



Mission-Oriented Innovation Policy: E-Government Development Trajectory in Indonesia's Bureaucratic Reform

Kebijakan Inovasi Berorientasi Misi: Lintasan Perkembangan E-Government dalam Reformasi Birokrasi Indonesia

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Abstract

The complex and evaluative nature of bureaucracy in Indonesia has posed significant challenges in its implementation. In response, the Indonesian government has prioritized the digitalization of government administration through the adoption of the e-government system. This paper investigates the trajectory of the e-government system in Indonesia, with a specific focus on Sistem Pemerintah Berbasis Elektronik (SPBE) as a pivotal element of the mission-oriented innovation policy. Through a thorough literature analysis, this study emphasizes the importance of embracing a mission-oriented strategy to effectively address governance issues and foster innovation. Additionally, it explores the roles of key actors involved in the policy process and examines the diverse factors that influence policy outcomes. The findings highlight the instrumental role of the maturity index in policy implementation and its impact on achieving policy objectives. Furthermore, this paper discusses the various challenges and opportunities arising in the context of e-government implementation in Indonesia.

Keywords: Mission-Oriented, Innovation Policy, E-Government, Bureaucratic Reform

Abstrak

Sifat birokrasi yang kompleks dan evaluatif di Indonesia telah menimbulkan tantangan yang signifikan dalam implementasinya. Menyikapi hal tersebut, pemerintah Indonesia memprioritaskan digitalisasi penyelenggaraan pemerintahan melalui adopsi sistem e-government. Penelitian ini berusaha menggambarkan perjalanan sistem e-government di Indonesia, dengan fokus khusus pada Sistem Pemerintah Berbasis Elektronik (SPBE) sebagai elemen penting dari kebijakan inovasi yang berorientasi pada misi. Melalui analisis literatur menyeluruh, penelitian ini menekankan pentingnya merangkul strategi berorientasi misi untuk mengatasi masalah tata kelola secara efektif dan mendorong inovasi. Selain itu, studi ini mengeksplorasi peran aktor kunci yang terlibat dalam proses kebijakan dan mengkaji berbagai faktor yang mempengaruhi hasil kebijakan. Hasil penelitian menunjukkan peran penting indeks maturitas dalam implementasi kebijakan dan dampaknya terhadap pencapaian tujuan kebijakan. Selanjutnya, tulisan ini membahas berbagai tantangan dan peluang yang muncul dalam konteks implementasi e-government di Indonesia.

Kata kunci: Berorientasi Misi, Kebijakan Inovasi, E-Government, Reformasi Birokrasi

Introduction

Bureaucracy, by nature, involves a set of complex rules and procedures to ensure the effectiveness and efficiency of operational activities. Max Weber, a prominent German sociologist renowned for his work on bureaucracy, pointed out several vital characteristics of bureaucracy, including hierarchy of authority, function specialization, and reliance on written rules (Hopfl, 2006). Consequently, it becomes crucial to consider the complexity that arises from the hierarchical processes, roles, and programs within governmental organizations, as well as the rules governing government administration, to successfully accomplish the primary goals of bureaucracy: achieving effectiveness and efficiency in operational activities.

In Indonesia, dealing with bureaucracy has proven to be a significant hurdle for the government, and it aligns with the "grand challenges" concept described by Ferraro et al. (2015) characterized as complex, uncertain, and evaluative. The complexity of this grand challenge becomes evident in the multitude of ministries, government bodies, and institutions that are interconnected in their functions. In an ideal scenario, these hierarchical processes should complement each other seamlessly. However, a major issue called '*ego sektoral*', which exhibits the silo mentality, has posed a considerable problem within Indonesia's government organizations (Pangaribuan, 2022).

Additionally, bureaucracy aims to bring order and reduce uncertainty in the system, but sometimes, the hierarchical structure and internal functions of bureaucratic organizations can actually hinder productivity. Considering the constantly emerging and disruptive societal problems that governments must address, future decisions and policies could introduce uncertainty as an inherent aspect of bureaucracy. Moreover, the nature and features of bureaucracy are continuously evolving, leading to variations in bureaucratic systems from one country to another, influenced by their unique conditions.

Indonesia's bureaucracy has a long history, and the spirit of bureaucratic reformation to achieve better governance has been developed since the early days of Indonesia's independence in 1945. To confront this grand challenge, the Indonesian government placed significant emphasis on the digitization of government administration, known as *Sistem Pemerintahan Berbasis Elektronik* (SPBE), or an Electronic-based Government System. This paper specifically delves into the role of SPBE as an essential element of the mission-oriented innovation policy, the policy instrument to achieve the mission, the trajectory of innovation, and the various challenges and opportunities faced by Indonesia in this context.

