CYBEROCRACY IN THAILAND

Srirath GOHWONG[1]

1 Faculty of Social Sciences, Kasetsart University, Thailand; srirathg3@yahoo.com

ABSTRACT

The key objectives of the study were to (1) to taxonomize the concept of cyberocracy under IT, and (2) to explain Thai government under cyberocracy. Documentary research was conducted in the study. The findings showed that cyberocracy concept was classified into eight groups-database, data management, data size, IT info-structure/IT Infrastructure, government-based cryptocurrency/CDBC, telecom-munication, internet, and wireless technology, KM, and AI and public policy analysis. Additionally, Thailand was not full-fledged-adopted cyberocracy, but the Thai government continuously encouraged cyberocracy in Thailand by enacting 113 key laws, and deploying IT-including database-oriented technologies, blockchain, and Thai CBDC -both wholesale (Inthanon) and retail (now in the experiment).

Keywords: Cyberocracy, Thailand

SIGNIFICANCE OF PROBLEM

Information and its algorithms are the two most important puzzles of public management in every modern state, which is defined in Article 1 of The Convention on Rights and Duties of States on December 26, 1933 (Convention on Rights and Duties of States, 1933). According to the 1933 convention, the government as part of the modern state is an important player in public service provision. It uses computers all the time to make countless decisions based on information and a set of algorithms, and has high hopes for their effectiveness. Two interesting academic papers illustrating this type of expectation are "The Computer and Its Impact on Public Organization" in 1968, written by Norman J. Ream, and "Computer Impact on Public Decision Making", written by Leslie T. Wilkins. The first argues that computer use at the federal, state, and local level invalidated public service whereas the latter focuses on how government can effectively use IT (algorithms, data storage, database, AI, decision-making, etc.) in the delivery of public services (Ream, 1968; Wilkins, 1968).

Subsequently, the use of computers in the public sector expanded its frontier from decision-making to algorithms-based autonomous control of government administration. This is called cyberocracy, developed by David Ronfeldt during 1978-1992, John Arquilla and David Ronfeldtand in 2001, and David Ronfeldt and Danielle Varda in 2008, in which government administration hypothetically is ruled by IT, especially a set of algorithms, computer systems, and the Internet. Decision-making power is concentrated in a small group of experts, called technocrats (Adapted from Ronfeldt, 1991, 1992; Arquilla and Ronfeldt, 2001; Ronfeldt and Varda, 2008). However, contrary to cyberocracy, kakistoscryptocracy, developed by Srirath Gohwong, Ph.D. (Copyrights) in 2023, is the phenomenon that non-state actors like firms, hedge funds, generic people, and net states strongly believe themselves to be god-like rulers of both virtual world and metaverse, inventing and/or using non-government-based cryptocurrencies (NGCs), such as Bitcoin, for their own benefit without government's control. Their use of NGC is compatible with the deep web, dark web, and pirate organizations, and conducts their own business outside the jurisdiction of the government (Gohwong, 2023). With the advent of kakistoscryptocracy, cyberocracy is under high strain because full sovereignty of government remains only the conventional state-based area under the 1933 Convention in the actual world and net states-based area under state control in the actual world. **Therefore, the paper has two main objectives as follows: (1) to taxonomize the concept of cyberocracy under IT, and (2) to explain Thai government under cyberocracy.**

LITERATURE REVIEW

Cyberocracy

David Ronfeldt introduced the concept of "cyberocracy" in a few articles published in 1991 and 1992. In these articles, Ronfeldt defined cyberocracy as an inevitable future which is a hypothetical form of government that has three characteristics as follows: (1) governmental power was based on the control of information and the use of IT in decision-making, (2) governmental decision-making was run by technocrats through algorithms and other automated systems, (3) human decision-making minimalism through algorithms and other automated systems in which a network of interconnected machines made decisions, (4) effectiveness and efficiency were more important than accountability and responsibility. He also pointed out the shortcomings of cyberocracy in ethical issues related to the digital divide between the haves and have-nots, and "accountability and responsibility" through algorithm-based decision-making in public service delivery. After that, in 2001, he joined with John Arquilla to confirm the competitive advantage of cyberocracy over internet activists in both democracy and totalitarianism. Technocrats who access and use information could influence outcomes, especially public opinions. Later, in 2008, he also joined Danielle Varda to revisit his first version of cyberocracy during 1991-1992 by confirming three characteristics in 1992 and

