Legal Challenges and Uncertainties: The Use of Biometric Information Technology in Immigration Control

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ASTRACT: The use of biometric information technology in immigration control is an innovation that supports the efficiency and security of the identification process of individuals at the entrance of a country. However, challenges and legal uncertainties arise as the implementation of this technology develops. This study aims to analyze the legal challenges and uncertainties that may arise in the context of applying biometric information technology in immigration control. Through a normative legal research and case study approach, we identify a number of legal issues related to privacy rights, data security, and the social impact of using biometric technology in the immigration context. These challenges involve regulatory vagueness, privacy violations, and data security risks that need to be addressed to ensure sustainable and fair implementation. This research also looks at international efforts and best practices in addressing the legal challenges that arise in relation to biometric technology in the context of immigration control. As such, this research is expected to contribute to the development of better regulations, as well as provide an in-depth look at the positive and negative impacts of using biometric technology in optimizing the immigration control process.

KEYWORDS: Uncertainty; Challenges; Biometric Information; Use of Technology; Immigration Surveillance.

I.   INTRODUCTION

Indonesia is a country that occupies a strategic position in international relations, both from a geographical aspect and potential resources, ranging from natural resources to human resources. From now on, the flow of people in and out of Indonesia is increasing. The globalization of the world has an impact on increasing the movement of people between countries, and this creates problems for countries because national borders are very easy to cross. Every country must have sovereignty regarding the regulation of people's traffic in and out of its territory. The regulation includes a matter of visiting or temporary stay, and each country has laws and regulations to regulate these matters which can be known as immigration provisions.[1]

In the context of immigration, the use of biometric technology provides significant benefits, ranging from improving border security to increasing the efficiency of the identity verification and identification process.Based on Law Number 6 of 2011 concerning Immigration. "Immigration is the matter of the traffic of people entering or leaving the territory of Indonesia and its supervision in the context of upholding state sovereignty". The use of this technology has implications not only in technical aspects but also in the fields of law, ethics and human rights.

Immigration Supervision is a series of activities aimed at providing services and law enforcement, ensuring the entry and exit of all foreign nationals into Indonesian territory, as well as monitoring foreign nationals residing in Indonesian territory.[2] The supervision factor is one of the essential factors because through supervision it can be known whether a foreign national's travel is in accordance with what has been stated in the immigration license, instructions or principles that have been determined, it can be known difficulties and weaknesses in work to be corrected and can also be known whether something is running efficiently or not.[3]

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[1] Kennisa Monoarfa, *et.all.*, "*Sanksi Atas Pelanggaran Izin Tinggal Warga negara Asing Menurut Undang-Undang N0. 6 Tahun 2011 Tentang Keimigrasian*", Lex Et Societatis, Vol. 9 No. 1,2021, p. 63-64.

[2] M. Imam Santoso, 2004, *Perspektif Imigrasi Dalam Pembangunan Ekonomi dan Ketahanan Nasional*, Universitas Indonesia UI Press, Jakarta, p. 21.

[3] Adrian Sutedi, 2009, *Implikasi Hukum Atas Sumber Atas Pembiayaan Daerah Dalam Kerangka Otonomi Daerah,* ,Sinar Grafika, Jakarta, p. 206.

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The process of travel document inspection, interview process, visa checking, travel document scanning, biometric data collection and checking on the deterrence list is a series of immigration checks carried out on Foreigners (OA) crossing into the Indonesian border.[4]

Biometric data collection is carried out by taking and recording fingerprints and facial photographs, and the biometric data collection is carried out for those who have never carried out biometric data collection before.[5] This means that the biometric data is taken when the OA first arrives at the TPI. The electronic immigration stamp is given by affixing a sticker-shaped stamp on the OA's travel document. This process is regulated in accordance with MOLHR Regulation No. 28/2018 on Immigration Stamp which replaces MOLHR Regulation No. 42/2015. This regulation explains that the electronic stamp is only given to OA who fulfill the conditions of entering Indonesian territory upon arrival. In the book Migration and Pandemic, border technologies for automated decision-making, biometric data, and drones are increasingly used to regulate migration and select global human mobility.[6]

