

SWOT ANALYSIS OF THE DISTRIBUTION MECHANISM FOR ELECTRONIC ID CARD BLANKS (CASE STUDY AT THE DIRECTORATE GENERAL OF POPULATION AND CIVIL REGISTRATION)

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Abstract

The distribution of electronic ID card (e-KTP) blanks plays a crucial role in supporting effective and equitable population administration services. However, in practice, the distribution mechanism still faces various challenges, such as inaccurate needs forecasting, limited travel budgets, and geographical barriers. This study aims to analyze the strengths, weaknesses, opportunities, and threats (SWOT) of the e-KTP blank distribution system from the Directorate General of Population and Civil Registration (Ditjen Dukcapil) to regional offices. Using a qualitative descriptive method, data was collected through in-depth interviews, direct observation, and document analysis of standard operating procedures (SOPs) and technical guidelines governing distribution. Findings indicate that while the distribution process benefits from well established SOPs and a serial-number tracking system, it remains deficient in terms of digitalized record-keeping and the accuracy of needs assessment. Opportunities exist in the development of an integrated digital system and the enhanced role of provincial authorities in collective distribution. Conversely, threats stem from fluctuations in demand and limited access to 3T (Frontier, Outermost, and Disadvantaged) regions. This study recommends that digitization be accelerated, real-time stock monitoring be implemented, and public transparency be enhanced to improve both operational efficiency and public confidence in population administration services.

Keywords: SWOT analysis, e-KTP blanks, distribution, population administration

INTRODUCTION

Digital transformation has driven fundamental changes in the governance of population administration in various countries, including Indonesia. In an era of information openness and high mobility, population identity serves not only as a data verification instrument but also as a key to delivering fair and efficient public services. The existence of accurate and digitally integrated population administration documents reflects the quality of governance and plays a role in guaranteeing civil rights protection and supporting data-based policy formulation.

As an archipelagic nation with a population exceeding 282 million, Indonesia faces structural challenges in providing equitable population administration services (Prasetya & Subekti, 2021). The government, through the Directorate General of Population and Civil Registration (Ditjen Dukcapil), has developed an electronic identity system in the form of the Electronic Identity Card (KTP-el or e-ID card), which stores population data in a chip as the implementation of an official national identity. The e-KTP is mandatory and strategic, making its availability crucial for the smooth delivery of public services. However, the physical availability of e-KTP card blanks, which must be distributed from the central government to all regions, has become a critical point in the success of population administration services in Indonesia.

Although the distribution of e-KTP card blanks is based on Standard Operating Procedures (SOPs) and Technical Guidelines from Ditjen Dukcapil, which regulate everything from the request process by regional Population and Civil Registration offices to the handover of blanks along with a Handover Report (BAST), the distribution still faces significant challenges. Currently, distribution is carried out through a direct collection mechanism by regional offices from the central office, which is often constrained by limited regional official travel budgets, capacity disparities between regions, and difficult geographical conditions, especially in 3T (Underdeveloped, Frontier, and Outermost) regions. The problem is also influenced by the absence of a digital-based demand planning system, still relying on manual records that are prone to errors. This condition leads to inaccurate allocation of blanks, resulting in service delays and an accumulation of unfulfilled requests across Indonesia (Yuristiawan et al., 2025).

The lack of efficiency in e-KTP card blank distribution directly impacts the quality of population administration services and public trust in government institutions. Delays in printing the e-KTP as an official identity lead to postponed access for citizens to essential services such as education, healthcare, banking, and election participation. The non-digitalized manual recording system also complicates national monitoring and evaluation processes and increases the potential for inefficiency and data misuse. Without systematic improvement efforts, this situation is feared to deepen service gaps between regions and reduce the legitimacy of data-based public services, ultimately hindering the achievement of Indonesia's digital government transformation goals. In this regard, service innovation becomes a primary strategy for improving the quality of population services, including optimizing the distribution of e-KTP card blanks as part of a bureaucracy reform oriented toward public satisfaction (Mohamad et al., 2021).