adding four trends-new sensory apparatuses, a network-based social sector, new modes of networked governance, and the cybercratic nexus-state as a successor to the nation-state. They also expand the challenges of the first version in an international setting such as the digital divide between developed and developing countries, accountability, responsibility, and data governance in a borderless setting (Developed from Ronfeldt, 1991,1992; Arquilla and Ronfeldtand, 2001; Ronfeldt and Varda, 2008).

Kakistoscryptocracy

The kakistoscryptocracy, developed by Srirath Gohwong in 2023, consisted of three domains (state-based, stateless-based, and net states-based) in both the actual and virtual world. The first realm was the mainstream body of knowledge based on public administration since 1926. The government was the agent of generic people to do public service provision through the bureaucracy. Moreover, the private and people sectors were two partners of bureaucracy. Good governance and data governance were two key mechanisms ensuring that public agencies and public resources were used in a responsible and effective manner. In addition, government-based cryptocurrency, also known as Central Bank Digital Currency (CBDC), is the blockchain-based crypto money, invented by the government, to cope with NGCs as a key potential threat to national security. The second was an area outside the state's jurisdiction, with three non-state actors in the deep and dark web since 2001, non-government-based cryptocurrency since 2009, and pirate organizations. The last one was dedicated to the net states, a set of giant international tech companies like Microsoft, Google, Facebook, Tesla, Apple, and Amazon, with responsibility for active public service delivery. Tech ambassador is a good entity to deal with these powerful firms (Adapted from White, 1926; Bergman, 2001; Wichowski, 2020; Scott, 2022; Gohwong, 2023).

METHODOLOGY

In this study, document research was conducted using secondary data from various sources such as textbooks, articles, and law.

FINDING

The findings were presented in two parts-the taxonomy of the cyberocracy concept under IT, and the Thai government under cyberocracy.
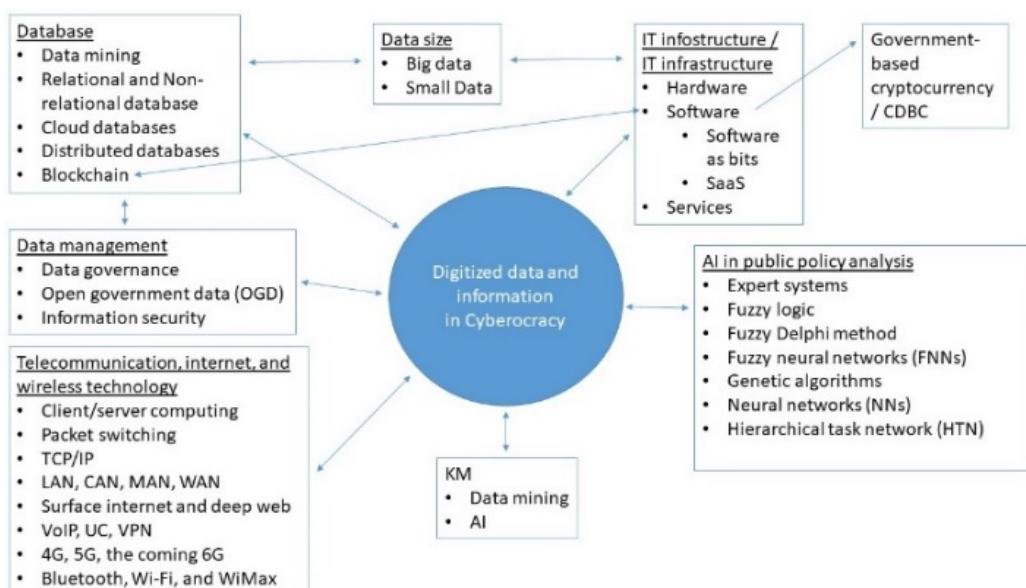
The taxonomy of the cyberocracy concept under IT

