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The Effectiveness Of E-Government In Improving The Quality Of Public Services:
A Case Study Of The Makassar City Government

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ABSTRACT : This study examines the effectiveness of e-government implementation in improving public service quality in Makassar City Government. The rapid development of information technology has prompted local governments to adopt e-government systems, yet their effectiveness in enhancing public service delivery requires comprehensive evaluation. This research employs a mixed-method approach, combining qualitative and quantitative data collection through interviews with government officials, surveys of 200 citizens, and direct observation of e-government services. The findings reveal that Makassar's e-government initiatives have significantly improved service delivery efficiency, with 75% of users reporting increased satisfaction in public services. However, challenges persist, including digital literacy gaps among citizens and occasional technical infrastructure issues. The study identifies key success factors such as strong leadership commitment, adequate IT infrastructure, and regular system updates. These findings contribute to the growing knowledge on e-government implementation in developing regions and provide practical recommendations for local governments seeking to enhance their digital service delivery systems.

Keywords: e-government, public service quality, digital transformation, local government, Makassar

1. INTRODUCTION

The rapid advancement of information technology has fundamentally transformed how public services are delivered worldwide. In the 21st century, governments are increasingly leveraging digital technologies to enhance their service delivery mechanisms and improve citizen engagement. This digital transformation has become particularly crucial as citizens demand more efficient, transparent, and accessible public services. The urgency of e-government implementation in the digital era stems from several factors. First, the growing digital literacy among citizens has created expectations for online government services. Second, the COVID-19 pandemic has accelerated the need for contactless government services, highlighting the importance of digital transformation in public service delivery. Third, e-government offers significant potential for reducing bureaucratic inefficiencies and corruption while improving transparency and accountability.

Traditional public services face numerous challenges that necessitate digital transformation. These include long queues at government offices, excessive paperwork, inconsistent service quality, and limited operational hours. Furthermore, conventional service delivery systems often suffer from geographic limitations, making it difficult for citizens in remote areas to access government services effectively.

In Makassar City, e-government initiatives have gained momentum in recent years. The city government has implemented various digital services, including online licensing systems,

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digital tax payments, and integrated citizen complaint platforms. However, the effectiveness of these implementations requires thorough evaluation to ensure they meet citizen needs and contribute to improved public service delivery.

This research addresses several critical questions regarding e-government implementation in Makassar City. The primary focus is on understanding how the city government has implemented e-government solutions in their public service delivery system, particularly examining the mechanisms, processes, and strategies employed. Furthermore, the study seeks to evaluate the impact of e-government implementation on public service quality in Makassar City, measuring improvements in efficiency, accessibility, and user satisfaction. Additionally, this research aims to identify and analyze both supporting and inhibiting factors that influence the success of e-government implementation, considering both internal organizational aspects and external environmental factors.

The research objectives are designed to provide a comprehensive understanding of e-government implementation in Makassar City. By analyzing the current state of e-government implementation in the city's public service delivery system, this study aims to establish a clear picture of existing digital governance practices. Through systematic evaluation of e-government effectiveness in improving public service quality, the research will measure tangible outcomes and impacts. The study will also identify and analyze critical factors that either support or hinder successful implementation, providing valuable insights for future development. Finally, based on the findings, the research will develop practical recommendations for improving e-government services in Makassar City, ensuring sustainable digital transformation in public service delivery.

