Implementation of Electronic Government in Indonesia
Recent Development and Challenges

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Abstract. The Indonesian government has implemented an electronic-based government system (SPBE) since 2003 through Presidential Instruction number 3 of 2003 and strengthened by Presidential Regulation of the Republic of Indonesia Number 95 of 2018. However, not many studies have discussed the development of e-government in Indonesia after implementing the regulation. Therefore, this study seeks to fill the research gap by discussing the development of e-government. We also analyze Indonesia's challenges after the implementation of SPBE. Using a qualitative approach and a review of secondary data, this study found that SPBE has progressed to the stage of development and maturity. It's just that various obstacles are faced in the implementation of SPBE, such as information technology fragmentation and COVID-19. Therefore, this research contributes to the study of the implementation and practice of e-government development in Indonesia.

Keywords: e-Government · SPBE · Implementation · Fragmentation

1 Introduction

The Indonesian government has anticipated environmental changes driven by advances in information technology with the development of the concept of e-government through Presidential Instruction Number 3 of 2003 concerning national policies and strategies for e-government development. The e-government concept was later updated to be precise and comprehensive under the electronic-based government system (SPBE) [1]. Another policy in line with the SPBE policy is the bureaucratic reform policy that started in 2010. It was marked by the issuance of Presidential Regulation Number 81 of 2010 concerning the grand design of bureaucratic reform 2010–2025. It covers eight areas of change: structuring and managing supervision, accountability, institutions, management, human resources of the apparatus, laws and regulations, public services, mindset, and work culture. This bureaucratic reform process was forced to go faster in line with the COVID-19 pandemic and the rapid development of the world of information technology [2].

The development of e-government in the bureaucracy was then harmonized and accelerated its implementation by the government by enforcing SPBE since 2018 through the issuance of Presidential Regulation of the Republic of Indonesia Number 95 of 2018

concerning Electronic-Based Government Systems (SPBE). This regulation is addressed not only to the central government but also to local governments. The background for the preparation of the SPBE is to anticipate future technological developments in the telecommunications sector, including mobile internet technology, cloud computing, the internet of things (IoT), big data analysis, and artificial intelligence (AI). With the increasing access to the internet through personal devices, SPBE services must be accessible to users in the form of mobile services without time and location limits. Cloud technology that provides data services, applications, and internet infrastructure also includes effectiveness and efficiency for integrating information technology in the bureaucracy.

The SPBE program is an administration of government by utilizing information technology to provide services to government agencies, state civil servants, business people, the community, and other parties. This program has encouraged the modernization of the world of bureaucracy, which should adjust to the times and demands of society through adopting technology. SPBE provides an opportunity to promote and realize an open, participatory, innovative, and accountable government administration and increase collaboration between government agencies in carrying out government affairs and tasks to achieve common goals. SPBE can also reduce the level of abuse of authority in the form of collusion, corruption, and nepotism through the implementation of an electronic-based system of monitoring and public complaints.

This paper focuses on the implementation of the President of the Republic of Indonesia Number 95 of 2018 concerning the Electronic-Based Government System (SPBE). The questions that this research wants to answer are (1) How is the development of SPBE in Indonesia, and (2) What are the challenges faced in implementing SPBE during the COVID-19 pandemic?

2   Research Methods

This research employed a qualitative approach using library research to explain the phenomena in implementing policies in the SPBE field, especially during the COVID-19 pandemic. The data were collected from journals, books, government documents, articles, and other literature [3]. The data is then selected, edited, and analyzed using a content analysis approach. This analysis is a technique for making replicable and valid inferences on data by considering the context [4].