Method

This study employs a qualitative methodology centered on literature reviews to investigate the case study of Mission-Oriented Innovation Policy (MOIP) in Indonesia's e-government development.

This approach enables a comprehensive examination of the implementation of MOIP in Indonesia and its influence on the progress of e-government.

To establish a theoretical foundation, a literature review was conducted on the theory of MOIP and its application in e-government development. The data gathered from literature reviews, case studies, and expert opinions are analyzed using a thematic analysis approach (Yin, 2018). This method facilitates the identification of significant themes and trends in the data, such as the role of the government in MOIP implementation, the challenges of implementing MOIP in a bureaucratic system, and the impact of MOIP on e-government development. By integrating these aspects, valuable insights are gained into the effective implementation of MOIP in Indonesia's e-government context.

Result and Discussion

Mission-Oriented Innovation Policy theory proposes that innovation should be directed toward solving specific societal challenges or missions rather than leaving innovation to the market alone. This theory has been extensively discussed and developed by Mariana Mazzucato in her book, "The Entrepreneurial State: Debunking Public vs. Private Sector Myths", and her subsequent publications. It means that the market is insufficient to tackle many of the pressing challenges facing society, and the state has an important role in shaping and directing innovation towards these challenges as it can take risks, invest in long-term research, and coordinate efforts across different sectors (Mazzucato, 2013).

Mission-oriented innovation policy is based on the idea that innovation needs a "mission-oriented approach" in which the government, business, and civil society work together to reach a common goal. René Kemp (2020) says involving a wider range of stakeholders in the innovation process can help make innovation more democratic and open to everyone. They should also be set up in a way that catches the public's attention and gets their support (Mazzucato, 2018).

Mazzucato made a framework that lets the public sector turn challenges into missions and then turn those missions into projects. Based on the diagram, we can understand that missions must be clear, with specific targets, measurable outcomes, and strict deadlines. They should also encourage people to get involved and should be framed in such a way as to spark activity across, and among, multiple scientific disciplines, across multiple industrial sectors, and across multiple types of actors. In addition, bottom-up approaches should be incorporated as missions should not be possible to be completed using just one technology or method of development. They ought to be flexible enough to accommodate many perspectives to fixing the problem. Thus, the set of missions will have lofty but achievable goals for tackling societal challenges.

Mission-Oriented Innovation Policy Framework in Indonesia's E-Government System

In the field of developing electronic government systems in Indonesia, the term SPBE was introduced through Presidential Regulation (*Peraturan Presiden*) No. 95/ 2018. This regulation presented a detailed plan, framework for planning and evaluation, and also defined the responsibilities of different parties involved. Although it wasn't the first regulation governing e-government development in the country, it played a vital role by providing essential guidance, clarity, and instructions for implementing electronic-based government systems in Indonesia.

Larrue (2021) discusses the importance of crafting a mission that is both ambitious yet grounded in reality. It should have specific targets, be measurable, time-bound, and impartial in its approach. Presidential Regulation No. 95/ 2018 clearly outlines the vision of achieving an integrated e-government system by 2025, aligning with Indonesia's broader plan for bureaucratic reform and the national medium-term development agenda. This regulation encourages various innovative solutions to address the challenges and drive bureaucratic reform. Hence, it is crucial to thoroughly identify and articulate the problem when formulating a mission (Mazzucato, 2017), which, in this context, can be illustrated through SPBE.

A crucial aspect of innovation, as highlighted by Mazzucato (2017), is the presence of significant structural change. This transformation necessitates collaboration and joint efforts from various sectors. In the context of SPBE, the most critical factor lies in fostering interests and collaborations across sectors. Unfortunately, the lack of cooperation among organizations led to a staggering 24,000 government applications in Indonesia, with only a few of them functional. This not only wasted public funds but also left citizens confused about which applications to use and raised concerns about data protection. Therefore, the current role of SPBE regulation is to establish effective coordination among these organizations to better serve the public. Achieving this common goal requires involvement from multiple sectors and interests to successfully carry out mission projects.



