Good Governance and Anti-Corruption: advantages and challenges in the era of digital technology

Boa Governança e Anticorrupção: vantagens e desafios na era da tecnologia digital

Buen Gobierno y Anticorrupción: ventajas y desafíos en la era de la tecnología digital

How to cite:
Dang, Minh T.; Vu, Thi Linh (2024). Good Governance and Anti-Corruption: advantages and challenges in the era of digital technology. Revista Gestão & Tecnologia, v. 24, n. 3, p.128-154

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Editor Científico: José Edson Lara
Organização Comitê Científico
Double Blind Review pelo SEER/OJS
Recebido em 03/06/2024
Aprovado em 21/08/2024

ABSTRACT
Digital technology has been globally widely applied in state governance and creates both advantages and challenges for governance and anti-corruption. Indeed, it has promoted openness, transparency, and accountability. However, recent technological applications have also created challenges for governance, especially in the areas of application of artificial intelligence (AI). This paper introduces the role of digital technology in the transition from traditional governance to modern/good governance. Then, it analyzes the advantages and challenges of digital technology in governance and anti-corruption.

Keywords: Digital technology; Fourth Industrial Revolution; Artificial Intelligence (AI); Good governance; Anti-corruption

RESUMO
A tecnologia digital tem sido amplamente aplicada a nível mundial na governação estatal e cria vantagens e desafios para a governação e a luta contra a corrupção. Na verdade, promoveu a abertura, a transparência e a responsabilização. No entanto, as aplicações tecnológicas recentes também criaram desafios para a governação, especialmente nas áreas de aplicação da inteligência artificial (IA). Este artigo apresenta o papel da tecnologia digital na transição da governação tradicional para a governação moderna/boa. Em seguida, analisa as vantagens e os desafios da tecnologia digital na governança e no combate à corrupção.

Palavras-chave: Tecnologia digital; Quarta Revolução Industrial; Inteligência Artificial (IA); Bom Governo; Anticorrupção

RESUMEN
La tecnología digital ha sido ampliamente aplicada a nivel mundial en la gobernanza estatal y cria vantagens e desafios para la gobernanza y la lucha contra la corrupción. Na verdade, promoveu a abertura, a transparência e a responsabilização. Sin embargo, las aplicaciones tecnológicas recientes también plantean desafíos para la gobernanza, especialmente en áreas de aplicaciones de inteligencia artificial (IA). Este artículo presenta el papel de la tecnología digital en la transición de la gobernanza tradicional a la gobernanza moderna/boa. A continuación, se analizan las ventajas y los desafíos de la tecnología digital en la gobernanza y la lucha contra la corrupción.

Palavras-chave: Tecnología digital; Cuarta Revolución Industrial; Inteligencia Artificial (IA); Buen Gobierno; Anticorrupción

1. INTRODUCTION

Since the twentieth century, administrative power and the organization of public administration have expanded around the world. Public administration has gradually become a privileged position for politicians and civil servants; while citizens are considered consumers of public goods and services and are passive receivers of public policies and consequences of state governance. This form of state-centered governance frequently results in low governance efficiency, incompetence, insufficient legitimacy, and generally lacks the necessary resources and capacity to be effective. Furthermore, traditional state-centered governance has many issues and difficulties such as corruption and abuse of power; lack of transparency and accountability; incompetent public service apparatus; low quality of public services; low responsiveness; limited participation and low people's confidence; and lack of motivation to innovate.

Modern governance, or good governance, has recently been introduced as a superior alternative that has the potential to address all the issues that plague traditional state-centered governance models. Since the 1990s, developed countries (such as The United States, Japan, the United Kingdom, New Zealand, and Canada) have been reforming their governance mechanism by concentrating on new management methods that place more emphasis on human rights, civil rights, the improvement of the democratic nature of public services, and promoting more public participation in the governance process.

Unlike traditional governance which is centered around the state, where the government exercises the right to rule and to pass out services, and the public are passive receiver of such services, modern governance is centered around the people. In modern and democratic governance, the public plays an active and essential role in all governance processes, such as planning, promulgation, decision-making, to the implementation of policies and laws. “Good governance” is a novel way of governance that has recently become increasingly popular and is actively promoted by both regional and international development organizations. Many economists believe that the effectiveness of economic reforms depends strongly on healthy and good political institutions. The core objective of Good Governance is

to improve political institutions and to foster economic development and hence, is based on institutional principles and requirements that promote transparency and reduce corruption. More specifically, Good Governance is based on the following basic principles: the rule of law; transparency; accountability; fairness; service; efficiency and effectiveness; consensus; data and forecast-based decisions; trust; and partner-stakeholder equality in the governance process.