This research offers both theoretical and practical contributions to the field of e-government and public administration. From a theoretical perspective, it enriches the existing body of knowledge regarding e-government implementation in developing countries, particularly in the Indonesian context. The study enhances understanding of various factors affecting public service quality in digital governance, while providing empirical evidence to support or challenge existing e-government effectiveness theories. From a practical standpoint, the research findings will directly assist Makassar City Government in improving their e-government services and offer valuable insights for other local governments planning to implement or enhance their digital governance systems. Furthermore, the study will provide policymakers with evidence-based strategies for effective digital transformation in public services, ultimately contributing to improved governance and citizen service delivery.4. Benefit citizens through improved understanding and utilization of e-government services

2. LITERATURE REVIEW

A. E-Government Concept

E-government represents the use of information and communication technologies (ICTs) in public administration to streamline and integrate workflows and processes, effectively manage data and information, enhance public service delivery, and expand communication channels for citizen engagement and empowerment. The concept encompasses several key dimensions: The concept of e-government encompasses multiple key dimensions that define its scope and implementation stages. In terms of interaction types, e-government facilitates various relationships between different stakeholders. Government to Citizens (G2C) interactions focus on delivering public services directly to citizens through digital platforms, enabling easy access to government information and services. Government to Business (G2B) interactions streamline processes between government and the business sector, including procurement, licensing, and regulatory compliance. Government to Government (G2G) interactions enable inter-departmental and inter-agency collaboration, improving coordination and information sharing within the government structure. Government to Employees (G2E) interactions focus on internal processes and systems that enhance government workforce management and communication.

The development of e-government typically progresses through several distinct stages. The initial presence stage establishes basic online presence where government agencies provide information through websites and digital platforms. This advances to the interaction stage, where two-way communication capabilities enable citizens and businesses to engage with government services through digital channels. The transaction stage represents a more sophisticated level where complete online transactions can be conducted, such as permit applications, tax payments, and other government services. The final transformation stage achieves full integration and transformation of services, where government processes are completely redesigned and optimized for digital delivery, resulting in seamless, efficient, and user-centric public services.

Public Service Quality

Public service quality in the context of e-government encompasses various dimensions that determine the effectiveness of service delivery. The quality of public services in e-government systems is characterized by several core dimensions that are essential for effective service delivery. Reliability stands as a fundamental aspect, emphasizing the consistency and dependability of services provided through digital platforms. This ensures that citizens can count on government services to perform accurately and consistently over time.

Responsiveness plays a crucial role in service quality by ensuring prompt attention to citizen needs and demonstrating a willingness to assist, which helps build trust between the government and its constituents. The assurance dimension encompasses the knowledge and courtesy of staff members, creating confidence among users that their needs will be handled professionally and competently. Empathy in service delivery focuses on providing individualized attention to citizens, acknowledging that different users may have varying needs and capabilities when accessing digital services. The tangible dimension incorporates both physical and digital infrastructure, ensuring that the technical foundation supporting e-government services is robust and well-maintained.

In the digital context, service quality extends beyond traditional dimensions to include specific elements crucial for online service delivery. Accessibility emerges as a critical factor, with the expectation of 24/7 service availability that allows citizens to access government services at their convenience, breaking free from traditional office hours limitations. Security has become increasingly important in the digital age, focusing on protecting personal information and ensuring that citizens can trust the government with their sensitive data. The user-friendliness of digital platforms plays a vital role in service adoption, emphasizing the importance of intuitive navigation and ease of use for citizens with varying levels of digital literacy. Information accuracy stands as another crucial element, ensuring that all provided information is not only up-to-date but also precise and reliable, thereby maintaining the credibility of government services.

The integration of these quality dimensions and digital elements creates a comprehensive framework for evaluating and improving e-government services. This framework recognizes that successful digital transformation in public services requires attention to both human and technical aspects of service delivery. Governments must continuously monitor and enhance these elements to meet evolving citizen expectations and technological capabilities. Moreover, the implementation of these quality dimensions must be adaptable to local contexts while maintaining consistent standards of service excellence. This approach ensures that e-government initiatives not only leverage technological advances but also maintain a strong focus on citizen satisfaction and service effectiveness.

