Zangi itself. The Zangi system also implements a permanent deletion policy, whereby any message deleted by a user is not stored in the form of cache, metadata, or server logs, and therefore leaves no digital footprint on the internet. Furthermore, the Zangi app also employs a peer to peer communication system a direct data transmission system between devices without a central intermediary (Zangi) to ensure the confidentiality of communication between users and prevent potential access by third parties. Given the system and rules of the Zangi app, it will make it difficult for law enforcement to track drug trafficking syndicates communicating within this app, as communication data cannot be accessed by third parties, including law enforcement.

The issue is that the Narcotics Law No. 35 of 2009 has not explicitly addressed the phenomenon of digital technology abuse by drug syndicates. The current legal framework is unable to accommodate the complexity of drug-related crimes in the digital era. This situation has the potential to complicate the resolution of narcotics cases involving new *modus operandi*. Therefore, an in-depth study is needed to evaluate the necessity of reformulating the Narcotics Law to align with the dynamics of information technology and current criminal methods. This phenomenon poses new challenges for law enforcement agencies in their efforts to eradicate technology-based drug syndicates (Muhammad Natsir, 2024).

Based on the background above, the author is interested in discussing narcotics trafficking syndicates in Indonesia through the use of digital media, such as the Zangi app, which is still in use today, and analyzing the gaps and weaknesses in the Narcotics Law in handling digital-based narcotics criminal cases, as well as the urgency of reformulation to address and manage increasingly complex forms of digital-based narcotics crimes. The research questions in this study are: What are the modus operandi of drug trafficking syndicates through digital applications such as Zangi? What is the urgency of reformulating the Narcotics Law to accommodate the modus operandi of drug crimes based on digital technology?

2. Research Methods

This study is a normative legal study employing a descriptive qualitative approach. This study focuses on the examination of applicable positive legal norms (R. Tahir, I. G. P. Astawa, 2023). The focus of this normative legal research is to analyze and evaluate the legal provisions in Law No. 35 of 2009 on Narcotics in order to address and understand the legal challenges posed by the modus operandi of drug syndicates that utilize digital technology, particularly the Zangi application. The approaches used include the statutory approach, the conceptual approach, and the case approach. The legal materials for this study were obtained through a literature review. Primary legal materials include Law No. 35 of 2009 on Narcotics, the Criminal Code (KUHP), the Criminal Procedure Code (KUHP), and Law No. 19 of 2016 on Information and Electronic Transactions. Secondary legal materials include scientific journals, previous research, books, and official documents related to narcotics crimes and the use of digital technology in their distribution. The analysis was conducted using a descriptive-analytical approach, focusing on the legal review of the alignment between existing legal norms and actual practices in the field, particularly the use of the Zangi app by narcotics trafficking syndicates

3. Results and Discussion

3.1 Modus Operandi of Drug Trafficking Syndicates Using Digital Applications such as Zangi

Criminal methods in Indonesia are increasingly evolving with the times; what was once carried out directly or conventionally has shifted to the use of the internet and digital technology. One such method in Indonesia that has changed with the times is the digital-based approach to drug trafficking. Data from the National Narcotics Agency (BNN) indicates a drastic increase in the use of digital channels in drug trafficking, rising from approximately 35% in 2020 to over 60% in 2023. This data demonstrates that drug trafficking crimes in Indonesia have seen a significant annual increase, driven by advancements in technology.

Digital-based modus operandi in drug trafficking refers to actions or methods employed by perpetrators to distribute or disseminate narcotics including Schedule 1, 2, and 3 drugs through digital technology. Typically, perpetrators do not act alone but operate in groups, often referred to as syndicates, each with specific roles. In carrying out their modus operandi, drug trafficking syndicates have become increasingly sophisticated by utilizing digital technology, specifically a digital application to facilitate and streamline their operations in distributing narcotics. One such

digital application commonly used by drug trafficking syndicates is Zangi. Zangi is a *private chat* app originating from Armenia, designed to protect user privacy.

Zangi is a communication platform that enables messaging, voice and video calls, and file sharing. Unlike WhatsApp and Telegram, this app does not store conversation history on servers but only on the user's device, so the content of communications cannot be accessed or checked by third parties. To use it, users must download the app and register an account using a phone number and email address. In terms of security, Zangi employs 256-bit AES-GCM encryption, which combines the Advanced Encryption Standard with Galois/Counter Mode to ensure data authenticity and integrity, making it one of the safest and fastest methods for protecting sensitive information within the app. Zangi also uses proprietary handshake encryption and dynamic channel encryption to protect every user communication, ensuring it cannot be accessed by third parties, including the service provider. The system also implements permanent deletion of deleted messages and a peer-to-peer communication mechanism that allows data transmission to occur directly between devices without a central server intermediary to ensure communication confidentiality.

