



OPTIMIZING IMMIGRATION PUBLIC SERVICES THROUGH ADMINISTRATIVE AUTHORITY AT BATAM IMMIGRATION CHECKPOINTS

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Abstract

Objective: This study aims to analyze the legal arrangements and implementation of optimizing immigration public services through administrative authority at the Batam Center Port Immigration Checkpoint (TPI), identify the accompanying obstacles, and formulate relevant policy solutions.

Research Methodology: The research uses an empirical juridical approach (socio-legal research) with qualitative methods, combining legislative, conceptual, case, and socio-legal approaches, through semi-structured interviews with immigration officials, field observations on the implementation of digital-based international arrival reporting, and document studies at the Batam Class I Special Immigration Office TPI.

Results: The administrative authority of Immigration Officers at the Batam Center TPI has strong legal legitimacy through attribution, delegation, and mandate mechanisms, but the implementation of digital services via the All Indonesia Application is not optimal due to regulatory gaps, the absence of imperative administrative sanction norms, and the unavailability of standard Contingency Plan SOPs. The Reliability Dimension has not been achieved due to server latency during peak hours, while the Responsiveness Dimension of officers is high but functions as a compensating factor that shifts the role of officers from border law enforcement to technical assistance. From the perspective of Aristotle's Theory of Justice, a single digital service scheme has the potential to harm distributive justice for vulnerable groups, while corrective justice for system failures is still ad-hoc because it has not been institutionalized.

Conclusion: Optimizing immigration public services at TPI Batam Center requires holistic legal and bureaucratic engineering in three dimensions at once, namely legal substance, legal structure, and legal culture, as per the Friedman Legal System Theory framework, so that the balance of the Four Immigration Functions can be realized without sacrificing state security or the quality of public services.

Limitations: The research is limited to one locus, namely the Batam Center Port TPI, with qualitative data based on interviews with a limited number of informants, so generalizations to other TPIs with different characteristics need to be done carefully.

Contribution: This research contributes to the development of state administrative law and immigration law, particularly regarding administrative authority in digital border governance, and proposes concrete recommendations for the Directorate General of Immigration and the Batam Immigration Office.

Keywords: administrative authority, public services, immigration, TPI Batam, digital transformation

1. Introduction

The basic principle of governance in Indonesia is firmly rooted in the concept of a state based on law (rechtsstaat) as expressly mandated in Article 1 paragraph (3) of the 1945 Constitution of the Republic of Indonesia (UUD NRI 1945). The fundamental legal consequence of this provision is that all actions, policies, and authorities carried out by government organs, including immigration officials, must have a valid legal basis (legality principle) and be oriented towards ensuring legal certainty (rechtssicherheit). Along with the development of the modern legal paradigm, the concept of a state based on law in Indonesia does not merely adopt a formal state based on law (formal

rechtsstaat) which is oriented solely towards order, but rather adopts the concept of a state based on material law or a welfare state (welfare state/verzorgingsstaat) as stipulated in the Preamble to the 1945 UUD NRI 1945 paragraph IV. The welfare state doctrine grants broad authority to the government to carry out public service obligations (bestuurszorg), which in the context of immigration institutions demands a paradigm transformation of the immigration function from merely a repressive and restrictive instrument of sovereignty (gatekeeper/securitization) to being the vanguard of fair, non-discriminatory, and efficient public service providers (Abdurrosyid & Eldo, 2024; Wahyudi et al., 2025).

Batam City holds a strategic position within this constellation. As a free trade zone and maritime border area directly facing Singapore and Malaysia, Batam is one of the busiest cross-border migration and mobility hubs in Indonesia (Respationo, 2024; Nasution et al., 2025). The Batam Center Port Immigration Checkpoint (TPI), as the main gateway to the maritime border, is required to harmoniously balance two strategic functions: providing ease and speed of crossing (border crossing facilitation) on the one hand, and maintaining order and oversight of national sovereignty (border security) on the other. As a step to modernize border governance, the Directorate General of Immigration implemented digital-based international arrival reporting through the All Indonesia Application at the Batam Center Port TPI, which is designed to reduce the duration of face-to-face checks at the counter and realize more transparent and measurable border governance, in line with the trend of digital transformation of public services in various countries (Pham et al., 2023; Wahyudi et al., 2025).

The problem is that the implementation of the digitalization policy is taking place without adequate technical regulations and infrastructure. Existing immigration regulations are still homogenous and adopt the pattern of air border crossings, even though sea crossings such as Batam Center Port have very different operational characteristics, namely a pattern of mass passenger arrivals in a short time (bulk/batch arrivals) due to the simultaneous docking of several fast ferries. The absence of a Director General of Immigration Regulation (Perdirjen) specifically for sea border crossings creates an operational legal vacuum, while the digital reporting scheme is still voluntary (voluntary basis) without imperative administrative sanctions norms, resulting in low user compliance. This condition is exacerbated by the absence of a standard operating procedure for handling emergencies (SOP Contingency Plan), which should serve as a legal umbrella for the discretion of immigration officials in the event of technical system disruptions.