Figure 1 the taxonomy of the concept of cyberocracy under IT

Adapted from Ronfeldt (1991, 1992), Ronfeldt and Varda (2008), Jethani and Leorke (2021), Gohwong (2015, 2020, 2023), and Laudon and Laudon (2022)

According to the taxonomy of the cyberocracy concept under IT, shown in Figure 1, cyberocracy could be classified into eight groups as follows:

First, in cyberocracy, the government collects vast amounts of data about its citizens, stores them in databases, and uses them to make governance decisions. The government uses the relational database to manage structured data in the form of rows and columns in tables, connected by entity relationship diagram (ERD) whereas it also employs the non-relational database for massive structured, semi-structured, and unstructured data such as data in XML or JSON formats, voice, images, and multimedia. Moreover, it also uses the internet for accessing and synchronizing cloud databases and distributed databases around the globe. Additionally, databases, such as data mining, can be used to track and store information about the government's own operations, such as personnel data, financial data, and policy documents. In addition, the government used blockchain as a type of database, money (discussed in the group of government-based cryptocurrency/CDBC), and smart contracts (Adapted from Swan, 2015; Gohwong, 2020; Laudon and Laudon, 2022).

Second, in cyberocracy, data management has a vital role in data governance, open government data, and information security. Data governance ensures that data were collected, stored, and used in an ethical, secure, and compliant manner with relevant laws and regulations. The government should provide all stakeholders with reasonable answers on database and data analysis to the following questions: What are the attributes of personal information collected by the government? When did the government collect this data? How did the government collect this data? Why did the government collect this data? Where did the government store this data? Who were the government data controllers and data processors? Who were the end users of this data? How did the government ensure information security, especially privacy and data accuracy, regarding this data? Was the total cost of ownership (TCO) reasonable? (Adapted from Gohwong, 2020; Holt, 2021). Moreover, open government data as the free and unlimited availability of government-generated data to the public is used by the government to increase government transparency and accountability by making information more accessible to the public. By publishing data in easy-to-use formats such as CSV, XLS, PDF, XML, MS Word, Web pages (HTML), KML, JSON, Shapefles, and SQL Database Dump, the government allows citizens, researchers, and businesses to analyze and interpret data and develop innovative solutions to social and economic challenges. Additionally, citizens can use open government data to hold government accountable and participate in public decision-making processes. Therefore, OGD would have a greater impact on people by providing them with the information, tools, and opportunities to become more actively involved in contemporary governance and civic engagement (Adapted from Ubaldi, 2013; Jethani and Leorke, 2021; Wirtz, B.W. et al., 2022). In addition, the government uses information security, which was a part of data management, to protect of C.I.A. triad of governmental information, based on confidentiality, integrity, and availability, whether stored, processed, or transmitted through a set of tools such as laws, awareness, training, education, and technology (Adapted from Whitman and Mattord, 2018; Gohwong, 2021).

Third, the data size in cyberocracy is employed by the government in two ways-big data and small data. Big data is characterized by 3 Vs-data volume during petabyte (PB) and Exabyte (EB), data velocity between 30 kilobytes per second (Kbps) and 30 gigabites per second (Gbps), and data variety in structured, semi-structured, and unstructured data. It uses database analytic tools such as Hadoop, NoSQL database, Data Visualization Tools or Operational Intelligence, and Analytic platforms. Unlike big data, the government uses small data, coined by Martin Lindstrom in 2016, as a small data set that could provide insights into consumer

behavior and preferences of public organizations. Its analytic tools for the government are both quantitative tools (such as The GNU Project's Statistical Package for the Social Sciences/PSPP) and qualitative tools (such as personal observation, ethnography, and cultural analysis) (Adapted from Lindstrom, 2016; Free Software Foundation, 2020; Gohwong, 2020).