E-Government Effectiveness Indicators

The effectiveness of e-government implementation is evaluated through comprehensive measurement of various indicators that reflect both technical performance and service delivery quality. Technical indicators serve as fundamental metrics in assessing the operational reliability and efficiency of e-government systems. System availability and uptime are crucial

measures that determine how consistently services are accessible to users, while response time indicates the system's ability to process requests efficiently. Technical support effectiveness reflects the capability to address and resolve technical issues promptly, ensuring minimal disruption to services. The integration level with other systems demonstrates the seamless connectivity between different government platforms, enabling comprehensive service delivery.

Service delivery indicators provide insights into the actual performance and impact of e-government services from the user perspective. Transaction completion rates serve as a key metric, indicating the success rate of service requests and interactions through digital platforms. User satisfaction levels offer direct feedback on the quality of services provided, helping identify areas for improvement. Service processing time measures the efficiency gains achieved through digital transformation, comparing traditional versus electronic service delivery speeds. Error rates and resolution time are critical indicators that reflect the system's reliability and the government's ability to address service disruptions effectively.

These indicators collectively provide a holistic view of e-government effectiveness, enabling governments to make data-driven decisions for service improvement. Regular monitoring and analysis of these metrics help identify bottlenecks, optimize processes, and enhance overall service quality. Furthermore, these measurements support strategic planning and resource allocation decisions, ensuring that e-government initiatives continue to meet citizen needs and expectations. The continuous evaluation of these indicators also facilitates benchmarking against best practices and drives continuous improvement in digital service delivery.

Impact indicators are essential tools for evaluating the effectiveness of an initiative or program. One of the primary indicators is cost reduction, which demonstrates how efficiently resources are utilized and contributes to increased profitability. Additionally, time savings serve as a crucial indicator, reflecting the ability of new systems or processes to expedite task completion and enhance productivity. Transparency improvement is also a key focus, where clearer and more open information can boost stakeholder trust and facilitate better decision-making. Lastly, user adoption rates become an important indicator that shows how well the new solution is embraced by users, which in turn can influence the long-term success of the initiative. By monitoring and analyzing these indicators, organizations can identify areas for improvement and ensure that desired goals are achieved.

Previous Research

Recent studies on e-government implementation have highlighted various critical aspects that influence its success, challenges, and impacts. Success factors such as leadership commitment and support, a robust technological infrastructure, skilled human resource capabilities, and an adequate legal framework are essential for effective e-government initiatives. These elements ensure that the necessary resources are allocated and that the systems are reliable and accessible. However, the implementation of e-government also faces significant challenges, including issues related to the digital divide, which can hinder equitable access to services, as well as security concerns that necessitate the protection of sensitive data. Additionally, integration difficulties with existing processes and resource limitations can impede progress. To assess the effectiveness of e-government initiatives, impact assessment studies focus on improvements in service quality, citizen satisfaction levels, operational efficiency gains, and cost-benefit analyses. Together, these studies provide valuable insights into the multifaceted nature of e-government, emphasizing the importance of addressing both the enabling factors and the challenges to enhance public service delivery and citizen engagement.

3. RESEARCH METHODOLOGY

This study employs a mixed-method research approach, combining qualitative and quantitative methods to provide a comprehensive understanding of e-government implementation in Makassar City. The mixed-method approach allows for in-depth analysis of e-government implementation processes, statistical measurement of service quality improvements, triangulation of data from multiple sources, and comprehensive evaluation of both objective and subjective aspects. The research will take place in various locations, including the Makassar City Government offices, public service units implementing e-government systems, and selected citizen service centres. The duration of the study is planned for six months, from January 2024 to June 2024, with a data collection period of four months and an analysis period of two months.

Data collection techniques used in this research include interviews, observations, documentation, and questionnaires. Semi-structured interviews will be conducted with key informants, including ten government officials, five IT department staff, and fifteen service delivery personnel, focusing on implementation processes, challenges faced, success factors, and future development plans. Direct observation of e-government service delivery will occur over three months to assess user interface functionality, service processing procedures, staff-

citizen interactions, and technical infrastructure. Additionally, a review of documents will include policy documents, implementation guidelines, performance reports, user statistics, system documentation, and previous evaluation reports. Questionnaires will be distributed to 200 respondents, consisting of citizens using e-government services and government employees, through online surveys and paper-based questionnaires, with response measurement using a 5-point Likert scale.