This gap between ideal norms (das sollen) and operational reality (das sein) is not unique to Indonesia. Border authorities around the world face similar challenges in transforming conventional services into reliable digital governance, including questions about infrastructure readiness, public trust in biometric data, and the digital divide, which has the potential to undermine the principle of equal service (Mutlu et al., 2025; Zhang et al., 2025; Jain et al., 2023). This comparison demonstrates that strengthening technical and institutional regulations is not merely a domestic need for TPI Batam Center, but also part of the challenges of contemporary, global border governance. Based on the description, this article is written to analyze the legal regulations for optimizing immigration public services through administrative authority, review its implementation at the Batam Center Port TPI, identify obstacles in the dimensions of legal substance, legal structure, and legal culture, and formulate comprehensive legal and bureaucratic engineering solutions. This article is an update and refinement of the results of the thesis research with the same object of study, compiled to be worthy of publication as a scientific article in a Sinta 3 accredited journal in the field of law, with a title that is narrowed down in variables without eliminating the focus of the intended research.\

2. Literature Review and Theoretical Framework

2.1 Previous Research

Many studies have been conducted in recent years on the role and authority of immigration in the Batam border area. Respationo (2024) examined the ex-officio position of the Mayor of Batam as Head of the Batam Business Entity and found a complex cross-jurisdictional authority that has implications for the governance of various government sectors in Batam, including immigration. Several studies on the Batam Class I Special Immigration Office (TPI) cluster also provide a comprehensive picture of the complexity of immigration functions in this region, ranging from its role in preventing human trafficking (Nasution et al., 2025), law enforcement against misuse of stay permits (Saputra et al., 2025), to examining the legality of the use of automatic inspection gates (Farisco et al., 2025; Simanjuntak et al., 2025) and the application of the concept of human security in immigration policy (Purnomo et al., 2025). These studies consistently highlight that the main obstacle to the implementation of immigration functions in Batam lies not in the lack of normative authority, but rather in the gap between technical regulations and operational realities in the field.

At the level of state administrative law, Putra et al.'s (2024) research on the legal vacuum in Indonesian administrative law emphasizes the urgency of policymaking that is responsive to developments in administrative

practice, while Tumuhulawa and Moonti (2021) detail the construction of government officials' authority through delegation and mandate mechanisms as instruments of legitimacy for government action. Studies on administrative discretion have also developed rapidly, both from the perspective of implementing the General Principles of Good Governance (AUPB) as a basis for government officials in exercising discretion (Ismail & Syahuri, 2024), the political pressures faced by Indonesian public officials in making discretionary decisions (Agustin & Insani, 2025), and the contemporary debate regarding the limits of artificial intelligence's adaptability to administrative discretion (Covilla, 2025). In the realm of digital-based public services, research by Pham et al. (2023) in Vietnam and Wahyudi et al. (2025) and Abdurrosyid and Eldo (2024) in Indonesia consistently found that the success of digital transformation of government services is largely determined by the quality of infrastructure, public trust, and accountable governance, not solely by the availability of technology. At the international level, border governance studies also provide relevant comparative perspectives. Jain et al. (2023) designed a risk-based border management model that integrates simulation and performance evaluation as a basis for decision-making at border points, while Mutlu et al. (2025) examined the phenomenon of "appification of borders," the digitalization of migration that creates new layers of data and applications in citizen interactions with border authorities. Zhang et al. (2025) found that public trust in the dissemination of biometric data by government agencies is a prerequisite for successful digital border governance, a finding relevant to the context of biometric data use in the Border Control System at the Batam Center TPI. Saito and Budianto (2025) noted that progress on Indonesia's labor migration policy at the normative level continues to face institutional coordination challenges at the implementation level, a pattern consistent with this study's findings regarding the gap between ideal regulations and operational practices at the Batam Center TPI. These studies generally stop at the level of evaluating technology or regulation separately, without integrating the analysis of administrative authority with justice theory and public service theory in an integrated manner as is done in this article.

As additional context regarding the broader complexity of Batam's immigration function, research by Alhakim et al. (2023), Laoly and Simamora (2025), and Panjaitan et al. (2025) on the role and optimization of immigration in preventing human trafficking in Batam confirms that the Batam Class I Special Immigration Office (TPI) is constantly faced with dual demands between service facilitation and law enforcement/security, a pattern that aligns with the doctrine of the Four Immigration Functions discussed in section 4.1. Similarly, Yusuf et al.'s (2025) study on factors influencing the effectiveness of law enforcement in society—including legal, apparatus, facilities, community, and cultural factors—provides additional empirical grounding for Friedman's Triad of Legal Systems framework used in this article. The pattern of gaps between normative authority and technical guidelines for implementation is also found in other administrative licensing sectors in Indonesia, for example, building permit policies (Fadlan, 2019), which confirms that the problem of the lack of technical guidelines after the issuance of the parent regulation is a recurring structural challenge in Indonesian administrative law, not a problem unique to the immigration sector alone.

2.2 Theoretical Framework

2.2.1 Aristotle's Theory of Justice (Grand Theory)

This study uses Aristotle's Theory of Justice as outlined in the *Nicomachean Ethics* as a grand theory. Aristotle divides justice into two main spectrums, namely Distributive Justice (*Iustitia Distributiva*), which demands the proportional distribution of rights, burdens, and facilities based on relevant similarities and differences (proportionate equality), and Corrective/Commutative Justice (*Iustitia Commutativa*), which functions to restore balance when losses occur due to inequality in a legal relationship. The relevance of Aristotle's thinking continues to be confirmed by contemporary legal philosophy studies as an ethical framework for governance and fair allocation of public resources (Ibemere, 2026). In the context of this study, Aristotle's Theory of Justice is used to examine whether the single digital service scheme at the Batam Center TPI has treated all cross-border groups proportionally (distributive justice), and whether digital system failures are responded to through institutionalized recovery mechanisms (corrective justice).

2.2.2 Public Service Theory (Middle Range Theory I)

As the first middle-range theory, this study uses the Public Service Theory proposed by Mahmudi and Lijan Poltak Sinambela, which measures the quality of bureaucratic service delivery by measuring the extent to which government agencies consistently, quickly, accurately, and responsibly fulfill public rights. This theory is operationalized through five dimensions of service quality: Reliability, Responsiveness, Assurance, Empathy, and Tangibles. This study specifically focuses on the analysis of two dimensions most relevant to the context of digitalization of immigration services at maritime borders: the Reliability Dimension and the Responsiveness

Dimension, in line with empirical findings regarding the determinants of the quality of government e-services (Pham *et al.*, 2023).