Fourth and fifth, the government uses IT infostructure / IT infrastructure, including hardware, software, and services (such as computing services, telecommunications services, data management services, application software services, etc.), in cyberocracy. For software, the government generally employs both Software as bits and Software-as-a-Service (SaaS). In addition, the government also uses software in the form of blockchain-based digital money, called Government-based cryptocurrency/ Central Bank Digital Currency (CDBC) (Adapted from Laudon and Laudon, 2022; Gohwong, 2023).

Sixth, in cyberocracy, the government deploys telecommunication, internet, and wireless technology to transmit and distribute data between public organizations and to collect and analyze electronic communications of firms and generic people, including email, video and voice chat, photos, and other types of data on the internet, from internet service providers (ISPs) and other tech companies, including client/server computing tog, packet switching, TCP/IP, LAN, CAN, MAN, WAN, surface internet and deep web, voice over Internet Protocol (VoIP), unified communications (UC), virtual private networks (VPN), 4G, 5G, the coming 6G, Bluetooth, Wi-Fi, and WiMax (Adapted from Whitman and Mattord, 2018; Laudon and Laudon, 2022).

Seventh, in cyberocracy, the government uses knowledge management (KM) to share and control government digital resources in the form of data, information, knowledge, and wisdom across different departments and agencies through data mining and AI in order to promote rational decision-making, effective public policy implementation and evaluation, data governance, and good governance.

Last, in cyberocracy, the government deploys AI for improving the decision-making of government by giving policy alternatives in every step of public policy analysis, including expert systems, fuzzy logic, fuzzy Delphi method, fuzzy neural networks (FNNs), genetic algorithms, neural networks (NNs), and hierarchical task network (HTN) (Gohwong, 2015). For example, the Temporal Exploration and Navigation System for Open-Source and Dark Web Intelligence project, abbreviated TENSOR, supported by the EU Horizon 2020 Programme under Grant agreement ID: 700024, was carried out by Law Enforcement Agencies (LEAs) in Europe between 1 September 2016 and 30 November 2019 to retrieve and analyze heterogeneous online content for the detection of terrorist activity from both the surface web and the dark web using natural language processing techniques, machine learning algorithms, and social network analysis (Community Research and Development Information Service, 2023).

TENSOR was a combination of all 8 groups.

The Thai government under cyberocracy

Thailand is not a full-scale-adopted cyberocracy, but the Thai government ceaselessly encourages cyberocracy in Thailand by enacting 113 key laws to allow Thai technocrats to rule the country through algorithms and other automated systems. These laws include 65 IT-based laws (57.5%), 24 public and private laws (21.2%), 17 money-oriented laws (15.0%), and 7 planning-related laws (6.2%). The example of law are Official Information Act 1997; Digital Development for Economic and Social Development Act 2017; Personal Data Protection Act 2019; Cybersecurity Act 2019; Digital Government Administration and Services Act 2019; Digital Economy and Society Council Act 2019; Act on Electronic Means-based Public Service 2022; Computer Crime Act 2007; and Computer Crime Act (No. 2) 2017; Announcement of the Digital Government Development Committee on data governance in the public sector 2020; Announcement of the Digital Government Development Board on Standard and Criteria for

