Assessing The Public Trust in The Indonesian National Police: A System Dynamics Model Approach

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Abstract

The importance of public trust in the police cannot be overstated, as it underpins social order, public safety, and the rule of law. Nevertheless, INP is facing its most difficult challenge yet after some senior police officers were involved in premeditated murder and drug trafficking. Therefore, it is necessary to provide an evaluation to improve public trust in the Indonesian National Police. This study aims to analyze the sustainability framework for enhancing public trust in the Indonesian National Police (INP). This research uses a descriptive statistical, qualitative approach with system dynamics modeling. The research was conducted between February to May 2023 with eight experts, including academicians and practitioners. The study findings project that INP public trust has a value of 3.567. Based on the scenario predicting 3.575 in 2027, indicating a medium trust status (level 3). However, there will be a slight decline in INP public trust from 2022 to 2025, followed by a gradual increase from 2025 to 2027, remaining within the medium trust range of 3.558. The repairing of public trust in INP is influenced by various dynamic and uncertain internal and external factors. Despite efforts to improve responsiveness, trustworthiness, and empathy, there is no significant positive trend observed in INP public trust, with only a marginal increase from 3.557 to 3.558 in medium trust level. Thus, the need to implement an accelerated strategy to improve trust becomes very important.

Keywords: Repairing Trust; Repairing Trust Strategy; Indonesian National Police (INP); System Dynamics Modelling

INTRODUCTION

Over the past 20 years, there has been a notable decline in the general public’s trust in the global community (Jones, 2015). Trust is critical for building and maintaining relationships and for effectively working together. When trust is broken, it has serious consequences for both individuals and organizations (Lewicki & Brinsfield, 2017). Trust plays a crucial role in the efficient functioning of any organization, and this significance is particularly pronounced in law enforcement institutions like Police Departments (Mishra, 2014).

In 2021, the Indonesian National Police (Polri) gained the highest level of trust among the Indonesian public as a law enforcement agency (Wahyurudhanto, 2022), with 80% of the population having faith in them, surpassing the public prosecutor’s office, the anti-corruption agency (KPK), and the courts. Nevertheless, Polri is facing its most difficult challenge in 2022 (Muniroh & Heydon, 2022). According to the latest survey conducted by Indonesian Political Indicator, this level of trust has plummeted to 54.2%, resulting in Polri now ranking as the least trusted law enforcement institution in Indonesia by the end of 2022 (Hutama et al., 2023). Therefore it is necessary to provide an evaluation to improve public trust in the Indonesian National Police.

This research offers several contributions. First, focusing on analyzing historical data and incorporating feedback loops, the model helps identify key variables that affect public trust. This contribution allows policymakers and law enforcement agencies to gain insights into the underlying dynamics and make informed decisions to repair public trust. Second, by manipulating variables within the model, policymakers can test scenarios and identify strategies that are most
effective in rebuilding trust. Third, this paper contributes to the development of an operational approach to trust measurement. It combines system dynamics (SD) modeling with a participatory approach.

This study aims to analyze a sustainability framework to increase public trust in the Indonesian National Police (Polri). This will enable policymakers to assess the potential impact of different strategies and policies on public trust in the Indonesian National Police. Finally, the research seeks to provide evidence-based policy recommendations for repairing public trust in the police force. By implementing these recommendations, policymakers can work towards rebuilding public trust in the police force.

To achieve our research objectives, we began by building a sustainability framework for trust improvement in Polri. This framework consists of three subsystems: accountability, transparency, and communication. This research uses a qualitative descriptive statistical method approach, complemented by a system dynamics (SD) model built by STELLA 9 to stimulate the interactions and feedback loops between various factors influencing public trust in the police force. System dynamics is a methodology that enables researchers to understand complex systems and their dynamic behavior over time.

