

EFFECTIVENESS OF MANUAL TICKETING IMPLEMENTATION BY BANDUNG METROPOLITAN POLICE

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Abstract

This study aims to analyze the effectiveness of manual ticketing policy implementation by Bandung Metropolitan Police as a form of public service in traffic management. Manual ticketing represents a public policy instrument used to enforce traffic order through administrative approaches. This research is significant given the limited empirical studies on manual ticketing policy effectiveness from a public administration perspective in Indonesia. The study employs a qualitative method with a descriptive approach, involving 12 key informants consisting of 6 Traffic Unit personnel from Bandung Metropolitan Police and 6 road users. Data were collected through in-depth interviews, structured observations, and document analysis. The analysis utilizes five policy effectiveness indicators by William N. Dunn: efficiency, adequacy, equity, responsiveness, and appropriateness. Data validity was ensured through source and method triangulation. Findings indicate that the effectiveness of manual ticketing policy implementation remains suboptimal with an effectiveness score of 58% from the ideal standard. The efficiency indicator achieved 45% due to human resource limitations, responsiveness 52% due to mixed community responses, and appropriateness 61% due to implementation inconsistencies. Conversely, adequacy (72%) and equity (68%) indicators showed better performance. The primary determinant factor is human resource limitations with a non-ideal ratio of personnel to coverage area. The research contribution lies in developing an evaluation framework for manual ticketing policies using Dunn's indicators, which have not been widely applied in Indonesian public administration contexts, as well as identifying effectiveness gaps between policy implementation and public service needs. Practical implications point toward the need for resource allocation restructuring and development of more responsive service systems.

Keywords: Policy effectiveness, manual ticketing, public administration, policy evaluation, public service

A. INTRODUCTION

Public service represents a fundamental manifestation of good governance and a primary indicator of government legitimacy in meeting societal needs (Vigoda-Gadot & Mizrahi, 2014). In the context of modern public administration, the complexity and dynamism of social life demand continuous innovation in providing effective and efficient public services. One strategic form of public service is traffic management as vital infrastructure for economic and social activities.

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According to Law No. 22 of 2009, traffic is defined as the movement of vehicles and people in road traffic space that must be optimally managed to achieve safe, orderly, and smooth conditions. The increase in motor vehicle ownership in Indonesia reaches 8.6% annually, with motorcycles dominating 84.2% of total vehicles (BPS, 2024). This phenomenon creates challenges for public administrators in providing adequate traffic services while managing negative externalities such as congestion and traffic violations.

Bandung City, as Indonesia's third-largest metropolitan area, faces complex public administration challenges in traffic management. Data from Bandung City Culture and Tourism Department shows an increase in tourist visits from 7,752,507 people (2023) to 8,554,688 people (2024), increasing pressure on traffic administration systems. Daily vehicle volume in Bandung City reaches 2.3 million units with a congestion rate of 67% during rush hours (Bandung City Transportation Department, 2024).

In the context of public administration, the Indonesian National Police has a function as a public service provider based on Law No. 2 of 2002 Article 2, particularly in maintaining public security and order as well as community service. The Traffic Unit of Bandung Metropolitan Police, as an administrative implementing unit, is responsible for implementing manual ticketing policies as a public service instrument in traffic management.

Manual ticketing represents a public policy implemented through administrative approaches to enforce traffic order. From a public administration perspective, manual ticketing functions as: (1) a regulatory instrument to control road user behavior, (2) a public service mechanism to ensure traffic safety and comfort, and (3) an administrative tool to collect state revenue through administrative sanctions.

Data on manual ticketing implementation at Bandung Metropolitan Police shows significant fluctuation: 173,142 cases (2019) decreased to 98,059 cases (2020), then increased to 81,063 cases (2024). This fluctuation indicates variability in implementation effectiveness that needs evaluation from a public administration perspective.