Public Disclosure of Government Data in the Form of Public Digital Data 2020; Announcement of the Digital Government Development Board on standards and criteria for preparing process and operation digital operations regarding the use of digital IDs for government services for generic people with Thai nationality 2021; Announcement of the Digital Government Development Board on government data catalog and its registration 2022; Announcement of the Digital Government Development Board on digital government standards on data quality assessment Criteria for government agencies 2022; and Announcement of the Digital Government Development Board on digital government standards on recommendations for the preparation of information management policies and practices 2022; Royal Decree on Criteria and Procedures for Good Governance 2003; Royal Decree on Criteria and Procedures for Good Governance (No. 2) 2019; National Strategies Preparation Act 2017; Royal Command Re: Announcement of National Strategy 2018-2037; National Reform Plans and Procedures Act 2017; Royal Command Re: Announcement of Thirteenth National Economic and Social Development Plan (2023-2027);and Thailand Digital Government Development Plan 2023-2027. Moreover, the Thai government deployed IT to promote cyberocracy, including database-oriented technologies (such as data governance in the public sector, open government data, identity proofing, government data catalog, data quality assessment, information management policies and practices), blockchain, and Thai CBDC, both wholesale (title "Inthanon" with Proof-of-Authority/PoA) and retail (now in the experiment with Proof-of-Concept/PoC). These IT applications systematically cover all previously mentioned 8 groups of cyberocracy (Adapted from Gohwong, 2021; Announcement of the Digital Government Development Committee on data governance in the public sector 2020; Announcement of the Digital Government Development Board on Standard and Criteria for Public Disclosure of Government Data in the Form of Public Digital Data 2020; Announcement of the Digital Government Development Board on standards and criteria for preparing process and operation digital operations regarding the use of digital IDs for government services for generic people with Thai nationality 2021; Announcement of the Digital Government Development Board on government data catalog and its registration 2022; Announcement of the Digital Government Development Board on digital government standards on data quality assessment Criteria for government agencies 2022; and Announcement of the Digital Government Development Board on digital government standards on recommendations for the preparation of information management policies and practices 2022; Act on Electronic Means-based Public Service 2022; Royal Command Re: Announcement of Thirteenth National Economic and Social Development Plan (2023-2027); Thailand Digital Government Development Plan 2023-2027; Chayakornvikrom et.al., 2021; Sethaudom, Supapongse, Thien-ngern, 2021).

DISCUSSION

First, eight groups of cyberocracy, including database, data management, data size, IT infostructure/IT Infrastructure, government-based cryptocurrency/CDBC, telecom-munication, Internet, and wireless technology, KM, and AI in public policy analysis, were a big picture of how the government employed IT to conduct centralization and manipulation of information through AI. According to the system, IT was ahead of human empathy. It made great strides in terms of convenience and efficiency, but the ability to emotionally connect and understand each other did not keep pace. This could lead to a highly connected society through technology, but lacking the deeper emotional connections that are essential for human well-being. Ethics are essential for technocrats in this system to avoid Caveamus Expertum, opportunism, misuse, and abuse of power.

Second, while the advent of advanced technology greatly facilitated the actual emergence of cyberocracy, the system had an unthinkable and serious vulnerability: data entry. Many

submissions in the system were based on human data entry. Therefore, the Garbage In-The Garbage Out (GIGO) might be the result of this weakness.

Last, Thailand was in the early stages of cyberocracy under 113 laws, especially Royal Command Re: Announcement of National Strategy 2018-2037, Royal Decree on Criteria and Procedures for Good Governance 2003; Royal Decree on Criteria and Procedures for Good Governance (No. 2) 2019, in which created a data-driven network of interconnected public agencies with different plans at different levels to cope with the advent of kakistoscryptocracy. Ethics or professionalism was the best solution to this problems.

CONCLUSION

Cyberocracy with its eight classified groups is the pessimistic future of IT without human sympathy. Caveamus Expertum, opportunism, misuse, and abuse of power are the possible results of the system, which must be solved by ethics. Thailand is transitioning to cybercracy in its early stages.

REFERENCES

Act on Electronic Means-based Public Service 2022. Retrieved from https://ratchakitcha.soc.go.th/documents/17225857.pdf. [In Thai] Announcement of the Digital Government Development Committee on Data.