The core foundation of Modern/Good Governance is a democracy that seeks to meet the needs and aspirations of the people (Democratic Governance) (BTC, 2006). Hence, Democratic Governance is the governance process that promotes the responsiveness of institutions to provide equitable services to all. As a result, the public achieves a strong consensus on policies and the implementation of such systems, laws, socio-political structures, and thereby, resulting in a society with a high level of justice, fairness, human rights, and civil rights. Policies are implemented, and laws are enforced by a variety of institutions: from traditional institutions such as state agencies, and political parties, to more diverse nontraditional entities in the private sector and civil organizations. In this sense, democratic governance addresses the question of how to organize a society to ensure equality and fairness for all citizens. Good governance with many characteristics of democratic governance is said to be a necessary condition for economic development and hence, is actively promoted by international organizations in development programs. (Ahmad Z & Saleem A, 2014)

The goal of state governance is to build a transparent, streamlined, dynamic, and effective governance system, which aims to serve, rather than govern the people. The modern governance model emphasizes core principles such as expanding citizen participation in state management activities; policymaking on the principle of public consensus; and building a responsible and transparent administration with strong accountability efficiency and effectiveness that is fair under the rule of law. Thus, state governance is the exercise of power to serve the people, ensuring the role and voice of the people, building a streamlined, dynamic, and effective administration. The people are free and encouraged to exercise directly or indirectly their ownership in the process through active representative entities. In order to

achieve this, the government apparatus must always ensure transparency from the process of providing information to the protection of the fundamental rights of the citizens. The modern governmental system needs to create a broad consensus in society and must always strive to increase the quality of life of the people. Furthermore, good governance must also contribute to the fight against corruption and government wastefulness. Experience shows that capable governance states are also effective prevention and control of corruption and poverty. Fighting against corruption and wastefulness also contributes to ensuring the nation's rise.

The Fourth Industrial Revolution stems from the concept of "Industry 4.0" in a German government report in 2013. Subsequently, Klaus Schwab, founder and executive chairman of the World Economic Forum has come up with a more refined concept: "The first industrial revolution used water and steam energy to mechanize production. The second industrial revolution took place thanks to the application of electricity for mass production. The third industrial revolution used electronics and information technology to automate production. Now, the fourth industrial revolution is emerging from the third revolution, bringing technologies together, blurring the lines between physics, digital technology, and biology." More specifically, the fourth industrial revolution was created by the convergence of novel technologies such as IoT, or the Internet of things, robotics, 3D printing technology, cloud computing technology, wireless technology, artificial intelligence, nanotechnology, advanced materials science, energy storage, and quantum computing. The Fourth Industrial Revolution will take place in three main areas, including biological tech, digital technology, and physics. The core elements of digital technology in the Fourth Industrial Revolution will be AI, the Internet of Things (IoT), and Big Data. The breakthrough advancement of the Fourth Industrial Revolution is now "unprecedented in history." When compared to previous industrial revolutions, the Fourth Industrial Revolution is evolving at a function exponential rather than a linear rate.

The transition from traditional/bad governance to modern/good governance is a necessary and meaningful endeavor. Moving governments from being state-centered to citizen-

centered, an essential role of public administration is to provide public services, and current public administration can benefit immensely from recent scientific and technical advancement that helps replace processes that traditionally rely on manual labor. The fourth industrial revolution had a profound impact on all aspects of social life, including how public governance is structured. Recent new technological advancements, especially intelligent technologies such as artificial intelligence, have become an essential and active role in public governance. Governance based on technology creates an equal playing field between the state and its citizens, especially in the area of access to information and supervision by the public. Moreover, the digitalization of many governance processes has helped the government promote transparency, increase access to information and hence increase accountability; and public participation; and improve the quality of public services and activities. Therefore, most of the new approaches of modern governance/good governance emphasize the need to understand, implement, promote, and further the advancement of technology. (Vu Cong Giao, 2018) It is reasonable to assume that the application of technological achievements, especially digital technologies, has the potential to transform and promote good governance in any organization or country (Bhupender S. Shhikara, 2005).

Modern society demands modern requirements of governance, such as effectiveness, efficiency, and diversity of services; openness, transparency, and accountability; personal security; the right to participate in the governance process; free election; the connectedness between the state and the people; the right to information and access to information; the right to monitor and evaluate the quality of public services. The application of information technology and communication technology is a great way to realize these requirements. Achievements in information technology, communication technology and other applications brought about by the Fourth Industrial Revolution have had many positive impacts on governance, such as stimulating changes in public services, promoting the quality of public services and the quality of decision-making, and bolstering supervision and people's right to participation; and promoting democracy. Digital-based government (or Smart Governance),

with the adaptation of advanced technology, has contributed enormously to building and promoting transparency, openness, participation, and effective governance. The advancement and application of the Fourth Industrial Revolution have created many positive impacts on governance and have created many new governance structures, such as e-government, open government, open data, and smart cities.