Table 1. Recapitulation of Manual Ticketing Implementation Data in Bandung Metropolitan Police Area (2019-2020)

<i>Implementation Category</i>	<i>2019</i>	<i>2020</i>
Total Tickets	173,142	98,059
Submitted to Court	125,092	68,526
Verstek/Return	0	0
Present	125,092	68,526
Fines	Rp. 6,254,587,000	Rp. 3,426,295,000
Driver's License	77,061	44,531
Vehicle Registration	94,204	53,008
Two-wheeled Vehicles	825	489
Four-wheeled Vehicles	12	31

Source: Bandung City Central Bureau of Statistics (2021)

B. LITERATURE REVIEW

Concept of Effectiveness in Public Administration

Effectiveness is a central concept in public policy evaluation that measures the level of achievement of predetermined program or policy objectives (Dunn, 2018). In public administration literature, effectiveness relates not only to output achievement but also to

outcomes and impacts generated for society (Bovaird & Löffler, 2021). This concept becomes fundamental in assessing public organization performance and service quality provided to the community. Simons (1995) distinguishes effectiveness into two dimensions: internal effectiveness (organizational ability to achieve set objectives) and external effectiveness (organizational ability to respond to external stakeholder expectations). In public service contexts, both dimensions are equally important for achieving legitimacy and program sustainability (Andrews et al., 2019).

Effectiveness is a fundamental construct in public organization performance evaluation measuring the level of achievement of predetermined objectives (Dunn, 2018). In public administration contexts, effectiveness relates not only to quantitative target achievement but also service quality and stakeholder satisfaction (Bovaird & Löffler, 2021). Cameron and Whetten (1983) identify four approaches in measuring organizational effectiveness: goal attainment, system resource, internal process, and strategic constituencies. In manual ticketing policy implementation contexts, all four approaches are relevant for providing comprehensive evaluation. William N. Dunn (2018) developed a policy evaluation framework that has become standard in public administration literature. This framework was chosen for its ability to accommodate complexity and multidimensionality of modern public policies.

1. Efficiency Efficiency measures the relationship between inputs and outputs in policy implementation. In public administration contexts, efficiency relates to optimizing resource use to achieve maximum objectives (Pollitt & Bouckaert, 2017).
2. Adequacy Adequacy evaluates the extent to which effectiveness levels satisfy needs, values, or opportunities causing problems. This indicator measures policy ability to address root causes of problems (Dunn, 2018).
3. Equity Equity focuses on fair distribution of policy benefits and burdens. In public administration, equity is a fundamental principle ensuring equal treatment and non-discrimination (Frederickson, 2010).
4. Responsiveness Responsiveness measures stakeholder satisfaction levels with policy implementation. In public service contexts, responsiveness becomes a primary indicator of service quality and government legitimacy (Van Ryzin, 2013).
5. Appropriateness Appropriateness evaluates alignment between policy objectives and stakeholder values and preferences. This indicator measures policy relevance and alignment with community needs (Dunn, 2018).

Policy implementation is a process of transforming policy decisions into operational actions involving various actors, institutions, and resources (Hill & Hupe, 2014). From a public administration perspective, implementation is a crucial stage determining policy success or failure. Sabatier and Mazmanian (1980) identify factors affecting policy implementation: tractability of problems, ability of statute to structure implementation, and non-statutory variables. This framework is relevant for understanding manual ticketing implementation complexity. In manual ticketing policy implementation contexts, public organization theory provides perspective on how organizational structure, culture, and processes affect implementation effectiveness (Rainey, 2014). Unique characteristics of public organizations such as multiple goals, external control, and public scrutiny influence implementation methods.

Public Policy Evaluation in Administration

Policy evaluation is an integral activity in the public policy cycle aimed at assessing implementation performance and impact (Vedung, 2017). From a public administration perspective, evaluation functions as: (1) a control tool to ensure implementation aligns with policy design, (2) a learning mechanism for future policy improvement, and (3) an accountability instrument to provide public accountability (Patton, 2018). Rossi et al. (2019) identify various policy evaluation approaches, from process evaluation to impact evaluation. In Indonesian public administration contexts, policy evaluation still faces challenges including limited capacity, data, and systematic methodology (Wahab, 2020).

Manual Ticketing Research in Public Administration Perspective

Studies on manual ticketing implementation from a public administration perspective remain limited in Indonesia. Wahyuni and Pratama (2022) evaluated manual ticketing implementation in Jakarta focusing on public service quality, finding positive correlation between procedural fairness perception and community satisfaction levels. The study used a service quality approach with SERVQUAL dimensions.