2.2.3 Lawrence M. Friedman's Legal System Theory (Middle Range Theory II)

As a second middle-range theory, this study uses Lawrence M. Friedman's Legal System Theory, which divides the legal system into three dynamically interacting components: Legal Substance, Legal Structure, and Legal Culture (Flora *et al.*, 2023; Halim *et al.*, 2023). These three components are used as an analytical framework to map the obstacles to optimizing immigration public services holistically, with the premise that the effectiveness of a policy cannot be achieved through a partial approach to one component alone, but rather requires harmony between the three.

2.2.4 Philipus M. Hadjon's Theory of Administrative Authority (Applied Theory)

At the applied level, this research uses Philipus M. Hadjon's Theory of Administrative Authority, which emphasizes that authority (*bevoegdheid*) is a legal power derived from statutory regulations to regulate, control, and make binding public legal decisions (*besluit*) through three main constructs: Attribution, Delegation, and Mandate (Tumuhulawa & Moonti, 2021). This theory is complemented by the concept of the General Principles of Good Governance (AUPB) as stipulated in Law Number 30 of 2014 concerning Government Administration, including the principles of legal certainty, accuracy, expediency, non-abuse of authority, and good service, which serve as substantial controls on the use of administrative discretion by Immigration Officials (Ismail & Syahuri, 2024). The relevance of this authority theory is increasingly important considering that digital transformation demands clarity in the construction of authority so that every automatic and manual verification process has legal legitimacy (Covilla, 2025).

2.3 Conceptual Propositions

Because this research is qualitative, descriptive-analytical and does not test statistical hypotheses, the theoretical framework above is formulated into two conceptual propositions that serve as the basis for the analysis. The first proposition (P1): Optimizing public immigration services through administrative authority is simultaneously determined by the alignment of Friedman's three dimensions of the legal system—legal substance, legal structure, and legal culture—so that improvements in one dimension alone without being accompanied by improvements in the others will not result in complete optimization. The second proposition (P2): Digital transformation of immigration services will only realize distributive and corrective justice as stated in Aristotle's Theory of Justice if it is accompanied by an affirmative service scheme for vulnerable groups and an institutionalized recovery mechanism (institutionalized corrective action), rather than simply relying on the individual discretion of officers in the field.

3. Methodology

This research uses an empirical juridical approach (socio-legal research), namely legal research that combines the study of positive legal norms with the reality of their implementation in the field. Four approaches are used simultaneously: a statute approach to examine the 1945 Constitution of the Republic of Indonesia, Law Number 25 of 2009 concerning Public Services, Law Number 30 of 2014 concerning Government Administration, and Law Number 6 of 2011 concerning Immigration as amended by Law Number 63 of 2024; a conceptual approach to analyze the concept of administrative authority, discretion, and the quality of public services; a case approach through a study of the implementation of the All Indonesia Application at the TPI of Batam Center Port; and a socio-legal approach to understand the practice of implementing administrative authority as carried out by Immigration Officers in the field.

The research data is sourced from primary and secondary data. Primary data was obtained through semi-structured interviews with officials and employees of the Class I Special Immigration Office of Batam TPI who are in charge of immigration inspection and digital services, as well as field observations on the implementation of international arrival reporting based on the All Indonesia Application at the TPI of Batam Center Port. Secondary data was obtained from document studies in the form of laws and regulations, daily crossing volume data, and literature studies on previous research results and relevant national and international literature.

Data analysis was conducted qualitatively by following the stages of data reduction, data presentation, and conclusion drawing/verification interactively. Data from interviews and document studies were reduced to sort out information relevant to the research focus, presented in narrative form and comparative tables, then analyzed using the framework of Aristotle's Theory of Justice, Mahmudi and Sinambela's Public Service Theory, Friedman's Legal System Theory, and Hadjon's Theory of Administrative Authority as described in the literature review section. To ensure data validity, this study applied source triangulation, namely comparing statements from several informants and matching them with official documents and field observation results.

4. Results and Discussion

4.1 Legal Regulations for Optimizing Immigration Public Services

The provision of services in the field of immigration is strictly bound by the national legal framework of public services as regulated in Law Number 25 of 2009 concerning Public Services. Article 4 of this law lays down 5 (five) main principles of public services which serve as indicators of the effectiveness of the implementation of administrative authority of Immigration Officials at TPI, namely the principle of legal certainty, the principle of openness, the principle of accountability, the principle of efficiency, and the principle of effectiveness, which specifically demands a balance between ease of crossing (border crossing facilitation) and the maintenance of order and supervision of state sovereignty (dual- function harmony). This framework is complemented by Law Number 30 of 2014 concerning Government Administration, which emphasizes that the authority of Government Officials must be derived from statutory regulations through attribution, delegation, or mandate mechanisms, and mandates the implementation of the General Principles of Good Governance (AUPB) — including the principles of legal certainty, accuracy, benefit, non-abuse of authority, and good service — as a substantial control on the use of administrative discretion (Ismail & Syahuri, 2024).

Indonesian immigration policy is fundamentally regulated in Law Number 6 of 2011 concerning Immigration as amended by Law Number 63 of 2024, which lays down 4 (four) main pillars of immigration function (Catur Fungsi Keimigrasian): Immigration Service Function, Law Enforcement Function, State Security Function, and Community Welfare Development Facilitator Function, which are based on the doctrine of selective policy. As summarized in Table 1, an investigation of Hadjon's Theory of Administrative Authority shows that the authority of Immigration Officers at TPI Batam Center is derived from three hierarchical legal constructions.