Governance in the public sector 2020. Retrieved from www.dga.or.th/wp-content/uploads/2021/03/%E0%B8%A3%E0%B8%B2%E0%B8%8A%E0%B8%81 %E0%B8%B4%E0%B8%88%E0%B8%88%E0%B8%B2%E0%B8%99%E0%B8% B8%E0%B9%80%E0%B8%9A%E0%B8%81%E0%B8%A9%E0%B8%B2_%E0%B 8%9B%E0%B8%A3%E0%B8%B0%E0%B8%81%E0%B8%B2%E0%B8%A8%E0 %B8%84%E0%B8%81%E0%B8%81%E0%B8%9E%E0%B8%B1%E0%B8%92%E 0%B8%99%E0%B8%B2%E0%B8%A3%E0%B8%B1%E0%B8%90%E0%B8%9A %E0%B8%B2%E0%B8%A5%E0%B8%94%E0%B8%B4%E0%B8%88%E0%B8% B4%E0%B8%97%E0%B8%B1%E0%B8%A5-%E0%B8%98%E0%B8%A3%E0%B 8%A3%E0%B8%A1%E0%B8%B2%E0%B8%A0%E0%B8%B4%E0%B8%9A%E0 %B8%B2%E0%B8%A5%E0%B8%82%E0%B9%89%E0%B8%AD%E0%B8%A1% E0%B8%B9%E0%B8%A5%E0%B8%A0%E0%B8%B2%E0%B8%84%E0%B8%A 3%E0%B8%B1%E0%B8%90.pdf.

Announcement of the Digital Government Development Board on Digital Government Standards on Data Quality Assessment Criteria for government agencies 2023. Retrieved from https://standard.dga.or.th/wp-content/uploads/2023/03/%E0%B8%9B %E0%B8%A3%E0%B8%B0%E0%B8%81%E0%B8%B2%E0%B8%A8-5-2565.pdf

Announcement of the Digital Government Development Board on Standard and Criteria for Public Disclosure of Government Data in the Form of Public Digital Data 2020. Retrieved from https://standard.dga.or.th/wp-content/uploads/2021/09/Raj_OpenData. pdf.

Announcement of the Digital Government Development Board on standards and criteria for preparing process and operation digital operations regarding the use of digital IDs for government services for generic people with Thai nationality 2021. Retrieved from https://standard.dga.or.th/wp-content/uploads/2021/09/T_0019_Digital-ID.pdf.

Announcement of the Digital Government Development Board on government data catalog and its registration 2022. Retrieved from https://standard.dga.or.th/wp-content/uploads/ 2023/03/%E0%B8%9B%E0%B8%A3%E0%B8%B0%E0%B8%81%E0%B8%B2%E 0%B8%A8-3-2565-1.pdf.

Announcement of the Digital Government Development Board on digital government standards on recommendations for the preparation of information management policies and practices 2022. Retrieved from https://standard.dga.or.th/wp-content/uploads/2023/03/%E0%B8%9B%E0%B8%A3%E0%B8%B0%E0%B8%81%E0%B8%B2%E0%B8%A8-4-2565.pdf.

Arquilla, J. and Ronfeldt, D.(eds.). (2001). Networks and Netwars: The Future of Terror, Crime, and Militancy. Santa Monica, CA: RAND Corporation, 2001.

Atkinson, R. C., & Shiffrin, R. M. (1968). Human Memory: A Proposed System and its Control Processes. In K. W. Spence & J. T. Spence, The Psychology of Learning and Motivation: II. Academic Press, pp.89-195. DOI: https://doi.org/10.1016/S0079-7421(08)60422-3.

Bergman, M. (2001). White Paper: The Deep Web: Surfacing Hidden Value. Journal of Electronic Publishing. 7(1) (August 2001). DOI: https://doi.org/10.3998/3336451.0007.104.

Chayakornvikrom, M. et.al. 2021.Blockchain for Government Services. BKK: DGA.

Community Research and Development Information Service. 2023. Retrieval and Analysis of Heterogeneous Online Content for Terrorist Activity Recognition: Fact Sheet. Retrieved from https://cordis.europa.eu/project/id/700024.

Convention on Rights and Duties of States (inter-American); December 26, 1933. Retrieved from https://avalon.law.yale.edu/20th_century/intam03.asp.

Free Software Foundation. (2020). PSPP Users' Guide: GNU PSPP Statistical Analysis Software Release 1.6.2. Boston, MA: FSF.

Gohwong, S. (2015). Artificial Intelligence Application in Public Policy Analysis. Presented at the 3rd ASEAN Conference on Humanities and Social Sciences, 3 December 2015, Lane Xang Hotel, Vientiane, Lao PDR.