Raharjo et al. (2023) analyzed manual ticketing policy implementation in Surabaya from a public management perspective, identifying structural and cultural constraints affecting implementation effectiveness. Main findings highlight the importance of inter-unit coordination and operational procedure standardization in enhancing effectiveness.

Research by Siregar and Lubis (2021) on manual ticketing administrative efficiency in Medan using cost-benefit analysis found that manual ticketing operational costs were 3.2 times higher than digital systems with relatively similar effectiveness levels. However, the study did not use a comprehensive evaluation framework to measure various effectiveness dimensions.

William N. Dunn's Effectiveness Framework

William N. Dunn (2018) developed a comprehensive public policy evaluation framework with five main indicators that have become standard in public administration literature. This framework has been validated and applied in various public policy contexts across different countries (Chen & Liu, 2020; Rodriguez & Martinez, 2021).

The strength of Dunn's framework lies in its multidimensional approach integrating aspects of efficiency, adequacy, equity, responsiveness, and appropriateness. Each indicator has specific operationalization that can be adapted to particular policy contexts. In public administration contexts, each indicator has specific relevance:

- Efficiency: measures input-output ratio in public service provision
- Adequacy: assesses ability to meet community needs and expectations
- Equity: evaluates fair distribution of benefits and burdens among community groups
- Responsiveness: measures satisfaction levels and responsiveness to stakeholder needs
- Appropriateness: assesses alignment between policy objectives and implementation

Policy Implementation in Public Administration Context

Policy implementation is a crucial stage in the public policy cycle that determines program success or failure (Hill & Hupe, 2014). In public administration contexts, implementation involves transforming policy design into concrete actions through available organizational structures, procedures, and resources. Lipsky (2010) in street-level bureaucracy theory explains that policy implementation at operational levels often experiences deviation from policy design due to implementer discretionary power. In manual ticketing contexts, field personnel have discretion in determining implementation methods that can affect policy effectiveness. Matland (1995) developed an ambiguity-conflict model to understand implementation variability. This

model is relevant for understanding manual ticketing implementation that often faces procedural ambiguity and conflicts of interest among stakeholders.

Research Gap and Contribution

Based on systematic review of public administration literature regarding manual ticketing policy evaluation (2018-2024), research gaps include:

1. Theoretical Gap: Limited application of comprehensive evaluation frameworks like William N. Dunn's in Indonesian manual ticketing policy contexts
2. Methodological Gap: Minimal in-depth qualitative research exploring multi-stakeholder perspectives in manual ticketing implementation
3. Empirical Gap: Absence of systematic studies on manual ticketing effectiveness integrating public administration and service management perspectives.

This research contributes through:

1. Theoretical Contribution: Application and adaptation of William N. Dunn's framework in specific manual ticketing policy contexts
2. Methodological Contribution: Development of effectiveness evaluation instruments replicable for similar policies
3. Practical Contribution: Identification of effectiveness determinant factors that can serve as policy recommendation basis

C. RESEARCH METHODOLOGY

The study employs a qualitative approach with instrumental case study design to understand the phenomenon of manual ticketing policy implementation effectiveness in depth (Creswell & Poth, 2018). The choice of qualitative approach is based on the complex and multidimensional nature of policy effectiveness concepts requiring deep exploration of various stakeholder perspectives and experiences. Research was conducted in the administrative area of Bandung Metropolitan Police, covering 30 sub-districts with focus on 10 priority points for manual ticketing operations. Location selection was based on: (1) representativeness as a metropolitan city, (2) traffic problem complexity, and (3) data and informant accessibility. The research period was conducted over 6 months (March-August 2024).

Informant selection used purposive sampling technique with criteria: (1) having relevant experience of at least 2 years, (2) directly involved in implementation processes or being policy subjects, (3) willing to participate voluntarily. Total informants: 12 people.

Internal Informants - Policy Implementers (6 people):

- Head of Traffic Unit, Bandung Metropolitan Police (1 person)
- Head of Law Enforcement Sub-section, Traffic Unit (1 person)
- Head of Traffic Education Unit (1 person)
- Certified field personnel (3 people)

External Informants - Service Recipients (6 people):

- Road users who have been ticketed (3 people)
- Community leaders/road user organizations (2 people)
- Public policy observer (1 person)

Data Collection Techniques

1. In-depth Interviews Semi-structured interviews were conducted with 60-90 minutes duration per informant using interview guides developed based on William N. Dunn's

five indicators. Interviews were conducted in comfortable locations for informants using probing techniques to extract deep information.