However, despite all the convenience and advantages of the Zangi app, drug trafficking syndicates have exploited Zangi as an intermediary for drug transactions. Drug trafficking syndicates use Zangi to communicate and conduct transactions whether to schedule deliveries, determine drug purchase prices, or specify the quantity of goods to be distributed and shipped to buyers. With the system built into the Zangi app, it becomes difficult for law enforcement to track drug trafficking syndicates communicating within the app because communication data cannot be accessed by third parties, including law enforcement.

One example illustrating the digital *modus operandi* employed by drug trafficking syndicates is the case uncovered by the North Sumatra Regional Police. The case came to light on April 28, 2025, with four suspects SUT and KAM, a married couple, who were arrested in possession of 28 kg of methamphetamine; CT, who was apprehended with 33 kg of methamphetamine; and ZUL, who was apprehended with 39 kg of methamphetamine. The total evidence amounted to 100 kilograms of methamphetamine, the distribution of which was successfully thwarted by the North Sumatra Regional Police. This syndicate is suspected of operating across regions, from the city of Medan to the Port of Merak in Banten Province. According to the North Sumatra Regional Police, they first communicated for transactions using the Zangi app, after which the goods would be shipped. This case demonstrates that this *modus operandi* reflects a shift in criminal tactics by drug trafficking syndicates from conventional communication to the use of encrypted digital platforms such as the Zangi app, which will complicate detection and enforcement by law enforcement agencies.

3.2 The Urgency of Reformulating the Narcotics Law to Accommodate Digital Technology-Based Narcotics Crime Modus Operandi

Narcotics regulations in Indonesia are governed by Law No. 35 of 2009 on Narcotics. This law covers all matters related to narcotics, ranging from types of narcotics, penalties for dealers and drug abusers, agencies handling narcotics cases, etc. However, as times have evolved, the Narcotics Law has not comprehensively addressed these issues and contains legal loopholes in the handling, supervision, and imposition of deterrent effects against drug trafficking syndicates operating through digital applications such as Zangi. This Narcotics Law needs to be reformulated regarding the provisions on handling and imposing deterrent effects against these drug trafficking syndicates so that these syndicates can be effectively addressed in committing criminal acts through the Zangi application. Law No. 19 of 2016 Amending Law-Law No. 11 of 2008 on Electronic Information and Transactions, Article 27(1), does indeed regulate the prohibition on distributing electronic information that violates public morality; however, this article does not explicitly address the handling, supervision, or imposition of strict sanctions against the digital-based modus operandi employed by drug trafficking syndicates.

In Law No. 35 of 2009 on Narcotics, there are several articles that could be reformulated to strengthen the handling and supervision by law enforcement agencies or the National Narcotics Agency (BNN) in addressing these issues, specifically Article 1 of the Narcotics Law. While this article defines terms related to narcotics, it has a shortcoming in that it does not mention or explain narcotics transactions conducted via electronic media such as the Zangi app or similar platforms. This needs to be added so that all modus operandi employed by narcotics trafficking syndicates can be explained and defined in detail in accordance with contemporary developments, making them clearly understandable to the Indonesian public.

Article 5 of the Narcotics Law regulates the scope of narcotics, covering only acts related to narcotics and narcotic precursors. There is a shortcoming in this article, namely that the scope related to narcotics is not broad enough; therefore, the scope of the modus operandi employed by syndicates in distributing narcotics and narcotic precursors via digital means needs to be added. This is quite important so that the handling and supervision of narcotics against drug trafficking syndicates can be stricter, as it now encompasses the digital sphere.

Article 67 of the Narcotics Law mentions the National Narcotics Agency (BNN), which comprises deputies in various fields such as prevention, eradication, rehabilitation, law and cooperation, as well as the community empowerment division. However, given the rapid pace of technological advancement, it is deemed necessary to expand the BNN's organizational structure by adding a deputy for digital oversight. This position aims to monitor and track all activities related to narcotics transactions conducted by trafficking syndicates with buyers via digital applications such as Zangi or similar platforms. The addition of this deputy position can strengthen the BNN in handling narcotics cases that have evolved to utilize digital applications.

Article 114 of the Narcotics Law only regulates the offering for sale, selling, buying, receiving, acting as an intermediary in the sale or purchase, exchanging, or handing over of Category I

Narcotics. This provision does not detail transactions involving the sale and purchase of narcotics via electronic media such as the Zangi app or similar platforms, which is necessary because as the technology used by syndicates to carry out their *modus operandi* becomes more sophisticated, the regulations must also be comprehensively and specifically addressed.

In the new Criminal Procedure Code (KUHP), Article 235(1) addresses the admissibility of evidence, differing from the old Criminal Code (KUHP) by including electronic evidence, judicial observation; and any other means that may be used for evidentiary purposes during court proceedings, provided they are obtained lawfully. When viewed in the context of evidence under the new KUHP, this can facilitate law enforcement officials in proving evidence related to drug trafficking syndicates using the Zangi app, as these elements have been added and explained in sufficient detail. This electronic evidence encompasses all forms of electronic information, electronic documents, and/or electronic systems related to criminal acts, so that drug traffickers who have been arrested by law enforcement officials can be prosecuted in court using this electronic evidence; however, law enforcement officials in Indonesia often lack sufficient knowledge in handling this electronic evidence and are also quite lax in monitoring these drug trafficking syndicates, resulting in sentences that are only brief and in some cases even lead to release, which fails to deter the perpetrators. The collection of digital evidence must also comply with international digital forensic standards.