3   Findings and Discussion

3.1   Development of SPBE

SPBE mandates ministers, heads of institutions, and regional heads to develop SPBEs following their duties, functions, and authorities and under the capacity of their resources. Ideally, various implementations of the Presidential Regulation on SPBE by central and local government agencies have contributed to the efficiency and effectiveness of government administration. Presidential Regulation Number 95 of 2018 is complete, covering all aspects of SPBE, from governance to evaluation. Its contents bind the central government and all local governments responsible for implementing SPBE in their respective work environments [5].
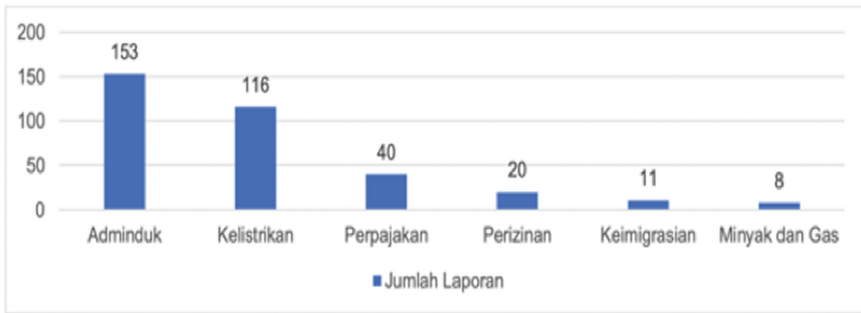
Fig. 1. Comparison of information and communication sector growth with national economic growth.

However, there is still a gap between pretty complete and binding regulations and progress in implementation on the ground. The success rate of SPBE implementation in central and local governments is still very diverse [6]. Kompas, April 13, 202011 edition, reported that of the 348 complaint reports received by the PANRB Ministry, 153 of them were reports related to the non-handling of population administration services. At the same time, second place is complaints related to electricity services (116 reports), tax services (40 reports), licensing services (20 reports), immigration services (11 reports), and oil and gas services (8 reports) [6] (Fig. 1).

There are several reasons why the problems occur [7]:

- No SPBE Governance regulates application and infrastructure development nationally, so there is no duplication and inefficiency.
- SPBE is still being implemented partially, and it has not touched the whole process of improving the performance of public services.
- It was related to the availability of infrastructure that has not been evenly distributed throughout Indonesia, especially in eastern Indonesia. The existence of infrastructure is the foundation for running the SPBE.
- The human resource factor is the low number of State Civil Apparatus (ASN) who have competence in information technology and computers.

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SPBE, as part of bureaucratic reform, has a big target: to create a high-performing government bureaucracy and public services [8]. A high-performing bureaucracy that

has the characteristics of being integrative, dynamic, transparent, and innovative with the following explanations:

- An integrative bureaucracy prioritizes strategic collaboration between government agencies and other stakeholders to share resources and build strength in carrying out government affairs and tasks.
- A dynamic bureaucracy can respond quickly to changes in strategic environmental conditions by dynamizing government business processes within and between government agencies.
- A transparent bureaucracy is a must to build trust and legitimacy in the eyes of the public. With a transparent bureaucracy, the government shows its seriousness in working for the benefit of the community, understands the community's needs for public services, and monitors and evaluates government performance.
- Innovative Bureaucracies Can Provide Space to Develop Faster, Easier, and Cheaper Services, so They Significantly Impact Economic Growth, Environmental Preservation, and Socio-culture.

The process of creating a quality government based on information technology through the implementation of this SPBE requires hard work and a period that is not short. In Presidential Regulation Number 95 of 2018 concerning SPBE, the government prepares stages and strategic plans. There are two stages of SPBE implementation, namely the foundation development stage and the development stage, where each step measures the quality of success. The foundation development phase is carried out for four years in the 2018–2022 period with the following achievements being made:

- SPBE architecture information system, National SPBE Architecture, Central Agency SPBE Architecture, and Regional Government SPBE Architecture;
- National SPBE coordination team, central agency coordination team, and local government coordination team;
- Meso and micro policies that support the implementation of the Presidential Regulation;
- Evaluation of National SPBE and SPBE assessment of Central and Regional Government Agencies;
- Survey of user needs and satisfaction;
- Public service portal, government administration portal, and national data portal;
- Implementation of SPBE on the integration of planning, budgeting, procurement of government goods and services, performance accountability, monitoring and evaluation, staffing, archives, and public complaints;
- SPBE Service Management;
- SPBE infrastructure;
- Information security system; and
- SPBE technical competency standards.