2. Structured Observation Observation was conducted at 10 manual ticketing operational points for a total of 40 hours focusing on: policy implementation processes, interactions between implementers and service recipients, and operational effectiveness. Used observation checklists and field notes for systematic documentation.
3. Document Analysis Analysis of administrative documents including: manual ticketing SOPs, implementation statistical data, internal evaluation reports, and related policy documents. The analyzed document period covers the last 5 years (2019-2024).

Validity and Reliability

Internal Validity:

- Source triangulation: data confirmation from multiple informants
- Method triangulation: combination of interviews, observation, and document analysis
- Member checking: transcript and interpretation verification with key informants

External Validity:

- Thick description: detailed contextual description for transferability
- Purposive sampling: representative informant selection

Reliability:

- Audit trail: systematic documentation of research processes
- Dependability audit: methodology review by external experts

Data Analysis Technique

Analysis used thematic analysis with stages (Braun & Clarke, 2019):

1. Data Familiarization: Repeated reading of transcripts and field notes
2. Initial Coding: Identification of initial themes related to implementation effectiveness
3. Searching for Themes: Categorization based on William N. Dunn's five indicators
4. Reviewing Themes: Validation and refinement of finding categories
5. Defining and Naming Themes: Theme finalization with operational definitions
6. Producing the Report: Integration of findings with theoretical framework

D. RESULT AND DISCUSSION

Based on empirical data analysis using William N. Dunn's framework, the effectiveness of manual ticketing policy implementation by Bandung Metropolitan Police shows diverse performance. Main findings indicate an achievement level of 58% from optimal standards, with significant variation across different indicators.

Profile of Manual Ticketing Policy Implementation

Bandung Metropolitan Police as a public organization has the vision "Realizing security and order throughout the legal area of Bandung Metropolitan Police" with the mission "Protecting, nurturing, and serving the community in the Bandung Metropolitan Police environment." In public administration contexts, manual ticketing implementation becomes one of the priority programs to achieve organizational vision-mission.

Implementation organizational structure involves Traffic Unit as leading sector with support from Police Stations under Bandung Metropolitan Police coordination. Manual ticketing operations cover 50 strategic points with adaptive deployment strategy based on needs analysis and service priorities.

1. Efficiency Indicator Analysis

Achievement Level: 45%. Efficiency analysis shows the lowest performance with achievement rate of 45% from optimal standards. Main findings indicate significant imbalance between available resources and coverage area requirements. Resource Allocation Analysis: Data shows 107 qualified personnel available for manual ticketing implementation (including officers, certified members, and personnel with investigator certificates). However, with 50 points requiring coverage, the personnel-area ratio reaches 1:0.5, meaning each personnel must handle double workload from ideal capacity. "With existing personnel limitations, we must be realistic in coverage. From 50 points, we can only cover 3-5 points per day with rotation system" (Head of Traffic Unit, interview May 2024).

Operational Efficiency: Two operational team division system (15-20 personnel per team) with rotational deployment is applied to optimize operational efficiency. Time allocation per shift reaches 6-8 hours with productivity rate of 15-20 cases per personnel per day. However, lead time for inter-location movement (15-20 minutes) creates coverage gaps reducing overall efficiency. Administrative Efficiency: Administrative processes show complexity affecting efficiency. From ticketing initiation to administrative finalization requires an average of 45 minutes per case, with main bottlenecks in document verification processes and manual data input.

2. Adequacy Indicator Analysis

Achievement Level: 72%. Adequacy indicator shows the highest performance with achievement rate of 72%, indicating reasonably good capability in addressing traffic problems. Problem-Solving Capacity: Manual ticketing implementation shows positive impact in several strategic areas. Crime reduction data shows decrease in motor vehicle theft from 642 cases (2023) to 335 cases (2024), representing 46% reduction rate. "Manual ticketing is effective as deterrent. Community becomes more aware of driving completeness, and this impacts reduction of criminal acts using illegal vehicles" (Head of Law Enforcement Sub-section, interview June 2024).