To address the complex and multidimensional challenges of e-KTP card blank distribution, this study employs a SWOT analysis approach, which can map internal strengths and weaknesses, as well as external opportunities and threats (Rangkuti, 2014) that affect distribution effectiveness. This approach was chosen for its proven effectiveness in evaluating policies and distribution management in the public sector (Prakoso et al., 2021). Applying SWOT analysis in the context of e-KTP card blank distribution allows for the systematic identification of administrative barriers, the mapping of potential digitalization solutions, and the formulation of collaborative strategies between central and regional governments. This research also considers important variables such as budget availability, human resource readiness, and supporting infrastructure.

This study is expected to provide strategic contributions to strengthening population administration governance in Indonesia, particularly in the aspect of a more adaptive, accountable, and data-driven distribution of e-KTP card blanks. The findings from the SWOT analysis can serve as a basis for formulating policies that balance local and national conditions and promote the implementation of a more efficient digital distribution system. Academically, this research expands the application of SWOT analysis in the context of public service management, especially in the field of population administration, which has had limited studies based on strategic evaluation. The results of this study are expected to become a reference for developing an identity document distribution system that is more responsive to the needs of society in the digital era.

METHODS

This study employs a qualitative descriptive approach to obtain an in-depth understanding of the e-KTP card blank distribution mechanism from Ditjen Dukcapil to the regions, based on the prevailing Standard Operating Procedures (SOPs). Data were collected through:

1. Structured interviews with purposively selected informants, namely technical officials within Ditjen Dukcapil and employees of district/city Population and Civil Registration Offices.
2. Direct observation of the process, from request and disposition to the handover of e-KTP card blanks.
3. Document analysis of formal regulations such as the SOP for e-KTP Card Blank Distribution (2020), Technical Guidelines for implementation (2024), and other supporting data like Handover Reports (BAST) and distribution summaries.

Data were analyzed using the SWOT analysis approach, which aims to identify strengths, weaknesses, opportunities, and threats in the distribution mechanism and to formulate alternative strategies based on these findings (Fatimah, 2016). The classification results are presented in a SWOT matrix as a tool for formulating a more adaptive and efficient distribution strategy. To ensure data validity, source and method triangulation techniques were used, along with member checking with key informants to confirm that the data obtained were consistent with the field situation and free from perceptual bias.

Table. 1 SWOT Matrix Framework

	STRENGTHS	WEAKNESSES
	Positive characteristics and advantages of the issue, situation, or technique	Negative characteristics and disadvantages of the issue, situation, or technique
OPPORTUNITIES	S-O Strategy/Analysis	W-O Strategy/Analysis
Factors, situations that can benefit, enhance or improve the issue, situation, or technique	<i>Using strengths to take advantage of opportunities</i>	<i>Overcoming weaknesses by taking advantage of opportunities</i>
THREATS	S-T Strategy/Analysis	W-T Strategy/Analysis
Factors, situations that can hinder the issue, situation, or technique	<i>Using strengths to avoid threats</i>	<i>Minimize weaknesses and avoid threats</i>

RESULT AND DISCUSSION

A SWOT analysis was conducted to evaluate the internal and external conditions affecting the distribution of e-KTP card blanks. Based on interviews with officials from Ditjen Dukcapil and regional Population and Civil Registration Offices, as well as a study of SOP documents and distribution summaries from 2021-2024, key strengths were identified, such as the existence of SOPs and the role of the Provincial Population and Civil Registration Office. However, weaknesses emerged in the form of an unintegrated real-time stock monitoring system. A major opportunity is presented by the national push for digitalization, yet this is hampered by geographical complexities and fluctuating demand. This analysis was then structured into an IFAS-EFAS matrix as a basis for strategy formulation.

Internal and External Factors

Strengths

1. Standard Operating Procedures (SOPs) and Technical Guidelines (Juknis) for distribution have been fully implemented and serve as the standard guide for distribution activities.
2. The distribution mechanism includes a handover report and blank serial numbers, ensuring accurate and traceable distribution.
3. Internal control is in place through the requirement for regional civil servants to collect the blanks and sign official documents.
4. A return system for damaged blanks (e.g., chips that cannot be encoded) is available as a form of quality control.
5. The Provincial Population and Civil Registration Office plays a role in supporting distribution to districts/cities, especially when regional official travel budgets are limited.