Figure 1. Mission Oriented Framework: From challenges, to missions, and projects (Source: Mazzucato & Dibb, 2019)

Table 1. Indonesia's government regulations on e-government

Regulation	Content	Innovation Outputs
Presidential Instruction (Instruksi Presiden) No. 3/ 2003	National strategy of e-government in Indonesia, including the four phases of the development: <ol style="list-style-type: none"> Preparation phase: website making in every institution, building accessible infrastructure such as multipurpose community center. Maturity phase: the making of interactive public websites, integration with other institutions. Consolidation phase: the making of websites to enable transactions for public services. Utilization phase: the making of integrated applications for G2G, G2B, G2C. 	The development of various government websites, but lack of data integration, security, and quality on the website and content. For example, in the Riau province, in the four websites being used by the government, there are many missing links, blank pages and missing information (Damanik, 2017).
Presidential Regulation (Peraturan Presiden) No. 95/ 2018	Governance and management of the SPBE, technology information and communication audit, actors involved and the roles, evaluation of SPBE.	Development of the government's SuperApp as a one-stop application for all government related services. In 2019, DKI Jakarta rolled out the JAKI SuperApp, which was an upgraded and consolidated version of its earlier applications. The main aim was to cater to the needs of the people in Jakarta across diverse sectors, including health, education, social well-being, and economic assistance, among other areas (Sofa, 2022)
Presidential Regulation (Peraturan Presiden) No. 132 / 2022	National architecture of SPBE, a direction for central institutions and local governments to develop their regional level of architecture.	Not yet identified as the regulation has just rolled out in December 2022

Source: The information in this table is obtained from each regulation and is being analyzed through literature review

Actor Mapping in SPBE

In the world of systems and innovation, it's essential to establish connections within organizations and institutions, and foster collaboration among different actors and entities (Mazzucato, 2018). The significance of these actors and their roles in achieving the mission cannot be overstated. For instance, in the context of SPBE, the Ministry of State Apparatus Utilization and Bureaucratic Reform (MoSAUBR) assumes the lead coordinator role, overseeing other ministries and their contributions based on their functions within the government.

While significant progress has been made in integrating the e-government system in Indonesia through the coordinating team of SPBE, the involvement of actors outside the government in this mission is still somewhat limited. On the other hand, the G2C (Government to Citizen) and G2B (Government to Business) strategy has been prioritized as one of the central projects within the e-government system.

In the SPBE mission, several private companies play a role in supporting the government's objectives, even though their involvement is not directly within the mission's structure. However, it's essential to consider fostering collaboration between the public and private sectors in this realm, as relying solely on private companies as vendors may not be the most sustainable long-term development strategy. Furthermore, the current regulation does not explicitly assign any role to academia or universities. Given the regulation's strong emphasis on the effectiveness and efficiency of e-government systems, it becomes crucial to grasp the technical aspects in the digital domain and adhere to best practices for digital integration. Bringing academia or universities into the picture would be advantageous for everyone involved, as academic research also stems from real-world implementation, creating a win-win situation.