Table 1. Construction of Administrative Authority of Immigration Officials at TPI Batam Center

Construction of Authority	Source and Flow	Consequences of Responsibility
Attribution	Law No. 6/2011 in conjunction with Law No. 63/2024 Article 1 number 3 in conjunction with Article 16, directly from the law to Immigration Officers	Legal responsibility is attached independently to the organs/officials determined by law.
Delegation	PP No. 31/2013 in conjunction with the Ministerial Regulation concerning Organization and Work Procedures, from the Minister/Director General of Immigration to the Head of the Immigration Office	Responsibility shifts completely from the delegans to the delegator (Head of the Immigration Office)
Mandate	From the Head of Office/Head of Division to the counter inspection officer (a' memoire)	Responsibility remains with the mandate giver (mandans), as long as the mandatory acts in accordance with SOP.

Source: compiled from Law No. 6/2011 in conjunction with Law No. 63/2024, Law No. 30/2014, and research data, 2026 (see also Tumuhulawa & Moonti, 2021).

In the reality of daily operations, especially at TPI with high mobility intensity such as Batam Center Port, the use of discretion (*freies ermesen*) by Immigration Officers becomes a crucial tool when the digital service system faces obstacles, as defined in Article 1 number 9 of Law Number 30 of 2014. However, the doctrine of state administrative law outlines that discretion is not unlimited power. Based on Article 22 in conjunction with Article 24 of Law Number 30 of 2014, the use of discretion by Immigration Officers is strictly limited by 4 (four) legal guidelines: in accordance with the purpose of granting authority, not contrary to statutory regulations, based on legitimate and objective reasons, and must comply with the AUPB — a framework of limitations that is consistent with contemporary debates regarding the limits of technological adaptation to administrative discretion without sacrificing legal certainty and judicial oversight (Covilla, 2025). To prevent individual discretion in the field from moving towards arbitrary action (*willekeur*) or abuse of authority (*detournement de pouvoir*), a Bound Discretion framework is required through a standard Emergency Handling Standard Operating Procedure (SOP Contingency Plan). The results of the study indicate that until now the SOP has not been formally established, so that Immigration Officers at the Batam Center TPI are forced to make incidental technical decisions — a regulatory gap that is a central finding of this study and will be further elaborated in section 4.4.

4.2 Implementation of Digital Services at the Batam Center Port TPI

The Batam Center Port Terminal (TPI) is the main gateway to Indonesia's maritime border, directly facing Singapore (HarbourFront Terminal and Tanah Merah Ferry Terminal) and Malaysia (Stulang Laut Terminal, Johor). Empirical research data records daily crossing volumes ranging from 8,000 to 12,000 people on weekdays, and soaring to 18,000-25,000 people on weekends or holiday seasons, with a pattern of massive, short-term arrivals (bulk/batch arrivals) due to the docking of several fast ferries simultaneously within 15-30 minute intervals. The composition of service users is very heterogeneous, including foreign tourists (dominated by Singapore and Malaysia), local Indonesian citizens of Batam and the Riau Islands, and Indonesian Migrant Workers (PMI) who require closer supervision — a characteristic that demands a balance between economic facilitation and security oversight (Respatono, 2024; Nasution et al., 2025). The immigration inspection service scheme via the All Indonesia Application is divided into 4 (four) sequential stages, as summarized in Table 2: (1) Pre-Departure (Pre-Departure & Digital Entry), namely filling in the arrival report data independently before the trip which produces a reporting QR Code; (2) Initial Verification at the Entrance Gate (Entrance Gate Verification), in the form of scanning the QR Code as an initial filter (pre-screening); (3) Main Inspection at the Immigration Counter (Counter Clearance), including matching biometric data, passport validity, and checking the prevent-deter list through the Border Control System (BCS)/SIMKIM; and (4) Secondary Inspection and Technical Assistance (Secondary Inspection & Assistance Lane) for border crossers who experience data mismatches, technical problems, or have not filled out the application.

Table 2. Stages of Immigration Services via the All Indonesia Application at TPI Batam Center

Stages	Main Function	Legal Control Point
1. Pre-Departure	Self-filling of data & issuing of QR Code	Reporting obligations (still voluntary basis)
2. Initial Verification	Pre-screening QR Code at the entrance	Real-time data match filter
3. Main Examination (Counter)	Biometric matching, checks, immigration clearance	Article 16 of Law No. 6/2011 in conjunction with Law No. 63/2024 (attributive authority)
4. Second Inspection/Assistance Lane	In-depth assistance & examination	Bound discretion (Article 22 in conjunction with 24 of Law No. 30/2014)

Source: processed from research data, 2026.

Referring to Mahmudi and Sinambela's Public Service Theory, the effectiveness of this digital transformation is tested through the two most relevant dimensions of service quality, namely the Reliability Dimension and the Responsiveness Dimension, as described in the following two sub-sections.

4.3 Reliability Dimension: The Gap between Digital Promises and Infrastructure Realities

The reliability dimension refers to the ability of service providers to provide accurate, consistent, and error-free performance. Empirical findings indicate that the reliability dimension of the All Indonesia application implementation at the Batam Center TPI has not yet reached optimal effectiveness. During peak hours when several ferries dock close together (bulk arrival), the digital system infrastructure often experiences server latency (slow response/delay), QR Code scanning failures, and data desynchronization between passenger self-reporting and the central database. This forces Immigration Officers to manually re-verify (double verification), resulting in work redundancy. This phenomenon is consistent with the challenges of global digital border governance, where the reliability of electronic verification systems is an absolute prerequisite for successful digital transformation (Jain et al., 2023; Mutlu et al., 2025). This condition indicates a gap between the promise of digitalization efficiency (das sollen) and the reality of infrastructure constraints (das sein), which legally contradicts the Principle of Legal Certainty and the Principle of Public Service Efficiency as stipulated in Article 4 of Law Number 25 of 2009.