The application of information technology and communication technology in the Fourth Industrial Revolution era in public governance is also very diverse. Generally, we can divide the use of technology in governance into two approaches. The first approach is the top-down approach, in which the government makes efforts to make information more accessible, to use technology to reach the public, and to promote the efficiency of government activities through the use of technology. The second approach is the bottom-up approach, in which there are grassroots efforts to connect the public to unify their voices and empower them to hold the government more accountable.

In the transition from traditional governance to modern/good governance, the Fourth Industrial Revolution served as a catalyst to promote new requirements of modern/good governance, especially in promoting openness, transparency, accountability in state governance, and the prevention of corruption. However, the application of technology to governance also has its drawbacks. The Fourth Industrial Revolution also created many challenges for state administration such as how to take advantage of the development and application of AI to promote efficiency in state governance, but also to ensure the accountability of organizations and individuals using AI in governance. Similarly, the development of the internet and internet freedom also creates many challenges for governance, such as ensuring freedom of speech, protecting the right to access information, protecting network security, and handling of misinformation and fake and malicious news.

2. MATERIALS AND METHODS

The main sources for writing this article are materials from publications and archives. Data analysis is descriptive and qualitative. The comparative method is used to compare national and regional practices and experiences. A systematic method does achieve a variety of accessible and comparable disciplines (public governance, human rights, technology, etc.).

Refer to the literature of colleagues, and previous studies. On the basis of analyzing, synthesizing, evaluating, and selecting the appropriate and necessary content for the article.

3. FINDINGS AND DISCUSSION

3.1 Advantages of digital technology in openness, transparency, and accountability E-Government

There are many ways to define e-government. The Organization for Economic Co-operation and Development (OECD) states that the term e-government refers to the use of new communication technology to perform various government functions, in which the internet brings about changes in government structure and mode of operation. The United Nations Organization (UN) and the American Administrative Association (ASPA) define e-government as the government's utilization of the Internet and the World Wide Web (www) to provide information and services to the public. In addition to Internet and web applications, some scholars also broaden e-government to the use of other information technology, such as electronic databases, networks, automated services, multimedia, and the use of technology in personal identification. Another critical view is that e-government is the relationship between government as a service provider, and other customers as service receivers (such as businesses, citizens, and other governments), and other non-government suppliers (such as businesses, citizens, and other governments).

Generally, it can be understood that e-government is a government that actively applies the achievements of information and communication technology to "digitize" procedures, and "automate" working processes to improve efficiency, capacity, the effectiveness of its

administration and management, and provide public service directly through the internet to its citizens and businesses. In order to perform the function of governance, administration, and provision of public services, there are four main types of transactions in e-government: Government with citizens (G2C); Government with business (G2B); Government with government agencies (G2G); Government with civil servants and officials (G2E).

Traditional government, where administrative management within state agencies is done manually, takes up more effort, time, and resources, and the public does not have easy access to state governmental agencies. With the help of modern information technology, e-government will help the state administration achieve its goals of strengthening the government's management capacity and efficiency, bringing satisfaction to the people, increasing the transparency of the national administration, streamlining the apparatus to reduce government spending and improve the morality of civil servants.

E-government plays a vital role in promoting openness, transparency, and accountability. More specifically, by increasing transparency and openness, e-government can limit public officials' wrongdoing, limit the opportunity for them to harass, and create unnecessary difficulties for the citizens. Transparency and openness in e-government management and service help fight corruption, bureaucracy, and monopoly, and reduce the laziness of civil servants. By being able to access and examine electronic data, heads of public agencies can identify, precisely and timely, those civil servants that are effective and efficient and which civil servants are slow, putting up red tape and harassing the citizens and businesses. Simple things, such as the timekeeping and monitoring of the working hours of civil servants, which had to be done manually before, now can be more easily collected using modern electronic devices that can aggregate and transfer data to the heads of public agencies for management.

More importantly, e-government can quickly and effectively publicize and provide the necessary information to the people. In a democratic society, people must have complete control and must be able to monitor the activities of their elected government. To monitor and control

effectively, however, the people must have complete, accurate, and timely information about their government.

