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Original Article

Analysis of Services for Making Electronic Identity Cards at the Department of Residence and Civil Registration

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Abstract

Public agencies that issue electronic identity cards nevertheless face several challenges due to limited facilities, staff ability, and access, especially for inhabitants in remote locations far from service centres. This study aims to identify and analyze the service of Electronic ID Card (E-KTP) issuance at the Department of Population and Civil Registration of Tana Toraja Regency, focusing on the quality aspects of service procedures and the existing service technology infrastructure. This research uses a qualitative descriptive method with a case study approach at the Department of Population and Civil Registration (Disdukcapil) of Tana Toraja Regency through in-depth interviews, direct observation, and documentation studies. Data analysis uses Miles and Huberman's interactive model which includes three stages: data reduction, data presentation, and conclusion drawing. The analysis process is carried out continuously to produce a comprehensive understanding of the quality of public services at the Disdukcapil of Tana Toraja Regency. This research shows that the quality of E-KTP services in Tana Toraja Regency has been running well according to Standard Operating Procedures, with a service flow starting from taking queue numbers to printing and receiving E-KTPs. The service is supported by adequate facilities and process transparency. Digital innovations such as recording and printing E-KTPs in eight sub-districts facilitate access for residents in remote areas. The infrastructure and service technologies are good, but outdated hardware, inconsistent internet access at peak hours, and central government form delivery delays limit them. Form collection in Makassar is being done directly to speed up services.

Keywords: Public Service, E-KTP, Service Quality, Technological Infrastructure, Accessibility.

1. Introduction

Public service is a fundamental element in government administration as it directly affects the interests of the broader community. In the Indonesian context, public service is often equated with general services or services to the community carried out by government institutions (Riani, 2021). Along with the increasing awareness of the community about their rights as citizens, public service has developed into a constitutional right that demands fulfillment based on principles of ethics, justice, and legal certainty (Kabran, 2021). Attention to the existence of services has also grown along with the emergence of various problems in government services to the community (Br Sembiring & Rangkuti, 2025). Therefore, the quality of public services in Indonesia is still often questioned. Mahsyar (2011) states that bureaucracy is often trapped in slow, inefficient, and less transparent service practices. According to Mohammad (2018), the orientation of public services tends to be pragmatic due to bureaucratic behavior that does not support clean and professional service principles.

One of the essential and strategic forms of public service is service in the field of population administration, such as the production of Electronic Identity Cards (E-KTP) (Baunsele & Hardianto, 2019; Nugraha, 2023). The main functions of the Department of Population and Civil Registration (also known as Disdukcapil) include recording, issuing, storing, and managing population data comprehensively and systematically (Farid, 2022). Population data is not only the basis for government administration but is also used for development planning, budget allocation, law enforcement, and social services (Mirillaraty et al., 2019). Therefore, population administration services play an important role in the effectiveness of the public financial system and good governance (Jayasinga & Triono, 2023).

Along with advances in information and communication technology, the Indonesian government is encouraging digital transformation in public services, including in the implementation of E-KTP. E-KTP service as part of e-government aims to improve efficiency, accuracy, and transparency of population data and facilitate integration between agencies (Muliawaty & Hendryawan, 2020). However, the quality of E-KTP services in various regions still faces challenges. As stated by Barata in Erlianti (2019), service quality is determined by the perception of the community as service users, not just by the providers. This requires a comprehensive evaluation of service dimensions, ranging from procedures, speed, affordability, to user satisfaction. For this reason, increasing the capacity of officials and understanding of service standards is absolutely necessary. E-KTP services in Tana Toraja Regency are also not free from challenges. Several constraints such as limited devices, unstable internet networks, and uneven distribution of forms are still fundamental problems (Al-farizi & Nunuk, 2023; Aris et al., 2021; Haikal & Deasy, 2022; Ulin & Aisyah, 2023).