In terms of service time, the ideal 30-45 seconds per passenger inspection time has ballooned to 2-3 minutes due to manual double verification, triggering queue buildup that extends all the way to the dock area. Empirical data also indicates that approximately 20%-30% of daily border crossings experience digital literacy issues or device limitations, dominated by the elderly, migrant workers with limited education, and day-trippers who do not yet have roaming data packages upon landing. This situation highlights the wide gap between the assumption of user readiness

underlying digitalization policies and the heterogeneous sociological reality of border crossings at Batam's maritime border.

Note: This finding of a digital literacy gap is consistent with a study on public trust and readiness for biometric data-based systems in border governance (Zhang et al., 2025).

4.4 Responsiveness Dimension: The Paradox of Officers as System Patchers

The responsiveness dimension describes the readiness, concern, and speed of Immigration Officers in assisting service users and responding to technical issues. The results of the study indicate that the Responsiveness Dimension of Immigration Officers at the Batam Center TPI is at a high level: when the digital system experiences latency or when border crossings experience technical issues, officers promptly direct them to the assistance lane, assist with filling out forms directly, or divert the examination to a manual procedure (override system). However, a critical analysis of this study found a paradox in this dimension of service. The high proportion of time officers spent providing technical assistance actually reduced overall systemic responsiveness and shifted the substantive function of Immigration Officers from security-oriented border law enforcers to operator-oriented administrative and technical facilitators. This functional role displacement is a consequence of the inefficient use of administrative authority: immigration authority specifically granted by law for border law enforcement has been relegated to technical assistance tasks that could actually be handled by a separate support unit. The synthesis of the evaluation of the Reliability and Responsiveness Dimensions shows that officer responsiveness currently functions as a "patch" (compensating factor) for the unreliability of infrastructure and technical regulations, a condition that, if allowed to continue, will erode the authentic function of immigration as a guardian of state sovereignty.

4.5 Distributive Justice: Single Digital Service Scheme and Vulnerable Groups

Distributive justice according to Aristotle outlines that "equals should be treated equally, and different things should be treated differently according to the proportion of their differences" (treat equals equally and unequals unequally). Juridical-empirical analysis shows that the current digital service scheme assumes that all border crossers are in a homogeneous position (uniform assumption), namely having adequate smartphone devices, a stable internet network, and adequate digital literacy. However, the sociological reality on the ground shows high heterogeneity, including vulnerable groups such as the elderly, people with disabilities, and migrant workers with limited education. Imposing a single digital crossing method without proportional differentiation creates hidden distributive injustice (pseudo-equality), which escalates the inequality of access (digital divide).

The Batam Class I Special Immigration Office (TPI) has institutionally responded to the needs of vulnerable groups by providing basic physical facilities, such as wheelchairs, special lanes for the disabled, and a Priority Lane. However, from a digital distributive justice perspective, the integration of the All Indonesia Application has not fully provided an inclusive digital assistance scheme from the pre-departure stage. To realize true distributive justice, the application of the principle of Proportional Equality is necessary, where the administrative authority of Immigration Officers is used to ensure that vulnerable groups receive special treatment in the form of direct verification assistance without having to go through the complexity of digital applications (Assistance and Direct Clearance Lane), as mandated by Article 4 of Law Number 25 of 2009 concerning Public Services.

4.6 Corrective Justice: Recovery from System Failures that are Still Ad-Hoc

Corrective or Commutative Justice functions to restore balance when there is an imbalance in public legal relations, which in the realm of state administrative law manifests as Administrative Responsibility and Accountability (administrative accountability) — the state's obligation to provide immediate responses and solutions (remedial action) when a service system failure occurs that harms the rights of service users. Empirical data shows that Immigration Officers at TPI Batam Center have carried out the corrective justice function concretely through the use of discretionary authority: when the system experiences disruption, officers activate emergency handling procedures (fallback mode) by switching verification to manual passport checks.

However, a critical analysis of this study found that the current implementation of corrective justice is still passive and fragmentary (ad-hoc corrective action), because it is highly dependent on the personal initiative of supervisors or officers on duty, considering the lack of a formally established standard SOP for a Contingency Plan. The absence of standardized emergency guidelines results in inconsistent corrective actions among officers, which ultimately triggers legal uncertainty. Therefore, from the perspective of Aristotle's Theory of Justice, corrective justice for digital system failures must be systematically institutionalized (institutionalized corrective justice), namely establishing that stopping digital verification and transferring to manual channels when a system failure occurs is a

measurable legal obligation (mandatory fallback procedure), not simply an officer's free discretion—a conclusion that confirms the conceptual proposition P2 in section 2.3.

4.7 Legal Substance Obstacles

Referring to Friedman's Legal System Theory, the first obstacle stems from the substantive element of the law, namely the regulatory gap at the level of technical implementing regulations. To date, the implementation of the All Indonesia Application has not been supported by a Director General of Immigration Regulation that specifically regulates the characteristics of the Sea Border TPI, thus creating an operational legal vacuum — a pattern of technical regulatory gaps following the issuance of the parent regulation that is also generally identified in Indonesian administrative law (Putra et al., 2024). Furthermore, completing arrival reports on the All Indonesia Application remains voluntary without firm and binding administrative sanctions (*dwingend recht*), thus the regulation loses its legal efficacy and is reduced to a mere recommendation. The third substantive obstacle is the lack of a standard SOP for Contingency Plans as a legal umbrella for Immigration Officers' discretion in the event of technical disruptions, as described in sections 4.1 and 4.6.

