

THE ROLE OF CENTRAL AGENCY IN PROMOTING OPEN GOVERNMENT IN
THAILAND: THE CASE STUDY OF DIGITAL GOVERNMENT DEVELOPMENT AGENCY
(DGA)

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การวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาบทบาทของสำนักงานพัฒนารัฐบาลดิจิทัล (สพร.) ซึ่งเป็นหน่วยงาน
กลางด้านการพัฒนารัฐบาลดิจิทัลของประเทศไทยในการประยุกต์ใช้เทคโนโลยีดิจิทัลส่งเสริมรัฐบาลแบบเปิด โดย
ศึกษาทั้งปัจจัยภายนอกและปัจจัยภายในที่เกี่ยวข้อง นอกจากนี้ยังเพื่อเสนอปัจจัยที่นำไปสู่ความสำเร็จในการส่งเสริม
รัฐบาลแบบเปิด การวิจัยเรื่องนี้ดำเนินการวิจัยตามระเบียบวิธีวิจัยเชิงคุณภาพโดยใช้วิธีการวิจัยจากเอกสาร และ
วิธีการสัมภาษณ์เชิงลึกเป็นวิธีหลักในการเก็บรวบรวมข้อมูลปฐมภูมิจากกลุ่มตัวอย่างที่มีประสบการณ์ และ มีความ
เชี่ยวชาญด้านเทคโนโลยีดิจิทัล

ผลการวิจัยพบว่า บทบาทของ สพร. ในการส่งเสริมรัฐบาลแบบเปิด อาทิ การสร้างศูนย์กลางบริการ
ภาครัฐสำหรับประชาชน (GovChannel), ตู้บริการอเนกประสงค์ภาครัฐ (Government Smart Kiosk), หรือกิจกรรม
วันข้อมูลเปิดสาธารณะ (International Open Data Day) ล้วนเป็นผลมาจากปัจจัยภายนอก (ได้แก่ ความ
เจริญก้าวหน้าของเทคโนโลยีสารสนเทศ และการประยุกต์ใช้แนวคิดรัฐบาลแบบเปิดในต่างประเทศ) และ ปัจจัย
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ไทย, และความท้าทายในการประยุกต์ใช้รัฐบาลแบบเปิดในประเทศไทย) ส่วนปัจจัยที่นำไปสู่ความสำเร็จในการ
ส่งเสริมรัฐบาลแบบเปิดในประเทศไทยประกอบด้วย (1) รัฐบาลมีแนวทางการเปิดเผยข้อมูลที่ชัดเจน (2) การมีกลไกที่
เป็นตัวกลางเชื่อมระหว่างนโยบายภาครัฐและความต้องการของประชาชนในการสนับสนุนและรองรับรัฐบาลแบบเปิด
และ (3) ประชาชนเห็นคุณค่าและประโยชน์ของรัฐบาลแบบเปิด และพร้อมที่จะมีส่วนร่วมในการสร้างสรรค์นวัตกรรม
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Thanadol Thongprakob : THE ROLE OF CENTRAL AGENCY IN PROMOTING OPEN GOVERNMENT IN THAILAND: THE CASE STUDY OF DIGITAL GOVERNMENT DEVELOPMENT AGENCY (DGA). Advisor: Assoc. Prof. Chanida Jittaruttha, Ph.D.

The purposes of this research were to (1) understand the role of the Digital Government Development Agency (DGA), the central agency, in applying digital technology for promoting open government in Thailand by studying both related external and internal factors, and (2) to suggest key success factors for promoting open government in the country. The study applied qualitative method using documentary research as well as in-depth interview approach to gather primary information from key informants who are experienced and well-versed in digital technology.

The findings were that the role of the DGA in promoting open government, such as the formation of GovChannel for promoting open data, Government Smart Kiosk for promoting open access, and International Open Data Day for promoting open engagement, were a result of both external factors; the advancement of ICTs and implementation of open government in foreign context, and internal factors; digital government transformation plans, related policies and laws, Thai people's behavior in receiving information, and challenges for open government implementation in Thailand. The key success factors for promoting open government in the country composed of the followings; (1) the government have a clear open government data approaches, (2) the intermediate mechanism bridging between the government policy and public needs to support open government is implemented effectively, and (3) people have awareness of open government values and benefits, and ready to participate in the formation of innovation from the usage of open government data.