**LITERATURE REVIEW**

**Public Trust**

Public trust is a fundamental aspect of any democratic society, particularly in institutions such as the police force. Trust plays a pivotal role in promoting compliance; however, it may be difficult to sustain, particularly in settings where governments and police forces have unfavorable reputations (Celik et al., 2022). Trust violation is a significant phenomenon that has garnered much attention in recent times (Gao & Yan, 2022; Kähkönen, 2021; Lewicki & Brinsfield, 2017; Wu et al., 2022). Trust in the police is crucial for maintaining social order, ensuring public safety, and upholding the rule of law (Kulachai et al., 2022). However, incidents of misconduct or corruption can erode public trust in law enforcement agencies (Choi & Bak, 2020).

There are three essential components in repairing public trust in the Indonesian National Police: accountability, transparency, and communication that essential components in repairing public trust toward the Indonesian National Police (Nilasari, 2022). Accountability refers to the obligation of public officials to answer for their actions and decisions. In the context of law enforcement agencies, accountability ensures that police officers are held liable for any wrongdoing and that appropriate measures are taken to address misconduct. (Gillespie & Dietz, 2009) emphasizes that accountability is crucial for repairing public trust in the police force.

Transparency involves openness and accessibility of information, allowing citizens to understand how decisions are made and how resources are allocated. In the case of the police force, transparency ensures that citizens have access to information about police operations, policies, and procedures. It also includes disclosing information about internal investigations and disciplinary actions taken against officers involved in misconduct. Transparency builds public confidence by promoting fairness and reducing suspicions about hidden agendas. Effective communication plays a vital role in building trust between law enforcement agencies and the public. Gillespie (2013) argues that effective communication can help repair public trust by fostering positive relationships between the police force and the community they serve.
Decline of Trust

Trust is a crucial element in maintaining effective relationships between law enforcement agencies and the communities they serve. However, trust in police has faced significant challenges in recent years. There are internal and external factors that contribute to the decline of trust in police.

Internal Factors

The internal factors that contribute to the decline of trust in police include misconduct and corruption within police departments (Ming Tat et al., 2023; Premkumar et al., 2021); the use of excessive force by police officers (Premkumar et al., 2021); lack of transparency within police departments (Sousa et al., 2018); perceived racial bias and discrimination in policing practices (Premkumar et al., 2021); and lack of meaningful engagement with the community (Wood et al., 2019).

External Factors

External factors also play a role in the decline of trust in police. They are media influence through negative portrayals of police actions, and biased reporting can shape public perceptions of law enforcement and erode trust (Mohammadi et al., 2020); Socioeconomic factors (Zhorayev, 2020); the historical context of past incidents of abuse or discriminatory practices by law enforcement (James et al., 2020); the political climate surrounding law enforcement policies and practices (Premkumar et al., 2021); and the perceived lack of accountability for police officer’s actions.

RESEARCH METHOD

In this research, a qualitative descriptive statistical approach is utilized to collect, analyze and interpret the data related to evaluating INP public trust levels.

The methodology involves data collection through a questionnaire administered to eight experts, including academicians and practitioners. The experts were selected based on their expertise and experience with specific criteria such as academic qualifications, specialization in the Indonesian National Police, minimum work experience, and expert judgments from previous research.

The focus of this study is on the Indonesian National Police and the sampling plan is East Java Regional Police (Polda Jatim). Polda Jatim is the perfect sampling plan for repairing trust in the population due to its large area and personnel, good reputation, and leadership under regional police chiefs with outstanding achievements. The study was carried out between February to May 2023, utilizing a questionnaire distributed to experts based on existing secondary data.

After collecting the completed questionnaires, qualitative descriptive statistics are used to analyze the data. Additionally, system dynamics modeling is employed to simulate and understand the complex dynamics of trust in the Indonesian National Police. By constructing a model based on expert opinions and available data, researchers can gain insights into how different factors interact to shape public trust in the police force.

System dynamics

Modeling is an effective approach to tackling real-world problems, especially when practical implementation or experimentation is difficult or costly. By utilizing modeling techniques, one can optimize their system before actual deployment. This involves mapping real-world issues into a conceptual model and analyzing and optimizing it to find workable solutions (Li et al., 2020a). Simulation, on the other hand, entails operating the system model to identify and address potential
failures, bottlenecks, resource overuse, and overall system performance optimization.