After the foundation stage, the SPBE implementation proceeds to the next step, the development stage, scheduled for 2023–2025. The qualities to be achieved in this stage are as follows:

- The existence of an SPBE Service Portal based on artificial intelligence and big data;

- Improving the quality of broadband networks and intra-government networks;
- Increasing the number of SPBE services according to user needs;
- Improving the quality of information security;
- Capacity building of human resources.

3.2 Challenges of E-Government in Time of COVID-19

Ideally, the stages of the SPBE implementation process will accelerate during the COVID-19 pandemic. With the pandemic, people's demands for online services have increased sharply, in line with the government's recommendation to government workers and employees to do WFH and get used to less physical contact activities. The acceleration of working online is also evident from the high spending in the information and communication technology sector. As a result, economic growth in the information and communication technology sector throughout 2021 will be above the average national economic growth. In 2021 the information and communication sector will grow positively at 6.81%, above the national economic growth of 3.69% [9]. Economic growth in the information and telecommunications sector, previously driven by technological disruption, will be added in 2021 with the COVID-19 pandemic. This figure is inversely proportional to other sectors which have stagnated or even declined during the pandemic.

The COVID-19 pandemic has changed the pattern of public services and how the bureaucracy works. Almost all public services initially carried out by physical contact are forced to use digital technology. The bureaucratic service patterns that previously took place were traditional, manual, modern, and automatic. According to a force field analysis concept, changes occur because of pressures on organizations, individuals, or groups. The pressure from the COVID-19 pandemic on people's lives is quite immense. According to the Ministry of Health of the Republic of Indonesia website, as of July 7, 2021, the total number of positive confirmed cases of COVID-19 was 2,379,397. There were 62,908 deaths related to COVID-19 (CFR: 2.6%), and there are 1,973,388 patients who have recovered from the disease. While the situation globally until July 7, 2021, the total confirmed cases of COVID-19 in the world is 184,350,802 cases, with 3,992,992 deaths (CFR 2.2%) in 222 countries [10].

Several studies have also stated that many impacts occur due to the COVID-19 pandemic. In the economic sector, there was a decline in the economic growth rate. The International Monetary Fund (IMF) has stated that world economic growth will decline by 0.1–0.2% to 3.3% in 2020. It was also conveyed by the Head of the Organization for Economic Co-Operation and Development (OECD), Laurence Boone, who predicted a slowdown in world economic performance due to reduced supply chains and falling demand for commodities [11].

Many other sectors also experienced a reasonably severe decline, such as tourism. The World Tourism Organization (UNWTO) announced in March 2020 that the impact of COVID-19 would be felt throughout the tourism chain. Around 80% of small and medium enterprises from the tourism sector, with millions of livelihoods worldwide, are affected by the COVID-19 pandemic [12]. The pressures due to this pandemic have an impact on almost all sectors of people's lives. In addition, there has been a change in life patterns due to the application of social distancing, which encourages people to use digital technology in their daily lives. It forces the bureaucracy to respond quickly to

the situation and adapt to the demands of society to obtain digital-based services with a minimum of physical contact.

Two dimensions of bureaucratic governance have changed due to the COVID-19 pandemic, namely the dimensions of the organization and work system [13]. From the organizational side, there has been a change from the normal way of adapting to new habits during the pandemic, also known as the new normal [14]. The situation above forces the bureaucracy to be ready or not ready to apply the new method. In its implementation, the bureaucracy must optimize the use of information and communication technology in all areas of the government sector. Transformation based on conventional public services has turned into e-public services, which must be implemented immediately. The process of public services that are usually queued and crowded has turned into online (online). For example, the renewal of a driving license (SIM), which generally requires hundreds of people to visit the nearest police station daily, has become entirely online through the Korlantas Polri application. The SIM that has been extended will be sent to their respective homes. Another example is the application of law enforcement on the highway through e-Tilang or Electronic Traffic Law Enforcement (ETLE) which the Indonesian National Police initiated as a form of transformation from conventional ticketing.