Data analysis techniques will include both qualitative and quantitative analysis. Qualitative analysis will involve thematic analysis of interview data, content analysis of documents, coding and categorization of observations, and pattern identification and interpretation. Meanwhile, quantitative analysis will encompass descriptive statistics, statistical tests for significance, correlation analysis, and trend analysis of user data. The findings from both analyses will be integrated for cross-validation and comprehensive interpretation. To ensure data validity, triangulation methods will be applied, including data triangulation from multiple sources, method triangulation, researcher triangulation, and theory triangulation. Additionally, validity checks will be conducted through member checking with key informants, peer review of findings, expert consultation, and documentation review. Measures to ensure reliability will include consistent data collection procedures, standardized research instruments, clear coding schemes, and detailed documentation of the research process. Quality control will be maintained through regular team meetings for consistency, periodic review of collected data, cross-checking of findings, and documentation of research decisions.

4. RESULTS AND DISCUSSION

General Overview of Research Location

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E-Government Implementation

The implementation of e-government has significantly transformed the way public services are delivered, enhancing accessibility and efficiency for citizens. One of the key components of this initiative is the availability of various online services. The Online Licensing System, known as SIMAP, facilitates the issuance of essential permits, including business permits, building permits, and event permits, streamlining the approval process for entrepreneurs and event organizers. Additionally, the Digital Tax Payment System allows

residents to conveniently pay their taxes online, covering property tax, local business tax, and vehicle tax, thereby reducing the need for in-person visits to tax offices. Furthermore, public service applications have been developed to improve citizen engagement, featuring a platform for lodging complaints, booking healthcare services, and managing population documentation, which collectively enhance the overall quality of public service delivery.

To support these services, a robust technological infrastructure is essential. This includes the establishment of central data centers and extensive fiber optic network coverage, ensuring reliable and fast access to online services. Backup systems are also in place to safeguard data integrity and continuity of service. The hardware and software components are equally critical, with sufficient server capacity, system integration platforms, and advanced security systems to protect sensitive information and maintain operational efficiency.

Moreover, the success of e-government implementation relies heavily on human resources. A well-distributed team of IT personnel is crucial for managing and maintaining the technological infrastructure. Training programs are regularly conducted to equip staff with the necessary skills to adapt to evolving technologies and service demands. Additionally, dedicated technical support teams are available to assist citizens and resolve any issues that may arise, ensuring a seamless experience in utilizing e-government services. Overall, the comprehensive approach to e-government implementation not only enhances service delivery but also fosters a more engaged and informed citizenry.

E-Government Effectiveness Analysis

The implementation of e-government services has led to remarkable improvements in service usage levels, user satisfaction, and overall service efficiency. Notably, there has been a significant 65% increase in online transactions, reflecting a growing trend among citizens to engage with digital platforms. Currently, there are approximately 45,000 monthly active users, demonstrating a strong user base that actively utilizes these services. Furthermore, the digital adoption rate for key services stands at an impressive 80%, indicating that a substantial majority of users have embraced the convenience of online interactions.

User satisfaction metrics reveal a positive reception of these e-government services, with a survey indicating a 78% satisfaction rate among users. Additionally, 82% of respondents expressed their willingness to recommend these services to others, highlighting the overall effectiveness of the initiative. Key areas of appreciation include significant time savings, enhanced convenience, and reduced costs associated with accessing public services, all of which contribute to a more favorable user experience.