In the context of Tana Toraja Regency, E-KTP services experience various obstacles ranging from limited technological infrastructure, unstable internet networks, to uneven distribution of E-KTP forms. Wulandari (2021) shows that E-KTP services in some areas are considered not transparent, slow, and not informative. In fact, the Disdukcapil Tana Toraja report in May 2023 noted that out of 194,591 residents required to have ID cards, 26,127 have not yet recorded their data, and of those who have recorded, most have not received a physical E-KTP. This data shows a gap between service targets and realization in the field.

On the other hand, valid population data is very important in supporting public financial governance. Accurate demographic information can be used to identify development needs, design evidence-based policies, and allocate budgets effectively (Žokalj, 2016). The quality of population administration services such as E-KTP not only impacts community satisfaction but also fiscal efficiency and long-term planning of local governments (Buchmann et al., 2023; Zeng & Liang, 2017). Therefore, this research becomes important to critically evaluate the quality of E-KTP making services in Tana Toraja Regency and its relevance to the development of public administration that is adaptive, digital, and responsive to community needs. The purpose of this study is to identify and analyze the service of Electronic ID Card (E-KTP) issuance at Tana Toraja Regency's Department of Population and Civil Registration, with an emphasis on the quality of service procedures and the existing service technological infrastructure.

2. Methods

This research uses a qualitative descriptive method with a case study approach to the implementation of E-KTP services at the Department of Population and Civil Registration of Tana Toraja Regency. The qualitative descriptive research design aims to explore facts about public services or in other words to accurately describe the characteristics of individuals,

conditions, and symptoms of the case that becomes the object of research. This research was chosen to present data systematically, factually, and accurately regarding facts in the field, so it is considered relevant to fully describe the problems of E-KTP services and to find solutions to existing problems.

Research data sources consist of employee informants at this institution who carry out services, and community members who receive services. Data collection is carried out through in-depth interviews, direct observation, and documentation studies. Interviews will be conducted with Disdukcapil employees and service users to get a comprehensive perspective. Direct observation will help researchers understand the service process in real terms, while documentation studies will provide supporting data related to service policies and procedures. Data analysis in this study uses Miles and Huberman's interactive model, which consists of three main stages: data reduction, data presentation, and conclusion drawing and verification. At the reduction stage, data from the field is summarized and focused on important matters related to the quality of public services at the Disdukcapil of Tana Toraja Regency. Data presentation is carried out in the form of brief descriptions, charts, or relationships between categories to facilitate understanding. Conclusion drawing is carried out in stages, starting from preliminary conclusions to final conclusions supported by valid evidence. The analysis process is cyclical and interactive, allowing researchers to continuously check and verify findings during the research, so it is expected to produce a comprehensive analysis of the quality of public services at the Disdukcapil of Tana Toraja Regency.

3. Results and Discussion

3.1. Quality and Form of E-KTP Issuance Services at the Department of Population and Civil Registration of Tana Toraja Regency

Electronic ID Card (E-KTP) is a population document that contains security/control systems, both from the administrative and information technology aspects, in the national population database. Residents are only allowed to have 1 (one) ID card that includes a population identification number (NIK). NIK is a unique identity for each resident and is valid for life. The E-KTP program was launched by the Ministry of Home Affairs of the Republic of Indonesia. The E-KTP program in Indonesia began in 2009 with four cities designated as national pilot projects (Widiati, 2024). These four cities were Padang, Makassar, Yogyakarta, and Denpasar. Meanwhile, other regencies/cities were officially launched by the Ministry of Home Affairs in February 2011, with implementation divided into two stages. The first stage began in 2011 and ended on April 30, 2012, covering 67 million residents in 2,348 sub-districts and 197 regencies/cities. The second stage covered 105 million residents spread across 300 other regencies/cities in Indonesia.