Weaknesses

1. The absence of a digital and adaptive forecasting system for blank needs that can respond to population dynamics and events (e.g., elections, regional head elections, and changes in data elements).
2. The non-digitalized distribution documentation process could lead to documents being lost or not optimally archived.
3. Limited funds for official travel in the regions pose a constraint to collecting blanks directly from the central office.
4. The fulfillment of e-KTP card blank needs in densely populated areas does not fully match the requests submitted.
5. An integrated, real-time stock monitoring application accessible to both central and regional offices is not yet available.

Opportunities

1. The digitalization of blank distribution, from demand submission and recording to documentation, is highly feasible for future implementation.
2. The use of information systems like the Population Administration Information System (SIAM) as a control tool for the number of e-KTP recordings and printings opens up potential for distribution transparency.
3. Coordination and synergy between Provincial and District/City Population and Civil Registration Offices can be optimized for collective and efficient distribution.
4. Digital transformation as a national agenda can accelerate the integration of the e-KTP distribution system electronically.
5. The development of the Digital Population Identity (IKD) as part of digital administration services may reduce dependence on physical blank distribution in the future.

Threats

1. Demand for blanks from the regions is fluctuating and influenced by various factors that are difficult to predict accurately.
2. Regions with difficult geographical conditions face logistical challenges and high official travel costs to collect blanks from the central office.
3. Changes in national budget policy could affect the smooth distribution of e-KTP card blanks to the regions.
4. A mismatch between demand and supply could potentially cause delays in e-KTP card printing in the regions.
5. Public dissatisfaction with population administration services may arise if blank distribution is not fully equitable and prompt.

Table 2. SWOT Matrix e-KTP Card Blank Distribution

<div>IFAS</div> <div>EFAS</div>	Strengths (S)	Weaknesses (W)
	<p>S1: Standard Operating Procedures (SOP) and technical guidelines have been fully implemented.</p> <p>S2: The distribution process is accompanied by an official report and serial numbers of the forms.</p> <p>S3: Internal control is exercised through regional civil servants (ASN).</p> <p>S4: A procedure is established for the return of damaged forms.</p> <p>S5: The role of the Provincial Population and Civil Registration Office (Dukcapil) in distribution.</p>	<p>W1: The forecasting system for form requirements is based solely on historical data.</p> <p>W2: Documentation is carried out manually.</p> <p>W3: There are limitations in the regional official travel budget.</p> <p>W4: Form needs have not been fully met in densely populated areas.</p> <p>W5: A real-time and integrated stock monitoring application is not yet available.</p>
Opportunities (O)	S-O Strategies	W-O Strategies
<p>O1: Potential for full digitalization in the distribution process of forms.</p> <p>O2: Potential development of e- monitoring for distribution.</p> <p>O3: Optimization of coordination between provinces and districts/cities for collective distribution.</p> <p>O4: National digital transformation.</p> <p>O5: Digital ID supports service efficiency</p>	<p>SO1: Development of an Integrated Digital System (based on S1, S2 – O1).</p> <p>SO2: Enhancement of Accountability Through a Structured e-KTP Form Return System (based on S2, S3 – O1).</p>	<p>WO1: Development of a Digital-Based Forecasting System for Form Requirements (based on W1 – O1, O2).</p> <p>WO2: Development of an E-Monitoring System to Improve Distribution Accuracy (based on W2 – O1, O2).</p>
Threats (T)	S-T Strategies	W-T Strategies
<p>T1: Fluctuations in demand.</p> <p>T2:Complex geographical conditions.</p> <p>T3: Changes in national budget policies.</p> <p>T4: Mismatch between demand and form availability.</p> <p>T5: Decline in public trust.</p>	<p>ST1: Optimization of the Role and Functions of the Provincial Civil Registry Office (Dukcapil) (based on S4 – T1, T2).</p> <p>ST2: Service Consistency to Maintain Public Trust (based on S1, S2 – T3).</p>	<p>WT1: Public Notification to Promote Service Transparency (based on W2, W3 – T5).</p> <p>WT2: Anticipatory Strategy in the Management of e-KTP Form Distribution (based on W1, W2 – T1, T4).</p>

Strategies for e-KTP Card Blank Distribution

Based on the combination of internal and external factors in the SWOT Matrix, four main strategy categories were formulated, aligning with Triana's (2019) findings on the importance of adaptive strategies in public sector distribution systems.

1. S-O (Strength-Opportunity) Strategies This strategy is designed by leveraging all strengths to seize opportunities to the fullest extent.