4.8 Legal Structure Barriers

The legal structure elements relate to the institutional structure, infrastructure, and human resource capacity that implements regulations. A diagnosis of the legal structure at the Batam Center TPI shows an imbalance between the high daily traffic volume and the capacity of the ICT infrastructure. The server infrastructure hosting the All Indonesia Application database does not yet have the bandwidth capacity and processing power to handle massive data traffic simultaneously during peak hours, while the coastal geographic location of Batam Center Port faces obstacles such as signal instability and limited dedicated internet network coverage. The number of biometric-based automatic checkpoints (autogates) is also still very limited and not commensurate with the daily traffic volume reaching tens of thousands of people (Farisco et al., 2025; Simanjuntak et al., 2025), and the lack of physical lane segregation causes all passengers to mix in one main queue, triggering bureaucratic bottlenecks.

4.9 Barriers to Legal Culture

The legal culture element refers to the values, customs, and behavioral patterns of society in responding to applicable legal norms. The results of the study indicate a tendency for the legal culture of border crossings to be less disciplined in utilizing the pre-departure self-reporting scheme, with the majority of passengers only responding to the obligation to fill out the application once they are in front of the immigration checkpoint. The empirical fact that 20%-30% of daily border crossings have low digital literacy or experience device problems, as described in section 4.3, is also exacerbated by the persistence of conventional bureaucratic traditions where service users feel safer and more certain when served directly by human officers (*face-to-face service habit*), which in turn shifts the role of Immigration Officers from border law enforcers to mere technical assistants as described in section 4.4.

4.10 Solution: Legal and Bureaucratic Engineering

Based on the diagnosis of obstacles through the Friedman Legal System Triad approach above, optimization of public immigration services at the Batam Center TPI cannot be achieved through a partial approach, but rather requires a holistic approach in the form of Legal and Bureaucratic Engineering which is divided into three strategic pillars, as summarized in Table 3.

Table 3. Three Pillars of Legal and Bureaucratic Engineering for TPI Batam Center

Solution Pillar	Concrete Steps	Friedman's Target Dimension
Technical Regulation Update	Drafting of the Director General's Regulation on Sea Border TPI; standardization of administrative (not financial) disincentive sanctions; issuance of standard SOP Contingency Plans	Legal Substance
Institutional and Infrastructure Strengthening	Separation of Fast Track and Assistance Lane channels; increased dedicated server capacity and bandwidth; digital governance and crisis management training for officers	Legal Structure

Solution Pillar	Concrete Steps	Friedman's Target Dimension
Compliance Culture Engineering	Cross-border Pre-Departure Campaign in collaboration with Singapore/Malaysia ferry operators; provision of interactive digital Self-Kiosks at port terminals	Legal Culture

Source: processed from research data, 2026.

In the first pillar, technical regulatory updates are aimed at closing the regulatory gap through the preparation of the Director General of Immigration Regulation on Digital-Based Immigration Inspection Procedures at Sea Border TPIs, which specifically integrate the characteristics of bulk arrivals of fast ferries; the normalization of imperative administrative sanctions that are constructed not as financial sanctions but rather as administrative disincentives in the form of revocation of fast track crossing rights for border crossers who do not comply; and the issuance of the Head of Office/Director General Decree regarding the standard Contingency Plan SOP that sets the technical disruption threshold (outage threshold) and tiered authorization mechanisms. In the second pillar, institutional and infrastructure strengthening is realized through physical separation of crossing routes (lane segregation) between the Fast Track Lane for border crossers who have complied with filling out applications (duration 15-30 seconds per person) and the Assistance Lane for those who need technical assistance, supported by increased dedicated cloud server capacity and competency training for officers in the fields of digital governance and bureaucratic crisis management, in line with best practices in digital transformation of public services that emphasize the importance of institutional capacity as a prerequisite for successful digitalization (Wahyudi et al., 2025). In the third pillar, engineering a culture of compliance is pursued through cross-border administrative collaboration with port authorities and ferry operators in Singapore and Malaysia to hold an intensive Pre-Departure Campaign, as well as the provision of interactive digital Self-Kiosk units at port terminals to bridge the digital literacy gap (digital divide) independently, consistent with the approach of strengthening legal culture based on direct education to border communities that has proven effective in other Batam contexts (Erniyanti et al., 2025).

5. Conclusion

5.1 Conclusion

The legal regulation for optimizing immigration public services through administrative authority at the Batam TPI has strong legal legitimacy based on the 1945 Constitution of the Republic of Indonesia, Law Number 25 of 2009, Law Number 30 of 2014, and Law Number 6 of 2011 in conjunction with Law Number 63 of 2024 through attribution, delegation, and mandate mechanisms. However, in practice, there are regulatory gaps that trigger legal uncertainty, due to the absence of a Director General of Immigration Regulation specifically for the Sea Border TPI, the absence of imperative administrative sanction norms for reporting on the All Indonesia Application, and the absence of a standard Contingency Plan SOP as a legal umbrella for Immigration Officer discretion.

The implementation of digital-based immigration public services at the Batam Center Port TPI has not been optimal. The Reliability Dimension has not been achieved because limited ICT infrastructure triggers server latency that leads to double verification and long queues, while the high Responsiveness Dimension of officers actually serves as a patch for system unreliability, thus shifting the functional role of officers from border law enforcement to technical assistance. From the perspective of Aristotle's Theory of Justice, this condition harms distributive justice for vulnerable groups who have not received adequate affirmative service schemes, while corrective justice for system failures remains ad-hoc because it has not been institutionalized through standard SOPs. Obstacles to optimizing these services occur simultaneously in three dimensions of Friedman's Legal System Theory—legal substance, legal structure, and legal culture—so that the solution requires holistic legal and bureaucratic engineering through three pillars: updating technical regulations, strengthening institutions and infrastructure, and engineering a culture of border-crossing compliance.