System Dynamics models are often presented through feedback diagram structures, specifically Causal Loop Diagrams (CLDs), which show the direction and polarity of variable flow changes—either positive or negative. Another way to describe the model's structure is by using flowcharts, representing relationships between variables with explicit symbols for the involved variables. For this study, system dynamics analysis was conducted using STELLA 9 software.

Scenario analysis in system dynamics modeling (SDM) is a valuable tool for exploring a spectrum of potential future outcomes based on different policies and actions. In SDM, the values of variables and parameters can be modified to depict various actions and scenarios. The simulation results will vary based on these different inputs (Bottero et al., 2020).

Conceptual Framework

This paper employed a systematic procedure to ensure data saturation, using a zigzag data collection pattern and document analysis. Although literature reviews are commonly used to build System Dynamics (SD) models, their results may lack definitiveness due to varying limitations and inconsistencies across studies. The researchers selected interviewees theoretically to construct the theory effectively. Causal relationships from the interviews were used to create a feedback loop, forming the basis of the model. Additionally, group interviews with different experts were conducted to validate the model structure, and historical data from real projects were gathered. The model was then subjected to a system dynamics validation test for further verification.

![Figure 1. The Causal Feedback Diagram of INP Repairing Trust](image)

The feedback diagram serves as a visual representation of the interconnectedness of variables within the model, forming the basis for simulation. To reveal the mechanism of interaction, a causal feedback diagram is created, focusing on key variables, as depicted in Figure 1. The diagram omits constants and includes only core variables. Additionally, Figure 1 illustrates that three main variables drive the dynamics of INP public trust, with several supporting sub-variables contributing to the overall capability value against declines.
Table 1. Scale on Trust Assessment

<table>
<thead>
<tr>
<th>Likert Scale</th>
<th>Description</th>
<th>Attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Very high</td>
<td>exhibit complete and unwavering trust in the entity or system</td>
</tr>
<tr>
<td>4</td>
<td>High</td>
<td>have significant faith and reliance on the entity or system being evaluated</td>
</tr>
<tr>
<td>3</td>
<td>Medium</td>
<td>have a reasonable amount of confidence in the entity or system</td>
</tr>
<tr>
<td>2</td>
<td>Low</td>
<td>have some reservations but still demonstrate a limited amount of trust</td>
</tr>
<tr>
<td>1</td>
<td>Very low</td>
<td>have minimal or no trust in the entity or system being evaluated</td>
</tr>
</tbody>
</table>

Adopted from (He et al., 2014)

To ensure unbiased, robust, and reliable evaluations of trust levels, two separate teams, each consisting of a maximum of four individuals, including academic experts and practitioners, assess the INP public trust. The assessment employs a Likert scale ranging from one to five, where one signifies a very low level, and five represents a very high level (as shown in Table 1). The final assessment results for proficiency at level three are determined by computing the average rating, considering various assessment methods and evaluations.

Table 2. INP Repairing Trust

<table>
<thead>
<tr>
<th>Level</th>
<th>Grade</th>
<th>Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>High distrust</td>
<td>$0 \leq \text{value} &lt; 1.25$</td>
<td>Lowest possible trust</td>
</tr>
<tr>
<td>2</td>
<td>Low trust</td>
<td>$1.26 \leq \text{value} &lt; 2.50$</td>
<td>Not very trust very worthy</td>
</tr>
<tr>
<td>3</td>
<td>Medium Trust</td>
<td>$2.51 \leq \text{value} &lt; 3.75$</td>
<td>Mean trustworthiness</td>
</tr>
<tr>
<td>4</td>
<td>High trust</td>
<td>$3.76 \leq \text{value} &lt; 5$</td>
<td>More trustworthy than most entities</td>
</tr>
</tbody>
</table>

Adopted from (Iltaf et al., 2012)

Trust value symbolizes the level of trust placed in a particular entity or system. It is a measure of the confidence and reliability attributed to that entity or system by individuals or organizations. Different trust levels can be defined based on various factors such as accountability, transparency, and communication. Different trust levels and their corresponding trust values are described in Table 2.