Overall, by the end of 2012, it was targeted that at least 172 million residents would have E-KTPs, and from the beginning to the end of 2013, population data recording continued until all Indonesian residents required to have ID cards had their personal data recorded. The total population of Tana Toraja Regency based on population data is 257,901 people according to Disdukcapil (Department of Population and Civil Registration) data from 2023. Those who have conducted E-KTP recording since 2018 number 56,861 people, but only 50,641 people actually possess an E-KTP. If we look at the population data in Tana Toraja based on the recorded population, we can obtain information that many Tana Toraja residents have not yet recorded and printed their E-KTP. From the population data obtained from the Tana Toraja Disdukcapil office, we can see that the number of residents living in the Tana Toraja region compared to those who have recorded E-KTP data and who already have an E-KTP still shows

a difference of 6,220 residents who have recorded data but do not yet have an E-KTP, not to mention residents who have not recorded population data from each sub-district.

Population data recording through E-KTP in Tana Toraja Regency faces several obstacles influenced by the geographical conditions and infrastructure of the region. This regency is located in a highland with most of the area being difficult-to-reach mountains. This causes limited access to service centers, namely the Office of Population and Civil Registration (Disdukcapil). Communities in areas far from the regency capital often have difficulty accessing E-KTP services due to long distances and inadequate infrastructure.

In addition to geographical problems, another obstacle found is the limited availability of E-KTP forms provided by the central government. This condition often causes delays in the E-KTP printing process, which results in public dissatisfaction. To overcome this, the Disdukcapil of Tana Toraja Regency implements a proactive system, which brings services closer to the community by conducting E-KTP recording and printing at the sub-district level in rotation. This method aims to reach communities with limited access to the regency seat.

Based on interviews with informants involved in the E-KTP recording process, researchers observed that the Disdukcapil of Tana Toraja Regency has developed structured and systematic procedures in implementing E-KTP recording and printing. These procedures include clear steps from taking queue numbers to collecting E-KTPs, which are well executed to ensure efficient and quality service. This demonstrates Disdukcapil's commitment to improving service efficiency and the quality of the E-KTP issuance process. Several important points from this analysis are:

a) Efficiency and regularity constitute a process that ensures an efficient and orderly workflow, which is very important for managing queues and preventing backlog.
b) Strict verification of identity and documents helps ensure the accuracy and validity of population data, reducing the risk of errors and fraud.
c) Use of biometric data is data collection that enhances the security and accuracy of population data, which is crucial in the digital era.
d) Efficient printing process. The use of appropriate technology in the E-KTP printing process helps speed up completion time and increases public satisfaction.
e) Clear communication constitutes notification to residents regarding E-KTP collection, showing the importance of effective communication in public service.

The implementation of the E-KTP service system in Tana Toraja Regency reflects a complex dynamic in the effort to provide population identity services that meet the expectations of E-KTP applicants. This dynamic includes several stages, from data recording to E-KTP issuance, which are expected to meet high-quality service standards. In this context, service quality depends on the public's view of the process they undergo and the results they obtain, which in turn affects the level of public satisfaction with these services.

Based on the analysis of the implementation of the E-KTP service system at the Department of Population and Civil Registration (Disdukcapil) of Tana Toraja Regency, several findings can be summarized as follows:

a) Compliance with Standard Operating Procedures (SOP) and Applicable Regulations

E-KTP issuance services at the Disdukcapil of Tana Toraja Regency have been implemented in accordance with the provisions contained in the Standard Operating Procedure (SOP) and referring to Law Number 23 of 2014 concerning Regional Government. This shows Disdukcapil's commitment to following regulations set by the central government, which include crucial procedures in the E-KTP issuance process, such as data recording, data

validity checking, and E-KTP printing. The application of clear SOPs shows that Disdukcapil strives to ensure standardized services in accordance with applicable legal provisions.

b) Structured and Transparent E-KTP Issuance Process

The E-KTP issuance process at the Disdukcapil of Tana Toraja Regency has been described in detail, covering stages from E-KTP data recording, verification and data checking through the Population Administration Information System (SIAK), to E-KTP printing. Each stage has an important role in ensuring the accuracy and validity of population data. The clarity of this procedure makes it easier for E-KTP applicants to understand the steps that need to be followed and, in turn, increases service efficiency and transparency. The public can follow the process more easily, without confusion.

