

Artificial Intelligence as a Basic and Centre for Integrated Digital Bureaucracy

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Abstract: Digital technology, whose deepest spirit is artificial intelligence, seems to be man's last love. It was created to serve man so that his status glory is perfected by the results of his mind, and the mind is a gift from God of the universe that is complete. The purpose of this research is to describe the use of artificial intelligence technology to support the bureaucratic system in our country. This research is descriptive, with the methodological basis being qualitative research. The research method is a literature study, with the main sources being writings sourced from scientific journals, mass media publications and other relevant sources. The writings are elaborately narrated with the guidance of relevant theories. The results of the study found several factors in the implementation of this digital bureaucracy, namely (1) Availability of an integrated system, (2) Placement of human resources according to their fields and capabilities, (3) Sustainability of the program and (4) Periodic improvement of infrastructure (software and hardware) as needed.

Keywords: Artificial Intelligence; Digital Bureaucracy; Integrated

Introduction

Today, the development of technology is rapid and unstoppable (Cloete, 2019; Sunandari et al., 2023). Digitalization has started to enter the cracks of our daily lives. These technological advances are then widely utilized by the private sector. Many companies and even small creative industries use digital technology to develop their businesses (Li, 2020), for example Gojek, Uber, and Grab are companies that concentrate on providing transport services through an online (R. Putra et al., 2022; Subandriyo, 2020).

The world of government is no exception. This digital trend is also growing. Many agencies are competing to provide public services to the community by utilizing the sophistication of information and communication technology (Abdeldayem & Aldulaimi, 2020). The hope is that public services can be more transparent and the public becomes more easily connected to government services.

In accordance with the Presidential Regulation No. 95/2018 on Electronic-Based Government System

needed to realize clean, effective, transparent, accountable, quality and reliable governance. The utilization of information technology aims to provide better public services (Camero & Alba, 2019), improve the relationship between government and business and industry (Chege et al., 2020), empower the public through access to information, and improve the efficiency of government management (Malodia et al., 2021).

Other benefits of the utilization of information technology by government institutions include reducing corruption, increasing transparency, increasing convenience, increasing revenue, and or reducing costs (Batool et al., 2021). Furthermore, this study will discuss how to apply AI technology in bureaucracy, with a theoretical approach. The study is also directed at how the implementation runs carefully so that the benefits are optimal.

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Method

The Systematic Literature Review (SLR) method was used to answer this research question. SLR is the process of compiling, evaluating, and synthesizing all relevant research related to a particular topic (van Dinter et al., 2021), in this case digital visual marketing. The purpose of SLR is to provide a comprehensive overview of digital visual marketing research and identify gaps that require further research (Xiao & Watson, 2019).

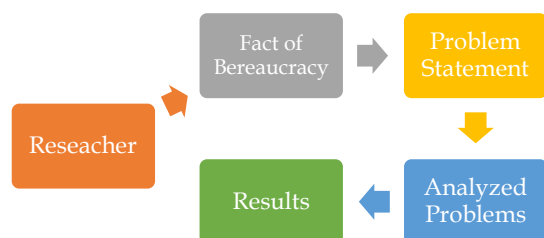


Figure 1. Research Flow Logic

Applies artificial intelligence technology to supervision methods and means, and improves the degree of supervision automation and intelligence (Hu, 2020). In this section of the article, we review some of the research in areas which are closely related to the topic of this article and need to be tied in more closely (Stone et al., 2020).

Result and Discussion

The reductionist and correlative characteristics of these artificial intelligences

Close examination of markets, bureaucracies, and Deep Learning reveals two common foundational characteristics: they are correlative and reductionist. Correlating intelligence identifies patterns. For example, when the barometer goes down, rain follows in a calculably high percentage of cases. Similarly, when a disease appears less often in a vaccinated group than in a matched unvaccinated group, the vaccination may be inferred to be useful with a level of confidence linked to statistical power of the observed results (Lohn & Musser, 2022).