Gohwong, S. (2020). Data Governance in the Public Sector: An Overview. Presented at the 1st National and International Virtual Conference on Multidisciplinary Research on 18 May 2020.

Gohwong, S. (2021). The State of the Art of Key Public Service Provision-related Laws under Digital Economy in Thailand. Psychology and Education Journal, Volume 58 NO. 3 (2021). DOI: https://doi.org/10.17762/pae.v58i3.4491.

Gohwong, S. (2023). Kakistoscryptocracy. Manuscript submitted for publication. Holt, A.(ed.). (2021). Data Governance: Governing Data for Sustainable Business. Swindon, UK: BCS Learning and Development Ltd.

Jethani, S. and Leorke, D. (2021). Openness in Practice: Understanding Attitudes to Open Government Data. Singapore: Palgrave Macmillan.

Laudon, K.C. and Laudon, P. (2022). Management Information Systems: Managing the Digital Firm. Harlow: Pearson Education Limited.

Lindstrom, M. (2016). Small Data: The Tiny Clues That Uncover Huge Trends. London: John Murray Press.

Ream, N.J. (1968). The Computer and Its Impact on Public Organization. Public Administration Review 28 (6) (November-December, 1968), 494-503. DOI: https://doi.org/10.2307/973326.

Ronfeldt, D. (1991). Cyberocracy, Cyberspace, and Cyberology: Political Effects of the Information Revolution. Santa Monica, CA: RAND.

Ronfeldt, D. (1992). Cyberocracy Is Coming. The Information Society 8(4),243-296.

Ronfeldt, D. and Varda, D. (2008). The Prospects for Cyberocracy (Revisited) (December 1, 2008). Available at SSRN: https://ssrn.com/abstract=1325809.

Royal Command Re: Announcement of Thirteenth National Economic and Social Development Plan (2023-2027). Retrieved from https://www.nesdc.go.th/article_attach/article_file_20230307173518.pdf. [In Thai]

Scott, B. (2022). Cloudmoney: Cash, Cards, Crypto and the War for Our Wallets. London: The Bodley Head.

Sethaudom, T., Supapongse, M., Thien-ngern, O. (2021). Central Bank Digital Currency: The Future of Payments for Corporates. BKK: Digital Currency Team, Bank of Thailand.

Swan, M. (2015). Blockchain: Blueprint for a New Economy. CA: O'Reilly Media.

Thailand Digital Government Development Plan 2023-2027. Retrieved from https://www.dga.or.th/wp-content/uploads/2023/03/%E0%B9%81%E0%B8%9C%E0%B8%99%E0%B8%9E%E0%B8%B1%E0%B8%92%E0%B8%99%E0%B8%B2%E0%B8%A3%E0%B8%B1%E0%B8%90%E0%B8%9A%E0%B8%B2%E0%B8%A5%E0%B8%94%E0%B8%B4%E0%B8%88%E0%B8%B4%E0%B8%97%E0%B8%B1%E0%B8%A5-66-70-v090366.pdf.

Ubaldi, B. (2013), "Open Government Data: Towards Empirical Analysis of Open Government Data Initiatives", OECD Working Papers on Public Governance, No.22, Paris:OECD Publishing.DOI: https://doi.org/10.1787/5k46bj4f03s7-en.

White, L.D. (1926). Introduction to the Study of Public Administration. NY: The Macmillan Company.

Whitman, M.E. and Mattord, H.J. 2018. Principles of Information Security. Boston, MA: Cengage Learning.

Wichowski, A. (2020). The Information Trade: How big tech conquers countries, challenges our rights, and transforms our world. NY: HarperOne.

Wilkins, L.T. (1968). Computer Impact on Public Decision Making. Public Administration Review 28 (6) (November-December, 1968), 503-508. DOI: https://doi.org/10.2307/973327.

Wirtz, B.W. et al. (2022). Open government data: A systematic literature review of empirical research. Electron Markets 32 (2022), 2381-2404. DOI: https://doi.org/10.1007/s12525-022-00582-8.

Data Availability Statement: The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Conflicts of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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