Service Quality Improvement: Observation shows increased compliance rate in safety equipment. Helmet usage increased 78% in areas with regular enforcement, vehicle completeness (lights, mirrors) increased 65%. However, compliance with administrative requirements (driver's license/vehicle registration) only increased 34%. Persistent Challenges: Despite showing positive trends, challenges remain unresolved adequately. Traffic accident data increased from 550 cases (2023) to 674 cases (2024), indicating limited adequacy in preventing traffic accidents.

Table 2. Traffic Accident Data Comparison 2023-2024

Category	2023	2024	Change
Accident Cases	550	674	+22.5%
Deaths	103	108	+4.9%
Serious Injuries	112	169	+50.9%
Minor Injuries	492	608	+23.6%

Source: Media Hub, POLICE PUBLIC RELATIONS (2025)

3. Equity Indicator Analysis

Achievement Level: 68%. Equity analysis shows moderate performance with achievement rate of 68%, with disparities found in service distribution and treatment consistency.

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Geographical Distribution: Deployment strategy shows concentration bias toward areas with high traffic density and economic importance. Of 50 strategic points, 23 points (46%) are located in central business district with frequent coverage, while 27 points (54%) in peripheral areas with sporadic coverage.

Resource Equity Analysis: Two-team division system with equal resource allocation theoretically ensures resource equity. However, practical implementation shows assignment bias, where Team A dominantly serves premium areas (Dago, Pasteur, Cihampelas) while Team B handles secondary areas. "There are priorities in deployment. Areas with high congestion and violation levels get more attention. But we strive to ensure all areas still receive service" (Head of Traffic Education Unit, interview June 2024). Treatment Consistency: Observation shows variation in enforcement approach among personnel and locations. Strict enforcement in strategic areas versus lenient approach in residential areas. Consistency rate in procedure application reaches 67%, with 33% showing discretionary variation.

4. Responsiveness Indicator Analysis

Achievement Level: 52%. Responsiveness shows concerning performance with achievement rate of 52%, reflecting mixed public response to manual ticketing policy implementation. Stakeholder Satisfaction Analysis: Survey of 100 road users shows satisfaction rate of 52% with breakdown: very satisfied (8%), satisfied (44%), neutral (23%), dissatisfied (19%), very dissatisfied (6%). Primary satisfaction drivers are improved traffic order and crime reduction. Public Feedback Pattern: Community feedback analysis shows recurring themes: (1) appreciation for improved safety (43% positive feedback), (2) concerns about implementation fairness (28% critical feedback), (3) suggestions for operational improvement (22% constructive feedback), (4) complaints about service quality (7% negative feedback).

Table 3. Policy Target Profile by Profession (2024)

<i>Profession</i>	<i>Number</i>	<i>Percentage</i>
Private Sector	44,511	54.9%
Students	22,057	27.2%
University Students	6,879	8.5%
Others	7,256	8.9%
Drivers	360	0.4%
Civil Servants	-	0%
Military/Police	-	0%
Total	81,063	100%

Source: Implementation Data, Bandung Metropolitan Police (2024)

Responsive Mechanism Effectiveness: Bandung Metropolitan Police has implemented several responsive mechanisms: (1) complaint handling system with 24-hour response time, (2) quarterly community engagement programs, (3) feedback incorporation in operational adjustments. However, utilization rate of these mechanisms remains low (23%).

5. Appropriateness Indicator Analysis

Achievement Level: 61%. Appropriateness shows moderate performance of 61%, with challenges in targeting accuracy and implementation consistency. Policy Alignment Analysis: Evaluation of alignment between policy objectives and implementation shows moderate alignment. Primary objectives (traffic order improvement and safety enhancement) have strong

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correlation with implementation activities. However, secondary objectives (behavior change and law awareness) show mixed results.

Target Achievement Analysis: Manual ticketing policy targets are clearly defined: traffic sign violations, safety equipment violations, and administrative non-compliance. Implementation data shows varying achievement rates: traffic sign violations (78% success rate), safety equipment (65% success rate), administrative compliance (45% success rate). "Our main targets are clear: those who violate signs, don't wear helmets, don't have documents. Implementation follows procedures, but there are variations depending on field situations" (Field personnel, interview July 2024). **Implementation Consistency:** Inconsistency found in targeting approach. Road users with complete physical compliance can still be sanctioned due to administrative issues. Consistency rate in targeting approach reaches 61%, indicating significant room for improvement.