Figure 2. The Stock-Flow Model of INP Repairing Trust
A stock-flow model is a quantitative approach that elucidates logical relationships, feedback patterns, and system control principles. The model categorizes variables into stock, flow, and supplementary variables. Stocks represent variables that accumulate over time, flows represent variables that change over time, and incremental variables are intermediate variables. Flows influence stocks through inflows or outflows, establishing connections between different stocks in the system (Li et al., 2020).

Using the causal feedback diagram as a basis, this study created a stock and flow model to evaluate the trust repair of the Indonesian National Police. The model includes variables shown in Figure 2: Transparency, Accountability, and Communication. Each level variable contains influential sub-variables. For instance, the Transparency variable encompasses five sub-variables: disclosure, clarity, accuracy, consistency, and responsiveness. The stock-and-flow model employed in this study captures the dynamic process of repairing trust in INP. Additionally, the model incorporates the Accountability variable, which is measured and simulated to enhance the SD model’s resemblance to real-world scenarios.

**FINDINGS AND DISCUSSION**

From 2022 to 2027, over a period of 60 months, the INP public trust value fluctuates between 3.567 and 3.570, indicating a medium trust level (level 3). This value is not static but rather dynamic, influenced by various external and internal factors. The model range for public trust in the INP spans from 0 to 5, implying that the level of trust can vary significantly.

Figure 3 illustrates the progressive growth of public trust. From 2022 to 2027 (60 months), there will be a slight decline in INP public trust. This decline can be attributed to dynamic and uncertain factors, including internal and external factors. However, improving responsiveness, trust, and empathy will maintain the public trust in the Indonesian National Police. Consequently, it is crucial to enhance its relationship with the public, foster cooperation, and ensure that law enforcement efforts align with the needs and expectations of society to effectively address existing trust decline factors. Furthermore, between 2025 and 2027, the INP public trust is projected to experience a gradual increase while remaining within the range of 3.575, indicating a medium trust level.
Scenario Analysis

The next step of this paper considers different scenarios: inertia and a strategic scenario. The inertia assumes that there is a decline in trust, while the strategic scenario is an action that may be taken when the trust decline by increasing the pattern of responsiveness, trustworthiness, and empathy. To represent these scenarios in the system dynamics model, different parameter values have been assigned: (1) the trust decline level can reach up to level 5, and (2) strategic measures are implemented to address the trust decline.

In detail, low values have been set for the inertia scenario to represent a no-intervention policy. On the other hand, moderate values have been set for this parameter to represent the actions of strategic scenarios in the HR model. Scenario simulations have been carried out for five years. This simulation has been developed for variables identified as decline factors. The main objective is to examine the possibility of its influence over time and how it affects the INP public trust in dealing with internal and external factors that may decline public trust.

Table 3 and Figure 4 illustrate the simulation, providing a visual comparison of the scenarios’ evolution over time.

### Table 3. Scenarios For The Simulation of INP Public Trust

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Value</th>
<th>Inertia</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>1</td>
<td>3.567</td>
<td>3.566</td>
<td>3.567</td>
</tr>
<tr>
<td>2023</td>
<td>12</td>
<td>3.567</td>
<td>3.564</td>
<td>3.565</td>
</tr>
<tr>
<td>2024</td>
<td>24</td>
<td>3.568</td>
<td>3.561</td>
<td>3.562</td>
</tr>
<tr>
<td>2025</td>
<td>36</td>
<td>3.569</td>
<td>3.559</td>
<td>3.559</td>
</tr>
<tr>
<td>2026</td>
<td>48</td>
<td>3.572</td>
<td>3.558</td>
<td>3.559</td>
</tr>
<tr>
<td>2027</td>
<td>60</td>
<td>3.575</td>
<td>3.557</td>
<td>3.558</td>
</tr>
</tbody>
</table>

![Value of INP Public Trust](image)

**Figure 4.** Histogram of Scenario results for INP public trust

In the first scenario (inertia), the decline level increases, but no action is taken for five years. As a result, there is a declining trend in the INP public trust. The decline level is assumed to reach level 4, with values ranging from 3.2 to 3.5, which hurts the trust value, causing it to decrease from 3.566 to 3.557. However, even with this decrease, the trust value remains at a medium trust level.