With technology, information from and about the government can be made public and distributed much more efficiently, which in turn helps the people carry out their role of supervising and monitoring the government much more effectively. Furthermore, with easily accessed information, the public can participate in the discussion and formulation of public policies and are also able to denounce and report the misconduct of civil servants.

The Fourth Industrial Revolution was developed on the basis of the constant improvement of science and technology. Hence, an essential requirement of modern governance is to continually innovate in order to improve the administrative process of state agencies. In the era of the Fourth Industrial Revolution, the demand is not only to build e-government, but also to adopt the most advanced technology to form the simplest, most convenient, and easiest-to-use administrative process for people. The concept of "a new generation of e-government" was created from that need.

In recent years, AI, a core issue of the Fourth Industrial Revolution, has been applied to state administrative activities in countries around the world, such as the US, Denmark, Dubai, and Hong Kong. The most prominent application of AI in governance is the consultation process, provision of services and public goods, and the management of public transport. The U.S. Citizenship and Immigration Services Department is now using an online AI-based virtual assistant to answer questions from citizens and immigrants (Linh Anh, 2018). In Hong Kong, AI has been used in the provision of government public services. More specifically: “The AI system was deployed to streamline the entire process of document processing with automatic decision support whenever possible. The main objectives of the AI module are to (1) automatically evaluate simple cases, (2) provide decision support for complex cases which need more information to handle, and (3) learn "current trends and practices" from people” (Dang Thi Thu Huong, 2018).

In Dubai, AI is utilized to assess citizen satisfaction with the services provided by state agencies. When people come to carry out administrative procedures at public agencies, sensors installed at entrances read people's faces to measure the level of satisfaction through face features. Interestingly, recent research proposes the ability of AI to prevent crime, such as corruption (Le Hoang Anh Tuan, 2018) and money laundering (Nguyen Hoa, 2018). In addition, AI is also being studied for potential use in areas such as litigation and criminal enforcement. For example, in the investigation and prosecution process, AI can formulate more comprehensive and objective investigative hypotheses and analyze more systematically the small details, which are usually ignored, intentionally or unintentionally, due to the subjective judgment or experience of the person in charge of the investigation or prosecution (Nguyen Thi Que Anh & Ngo Huy Cuong 2018).

Some researchers go as far as proposing that the application of AI to governance will lead to the formation of an AI government. AI government is a government that applies AI to the governance, administration, and development of the country. AI supports government decision-making at all levels. AI supports the provision of intelligent and automated public services to serve citizens better. This concept of AI government was developed at the Michael Dukakis Institute for Leadership and Innovation (*Michael Dukakis et al., 2018).* Imagine at a more advanced level, where AI and robots become more sophisticated and widely available, and this may lead to the emergence of "robot civil servants" to replace the job positions of civil servants today. This possibility is not fiction, and it is entirely possible. The case of Sophia, the robot that Saudi Arabia has decided to recognize as a citizen is a move that shows that possibility exists.

In sum, the introduction of e-government in the context of the rapid advancement of the Fourth Industrial Revolution can be considered a revolution in the governance process. E-government creates a modern, effective, and transparent leadership, and enhances the level of satisfaction for the people and business entities. E-government overcomes the inherent weaknesses of the traditional management system, such as bureaucracy, authoritarianism,

corruption, and concealment of information. E-government changes the nature of public administration from “ruling the public” to “serving the public”, and changes the nature of public administration from the traditional “solicit-handout” relationship to the “service provider-service consumption” relationship. Building e-government is an essential step in the process of openness, and transparency, and increases the accountability of government.

3.2 Open Data and Open Government Data

Open Data is not considered private or personal data, nor is it regarded as state secrets. Open data is data that anyone has the freedom to use and reuse, distribute and redistribute, customize, and join with other data sets. More specifically, open data is defined as machine-readable data that can be freely shared, used, and built, without any restrictions. (Government of Canada) Open data is often associated with the public sector, provided by the state, and called "open government data". Furthermore, open data can also be provided by international organizations, businesses, and social organizations (Davis et al., 2013).

Open Government Data is a term used to refer to a concept, which later became a set of rules for increasing transparency, accountability, and establishing values by requiring the government to open its data to the public. Government agencies collect and provide an enormous amount of data from the public. By opening up their databases, government agencies become more transparent and accountable to the public. By encouraging the use, reuse, and distribution of data, the state promotes economic activities, creativity, and business activities. (OECD) According to the Open Data Impact Map, an Open Data Organization for Development Network (OD4D) project, 1615 organizations, and 90 countries have used open data systems in managing their activities, mostly focusing on budget issues and advocacy procedures. (Open Data Impact Map) Open Government Data is also based on the characteristics of Open Data: proactive disclosure; machine readability; and the ability to reuse. (Open Data Research Network) The principles of open data continue to be elaborated and supplemented by several

governments or organizations that advocate for open government. (Opengovdata.org; Government of Canada)

Open data is closely related to many aspects of governance and can change the public's perception of state governance in the following ways:

First, open data allows citizens to monitor the state, because through open data access, state activities become more transparent, and citizens are given the necessary tools to exercise their right to supervise the government.