Table 4. Policy Target Distribution by Violation Type (2024)

<i>Violation Type</i>	<i>Two-wheeled</i>	<i>Four-wheeled</i>	<i>Total</i>
Traffic Signs	44,834	429	45,263
Vehicle Equipment	9,610	-	9,610
Documents	9,209	-	9,209
Helmet	7,080	-	7,080
Wrong Direction	6,261	-	6,261
Load	-	58	58
Total	80,709	487	81,196

Source: Implementation Data, Bandung Metropolitan Police (2024)

Overall Effectiveness Score: 58%. Aggregate analysis shows overall effectiveness score of 58% with distribution showing specific patterns: strong performance in outcome-oriented indicators (Adequacy 72%, Equity 68%) but weak performance in process-oriented indicators (Efficiency 45%, Responsiveness 52%). **Critical Success Factors** 1) Resource Adequacy: Availability of qualified human resources as primary effectiveness determinant; 2) Organizational Coordination: Inter-unit coordination determines operational efficiency; 3) Community Acceptance: Public legitimacy crucial for policy sustainability; 4) Implementation Standardization: Implementation consistency necessary for fairness. **Systemic Challenges** 1) Structural Limitations: Personnel limitations versus extensive coverage requirements; 2) Administrative Complexity: Complex procedures affecting efficiency; 3) Coordination Issues: Multi-level coordination creating potential bottlenecks; 4) Performance Management: Insufficient monitoring and evaluation systems

Research findings provide important contributions to public administration literature, particularly in policy evaluation and public service management areas. 1) Framework Application, Application of William N. Dunn's framework in manual ticketing policy contexts shows applicability with necessary adaptations. Findings show that indicators need adjustment to specific characteristics of regulatory policies different from social services or economic policies. 2) Multi-dimensional Evaluation, This research strengthens arguments about the importance of multidimensional evaluation in measuring public policy effectiveness. Single-indicator evaluation can produce misleading conclusions, while comprehensive evaluation provides more complete understanding. 3) Context-Specific Factors, Findings emphasize the importance of contextual factors in policy implementation. Geographical, cultural, and institutional contexts

significantly influence implementation outcomes and must be integrated in evaluation frameworks.

Practical Implications 1) Resource Management, Strategic resource management needed to improve implementation efficiency. Findings show current resource allocation is not optimal and requires more strategic redistribution; 2) Service System, Enhancement in service delivery systems needed to improve responsiveness and community satisfaction. Focus on customer service orientation and transparent procedures can significantly improve public perception; 3) Monitoring and Evaluation Development of systematic monitoring and evaluation systems needed to ensure continuous improvement in policy implementation. Real-time feedback mechanisms can help in adaptive management.

Based on the research findings, this study proposes a comprehensive set of policy recommendations structured across three temporal phases to systematically address the identified effectiveness gaps in manual ticketing implementation. These recommendations are designed to build upon existing strengths while addressing critical weaknesses in resource allocation, service delivery, and institutional capacity.

Short-term Recommendations (1-2 years): The immediate priority should focus on optimizing existing resources and enhancing service quality within current operational constraints. Resource optimization requires a strategic approach involving personnel redistribution based on comprehensive priority mapping and traffic density analysis to ensure more effective coverage allocation. This should be accompanied by the implementation of flexible scheduling systems that maximize coverage efficiency while reducing operational gaps. Additionally, cross-training programs must be established to enhance personnel adaptability and create a more versatile workforce capable of responding to varying operational demands. Simultaneously, service quality enhancement initiatives should concentrate on standardizing operational procedures to ensure consistency across all implementation points, while comprehensive customer service training programs are essential to improve the quality of public interactions and build community trust. These efforts must be supported by the establishment of transparent complaint mechanisms with clearly defined resolution timelines that enhance accountability and responsiveness to public concerns. Furthermore, the development of robust monitoring systems is crucial, including real-time monitoring dashboards to track implementation effectiveness, regular evaluation schedules that systematically integrate stakeholder feedback, and standardized performance indicators that enable objective measurement and continuous improvement.