In the general explanation section of Law No. 6 Year 2011 on Immigration, it is emphasized that against foreigners, services and supervision in the field of immigration are carried out with selective principles (selective policy), it is determined in order to protect the interests. Selective policy is a policy that requires accuracy in terms of licensing foreigners who enter Indonesian territory, namely only people who bring benefits to the country and do not disturb security and order can enter and stay in Indonesia. These foreigners must have valid travel documents and visas and are not included in the deterrence list. Thus, not all foreigners are allowed to enter Indonesian territory. This policy indirectly becomes a filter for foreigners entering Indonesian territory.[7]

Immigration Supervision based on Law No.9 of 1992 Articles 11 and 12 is in the form of prevention of Indonesians who will leave the country if the person is declared not allowed to leave Indonesia at the request of the prosecutor, police or requests from related parties.Immigration Supervision consists of Administrative Supervision in the form of examining, researching, evaluating, analyzing, concluding clarifying and documenting every document or letter which is the target or object of supervision. The data and information are used as input in decision making to conduct operational supervision, immigration investigation or immigration action. Other supervision is operational supervision which is a field activity in the form of investigation, security and mobilization.[8]

However, along with technological advancements come a number of legal issues, particularly regarding the legal uncertainty in the application of biometrics in immigration control. These issues create significant challenges for policymakers, legal practitioners, and the general public. The sustainability and availability of biometric data creates ethical debates about individual privacy. The massive storage and use of biometric data can threaten the privacy rights of citizens and migrants, raising questions about the extent to which the state has the authority to collect and store individual biometric data.

Furthermore, legal uncertainties arise in the context of a regulatory framework that is not yet fully well-defined. There is a need for a clear legal foundation to address the various issues that arise with the use of biometrics in immigration control, including arrangements related to the storage, access, and deletion of biometric data. Furthermore, the risk of technical errors and data security is an inevitable focus of attention. The use of biometric technology may pose a risk of misidentification and security threats to stored biometric data. In this context, there needs to be adequate legal protection to address the potential misuse or leakage of data that can significantly harm individuals.

In this atmosphere of uncertainty, it is necessary to conduct an in-depth study to develop a balanced legal framework between the use of biometric technology in immigration control and the protection of individual rights and privacy. Concrete steps need to be taken so that clear and firm regulations can protect the interests of the public while ensuring the effectiveness of immigration control in the face of today's global challenges.

II. RESEARCH METHOD

This research is a normative juridical legal research. What is meant by juridical research is to look at legal aspects based on laws and regulations, while normative research is a research in the field of law to find legal rules, as well as legal doctrines to answer existing legal issues. Normative juridical legal research that focuses on the review or study of positive law. Normative juridical

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[4] Menteri Hukum dan HAM RI, *Peraturan Menteri Hukum Dan HAM RI No. 44 Tahun 2015 Tentang Tata Cara Pemeriksaan Masuk Dan Keluar Wilayah Indonesia*, 2015, www.peraturan.go.id.

[5] Menteri Hukum dan HAM RI, *Peraturan Menteri Hukum Dan HAM RI No. 44 Tahun 2015* Tentang Tata Cara Pemeriksaan Masuk Dan KeluarWilayah Indonesia.

[6] A. Triandafyllidou, 2022, Migration and Pandemics: *Spaces of Solidarity and Spaces of Exception*, IMISCOE Research Series, p.23.

[7] *Ibid*., p. 50.

[8] Wahyudin Rukun, 2003, telaah masalah-masalah keimigrasian, kumpulan *artikelkeimigrasian,* PT. Adi Kencana, Jakarta, p. 5.

research is legal research that places the law as a building system of norms. The system of norms in question is about principles, norms, rules from laws and regulations, court decisions, and doctrines or teachings.