Second, open data promotes the idea of a service democracy, in which citizens participate in governance through personal choices of public services. Through open data, citizens gain complete and detailed information about available public services, which helps inform their decisions.

Third, open data promotes the cooperation between citizens, social organizations, businesses, and the government, and helps improve the enactment and implementation of public policies. Governance is advanced when no one in society is left out and when more people are involved in the decision process that affects everyone (Open Data Research Network).

Open data promotes transparency and accountability by facilitating citizens' decision-making process. Through access to transparent information, driven by an open database, citizens can exercise their rights to supervise and demand public officials explain and take responsibility for decisions, thereby reducing corruption. It also promotes creativity in the governance process, as well as in the provision of public services. Open data allows information from many different sources to be aggregated, utilized, and shared by many individuals and organizations to avoid the traditional one-way distribution of information by the state. For example, OpenSpending.org provides public access to information and promotes citizen participation in fundamental issues, such as national budget decisions. This site offers revenue and expenditure data from governments through interactive charts and searchable databases. The website now includes data from Nigeria, India, Kenya, South Africa, and the United Kingdom, along with several other countries that voluntarily join the network (Davies, 2012).

According to a study by the Organization for Economic Co-operation and Development (OECD), open data is related to state governance in the following fundamental aspects: increased transparency and accountability; open data helps improve the performance of government; improves national competitiveness, and promotes social participation. Other studies on the impact of open data basically confirm the positive effects of on governance. Tim Davies and Fernando Perini maintain that open data contribute to (1) transparency and accountability; (2) Creativity, development, and economic efficiency; and (3) not eliminate (inclusion) and empower (Davis et al., 2013).

Furthermore, open data is an excellent tool in the fight against corruption. Governments around the world increasingly pay attention to and utilize open data to prevent and reduce corruption. By promoting transparency in government activities, such as revenue and expenditure, open data has become an important factor that helps improve the accountability of the government. Open data not only minimizes the mismanagement and misallocation of resources, but it also ensures a more transparent and accountable exchange between governments and citizens. The need and constant quest for anti-corruption require governments to expand the use of open data to increase transparency increasingly. With thousands of GB of data generated by governments, organizations, and businesses around the world, new tools and methods are now available in the fight against corruption. When government data and other data related to governance are publically available, easily accessible, and interactive, the public is given stronger monitoring capabilities to ensure transparency and accountability (Transparency International). OECD research finds that the use of open data has significantly reduced corruption in G20 countries (OECD).

Many countries have been adopting open data as an essential way to improve governance. In 2009, US President Barack Obama signed the Memorandum of Transparency and Open Government, which led to the creation of data.gov, which stores hundreds of databases for public access. The movement was soon followed by the United Kingdom, which established data.gov.uk in the early 2010s, and started an open database reform program

throughout its government system. Currently, open data is becoming a movement in many countries around the world and international organizations. In April 2010, the World Bank opened an open data portal, providing access to hundreds of social and economic indicators. In July 2011, with the support of the World Bank, Kenya opened its data portal (open data.go.ke), becoming one of the first developing countries to have an open national database. In September 2013, India began a trial version of data.gov.in, bringing open government data to the largest democracy in the world. Open data has become an essential topic in Open Government Partnership (OGP), a multilateral initiative that was initiated and run by many governments, and social organizations of many countries, that focus on governance, transparency, efficiency, and accountability. (T. Davies, 2012) One of OGP's action plans in July 2016 indicates that new technologies create opportunities for information sharing, public participation, and cooperation.

3.3 Internet freedom

The Internet is a remarkable medium through which people can express and share ideas. The Internet has become an increasingly important tool for citizens to exercise their right to participate in the democratic process, the supervision of public authorities, and the protection of human rights. In today's technological age, the Internet has become a pivotal platform to share information and to advocate and promote human rights. Everyone has the right to participate in the information society, and therefore the state now has the responsibility of ensuring the right to access the Internet. The Internet has become increasingly indispensable for people to participate in all aspects of public life, such as political activities, economic activities, and cultural and social activities. As of January 2016, the number of Internet users globally is estimated to be around 3.27 billion and the number of users globally in social networks is estimated to be about 2.5 billion in 2018, which accounts for one-third of the world's population.