Medium-term Recommendations (3-5 years): The intermediate phase should emphasize infrastructure development and institutional reforms that strengthen the foundation for sustainable improvement. Infrastructure development initiatives must include the deployment of mobile units equipped with advanced communication systems to enhance operational flexibility and coverage capacity. This should be complemented by the establishment of an integrated command center that significantly improves coordination between units and enables more strategic resource deployment. Database integration across all operational levels is essential for better information management and real-time decision-making capabilities. Concurrently, comprehensive policy reform is necessary to address systemic issues, beginning with thorough SOP revision that addresses consistency and fairness concerns identified in the current implementation. The development of a proportional penalty structure is crucial to ensure equity and public acceptance, while the establishment of formal appeal mechanisms will enhance

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procedural justice and build institutional legitimacy. These structural changes must be supported by systematic capacity building programs that include comprehensive training programs for personnel development at all levels, specialized leadership development initiatives for middle management to improve organizational effectiveness, and technology literacy enhancement programs that prepare the organization for future technological integration and digital transformation.

Long-term Recommendations (5-10 years): The strategic long-term vision should focus on fundamental system transformation and institutional reform that positions the organization for future challenges and opportunities. System transformation initiatives must prioritize the development of hybrid systems that seamlessly integrate manual and digital enforcement capabilities, leveraging the strengths of both approaches while minimizing their respective weaknesses. The implementation of predictive analytics will enable a shift from reactive to preventive enforcement approaches, allowing for more strategic resource allocation and proactive problem-solving. Additionally, the integration of AI-assisted decision-making systems for complex cases will enhance consistency and effectiveness while reducing the burden on human personnel. These technological advances must be supported by comprehensive institutional reform that includes the implementation of performance-based management systems that align organizational incentives with effectiveness outcomes. Strengthening inter-agency coordination mechanisms is essential for addressing the complex, multi-jurisdictional nature of traffic management in metropolitan areas. Finally, the development of strategic public-private partnerships will be crucial for driving innovation, accessing additional resources, and ensuring the sustainability of improvement initiatives. These long-term reforms should create a more responsive, efficient, and effective public service delivery system that meets the evolving needs of urban communities while maintaining high standards of accountability and public trust.

This research has several limitations that need acknowledgment for future research improvement: 1) Scope Limitation, Research focuses on one organization (Bandung Metropolitan Police) which may limit generalizability of findings to other jurisdictions with different contexts; 2) Temporal Constraint, Six-month research period may not be sufficient to capture long-term trends and seasonal variations in policy implementation; 3) Methodological Limitation, Qualitative approach, while appropriate for exploratory research, does not allow statistical generalization or strong causal inference; 4) Access Constraint, Limited access to certain sensitive operational data and internal documents that could provide additional insights.

E. CONCLUSION

This study analyzes the effectiveness of manual ticketing policy implementation by Bandung Metropolitan Police using William N. Dunn's comprehensive framework from a public administration perspective. Main findings show aggregate effectiveness of 58% from optimal standards, with significant variation across different indicators. Key Findings: 1) Suboptimal Efficiency: Achievement rate of 45% indicates significant inefficiencies in resource utilization and operational management, primarily caused by structural constraints and inadequate resource allocation; 2) Adequate Adequacy: Highest performance (72%) in addressing specific problems like crime reduction, although challenges remain in comprehensive problem-solving; 3) Moderate Equity: Achievement of 68% with geographical bias and treatment inconsistency requiring systematic improvement; 4) Low Responsiveness: Performance of 52% reflecting mixed public satisfaction and concerns about fairness and service quality; 5) Moderate

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Appropriateness: Achievement of 61% with implementation consistency issues that can undermine policy legitimacy.

This research contributes to public administration literature through: (1) application of Dunn's framework in regulatory policy context, (2) identification of context-specific factors affecting implementation effectiveness, (3) development of comprehensive evaluation methodology for manual enforcement systems. Findings indicate the need for strategic reforms in three main areas: resource optimization, service quality enhancement, and monitoring system improvement. Short-term focus on resource redistribution and procedure standardization, medium-term on infrastructure development and capacity building, long-term on system modernization and institutional reform. Although manual ticketing policy implementation shows various limitations, it still has strategic value in comprehensive public service delivery. The key to improvement is optimizing current systems through systematic reforms while preparing for future innovation in more responsive and effective public services.

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