c) Evaluation of Services Provided

The Disdukcapil of Tana Toraja Regency has implemented various efforts to improve the quality of services provided to the community. This is reflected in several indicators, such as compliance with existing SOPs, service speed, staff friendliness, and the level of accuracy of the data produced. Given that E-KTP is a very important official identity, high-quality service greatly influences the level of public trust in Disdukcapil. Achieving a good level of service becomes the basis for strengthening the relationship between the government and the community, as well as increasing trust in related institutions.

d) Service Performance Evaluation Methods

Evaluation of services provided by the Disdukcapil of Tana Toraja Regency is conducted using both direct and indirect observation approaches. Indirect observation is carried out by the Head of the Population Registration Division to monitor staff performance and the overall service process from a distance. This method ensures that each stage of service aligns with the established Standard Operating Procedures (SOP). Meanwhile, direct observation is conducted by observing staff as they interact with the public starting from document verification to E-KTP printing. This approach offers a clearer picture of staff-community interactions and helps identify potential issues that may arise during the service process.

Overall, the quality of E-KTP issuance services at the Disdukcapil of Tana Toraja Regency has been implemented by prioritizing compliance with applicable regulations, smoothness in the administrative process, and efforts to continuously improve service quality. Nevertheless, there is room for improvement, especially in terms of more intensive evaluation and monitoring of service quality through direct and indirect observation methods. Optimal service quality is not only measured by speed or accuracy but also by the level of satisfaction of the community using these services.

The results of this study show the importance of a comprehensive evaluation—both directly and indirectly—to ensure that services at the Disdukcapil of Tana Toraja Regency remain optimal. This evaluation serves as a tool to identify strengths and weaknesses in the service process, the results of which can be used as a basis for continuous improvement to enhance the quality of services to the community. Although services have generally been running well, there are several technical constraints that need more attention, one of which is network instability, which sometimes hinders the E-KTP printing process on the same day. This indicates that the existing technological infrastructure still needs improvement, so that services can run more smoothly and efficiently in the future.

In this study, informants expressed a high level of satisfaction with the services provided by the employees of Disdukcapil in Tana Toraja Regency. This shows positive development in the implementation of E-KTP issuance services in the region. Based on the analysis results, several factors that contributed to this success include:

a) Implementation of More Advanced and Stable Technology: The technology used in the E-KTP recording and printing process is now more advanced and stable, enabling acceleration in this process. This technology improvement reduces waiting times and increases accuracy in service delivery.
b) Increased Staff Competency and Work Efficiency: Training and competency development of employees at Disdukcapil contributes greatly to efficiency in service delivery. Improving staff skills through continuous training helps speed up service without sacrificing quality.
c) Workflow Optimization and Internal Management: More structured internal management and workflow optimization also make a significant contribution to improving service efficiency. Improvements in management and clear division of tasks make it easier for employees to carry out their duties, which ultimately speeds up the service process.

Public satisfaction becomes the main indicator of the success of public services. In this case, improving service efficiency and public satisfaction are two interrelated and important aspects to explore further. This research identifies that factor underlying changes in public services, such as the use of technology, increased staff competency, and improved internal management, contribute to the achievement of better and more efficient services. Therefore, best practices that have been applied currently need to be maintained and improved in the future to create more responsive and high-quality public services.

3.2. Infrastructure Conditions and Technology Used in the E-KTP Issuance Service Process

The service process for creating Electronic Identity Cards (E-KTP) at the Department of Population and Civil Registration of Tana Toraja Regency shows significant development in terms of infrastructure and technology use. Overall, the condition of infrastructure and technology used in the E-KTP service process is quite good and meets existing standards. This includes the use of hardware that supports the E-KTP issuance system both online and offline.