Proving cases involving digital drug trafficking in Indonesia poses a unique challenge for law enforcement because conventional methods are not sufficiently effective in uncovering drug trafficking networks. Law enforcement officials may use undercover buys as a means to infiltrate illicit drug distribution networks. This technique is recognized under Article 75(j) and Article 79 of Law No. 35 of 2009 on Narcotics; however, these provisions lack detailed explanations regarding the definition, mechanisms, and procedures for its implementation. This regulatory gap in the provisions leads to differing interpretations regarding its role during the investigative or prosecutorial stages, as well as the admissibility of *undercover buy* results as evidence in court. The implementation of this undercover buy technique raises issues such as budget constraints, the use of informants without proper oversight, and the potential for human rights violations (Fahrezi, F. R., & Gaol, S. L., 2024).

In Indonesia, the use of digital methods by drug trafficking syndicates has increased significantly, rising from 35% in 2020 to over 60% in 2023; this figure indicates that law enforcement agencies have yet to effectively prevent and counter these digital methods. The cases carried out by drug trafficking syndicates described in this first discussion illustrate how these syndicates conduct their operations through the Zangi app. The syndicates use the Zangi app to carry out their activities, yet the Narcotics Law has not yet provided detailed regulations for drug trafficking syndicates operating via digital applications. When examining how law enforcement conducts operations to apprehend these drug trafficking syndicates, the response is still categorized as relatively slow and lacking in agility. Typically, only couriers or street-level dealers are arrested, while the masterminds above them continue to operate behind the scenes, watching their

subordinates get caught and usually seeking new recruits to replace them. If this cycle continues indefinitely in Indonesia, the circulation of narcotics in the country will be difficult to control/

This necessitates amendments to the provisions of the Narcotics Law, which have not yet adapted to the characteristics of digital crime, where law enforcement agencies must be agile and swift in handling similar cases in an increasingly evolving era. Law enforcement officials need to be educated and trained on the *modus operandi* used in apps like Zangi. Furthermore, it is not only the syndicates or couriers that must be seriously prosecuted; regulations governing these drug dealers must also be strictly enforced until they are brought to court, so that drug trafficking in Indonesia can be eradicated at its roots.

Specific regulations regarding how digital platforms like Zangi bear responsibility for monitoring and preventing drug trafficking within the app are one aspect that needs to be addressed in the Narcotics Law. Cases involving the use of the Zangi app as a *modus operandi* demonstrate that the platform plays a significant role; both the Narcotics Law and the ITE Law need to include provisions requiring digital platforms to have mechanisms for detecting drug transactions and to provide reporting on suspicious activities carried out by drug dealers.

4. Conclusion

Based on the results of research and normative analysis of the regulations in Law No. 35 of 2009 on Narcotics, it can be concluded that the evolution of *modus operandi* by drug trafficking syndicates utilizing digital technology, particularly through encrypted applications like Zangi, has surpassed the scope of current normative regulations. The transformation of criminal patterns from conventional models to digital models that utilize end-to-end encryption, peer-to-peer systems, and policies for the permanent deletion of data has, in fact, created serious obstacles in the processes of detection, investigation, inquiry, and evidence presentation in court. The significant increase in the use of digital channels in narcotics transactions indicates a structural disruption in narcotics crime patterns that has not yet been adequately addressed by the national regulatory framework. The Narcotics Law has not explicitly regulated the distribution and transaction of narcotics via electronic media or encrypted digital applications, thereby creating a normative gap in regarding definitions, the scope of offenses, criminal liability, and oversight mechanisms. Provisions in the Electronic Information and Transactions Law also have not specifically established digital-based narcotics offenses as a distinct regulatory regime. Although developments in criminal procedure law have recognized electronic evidence, its effectiveness remains dependent on technical capacity, procedural integrity, and digital forensic standards that have not yet been fully and optimally institutionalized in law enforcement practice. The urgency of reformulating the Narcotics Law stems from the need to establish a criminal legal policy that is adaptive, responsive, and oriented toward public protection. This reformulation must include expanding the definition and scope of narcotics-related criminal offenses to encompass transactions conducted via electronic systems, strengthening institutional authority in digital oversight, clarifying accountability mechanisms for key actors within syndicate structures, and establishing more comprehensive regulations regarding

specialized investigative techniques such as undercover buys in a digital context. In addition, digital platforms need detection mechanisms for narcotics transactions and must provide reporting on suspicious activities carried out by drug dealers

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