Public trust in the INP is a crucial aspect of its functioning and effectiveness as a law enforcement agency. However, various internal and external factors have contributed to a decline in public trust over time. To effectively address these challenges, scholars have proposed various reforms, including enhancing internal accountability mechanisms within the organization to
increase transparency by promoting open communication channels between the police and the public (Nilasari, 2022).

In the second scenario, the declining level is increased to level 4, accompanied by strategic actions aimed at enhancing responsiveness, trustworthiness, and empathy. As a result of these measures, there is no significant positive trend observed in INP public trust. The value of public trust only marginally increases from 3.557 to 3.558 in medium trust levels. To address this issue, it is crucial to implement an accelerated strategy to repair trust.

**Research Findings**

The repairing of public trust in INP is influenced by various dynamic and uncertain internal and external factors. Despite efforts to improve responsiveness, trustworthiness, and empathy, there is no significant positive trend observed in INP public trust, with only a marginal increase from 3.557 to 3.558 in medium trust level. Thus, the need to implement an accelerated strategy to improve trust becomes very important.

**CONCLUSIONS**

Public trust in Indonesian National Police is a vital element for the agency's functioning and effectiveness as a law enforcement institution. Analyzing the framework through scenarios and simulations allows for a comprehensive assessment. According to the study findings, the INP public trust value remains consistently high from 2022 to 2027, ranging from 3.567 to 3.575, indicating a medium trust status. From 2022 to 2025 (36 months), there is a slight decline in INP public trust. However, between 2025 and 2027 (24 months), there is a gradual increase in INP public trust, although it remains within the medium trust range of 3.575.

In the context of inertia, the decline is assumed to increase significantly to level 4, ranging from 4.2 to 4.5. As a result, the INP public trust value decreases from 3.566 to 3.557. Despite this decline, the INP public trust remains at a medium trust level 3. On the other hand, in the second scenario, the increase in the declining value to level 4 is accompanied by strategic actions aimed at enhancing responsiveness, trustworthiness, and empathy. As a result, there is only a marginal increase, rising from 3.557 to 3.558. This trend indicates no significant improvement at the medium trust level 3.

**LIMITATION & FURTHER RESEARCH**

This research has several limitations. Firstly, it did not account for the influence of organizational culture, particularly in a mechanistic organization. A positive organizational culture, characterized by clear values, ethical leadership, and accountability, is crucial in addressing and preventing misconduct, thus contributing to the restoration of trust (Ming Tat et al., 2023; Premkumar et al., 2021; Wood et al., 2019). Future studies could incorporate the specific characteristics of a mechanistic organizational culture to enhance the model.

Secondly, the current study focused on a restricted set of significant variables to construct the model, potentially overlooking vital factors that could significantly impact the system's behavior. To strengthen the model's robustness and increase its applicability, future research should consider incorporating a more extensive range of variables.

Thirdly, the simulation and impact evaluation of the strategy was limited in spatial scale. To address this limitation and ensure the strategy's effectiveness across various settings, researchers should consider conducting experiments on a broader spatial scale. By taking into consideration both internal and external elements, the strategy can more comprehensively address trust-related issues and yield more robust results. Moreover, conducting a comparative analysis between the original strategy and the accelerated approach would offer valuable insights into their relative
effectiveness. This comparison could shed light on which specific aspects of the accelerated strategy contribute most significantly to trust repair and how it outperforms the original approach.

REFERENCES