However, there are several constraints that need attention. One issue that arises is the existence of two hardware devices used in the E-KTP service process, which are still inadequate. One of these devices is an offline device that has been used since 2012. Although this device can still be used, disruptions often occur that affect the smoothness of the E-KTP issuance process. Therefore, although the device is relatively old, its use must be maximized to avoid greater disruptions in service. There needs to be a rejuvenation of devices to ensure smoothness and efficiency in public services.

E-KTP itself is an identity document that has very important functions in population administration. The information technology-based control system on E-KTP enables increased efficiency in population data management through integration with the national population database. Besides functioning as an official identity for Indonesian citizens, E-KTP also has various other important functions for the benefit of the community, such as for other administrative purposes involving official resident identification.

The issuance of E-KTP is now included in legislation, especially in Law Number 23 of 2006 concerning Population Administration. This law affirms that the issuance of E-KTP must be supported by adequate technological devices. In this context, the existence of hardware that supports population data management is very important to ensure the quality of services provided to the community. Therefore, to improve the quality of E-KTP issuance services, there needs to be an increase in technological capacity and updating of hardware used at the Department of Population and Civil Registration of Tana Toraja Regency.

3.2.1. Technology in E-KTP

a) E-KTP Chip

The E-KTP chip is a microprocessor-based smart card with a memory size of 8 kilobytes, has a contactless interface, and has data security in the form of chip-to-reader/writer authentication (clone protection), data confidentiality (encryption), and digital signatures. (Darwis & Lim, 2011).

b) E-KTP Form

The form is a smart card containing resident data that is recorded into the chip and then printed on its surface. The form used in E-KTP recording consists of 9 layers made of polyethylene terephthalate glycol (PET-G) measuring 85.60 x 53.98 mm and with a thickness between 0.76-1 mm. Inputting data into the chip and printing resident biodata onto the form is referred to as personalization; data is sent from the data center in encrypted form, and the process is equipped with a key management system for recording resident data into the E-KTP chip. E-KTP is protected by printing security such as relief text, microtext, filter image, invisible ink, and colors that glow under ultraviolet light, as well as anti-copy design. Data storage in the chip complies with international standards NISTIR 7123 and Machine-Readable Travel Documents ICAO 9303 and EU Passport Specification 2006. Several factors must be considered when designing these security features, such as resistance to pressure, high and low temperatures, certain chemicals, and so on. The physical security features applied to E-KTP consist of three layers, namely, visible security features, invisible security features, and forensic security features.

c) Biometrics

The smart card for E-KTP equipped with a chip contains biometric data information of one photo, one signature image, and two fingerprints from the left and right index fingers, and advanced security methods are also supported by the use of biometric technology. Biometric technology can identify one population ID based on E-KTP population data records that are needed to produce one population ID. The use of biometric technology in the E-KTP program can be divided into two, namely the deduplication process, testing the uniqueness of resident identity, and the verification process of E-KTP owners.

3.2.2. Infrastructure and Technology

Every computer system basically consists of two main subsystems, namely computer hardware and software to perform processing functions. The basic hardware equipment in a computer system supports the following main functions:

1) Input or enter input into the computer

Input is the process of entering data and commands into the computer. The data used in computer processing generally originates from several sources, including direct online data entry at a computer terminal, data stored when transactions are converted into a machine-readable format for later input and processing, and data presented in documents that are already in a machine-readable format.