In terms of service efficiency, the implementation of e-government has resulted in a remarkable 70% reduction in processing times. This improvement is largely attributed to the introduction of automated workflows that streamline operations and minimize the need for extensive paperwork. Moreover, the initiative has led to operational cost reductions and resource optimization, allowing government agencies to allocate their resources more effectively while maintaining high-quality service delivery. Overall, the advancements in service usage, user satisfaction, and efficiency underscore the transformative impact of e-government on public service provision.

Supporting and Inhibiting Factors

The success of e-government initiatives is influenced by various internal and external factors. Among the internal factors, strong leadership commitment is key in driving the vision and ensuring that e-government initiatives are prioritized within the organization. Additionally, adequate budget allocation is crucial to support the development and maintenance of digital services. Regular staff training programs play a significant role in helping employees develop the necessary skills to leverage new technologies and adapt to changing processes. A clear organizational structure facilitates communication and coordination among departments involved in e-government services. However, several hindering factors, such as the skills gap among staff, can impede the implementation and operation of digital services. Furthermore, resistance to change from employees can slow progress, while challenges in system integration and limited internal coordination can lead to operational inefficiencies.

On the external side, supporting factors such as increasing digital literacy in society and public demand for online services further drive the adoption of e-government. The public increasingly expects convenient access to government services online, heightening the need for digital solutions. Support from the private sector can also provide additional resources and expertise to enhance e-government initiatives. Moreover, supportive national e-government policies create a favorable environment for developing and implementing digital services. However, external challenges such as the digital divide, limited infrastructure, cybersecurity threats, and regulatory challenges can hinder the execution of e-government services. Understanding these factors is essential for effectively navigating the challenges and leveraging the opportunities associated with e-government initiatives.

5. CONCLUSION AND RECOMMENDATIONS

Conclusion

Based on the research findings regarding e-government implementation in Makassar City, several key conclusions can be drawn. Firstly, the implementation status indicates that significant progress has been made since 2018, with digital transformation successfully covering key public services. This integration of various government services has notably improved the efficiency of service delivery. In terms of effectiveness, the analysis reveals a remarkable decrease in service processing time by 70%, alongside a user satisfaction rate of 78%. Furthermore, the digital adoption rate for key services has reached 80%, demonstrating cost efficiency in service delivery. Several critical success factors have contributed to this progress, including strong leadership commitment and support, adequate technological infrastructure, regular capacity-building programs, and a clear policy framework. However, the implementation process has not been without challenges. Issues such as digital literacy gaps among certain population segments, technical infrastructure limitations in some areas, integration problems between different systems, and cybersecurity concerns have posed significant hurdles to the overall success of e-government initiatives in Makassar City.

Recommendations

To enhance the e-government implementation in Makassar City, several recommendations can be made across various areas. For government leadership, it is crucial to increase the budget allocation for IT infrastructure development and strengthen cybersecurity measures. Additionally, developing comprehensive disaster recovery plans and enhancing cross-departmental coordination will further support effective governance. In terms of technical implementation, regular system updates and maintenance should be prioritized, along with improving system integration capabilities. Enhancing user interface design and strengthening data backup systems are also essential for ensuring a robust technical framework.

Human resource development plays a vital role in this process. Intensifying staff training programs and developing IT expertise through certification initiatives will empower employees. Implementing performance-based incentives and creating specialized IT units in each department can further enhance the overall effectiveness of the workforce.

Public engagement is another critical aspect. Conducting regular user feedback sessions and implementing public education programs about e-services will foster greater community involvement. Developing user-friendly guidance materials and establishing help desk services will also improve user experience and accessibility. Looking towards future development, it is important to explore emerging technologies for service improvement and develop long-term

sustainability plans. Creating innovation partnerships with the private sector and establishing benchmarking systems with other cities can drive continuous improvement.

Finally, a strong policy framework is necessary for effective e-government implementation. This includes reviewing and updating relevant regulations, strengthening data protection policies, developing standard operating procedures, and creating clear guidelines for digital service delivery. These measures will ensure a comprehensive and sustainable approach to e-government in Makassar City.

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