According to the Internet Corporation for Assigned Names and Numbers (ICANN) and DAMMIO - We Are Social (UK), as of 2017, Vietnam has become the 17th largest country in

the world by the number of internet users, accounting for nearly 53% of the population, increased by about 6% over the same period in 2016. Vietnam has 46 million users of social networks (Facebook, Twitter, and Zalo), among the highest in the world.

According to one research result by Nikkei Newspaper (Japan) on the internet speed of Asia-Pacific countries in 2017, it has confirmed that "India and Vietnam are far ahead of developed countries." This advantage in internet speed will continue to increase as the Vietnamese government is now focusing on developing its own digital economy.

According to the 2017 global internet speed report of Amakai, a content delivery network service provider (CDN) and cloud computing of the United States, Vietnam is currently ranked 58 out of 193 countries, up 89% over the same period in 2016, the highest increase in the Asia-Pacific region. Currently, Vietnam is among the countries with the highest percentage of internet users in Asia, ranked 12 among the 20 states that have the highest number of internet users. More than 20 years ago, on November 19, 1997, the Vietnamese internet network officially connected to the global internet network, marking an important milestone in the history of Vietnam's information and communication industry. Since then, Vietnam has been taking full advantage of the internet in all aspects of its development, and further its integration with the world. The number of internet users increased significantly from 200,000 users in the 1990s to 31 million in 2012, and more than 50 million by 2017. These numbers demonstrate the importance of free access to the internet, without which people will be deprived of access to information as well as the right to participate in political issues.

Access to the Internet and guarantee of access to the Internet has become one of the most critical policies in development. Many countries and international organizations, such as the United Nations, are now considering the right to access the Internet (that is tied to the freedom of expression) as one of the fundamental human rights. (Frank La Rue, 2011) Countries such as Finland and Estonia have defined Internet access as a fundamental right of citizens. According to a 2010 BBC World Service survey of 27,000 people in 26 countries, about 4 in 5 believe that accessing the Internet is a fundamental right. In 2003, the World Summit on the

Information Society in Geneva in 2003 and Tunis in 2005 all affirmed a "common desire and commitment to building a people-centered, inclusive and development-oriented Information Society, where everyone can create, access, exploited and share information and knowledge, enabling individuals, communities, and peoples to achieve their full potential in promoting their sustainable development and improving their quality of life, premised on the purposes and principles of the Charter of the United Nations and respecting fully and upholding the Universal Declaration of Human Rights" (World summit on the information society, 2003).

Internet freedom is considered an essential means to exercise the right to expression and guarantee freedom of information. The UN Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression emphasizes the importance of the Internet as a medium to exercise the right to expression, or in other words, freedom of expression can only be guaranteed with the commitment of the states to adopt and implement effective policies to ensure universal access to the Internet for the people (Frank La Rue, 2011).

On July 5, 2010, the United Nations Human Rights Council passed a resolution "Developing, protecting and enjoying human rights on the Internet." This is the first time the Council has extended the definition of human rights to the virtual world. This is an essential international legal basis to ensure the freedom of debate on the internet, free from all constraints and control by the state. Specifically, this Decree states that freedom of speech that is guaranteed on traditional media, such as TV, radio, newspapers, etc., should be extended to the Internet, while also declaring that any human rights that are protected “off-line” must also be protected “on-line”, and call on countries to facilitate the development and adoption of Internet freedom. This is an essential expansion of the definition of human rights to the virtual world, the most significant expansion since Article 19 of the Universal Declaration of Human Rights (adopted in 1948) and the Convention on International civil and Political Rights (adopted in 1966). Changing and expanding the definition of human rights to the Internet has been discussed more frequently in the last ten years when the Internet began to become a popular venue for people to express their opinions. In 2003, the International Telecommunication Union

(UIT), under the United Nations, was the first agency to come up with this new definition. The decree "Developing, protecting and enjoying human rights on the Internet" shows that the need to use and freely express on the Internet has become a part of many people's lives. This decree is the legal basis for the advancement of Internet freedom and protecting human rights and freedom online. In 2016, the United Nations Human Rights Council passed a new resolution that condemns measures that intentionally prevent or disrupt access to and dissemination of information online, considers such actions as severe violations of human rights and international human rights law, and calls on all parties to refrain and stop such measures. Although there are still controversies and even objections from some countries, the birth of this resolution expresses the popular views of the world community in promoting Internet freedom, especially freedom on the Internet (Molly Land, 2003).