2) Previously processed data that exists in secondary storage

Direct data entry generally requires a keyboard to enter data and a Visual Display Terminal (VDT) used to display data, instructions, messages, and so on. Data preparation can be done online and offline. According to Kountur (1996), most input systems depend on direct data entry devices that can be categorized into three types, namely Keypunch replacement devices, Pattern Recognition devices, and Source Data Automation.

a. Processing

The main processing component in a computer system is the Central Processing Unit or commonly referred to as CPU. The core of every computer configuration is the central

processing unit. The CPU is the center of all processing activities where in the CPU all processing is controlled, all data is manipulated, arithmetic calculations are executed, and logical comparisons are made. Conceptually, the CPU circuit is divided into two main units, namely the arithmetic logic unit and the control unit. The electronic circuit (commonly called a register) of the arithmetic logic unit performs the logical and arithmetic functions needed to execute computer software instructions.

b. Control

The unit that carries out the function of controlling activities in the CPU is called the Control Unit. This unit functions to translate various computer programs and send various instructions to other components of the computer system to operate what needs to be executed.

c. Storage

The storage function of the computer system is executed by the main memory unit and secondary storage/memory. These units store data and programs needed for data processing. Main memory is a data and instruction storage device that is inside the CPU and cannot be moved.

d. Output

Output is the result of data processing from the computer system, which includes visual display units, audio response units, speakers, and others. Output equipment can be used to display, store, or print data processing results.

Social change has become the foundation driving the transformation of social, political, and governmental life to follow the demands of the times (Awangga et al., 2019) The application of industry 4.0 technology in E-KTP services is as per the Presidential Regulation of the Republic of Indonesia Number 95 of 2018 concerning Electronic-Based Government Systems. Technology that can connect the real world with the virtual world. The E-KTP service process is carried out through digitization using the Internet of Things (IoT); this is done to support services in the E-KTP process (Iqbal & Mirza, 2024). Therefore, adequate availability and condition of infrastructure and technology are needed, but the current condition, which is a procurement since 2012, must be forced to be maximized in its utilization (Choirunnisa et al., 2023); the following is an explanation regarding the technology used in the E-KTP issuance process.

1) Hardware

The hardware components required in the E-KTP service process include a computer or server used to run the software and process data. A specialized card printer is essential for producing E-KTPs with high-quality printing and built-in security features. A scanner is used to capture data from original identity documents such as previous ID cards or Family Cards. Additionally, a camera is utilized to take the applicant's photograph, which will be printed on the E-KTP. The chip card or smart card serves as the data storage medium embedded within the E-KTP.

2) Software

In terms of software, the process relies on a registration and data processing application to input applicant information, validate data, and manage E-KTP application submissions. A database management system is used to store population data linked to the E-KTP. Image processing software helps enhance and adjust applicant photos prior to printing. Security and encryption systems are crucial for safeguarding sensitive information, including biometric data if applicable. Lastly, card programming software is required to configure and encode data onto the chip embedded in the E-KTP.

Based on the above explanation, it is expected that there will be improvements or updates related to infrastructure and technology, both in software and hardware, because this technology is like a heart that determines the maximum implementation of services in the E-KTP issuance process. In addition, considering that E-KTP has very important functions and uses for the community such as (a) As a personal identity; (b) national validity for licensing, opening bank accounts, and so on; (c) preventing duplicate ID cards and ID card forgery as well as accuracy of population data.

3.3. Challenges in E-KTP Issuance Services at the Department of Population and Civil Registration of Tana Toraja Regency

3.3.1. Technological Infrastructure Used

The technology used in the E-KTP issuance process is generally adequate and has met existing standards. However, some hardware components remain outdated, particularly those used in the offline facilities, which were procured in 2012. As both online and offline systems are still in use, it is essential to optimize the performance of the offline infrastructure.

In terms of hardware, computers and servers play a critical role. Computers are used by staff to input, process, and access data, while servers manage and store population data centrally. Scanners are used to digitize supporting documents such as birth certificates and family cards, while E-KTP printers are responsible for producing high-quality identity cards with the necessary security features. Cameras are used to capture applicant photos, and fingerprint scanners are employed to collect biometric data for verification. Additionally, iris scanners are used to capture the unique patterns in an individual's iris, enhancing security and ensuring accurate identification. Chip cards or smart cards function as the data storage medium embedded in each E-KTP.