The correlation however reveals nothing about how or why the vaccine works or what causes rain and barometers to move synchronously. An intelligence that is “conceptual” claims insights as to causation. It propounds a theory about the linkage or lack of it between phenomena of interest. For example, an understanding that though barometric behavior is correlated with rainfall, the barometer does not cause rain. Human thought encompasses both correlative and conceptual capabilities.²⁶ To take a famous example,

Johannes Kepler spent four years intensely trying to fit the orbits of planets to an identifiable form. Eventually, without comprehending why, he discovered that all such orbits could consistently be represented by an ellipse. Two-thirds of a century later Sir Isaac Newton developed a causal explanation that illuminated why and how this movement conformed to this geometry. Markets are purely correlative entities. Assimilating many information inputs, they arrive at a price without any pretension of understanding what drives that price (Danzig, 2022). Market mechanisms are indifferent to the character or consequence of the commodities they evaluate (Acikgoz et al., 2023; Lohn & Musser, 2022).

Bureaucracy Digital Framework

As the democratic process improves, democracy is also an important aspect of the governance process. The purpose of establishment of Electronic-based Government System in Presidential Regulation Number 95 of 2018 is also in line with the objectives of the establishment of the Regulation of the Minister of Administrative Reform and Bureaucratic Reform of the Republic of Indonesia Number 26 of 2020 concerning Guidelines for Evaluating the Implementation of Bureaucratic Reform. Where there are eight areas of change that represent each change program. One that is related to Electronic-based Government System is Structuring Management.

The national use of AI in the government sector is necessary to achieve effectiveness and efficiency in supporting bureaucratic reform and policy decision making in order to implement good governance (Kuziemska & Misuraca, 2020). The implementation of Electronic-based Government System is expected to increase the use and utilization of information technology in the government management process (Haerofiatna & Chaidir, 2023b). Not only in providing public services to the community, but also internal governance within the government. To be effective, efficient, and improve government performance. For example, the use of Employee Information System (SIMPEG) in terms of personnel data management. With this system, it provides convenience in collecting employee data, processing personnel planning and formation, providing salaries, assessing credit scores, mutations, reporting systems, and supervision.

In *Permenpan* (Ministerial Regulation) RB Number 26 of 2020, the implementation of Electronic-based Government System is also measured in several indicators. Some of them are: whether the ministry/agency/government has implemented Electronic-based Government System service management, implemented electronic-based personnel services, implemented electronic-based archiving

services, and implemented electronic-based public services (Haerofiatna & Chaidir, 2023; Makmur, 2023). All of these indicators must be met, because they have a major influence on the achievement of Bureaucratic Reform in the ministry/agency/government (B. K. Putra & Dhanuarta, 2021).

In addition to the implementation of Electronic-based Government System in the internal aspects of government management, the influence of Electronic-based Government System also has a major impact on the service user community (B. K. Putra & Dhanuarta, 2021). Many public service innovations have sprung up that the author cannot mention one by one. However, with this information technology-based public service innovation, many positive impacts arise because of it.

First, the application of information technology in public services provides convenience to service users. The public does not have to come to government agencies as service providers, simply by accessing pages that have been managed by the government, either websites or social media, the public can already find out basic information about the services provided, and fill out the application form that has been provided.

Second, increased public trust in public services. With information presented openly through information technology, it is easy for the public to know the SOP, requirements, costs and the time period required. This can prevent maladministration in the form of procedural irregularities, protracted delays, extortion and so on. *Third*, public complaints against public services can be integrated, for example by establishing the People's Online Aspiration and Complaint Service (LAPOR) system.

Societies' acceptance of bureaucracies and markets as mechanisms for consequential and often emergent decisions suggests that we may learn something about the new phenomenon of machine intelligence by considering it in light of our extended, substantial experience with markets and bureaucracies (Lohn & Musser, 2022).

In this term, AI was originally known in the world of computers, automation, and ICT that adapts human intelligence using computer machines and systems (Hassani et al., 2020) so as to be able to carry out work that requires human intelligence such as decision making, problem solving, and introduction (Duan et al., 2019).

One of the primary contributions of this study is the examination of citizens' preferences for bureaucrats versus AI in the context of making trivial decisions, i.e., quality control, in which representation is not a salient issue. We find evidence for people's ability to perceive differences between bureaucratic discretion and AI. Furthermore, we disentangle individuals' preferences

for the intricate attributes of human and algorithm decisionmakers to some degree. We find that citizens tend to choose bureaucrats over AI to make government decisions (Gaozhao et al., 2023; Russell, 2019).

However, this needs to be explored further in different contexts with low/high trust government agencies and in different policy areas, such as education, health, and policing. That said, in our study, citizens generally prefer a human agent who is an African American female with substantial training (Gaozhao et al., 2023).