Article 19 also summarizes standards for freedom of speech in a digital environment. Furthermore, Article 19 lays out international and regional standards to protect many areas of interest, especially Internet access and control of online content access, content regulation, journalists' and bloggers' rights, access to information and information and communication technology, and provides a legal framework for the management of the Internet. More specifically, access to the Internet and freedom of speech on the Internet are essential aspects of freedom of expression and other rights in the digital age.

The 2003 World Summit on the Information Society (WSIS) affirms that "connectivity is a central element in building an information society. Fair and equal access to the ICT infrastructure and services is one of the challenges of the information society. Connectivity also includes access to postal and energy services, which should be ensured in accordance with the national laws of each country (World summit on the information society, 2003). The 2011 Report of the UN Special Rapporteur on Freedom of Speech declared that countries must "ensure that Internet access is maintained at all times, even in times of political instability." (Frank La Rue, 2011) The Special Rapporteur also conceived that access to online content and access to "information and communication infrastructure and technology, such as cables,

modems, computers, and software, in order to access the internet, must also be guaranteed" (Frank La Rue, 2011). Thus, access to infrastructure and ensuring global access to the internet must be a priority for all countries. Therefore, every government must develop a specific and compelling policy, in consultation with relevant individuals and organizations from all members of the society, including the private sector and relevant ministries, in order to provide access to the internet and to guarantee freedom of speech on the internet.

Internet freedom is an essential factor in reforming governance in improving openness, transparency, and accountability. Internet freedom enables people to freely share and express personal information and opinions through the Internet, primarily via blogs and social networks. The Internet allows agencies and organizations in the political system to connect, carry out administrative procedures, and provide services directly to the people.

3.4 AI and challenges for human rights, transparency, and accountability

AI is a vital aspect of the recent technological advancement of the Fourth Industrial Revolution. There is no widely accepted definition of AI, but it is often understood in many different ways (Nguyen Thanh Thuy, et al.). With the extremely rapid development of technology, the concept of AI changes develops, and expands continuously. In general, the meaning of AI includes a series of computational techniques and associated processes used to improve the ability of machines to perform intellectual tasks, such as pattern recognition, computer vision, and language processing. (Executive Office of the President National Science and Technology Council Committee on Technology, 2016). It also can predict the future and solve complex tasks.

AI is affecting many areas of social life, such as economics, politics, culture, science, and technology. AI has also recently been adopted to improve the organization of governments. The inherent characteristics of the administrative apparatus are that it is massive and has many intermediary hubs, and the working relationships between such centers are very complex. Therefore, the process of organizing and operating a state administrative apparatus is always a

challenging task, even in developed countries, and can benefit greatly by utilizing AI. The increasing use of AI in governance has led to the emergence of, a government that applies AI to governance and administration. However, the application of AI in governance also has many potential adverse impacts related to human rights, transparency, and accountability.

AI has impacts on human rights in many areas of society. According to Harvard University's research, AI creates both opportunities and risks for human rights. In particular, it negatively affects the maintenance and amplification of existing social prejudices, creating inequalities in society, profoundly affecting the rights of privacy, and posing challenges for many existing mechanisms (Filippo Raso et al., 2018). The fundamental rights directly affected by AI include the right to equality and non-discrimination, the right to participation, the right to privacy and personal information security, freedom of expression, and the right to work.

AI has a significant impact on the right to access, search, and share information. AI can have a negative impact on information sharing, and information quality when governments use AI technologies to censor information and limit media pluralism. These systems negatively affect pluralistic communication and diversity in views, it prevent discussion, sharing, and exchange of information in society, and in the long run, can lead to polarization among social classes due to lack of connection and information exchange.

The matter gets serious when AI's control of information is used for unjust purposes, as control systems are used to propagandize, control, and disperse information. Because of this, the use of AI might affect democracy and people's right to self-determination. AI systems are being used more to propagandize, control, and orient behavior in petitions through social network users. As a result, these campaigns are controlled by wrongful information that is to propagandize and orient public opinion. Meanwhile, if people see that their information is managed, tracked, and oriented, they will no longer trust the information they receive and will not be ready to express it freely. They will change their expression behavior instead.

In the event that the government of AI applications violates or adversely affects human rights, it is necessary to determine the responsibility for such violations. However, identifying responsibility is hard if the decision to censor is made by AI.

According to the rule of law, any entity that violates the law must bear responsibility for such violation. However, in the case when AI replaces many individual decisions and actions, including many governance decisions and actions, who takes responsibility when AI violates the law or infringes on human rights? Can AI be held responsible when it has no human qualities or values? Although the debate is ongoing and difficult to resolve, the fact is that AI is increasingly involved in many aspects of our society, but there is no mechanism to identify responsibility for this new type of entity.