5.2 Research Limitations

This study has several limitations that need to be considered in interpreting its findings. First, the study was conducted at a single location, namely the Batam Center Port Terminal (TPI). Therefore, generalizing the findings to other TPIs in Indonesia with different geographic characteristics and service volumes, particularly the Air Terminal (TPI Air), requires caution. Second, the primary data is qualitative and interview-based, with a limited number of informants consisting of officials and employees within the immigration inspection scope, so the perspectives of direct service users are not yet comprehensively captured. Third, because the Director General of Immigration

Regulation specifically for the Sea Border TPI and the standard Contingency Plan SOP had not yet been issued at the time of the study, the assessment of the need for these regulations remains prospective and open to updating as derivative regulations are issued in the future.

5.3 Suggestions

The Directorate General of Immigration is advised to immediately formulate and enact the Regulation of the Director General of Immigration concerning Procedures for Digital-Based Immigration Inspection at Sea Border TPI, which contains the standardization of administrative disincentive sanctions and stipulates the Director General's Decree concerning the standard Contingency Plan SOP as a guideline for the legality of officer discretion when system downtime occurs. The Class I Special Immigration Office of Batam TPI is advised to immediately carry out spatial and institutional engineering by separating the physical crossing flow between Fast Track and Assistance Lane, increasing dedicated bandwidth capacity, and holding bureaucratic crisis management training for officers. The Batam Immigration Office together with port managers and ferry operators are advised to improve the engineering of a culture of border crossing compliance through an intensive Pre-Departure Campaign in the waiting room and ferry cabin on the Singapore/Malaysia route, as well as the provision of interactive digital Self-Kiosk units to bridge the digital literacy gap independently. Future research is recommended to expand the scope of loci to other TPIs with different migration characteristics, including Air TPIs, to test the generalizability of the Friedman Legal System Theory and Aristotelian Theory of Justice framework used in this study, directly involving the perspective of service users, and specifically evaluating the effectiveness of the Director General of Immigration Regulation and the SOP for the Contingency Plan once it is issued. Comparative studies with practices of digital transformation of public services and risk-based border management in other countries (Jain et al., 2023; Mutlu et al., 2025; Pham et al., 2023) can also enrich policy recommendations for strengthening Indonesia's digital-based yet equitable immigration governance.

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Author Contribution

Ahmad Rifki (AR) is fully responsible for all stages of the research and writing of this article, including: conceptualization and research design (AR); collection of field data through interviews and observations (AR); analysis and interpretation of data using the framework of Aristotle's Theory of Justice, Public Service Theory, Legal System Theory, and Administrative Authority Theory (AR); preparation of the draft manuscript (AR); and review and final approval of the manuscript for publication (AR).

REFERENCES

- Abdurrosyid, M., & Eldo, D. H. A. P. (2024). Analisis penerapan prinsip-prinsip good governance dalam pelayanan publik di Kantor Desa Perboto Kecamatan Kalikajar Kabupaten Wonosobo. *Jurnal Studi Pemerintahan dan Akuntabilitas (Jastaka)*, 4(1), 17–28. <https://doi.org/10.35912/jastaka.v4i1.3212>
- Agustin, M., & Insani, N. (2025). Administrative discretion under political pressure: A phenomenological study of public officials in Indonesia. *Hukmuna: Journal of Law and Policy*, 1(12).
- Alhakim, A., Situmeang, A., & Mashita, J. A. N. (2023). Peran imigrasi dalam pencegahan dan pengawasan tindak pidana perdagangan orang menurut perspektif imigrasi Kota Batam. *Jurnal Hukum To-ra*, 9(3), 322–338.
- Amoroso, M. P. (2024). Intelligent borders: Exploring the suitability of artificial intelligence systems in refugee status determination under international law. *Refugee Survey Quarterly*, 43(4), 410–435. <https://doi.org/10.1093/rsq/hdae021>
- Covilla, J. C. (2025). Artificial intelligence and administrative discretion: Exploring adaptations and boundaries. *European Journal of Risk Regulation*, 16(1), 36–50. <https://doi.org/10.1017/err.2024.76>
- Erniyanti, Chikita, E. A., & Fadlan. (2025). Penyuluhan hukum maritim bagi nelayan dan masyarakat pesisir dalam pengawasan kapal asing di wilayah perairan Batam. *Kesejahteraan Bersama: Jurnal Pengabdian dan Keberlanjutan Masyarakat*, 2(3), 92–101. <https://doi.org/10.62383/bersama.v2i3.1857>
- Fadlan. (2019). Government policy regarding building permits in Indonesia. *International Journal of Research Culture Society*, 3(11), 137–140.