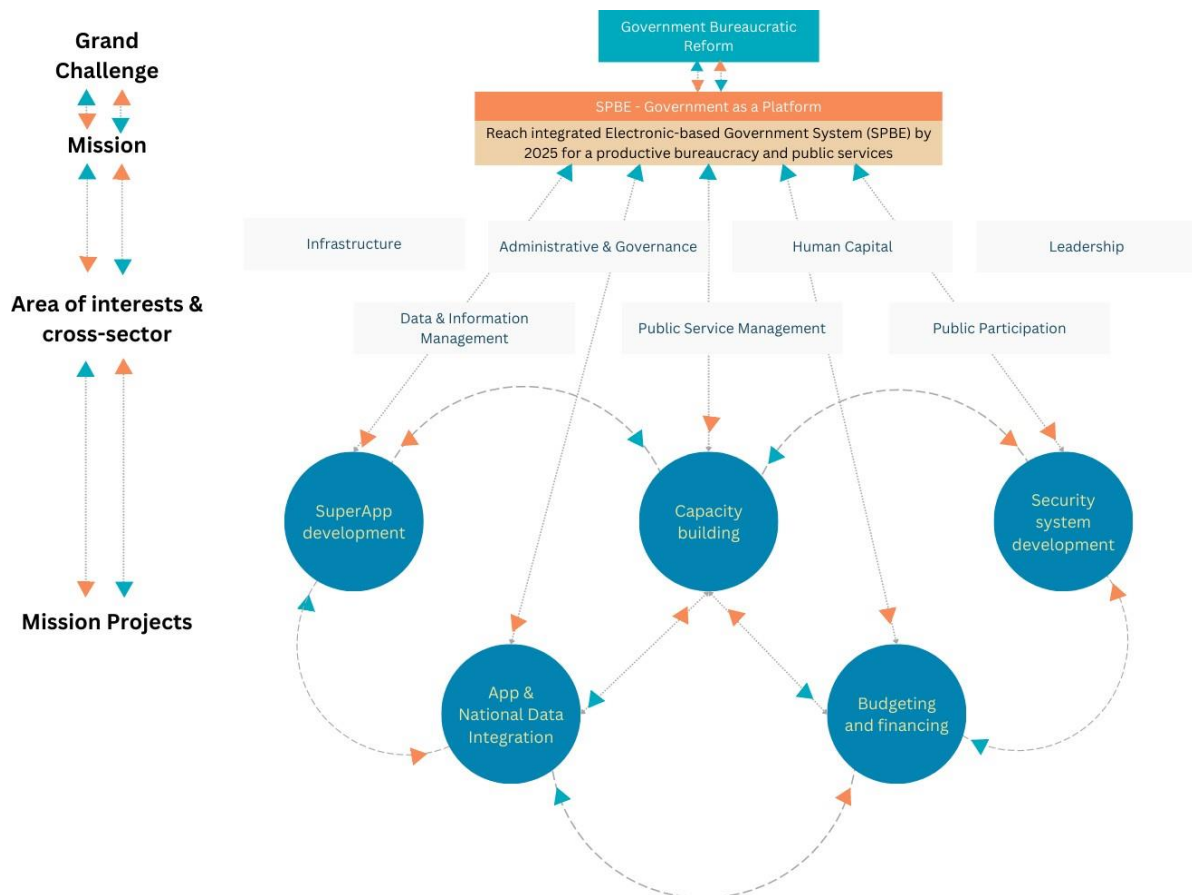


Figure 2. Adaptation of Mission-Oriented Innovation Framework in Indonesia's E-government system

(Source: Adapted from Mission-Oriented Research & Innovation in the European Union: A problem-solving approach to fuel innovation-led growth by Mazzucato, 2018)

Maturity Index as a Policy Instrument

In the context of policy implementation, a policy instrument serves as a crucial bridge between policy formulation and its practical execution (Luo & Zhang, 2020). Within SPBE, a maturity index is employed as a benchmark to gauge the success of SPBE implementation in both central institutions (CI) and local governments (LG). This index comprises several domains, aspects, and indicators, which are used to evaluate fundamental aspects of SPBE implementation, including internal policies, management practices, and services provided by CI and LG. By using this approach, the effectiveness and progress of SPBE initiatives can be assessed and compared across different institutions.

Initially, the government used the United Nations E-Government Development Index (EDGI) to assess the national e-government index. However, for regional and institutional evaluations, they adopted the *Pemeringkatan E-government Indonesia* (PeGI) measurement, which is specifically designed to fit Indonesia's national, regional, and institutional context. Each aspect within these assessments carries different weighted percentages, and the evaluation criteria continue to evolve to ensure the best measurable outcomes for organizations.

In 2020, the average e-government index for local governments and central institutions displayed a significant gap, with scores of 2.14 and 2.90, respectively. At the national level, the score was 2.26, falling into the 'enough' category on a scale of 1 to 5. The Indonesian government had previously announced its goal of achieving a score of 2.6. Therefore, collective efforts are required to work towards reaching this target.



Figure 3. National Coordinating Team for SPBE

(Source: Adapted from the Indonesian version of Ministry of State Apparatus Utilization and Bureaucratic Reform (MoSAUBR) policy outreach, Humas Menpanrb, 2020)

The arrangement in the maturity index and the target set by the central government drives some innovation outputs, such as: 1) Increased the priority for capacity building in digitalization, technology, information, and communication. The district of Sumedang, West Java, developed the Digital Services Living Lab to help the government inside and outside Sumedang to train civil services in digitalization (Hayati & Gewati, 2022). Sumedang has reached a high maturity index among all the local governments, and this action has gained traction from other local organizations in the government to prioritize capacity-building activities to increase the maturity index. 2) Strengthened international collaboration and cooperation between countries. Assessment of the maturity index in Indonesia is one factor that supports collaboration between Indonesia and South Korea through the Digital Government Cooperation Center or DGCC (Humas Menpanrb, 2022). 3) Empowered a new regulation on Satu Data Indonesia or One Data Indonesia. Data integration is listed as one of the key indicators in the maturity index. The weight is also set to be high, and this action drives more collaboration between organizations in the government.