Likewise, for example, what happened in the world of education? This change took place massively in all regions and almost all levels of education. The learning process from kindergarten to college level takes place entirely online. No face-to-face interaction between teachers and students or between students themselves occurred. The dialogue and discussion process use technological facilities such as Zoom, Google Classroom, Microsoft Webex, and others [15].

The second dimension is the work system, where there are two choices: working from home or work from home (WFH) and continuing to work in the office or work from an office (WFO) by implementing the health protocol provisions. People also follow the government's advice to keep their distance and work more flexibly from home through Work from Home (WFH). Law Number 25 of 2009 concerning Public Services defines public services as activities fulfilling service needs following laws and regulations for every citizen and resident of goods, services, and administrative services provided by service providers. Implementing public services is to provide services for the community's welfare. Therefore, the service must not stop, be closed, or have access to it, even though there is a WFH policy. The WFH policy is only a transfer or change of the method or working method of service providers and implementers. The essence is to continue to provide services to the community. Access to information previously only during office hours has become 24 h, seven days a week.

To realize optimal physical distancing, the work process shifts from working in the office to working from home (work from home). The development of online-based service, administration, and coordination processes began to be pursued as much as possible in each government agency environment, both central and local governments. On the other hand, to achieve optimal physical distancing, the work process shifts from working in the office to working from home (working from home). The development of online-based service, administration, and coordination processes began to be pursued

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To regulate the implementation of this work-from-home activity, the government, through the Ministry of Health, then issued a Minister of Health Decree Number HK.01.07/MENKES/328/2020 concerning guidelines for the prevention and control of COVID-19 in office and industrial workplaces for supporting business continuity in a pandemic situation. In this regulation, there are several health protocols that offices, industry, and workers must obey in the new normal era. Furthermore, especially for state civil apparatus (ASN), this policy is regulated by the Ministry of Empowerment of State Apparatus and Bureaucratic Reform of the Republic of Indonesia (Kemen-PANRB) through the Circular Letter of KemenPANRB Number 19 of 2020 concerning the adjustment of the work system of state civil apparatus in efforts to prevent the spread of COVID-19 in government agencies. It was later enhanced by issuing the Circular Letter of MenPANRB No. 58/2020 concerning the work system of ASN in the new normal order.

Based on the MenPANRB Circular, there are two mechanisms for adjusting the work system for ASN employees in Indonesia, namely: first, carrying out official duties in the office (work from the office), namely carrying out official duties in the office referring to the provisions of the legislation in the field of employment; and secondly the implementation of official duties at home (work from home), namely carrying out official duties carried out at home while still referring to the provisions of the legislation in the field of employment [16].

With the spread of COVID-19 in almost all regions and the imposition of large-scale social restrictions, people's activities are forced to be limited. The limits include office activities, schools, out-of-town trips, and direct sales. Due to these limitations, people's habits have changed from physical activity to new technology-based practices, which also function as a medium for communication, interaction, teaching and learning activities, and working at home. The government must also provide optimal public services and targeted policies to quickly solve problems based on digital technology. The government implements this digital transformation innovation through the e-government system (SPBE). The existence of digital technology, or information and communication technology (ICT), through information sharing and online services, has kept governments and citizens connected during the pandemic. ICTs have also enabled governments to make timely policy decisions based on real-time data and analytics, increasing authorities' capacity for better coordination and deploying evidence-based services to those in need (UN 2020).

4   Conclusion

This research focuses on the implementation of SPBE and its challenges in Indonesia during the COVID-19 period. By examining secondary sources, this study finds that the implementation of SPBE has been running in almost all government sectors in Indonesia. Since the COVID-19 pandemic, the implementation of SPBE through Presidential Regulation of the Republic of Indonesia Number 95 of 2018 has increasingly gained momentum. This is due to the massive use of information technology in the public sector to reduce the risk of COVID-19.

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