- SO1: Development of an Integrated Digital System. Ditjen Dukcapil's strength lies in the consistent application of SOPs. As stated by a technical official at Ditjen Dukcapil, "We have fully implemented the SOP; so far, no one has violated it or conducted distribution outside the SOP." This indicates that procedural aspects have been consistently executed and form the foundation of distribution control (S1) and an accurate blank serial number tracking system (S2), as observed during the blank handover process. On the other hand, the opportunity for digitalization (O1) is wide open with the development of information technology and infrastructure. By combining these strengths with existing opportunities (S1, S2-O1), Ditjen Dukcapil can build an integrated digital distribution platform that covers everything from demand planning to real-time monitoring. This strategy aligns with the findings of As'adi (2024), who asserted that digital transformation in administrative services yields significant positive impacts.
- SO2: Enhancement of Accountability Through a Structured e-KTP Card Blank Return System. Ditjen Dukcapil has a strength in its mechanism for returning damaged blanks from regions to the central office as a form of quality control (S3), reinforced by a serial number tracking system (S2) to ensure the identification of each damaged blank. Observation and document analysis show that blanks verified as damaged will be submitted for replacement to the provider, although the process is still manual and not integrated. Meanwhile, the opportunity for digitalization driven by the Electronic-Based Government System (SPBE) policy (Presidential Regulation No. 95 of 2018) opens up space for accelerating system integration. Interviews with technical officials also confirmed the urgency of this transformation. By leveraging these strengths (S3, S2) and opportunities (O1), Ditjen Dukcapil can integrate the management of blank returns, enabling digital reporting, tracking, and recording. Besides speeding up the process, this system will enhance accountability in managing state assets.

2. S-T (Strength-Threat) Strategies S-T strategies use existing strengths to overcome threats.

- ST1: Regional Coordination Scheme with a Collective Approach. The distribution of e-KTP card blanks has a strength in the active role of the Provincial Population and Civil Registration Office in supporting delivery to districts/cities (S4). However, threats remain in the form of geographical constraints, difficult access to remote areas, and limited regional budgets that often hinder the process of collecting blanks from the central office (T1, T2). Through an S-T strategy, Ditjen Dukcapil can optimize the role of the Provincial Office as a regional distribution coordination hub. With the existing coordinative capacity, the Provincial Dukcapil can be directed to coordinate the collective delivery of blanks to districts/cities within its territory. This collective distribution approach allows for budget efficiency, reduces the logistical burden on individual regions, and ensures smooth distribution despite geographical and budgetary limitations.
- ST2: Service Consistency to Maintain Public Trust. Ditjen Dukcapil has strengths in its well-implemented SOPs (S1) and its accurate blank tracking system (S2). However, there is a threat of a potential crisis in public trust (T3) that could arise from delays or inconsistencies in e-KTP services caused by inefficient blank distribution. Based on the S-T strategy, these strengths (S1, S2) can address the threat (T3) by generating a strategy to maintain consistency in the distribution process by leveraging established SOPs and the accurate tracking system. This aims to prevent delays that could trigger a public trust crisis through predictable and transparent distribution. Service consistency is key to maintaining the institution's credibility in the eyes of the public (Sari & Suryani, 2023).

3. W-O (Weakness-Opportunity) Strategies This strategy is implemented by leveraging existing opportunities to minimize weaknesses.

- WO1: Development of a Digital-Based and Predictive Analytics Forecasting System for e-KTP Card Blank Needs. The manual planning of e-KTP card blank needs (W1) makes accurate prediction difficult. However, current developments in predictive calculations and digital infrastructure (O1, O2) present a significant opportunity to build a more modern forecasting system. By processing historical data and demographic trends, this system would help estimate blank needs more accurately. This would reduce the risk of stock shortages or surpluses and improve distribution efficiency. This strategy is reinforced by the findings of Yuristiawan (2025), which show that the Double Exponential Smoothing (DES) method is effective in adjusting blank demand forecasts to changing demand. The calculation results proved to be accurate, allowing regional offices to submit requests in a timely manner and avoid stock surpluses or shortages.