- Farisco, L., Nurkhotijah, S., Fadhil, S., & Erniyanti. (2025). Legal analysis of the effectiveness of the autogate system in facilitating the traffic of foreigners at international ports (research study in Batam City). *International Journal of Educational Review, Law and Social Sciences*, 5(3), 3992–3999. <https://doi.org/10.54443/ijerlas.v5i3.4016>
- Flora, H. S., Thuong, M. T. H., & Erawati, R. D. (2023). The orientation and implications of new criminal code: An analysis of Lawrence Friedman's legal system. *Jurnal IUS Kajian Hukum dan Keadilan*, 11(1). <https://doi.org/10.29303/ius.v11i1.1169>
- Halim, M. A. A., Amni, S. Z., & Maulana, M. (2023). Legal system in the perspectives of H.L.A Hart and Lawrence M. Friedman. *Peradaban Journal of Law and Society*, 2(1). <https://doi.org/10.59001/pjls.v2i1.83>
- Ibemere, D. K. (2026). Distributive and corrective justice in Aristotle: A panacea for addressing inequality and resource allocation in Nigeria. *Journal of Philosophy and Contemporary Issues*, 2(1), 86–97.
- Ismail, A. N., & Syahuri, T. (2024). Asas-asas umum pemerintahan yang baik sebagai dasar pejabat pemerintah untuk melakukan diskresi. *Deposisi: Jurnal Publikasi Ilmu Hukum*, 2(3). <https://doi.org/10.59581/deposisi.v2i3.3772>
- Jain, A. K., de Ruiter, J., Häring, I., Fehling-Kaschek, M., & Stolz, A. (2023). Design, simulation and performance evaluation of a risk-based border management system. *Sustainability*, 15(17), Article 12991. <https://doi.org/10.3390/su151712991>
- Laoly, G. A. K., & Simamora, J. (2025). The role of immigration in preventing the crime of trafficking in persons (TPPO). *Golden Ratio of Data in Summary*, 5(1), 50–61.
- Mutlu, C. E., Frowd, P. M., & Muller, B. (2025). The application of borders: Data, migration and digitalization. *Big Data & Society*, 12(2). <https://doi.org/10.1177/20539517251319996>
- Nasution, M. A. F., Nurkhotijah, S., & Anatami, D. (2025). Juridical analysis of the role of immigration in preventing the crime of trafficking in persons (research study at the Special Class I Immigration Office of TPI Batam). *International Journal of Educational Review, Law and Social Sciences*, 5(5), 4009–4014. <https://doi.org/10.54443/ijerlas.v5i5.4018>
- Nurkhotijah, S., Saputra, J., Fadrijani, L., & Ginting, S. M. (2025). Analisis yuridis tentang perlindungan hukum bagi pekerja migran Indonesia di Singapura (studi penelitian di Kedutaan Besar Republik Indonesia di Singapura). *Jurnal Zona Keadilan*, 15(2). <https://doi.org/10.37776/zkih.v15i2.1795>
- Panjaitan, P. C., Utami, D. Y., & Bakhtiar, M. (2025). Optimalisasi peran imigrasi dalam upaya pencegahan tindak pidana perdagangan orang di Indonesia. *Innovative: Journal of Social Science Research*, 5(4), 8000–8010.
- Parameswara. (2023). Implikasi hukum penempatan TKI ilegal. *Jurnal Studi Akademik dan Praktik Multidisiplin*, 1(3). <https://doi.org/10.35912/jomaps.v1i3.1580>
- Pham, L., Limbu, Y. B., Le, M. T. T., & Nguyen, N. L. (2023). E-government service quality, perceived value, satisfaction, and loyalty: Evidence from a newly emerging country. *Journal of Public Policy*, 43(4), 812–833. <https://doi.org/10.1017/S0143814X23000296>
- Purnomo, R. A. D., Ramlan, Dahlan, & Erniyanti. (2025). Legal analysis of the application of the concept of "human security" in immigration policy to combat human trafficking in Indonesia. *International Journal of Educational Review, Law and Social Sciences*, 5(5), 4037–4044. <https://doi.org/10.54443/ijerlas.v5i5.4022>
- Putra, E. A. M., Wibowo, G. D. H., & Minollah. (2024). Legal vacuum in Indonesian administrative law: Urgency of policy regulation. *Indonesian Journal of Law and Economics Review*, 19(1). <https://doi.org/10.21070/ijler.v19i1.991>
- Respationo, S. (2024). The mayor of Batam ex-officio as head of the Batam Concession Agency: Cross-jurisdictional authority and legal problems. *Jurnal Pena Justisia: Media Komunikasi dan Kajian Hukum*, 23(1).
- Saito, K., & Budianto, F. (2025). Promoting safe and skilled labour migration: Implementation and challenges in Indonesia's labour migration policies. *International Migration*, 63(5). <https://doi.org/10.1111/imig.70091>
- Saputra, M. I., Nofriah, R., Simatupang, B., & Erniyanti. (2025). Law enforcement on the misuse of residence permits by foreign nationals (a research study at the Special Class I Immigration Office TPI Batam). *International Journal of Educational Review, Law and Social Sciences*, 5(5), 4015–4021. <https://doi.org/10.54443/ijerlas.v5i5.4019>
- Simanjuntak, I., Ramlan, Simatupang, B., & Erniyanti. (2025). Legal analysis of legal certainty regarding the use of automatic gates (autogate) at the immigration checkpoint of the international port of Citra Tritunas. *International Journal of Educational Review, Law and Social Sciences*, 5(5), 4000–4008. <https://doi.org/10.54443/ijerlas.v5i5.4017>
- Tumuhulawa, A., & Moonti, R. M. (2021). The authority of government officials in delegating and mandating. *Unnes Law Journal*, 7(1). <https://doi.org/10.15294/ulj.v7i1.38705>

OPTIMIZING IMMIGRATION PUBLIC SERVICES THROUGH ADMINISTRATIVE AUTHORITY AT BATAM IMMIGRATION CHECKPOINTS

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- Wahyudi, S., Yusup, A., & Perdana, M. R. (2025). Analysis of digital transformation of public administration in improving the effectiveness of government services in Indonesia. *Jurnal Konseling dan Pendidikan*, 13(3), 574–585. <https://doi.org/10.29210/1183900>
- Yusuf, M., Putra, A. K., Hasibuan, R. Y., & Giawa, S. D. (2025). Faktor-faktor yang mempengaruhi penegakan hukum dalam masyarakat. *Jurnal Ilmu Hukum, Humaniora dan Politik*, 5(4). <https://doi.org/10.38035/jihhp.v5i4.4234>
- Zhang, W., Zhang, H., & Deng, Z. (2025). Public attitude and media governance of biometric information dissemination in the era of digital intelligence. *Scientific Reports*, 15(1). <https://doi.org/10.1038/s41598-025-86603-w>