The policy instrument's innovation can be observed as both a product and a process. This concept illustrates how integrating the e-government system serves as both a product and a process to address the significant challenge of bureaucratic reform. In this assessment, the maturity index functions as a tool to establish a distinct and measurable target for each stakeholder, facilitating the advancement of innovation.

Challenges and Opportunities

Despite the accomplishments of the e-government system regulation in Indonesia via SPBE, several challenges continue to hinder the ultimate goal. The most significant obstacle originates from the 'ego sektoral' within governmental organizations, each having its distinct priorities and political agendas. To address this issue effectively, a rigorous oversight mechanism and periodic evaluations become necessary to assess the functioning of the system, particularly concerning integration and collaboration between different organizations. Below are some recommendations aimed at enhancing the implementation of the e-government system: 1) Foster a shared understanding of e-government in Indonesia, particularly at the local government level. This is crucial to enhance the maturity index, as many local governments still lag behind central institutions in their e-government scores. Rozikin et al. (2020) emphasize the significance of e-literacy for local governments, as their grasp of electronic government concepts might be comparatively lower than that of central institutions. 2) Promote public participation and transparency for the public. While Indonesia's e-government system prioritizes the Government to Citizen (G2C) program, there is limited evidence of how these applications facilitate public involvement in expressing their needs to improve public services. Emphasizing user participation is fundamental to design thinking, as it can be one of the ways to

effectively navigate challenges. 3) The weighting percentages in the maturity index are dynamic, which can have both positive and negative implications if not properly justified and communicated to the targeted institutions. Since the standards for institutions change over time, it is crucial to engage in thorough discussions with them about the importance of these weightings and how they can contribute to achieving an ideal e-government system in their respective contexts.

E-government and the strategy of bureaucratic reform have been continuously governed across five presidential tenures and have evolved up to the present day. The regulations implemented were designed to be contextual, flexible, and subject to evaluation. The initial regulation in 2003 primarily emphasized the development of websites and applications. However, in 2018, the focus shifted towards emphasizing the integration of the e-government system, leading to the introduction of further regulations that prioritized the SPBE approach. This encouraging advancement exemplifies a mission-driven innovation, which facilitates institutional learning and creates an environment conducive to transformation and systemic change.

Conclusion

Bureaucracy is a complicated system of hierarchical processes, jobs and programs in government institutions, and administrative laws. Due to its complexity, uncertainty, and evaluative character, bureaucracy in Indonesia has proved difficult. To remedy this, the Indonesian government prioritized digitizing government administration, known as SPBE. With the ratification of Presidential Regulation No. 95 / 2018, the term Mission-Oriented Innovation Policy Framework (SPBE) was first used. It laid out Indonesia's e-government development roadmap, planning, and evaluation, as well as the actors' roles.

Mazzucato created a framework for the public sector to turn issues into missions and projects. Missions should be explicit, with specific aims, measurable outcomes, and firm timeframes, and should encourage participation across diverse scientific disciplines, industrial sectors, and types of players, as well as using a bottom-up approach. SPBE needs detailed identification and articulation of the problem and cross-sector collaboration. The Ministry of State Apparatus Utilization and Bureaucratic Reform (MoSAUBR) leads the other ministries to fulfill their government roles. Private enterprises assist the government in meeting the target, but public-private collaboration is crucial. However, universities and academia have no specified role.

A maturity index is utilized as a policy instrument to measure SPBE implementation, using domains, aspects, and indicators to evaluate the fundamental key elements. The maturity index and aim set by the central government have generated various innovation outputs, such as expanded capacity building in digitalization, strengthened international engagement and cooperation, and empowered a new regulation on Satu Data Indonesia or One Data Indonesia. Mission-oriented

innovation encourages institutional learning and systemic change, as demonstrated by the progress. However, the goal is still hindered by *'ego sektoral'* in government institutions. Strict oversight and regular evaluation are needed to enable transformation. Some suggestions for improving Indonesia's e-government include aligning local governments' perceptions and understanding of e-government, facilitating public engagement and transparency, and addressing the weighted percentage on the maturity index with targeted institutions. These recommendations are crucial for Indonesia to enhance its e-government system and improve the delivery of public services. The progress made so far is a testament to the effectiveness of mission-oriented innovation and flexible regulations in promoting institutional learning and systemic change.

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