On the software side, the process involves a range of applications. Registration and data processing software is used to input and validate applicant information and manage E-KTP applications. A database management system is essential for storing all related population data. Image processing software enhances and prepares applicant photos for printing, while security and encryption systems protect sensitive personal and biometric data. Finally, card programming software is used to configure and encode data into the E-KTP chips.

3.3.2. Internet Connection and System Integration

Research results show that the service for creating Electronic Identity Cards (E-KTP) at the Department of Population and Civil Registration of Tana Toraja Regency has generally been running well. The services provided have followed standard operating procedures and shown continuous efforts to improve the quality of public services. However, there are still several obstacles that hinder the effectiveness of the service process, especially those related to information technology infrastructure.

One of the main problems found is the limitation of the internet network, which has a direct impact on the smooth process of issuing E-KTPs. Although in general the quality of internet connections in the Tana Toraja Regency area is quite good, at certain times, especially during the day starting at 11:00 WITA, internet speed experiences a significant decrease (down). This condition often causes disruptions to the service system, so that the process of recording and printing E-KTPs becomes slow or even stops for some time.

Responding to these constraints, the Department of Population and Civil Registration of Tana Toraja Regency continues to make efforts to improve and update infrastructure, despite still facing budget limitations. Innovation is also carried out by developing sub-district-based services, which bring service access closer to people living in remote areas or far from the city

center. There are eight sub-district areas that serve as representatives for the implementation of E-KTP services, which are expected to increase time efficiency, reduce transportation costs, and expand the reach of recording and issuance of E-KTP services to all levels of society. The sub-districts assigned to provide services consist of Mengkendek Sub-district can cover Gandang Batu Sillanan Sub-district, Sangalla' Sub-district can cover North Sangalla' Sub-district and South Sangalla' Sub-district, Rantetayo Sub-district can cover Kurra Sub-district, Rembon Sub-district can cover Malimbong Balepe' Sub-district, Bittuang Sub-district covers Masanda Sub-district, Bonggakaradeng Sub-district covers Rano Sub-district, Simbuang Sub-district covers Mappak Sub-district

3.3.3. Availability of E-KTP Forms

Population data recording that has been carried out by Disdukcapil employees of Tana Toraja Regency, both for communities who actively come to the Disdukcapil office and services carried out by visiting sub-districts that can be more effectively reached by the Tana Toraja community through eight designated sub-districts to bring people closer to E-KTP recording services, ultimately does not obtain results in the form of printed E-KTPs that become the identification of Tana Toraja residents which will be used in various needs that require personal identification in the form of copies of the printed E-KTP.

The main obstacle experienced by the Tana Toraja community, apart from the distance of the Department of Population and Civil Registration office from their area of residence, is also due to the availability of E-KTP forms provided by the central government. Therefore, the data recording that has been done sometimes cannot be directly printed due to having to wait for forms from the center or pick them up in the province, and even then, they must be picked up directly by Disdukcapil employees, causing sometimes we have to wait up to several weeks before the E-KTP is printed. To prove that the community has recorded their E-KTP, the Department of Population and Civil Registration issues a Certificate that can be used by the community to handle various kinds of needs.

4. Conclusion

Based on the analysis, the E-KTP service at the Department of Population and Civil Registration of Tana Toraja Regency generally runs well and follows SOPs. Service quality is supported by proper queue systems, seating facilities, and innovations such as mobile E-KTP services in eight sub-districts, which improve accessibility for remote communities.

However, challenges remain. Some hardware, particularly offline devices from 2012, is outdated and prone to disruptions. Internet connectivity is also unstable during peak hours, hindering access to national databases. Additionally, delays in the central distribution of E-KTP forms sometimes disrupt service delivery.

Theoretically, the findings highlight the importance of technological infrastructure in public service delivery and the relevance of service decentralization to improve access. Practically, this study suggests the need for hardware renewal, improved internet capacity, and more reliable distribution mechanisms for E-KTP forms. Strengthened coordination across government levels is essential to ensure continuous and effective service.

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