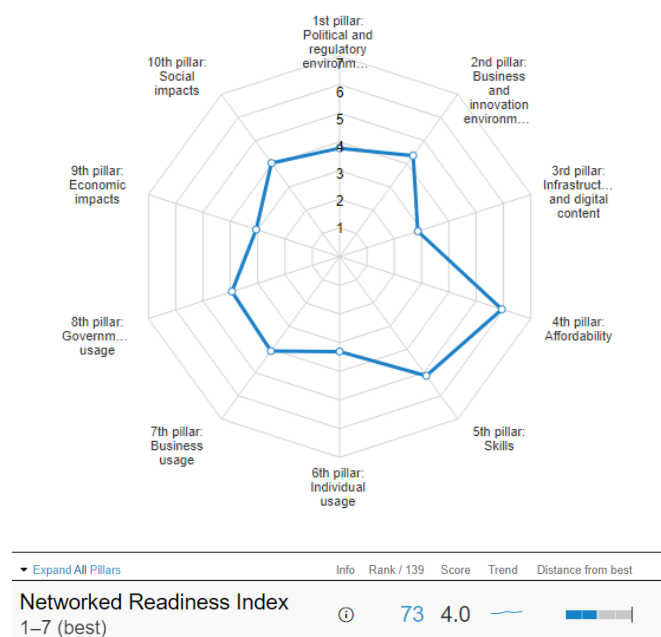


Figure 2. Indonesia Ranking in Global Information Technology Report 2016. Source: World Economic Forum (2016).

From the results of the report, Indonesia climbed six spots to 73rd in 2016, partly driven by increased affordability and strong increases in individual use. To take advantage of this positive trend, infrastructure needs to be maintained as the number of users increases, the existing infrastructure begins to be improved. Business and government use is already high with a flat trend line for businesses and a slight decline for the government. Newly reformed regulation and business environment provide a good foundation for building a digital economy with several supporting indicators (legislative, legal system, availability of the latest technology, and number of procedures for starting a business) World Economic Forum (2016).

Approaches to Understanding the Concept E-Government: Stakeholder-Based Approach

Stakeholder-based approach emphasizes the categorization of the types of relationships between the

government and other entities. This approach focuses on using the internet as an instrument to improve and support government relations with other stakeholders.

This is manifested in the concept of which we know as: Government to Citizens (G2C)/relationship between government and citizens, Government to Business (G2B) / the relationship between government and business, and Government to Government (G2G) / the relationship between governments (Irawan & Hidayat, 2021).

Government to Government (G2G) / the relationship between governments. The first category, Government to Citizens (G2C), is the implementation of e-government to improve quality of public services provided by the government (Irawan & Hidayat, 2021).

The use of the internet in the provision of public services the government is believed to be able to provide better example of this G2C relationship is for example (Sulistya et al., 2019): the use of official government websites as a means of dissemination of public information, the provision of online online and the provision of interaction channels between the public and the government through the internet(Irawan & Hidayat, 2021).

Second, Government to Business (G2B). The use of ICT in supporting organizational performance is not dominated by the government alone but vice versa, various innovations and breakthroughs that aim to maximize profits with effective and efficient organizational management organizations come from the business sector (Farmansyah, 2020; Karim et al., 2022). Studies in Public Administration even encourage government to innovate and manage organizations as done by the business sector, this can be seen in the New Public Management (NPM) paradigm, for example.

For the context of the relationship between the government and business, e-government improves coordination and co-operation between the two parties, especially on the coordination and cooperation between the two parties, especially in services to the business sector or transactions between transactions between the two, for example in the process of purchasing goods and services (Irawan & Hidayat, 2021) .

Conclusion

Indonesia needs to manage artificial intelligence more complex than procuring the latest hardware and software, and manage AI operationally that is more focused on knowing what we want AI to do for us, and how to make AI do what we want. Stakeholders need to coordinate various approaches to address the operational spectrum in its implementation. The writings are elaborately narrated with the guidance of

relevant theories. The results of the study found several factors in the implementation of this digital bureaucracy, namely (1) Availability of an integrated system, (2) Placement of human resources according to their fields and capabilities, (3) Sustainability of the programme and (4) Periodic improvement of infrastructure (software and hardware) as needed.

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Conflicts of Interest

There is no interest conflict in this research.

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