III.   RESULT AND DISCUSSION

Challenges and Legal Uncertainty in the Use of Biometric Information Technology in Immigration Surveillance

The word immigration is a translation of Latin migration which means the movement of people from one place to another or from one country to another. There is also the term emigration which has a different meaning, namely the movement of people from one country's territory out to another country's territory. On the other hand, the term immigration in Latin means the movement of people from one country to enter another country.[9] Based on Law Number 6 Year 2011 on Immigration, Article 1 paragraph 1 states: Immigration is the matter of people entering or leaving the territory of Indonesia and its supervision in order to maintain the sovereignty of the State ".

In this era of globalization, immigration control has become a crucial aspect in maintaining the security and integrity of a country. In an effort to improve its effectiveness, many countries are adopting biometric technology as the main identification tool. Biometrics, which involves the use of unique physical data such as fingerprints, face, and iris, has opened up new opportunities in monitoring and controlling population movements at borders.[10]

According to Roethenbaugh and Mansfield, biometrics is an automated method of recognizing or verifying a person's identity based on a physical or behavioral characteristic. Individual behavioral characteristics such as fingerprints, iris, hand geometry and retina are special physical characteristics of each individual or can also be called biometrics. Biometrics (derived from the Greek bios which means life and metron which means to measure). So, it can be concluded that biometrics is the measurement and calculation of the body related to human characteristics.

Biometric identifiers are distinctive and measurable characteristics used to mark and describe individuals. Biometric identifiers are often categorized as physiological characteristics related to body shape. Examples include, but are not limited to fingerprints, palm veins, facial recognition, DNA (deoxyribonucleic acid), palm prints, hand geometry, iris or retinal recognition and smell/aroma. Behavioral characteristics relate to a person's behavioral patterns, including but not limited to typing rhythm, gait, keystrokes, signature, behavioral profile and voice.[11] According to Lebovic, Galton's work "led to the application of mathematical models for fingerprints, phrenology, and facial characteristics, as part of absolute identification and key to including and excluding populations.[12]

The utilization of biometric technologies, such as fingerprinting, facial recognition, or iris scanning, provides advantages in the identification of individuals with a high degree of accuracy. However, behind the sophistication of this technology comes a number of legal uncertainties that need to be addressed. The use of biometrics in the context of immigration control presents complex challenges related to privacy, human rights, and other legal aspects.

The use of biometric information technology is useful for surveillance in immigration functions. Supervision in the immigration function is the whole process of activities to control or supervise whether the process of carrying out tasks is in accordance with predetermined rules. Initially, the implementation of supervision was only carried out against foreigners, but given the development and dynamics of society that are increasing, it is carried out thoroughly, including against Indonesian citizens, especially in terms of misuse and falsification of travel documents.[13]

Article 68 of Law Number 6 Year 2011 on Immigration has regulated immigration control of foreigners conducted at the time of visa application, entry or exit and the granting of residence permits:

a. Collection, processing, and presentation of data and information;
b. Preparation of a list of names of Indonesian citizens subject to prevention from leaving the territory of Indonesia;
c. Monitoring the presence and activities of foreigners in the territory of Indonesia;
d. Taking photos and fingerprints;
e. Other activities that can be legally accounted for.

Supervision as one of the functions of management which is a process of activities to ensure and guarantee that goals and objectives and tasks have been carried out properly in accordance with the plans and conditions that have been set. So that there is a close relationship between planning and supervision.

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[9] Herlina Wijayanti, 2011, *Hukum Kewarganegaraan dan Keimgirasian*, Bayumedia Publishing, Malang, p.129.

[10] 2001, *Kamus Besar Bahasa Indonesia*, Balai Pustaka, Jakarta, p. 346.

[11] Josh Ellenbogen, 2012, *Reasoned and Unreasoned Images*: The Photography of Bertillon, Galton, and Marey, University Park, p. 8.