Accountability of AI must be tied to the individuals or organizations that utilize AI. A government that uses AI in its governance process must be responsible for the development and application of AI. However, AI is a very complex system that requires initial inputs from developers, such as the basic rule of operations. Coming up with a comprehensive set of values, operational rules, and even legal rules as initial input for AI in government is a challenging task. If these issues are not clearly defined, it will be difficult to clearly identify and explain the responsibilities related to AI in public service. Suppose in the course of providing public services to people, if AI makes mistakes, or makes incorrect and even disastrous decision based on an incomplete set of rules, causing severe consequences to the public, organizations, or administrative agencies, then who is responsible for such mistake? Is it the agency utilizing AI, the public servant, or is it the responsibility of the manufacturer and developer that ensure the quality of the product, or is it the sole responsibility of the machine? Therefore, the problem of determining the level of application, the subject matter, and liabilities related to AI is a big issue that needs careful planning.

There are also many technical challenges to transparency and accountability when AI is utilized for governance. The use of AI in decision-making-based sophisticated algorithms makes it difficult for people to understand, and it is almost impossible to trace and fully

understand the process of such decisions. Humans create AI to help us make decisions and recommendations on complex issues. However, even AI creators are unable to understand how some decisions and recommendations are made. This creates significant problems related to transparency and accountability (Matthew L. et al., 2018). In addition, AI operates and is trained using data, which is sometimes incomplete and irrelevant to the subject. This creates another layer of complexity when identifying transparency and accountability.

Governance using AI must guarantee the protection of human rights. Transparency and accountability, therefore, must be ensured by the development and implementation of a system of specific rules that clearly set the framework for implementing AI. In recent years, the international community and many countries have been increasingly adopting governance using AI, while trying to limit the negative impact of AI on human rights. The set of principles, standards, and general guidelines on AI management were developed and issued by a number of international and regional organizations (such as the EU), and technology companies. Among them, Europe is one of the pioneer regions in AI management. The birth of the common rules of AI governance plays an important role in the process of building a system of governance using AI that protects human rights (Jess Whittlestone et al., 2019; Luongngoc et al., 2022). However, such common rules are still very limited. Common principles in the form of ethical rules are still very general, vague, and lack specificity. (Jess Whittlestone et al., 2019). The international law of human rights protection in the era of AI mainly relies on ratified conventions and documents on human rights.

The risks and adverse effects of AI on human rights require the need to control and regulate AI for human rights, but the rapid development of complex AI systems and their applications in social life create difficulties and challenges for AI control and regulation. Indeed, the development of an AI rules system is a challenging task. AI, with its characteristics, makes not only politicians but also academics feel confused. Unclear, or even very controversial conceptions on AI issues make it difficult to determine the legal status of AI and responsibility for the consequences of AI on human rights. (Doan Van Nhat, 2019; Duchiep et al., 2021) The

development of AI also creates changes in many legal phenomena according to traditional approaches and perceptions (Nguyen Hoang Anh, 2018), posing many legal challenges, especially in controlling and regulating AI (Tran Kien, 2018). One of the fundamental legal challenges of developing and using AI is to ensure a balance between promoting, innovating, and protecting fundamental human rights and values. (Leenes et al., 2017). AI management has to improve its values on people and human rights while eliminating and limiting its harmful effects and adverse effects on human rights.

4. CONCLUSION

Digital technology has brought many values and opportunities but also creates many potential negative consequences, risks, and challenges in state governance. On the positive side, the digital revolution promotes the transition from traditional governance to modern/good governance, which promotes openness, transparency, and accountability in state governance and promotes anti-corruption. One of the recent requirements of modern and good governance is to understand the latest advancement in digital technologies and to use those advancements to organize the political process and social aspects of a country. Many applications of such technologies have recently emerged and are being adopted, such as e-government, open data, new government data, internet freedom, and smart city. On the negative side, the application of digital technology in state governance has many potential risks and negative impacts; for example, the use of AI in state governance. Expanding and promoting openness and transparency through digital applications also poses challenges when personal data, intellectual property rights, and core social values needed to be protected.

The development of digital technology is an irreversible trend. Therefore, countries need to fully embrace that trend, take full advantage of its benefits, and adapt its strengths to the specific conditions of each country. One of the first and most essential steps is to create a legal framework for technology-based governance. The international community and governments have worked hard to develop many basic building blocks for such a legal

framework. However, the rapid development of digital technology and the continuous emergence of new innovations has created many challenges. The international community, governments, and policymakers have a hard time coming up with a new legal framework to address and keep up with the fast pace of the technological revolution.

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