- WO2: Development of an E-monitoring System for Distribution Accuracy. A key weakness in e-KTP card blank distribution is that documentation and stock monitoring are still done manually (W2). This process is time-consuming, risks data loss, and complicates rapid decision-making. On the other hand, the development of digital infrastructure and the availability of real-time monitoring technology create an opportunity to build a more efficient and transparent monitoring system (O1, O2). By addressing the weakness (W2) with the opportunities (O1, O2), Ditjen Dukcapil can develop an integrated e-monitoring system capable of recording and displaying distribution data and blank stock levels. This system would allow for tracking the position of blanks and detecting stock shortages in the regions. The implementation of this e-monitoring system aligns with the findings of Putranto (2021), who showed that web-based monitoring digitalization can simplify verification and reporting processes that were previously done conventionally. This e-monitoring system is expected not only to increase transparency and distribution accuracy but also to strengthen accountability in managing blanks as state assets.
4. W-T (Weakness-Threat) Strategies This strategy is based on defensive actions and seeks to avoid threats and weaknesses.
- WT1: Development of a Public Notification and Transparent Communication System for Blank Availability. Limitations in public communication systems and manual documentation (W2, W3) create a gap in accurately conveying information about blank availability. This can trigger a public trust crisis when service delays occur (T5). To overcome this, Ditjen Dukcapil needs to develop a transparent and proactive public notification system consistently. Information on blank availability can be disseminated through official channels such as websites, social media, or announcement boards at service offices in regional Dukcapil offices and Ditjen Dukcapil. This strategy can increase transparency, reduce speculation, and maintain public trust through open service communication (Nugraha et al., 2020).
 - WT2: Anticipatory Strategy in e-KTP Card Blank Distribution Management. Weaknesses in manual planning and non-real-time monitoring (W1, W2), coupled with geographical threats and limited regional budgets (T1, T2), demand the strengthening of anticipatory strategies. Ditjen Dukcapil needs to build an early detection system integrated with central and regional stock monitoring to identify potential disruptions from the outset. This system could provide automatic alerts when stock levels are low, allowing preventive measures to be taken immediately. With this approach, distribution remains stable, the risk of delays is reduced, and the overall system resilience is enhanced.

The findings of the SWOT analysis indicate that the e-KTP card blank distribution mechanism already has a solid foundation through procedural standardization and a consistent administrative control system. However, challenges such as manual processes, limited data access, and geographical constraints highlight the need for digital transformation to make the system more adaptive and efficient. The strategies formulated in this study aim to combine internal strengths with digitalization opportunities to overcome structural weaknesses and respond to the dynamics of regional needs. This trend is consistent with Soemartono's (2017) research, which examined the e-KTP evaluation program in DKI Jakarta and found that information technology integration was crucial in addressing administrative and demographic issues. That study confirmed that strengthening the digital system not only complements existing infrastructure but also serves as a strategic step toward realizing more effective public services. Thus, the formulated strategies have the potential to drive the distribution of e-KTP card blanks toward a more responsive, transparent, and inclusive service system. This approach is expected not only to strengthen the management of e-KTP card blank distribution nationally but also to increase public trust in population administration services.

Conclusion

The SWOT analysis reveals that the distribution of e-KTP card blanks by Ditjen Dukcapil is built on a strong foundation of consistent SOPs and an accurate serial number tracking system. However, its implementation still relies on manual processes and is constrained by limited regional budgets, creating a risk of hindering equitable distribution, especially in 3T regions and densely populated areas. This disparity indicates the need for improved coordination and planning in the allocation of e-KTP card blanks.

The opportunity for digitalization, supported by national policies like the Electronic-Based Government System (SPBE), provides a strategic direction for strengthening the distribution system comprehensively. Integrating technology into the distribution process has the potential to enhance the efficiency, transparency, and accountability of the service.

Based on these findings, it is crucial to accelerate the integration of a digital-based distribution system within the central and regional Dukcapil environment, including developing a demand forecasting system and real-time e-monitoring of blank stocks. These efforts will not only improve transparency and efficiency but also bolster public trust in public services. Furthermore, the synergy between provincial and district/city

Dukcapil offices needs to be strengthened through a region-based collective distribution scheme to reach 3T areas more efficiently.

From an academic perspective, this research opens opportunities for further studies, such as developing predictive data-based distribution models and comparative studies between regions. A deeper analysis of the effectiveness of SOP implementation in various regions could form the basis for strengthening distribution regulations and policies in the future.

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