[12] Nitzan, Ellenbogen, 2015, *Biometrics or the Power of the Radical Center*, University of Chicago, p. 841–868.

[13] Bhakti Yudha, 2003, *Hukum Internasional*, Sinar Grafika, Bandung, p.3.

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To carry out tasks and activities properly, the apparatus that carries out the supervisory function must understand the meaning of the purpose of conducting supervision first. This is important, because if the apparatus implementing the supervisory function does not understand the meaning and purpose of supervision, the final result of the supervision carried out is not in accordance with the expectations and desired goals. It could be that supervision is carried out carelessly and only as a formality. So in essence, so that the achievement of the desired goals does not deviate, then the implementation of a policy or activity needs to be supervised.

In the implementation of supervision is an important element to maintain the smooth running of organizational work which consists of various components, so that it can run in accordance with what is expected. Basically, good supervision is effective supervision, which means that if there is a deviation, it must be possible to take corrective action immediately, so that the implementation of further activities can run smoothly.

The use of biometric information technology in immigration control, while bringing great benefits, is also faced with a number of challenges that need to be overcome to ensure its sustainability and effectiveness. Below are some of the critical challenges associated with the use of biometric information technology in the context of immigration control:

1. Privacy and Human Rights
   The collection and storage of biometric data often raises concerns regarding individuals' privacy rights. This challenge includes how to ensure that biometric information is not misused and remains compliant with human rights norms.

2. Data Security
   With large amounts of biometric data being collected, data security challenges are significant. The risk of biometric data leakage or misuse is a threat that must be addressed with robust security measures.

3. Accuracy and Misidentification
Biometric technology can face challenges in terms of accuracy, especially when faced with variations in environmental conditions or changes in an individual's physical characteristics. Misidentification can have serious consequences, including wrongful arrest or deportation.

4. System Integration and Standardization
Integration challenges arise when various biometric systems cannot communicate or connect efficiently. Additionally, disagreements in biometric standards can hinder international collaboration in data exchange.

5. Public Acceptance and Stigma
The public often responds to biometric technology with distrust or concern, especially when it comes to immigration control. This challenge includes how to gain public support and overcome the stigma associated with using this technology.

6. Implementation and Maintenance Costs:
The implementation of biometric technology requires significant investment, both in hardware and software procurement, as well as in personnel training. System maintenance and updates also incur additional costs.

7. Misuse by Certain Parties
There is a risk of misuse of biometric technology by irresponsible parties, such as identity theft or falsification of biometric data. This challenge requires efforts in building a security system that is resistant to various threats.

Responding to these challenges requires cross-sector collaboration, ethical thinking, and ongoing efforts to improve the technology and regulatory systems that support the application of biometric information technology in immigration control. The successful application of biometric technology in immigration control depends not only on its ability to identify individuals, but also on the compatibility of the practice with the applicable legal framework. Legal uncertainties arise in many aspects, including the regulation of data privacy, the protection of individual rights, and the management of biometric data in general.

One of the main challenges is the uncertainty in the regulatory framework. Many countries do not have clear and comprehensive regulations governing the use of biometric information technology in immigration control. The existence of poorly defined regulations creates legal uncertainty, leaving room for varying interpretations and potential abuse. Furthermore, the collection and use of biometric data in immigration control often raises questions related to individual privacy rights and personal data protection. The discussion needs to highlight the legal uncertainty regarding the extent to which states can violate individuals' privacy rights in the interest of national security.

In order to address this legal uncertainty, cooperation between the government, legal experts, and community groups needs to be enhanced. The development of clear regulations that can be applied fairly and ethically is essential to balance security and individual rights in biometric technology-based immigration surveillance.

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10) Menteri Hukum dan HAM RI, *Peraturan Menteri Hukum Dan HAM RI No. 44 Tahun 2015* Tentang Tata Cara Pemeriksaan Masuk Dan KeluarWilayah Indonesia.

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