Field of Study: Governance

Student's Signature

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CHAPTER I INTRODUCTION

1.1 Background and Significance of the Study

The world has been transformed to the age of digital that information and communication technologies (ICTs) rapidly grow. The advancement of ICT facilitates public sectors, private organizations, and people to communicate and exchange their information easily without limitation of place and time. The growth of ICT can affect development of politics and public administration in two main issues (Phakthanakul, and ChiaoChanprapan, 2016). First, modern technology help enhances communication between public organizations and other agencies more convenient by reducing time and cost, and increasing security with these followings; (1) government information network, (2) government cloud, and (3) centralized electronic mail system for public sector communication called MailGoThai (Digital Government Development Agency, 2015). Another issue is that social media such as Facebook, Twitter, or Instagram had been applied as digital instrument for making political changes. For example, demonstrators in North Africa and the Middle East used such social media to protest against their dictatorial government that lead towards ‘Arab Spring’ in late 2010 (O’Donnell, 2011). As in Thailand, the political crisis among multicolored shirt people before the coup by National Council for Peace and Order was occurred by the usage of social media to express opinions, accuse opponents, and mobilize own supporters for continual demonstration (Boonchutima and Tang, 2014, pp. 198-200; Chia, 2015).

Furthermore, the advancement of ICT in digital era also affects politics and government. People nowadays call the government, whether democratically-elected or



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not, for exposing public information through technology portals. The government is required to allow citizens to access the data, monitor government operations, and participate in policy-making process with less limitation aiming towards Open Government (Phakthanakul and Others, 2016). In case that some countries, on the other hand, attempt to conceal their information from the public, groups of people who stand against the government will leave no stone unturned using contemporary technologies in their search for public data, and then reveal those to the public (Fenster, 2012). Therefore, making open government data towards open government is an important issue nowadays for public administration in digital era that the government of various countries could no longer avoid.

Open government data is main mechanism for building open government in order to enhance transparency in public administration, promote political participation of people at all level, and reduce corruption (OECD, 2010). United Nations, together with various developed countries, had realized the importance of open government and continually attempted to implement the concept in practice. Those had implemented clearness of open government data policies as well as action plans to promote open government, and created web portal to gather information resources from all agencies (United Nations Public Administration Country Studies, 2016). In the United States, the former president, Barack Obama, provided open government policies to heads of executive departments and agencies in order to build transparent government, promote public participation, and make collaboration among public sectors, and between government agencies and society (Memorandum for the Heads of Executive Departments and Agencies 2009; Schrier, 2014). In the United Kingdom, the government announced 'Open Data White Paper: Unleashing the Potential' purposed



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to building transparent society and increasing public trust, promoting the usage of information for business benefits and others with less limitation, and supporting data exchange among government agencies for efficiency and effectiveness of public administration (Cabinet Office, United Kingdom, 2012). In Australia, the department of the Prime Minister and Cabinet is responsible for open government data function. The Australian government announced that “data is a national asset and must be disclosed to the public” (Department of Finance, Australia, 2013, p. 21). The government is concentrated in disclosure public information through electronic platforms in order to facilitate users can process the data comfortably. However, those disclosed data must not affect security and privacy of citizens and able to be integrated with other agencies for creation, collection, and implementation of the data (Department of the Prime Minister and Cabinet, 2015). Overall, it is apparent that concept of open government had been accepted by international organization and worldwide countries, especially digital-leadership countries. Important benefits of those to promote open government is that the government succeed in building transparency in public administration and reducing corruption, people trusted in government operation and willing to pay taxes, and they were interested in policy-making process as well as collaboration between people and government agency for solving public problems and creation of social innovations (Holzer et al. 2004; Leighninger, 2011).

In Thailand, the country was first initiated open government data to promote open government in the age of King Rama IV by providing ‘Ratchakitcha Book’ (or Royal Thai Government Gazette) to inform people government data (Phakthanakul, and

ChiaoChanprapan, 2016). Up until now, the approach of promoting open government had been solidified when Official Information Act, B.E.2540 (1997) and Public Administration and Government Services through Digital System Act, B.E.2562 (2019) was officially enacted. In May 2016, the Digital Economy Plan, created by the Ministry of Digital Economy and Society, together with the Ministry of Science and Technology, was approved by the cabinet. Therefore, to create open government data towards open government is become one of core-essential approaches for transformation of digital government in order to develop economy and society (Ministry of Digital Economy and Society, 2016).

However, Thailand still faces various problems and limitations in applying open government (Lorsuwannarat, 2016) such as a lack of policy and implementation clarity, a lack of data exchange network system, low values of received information, refusal of inter-cooperation in data exchange, and digital divide. It seems that those could not be solved solely by only single organization. Therefore, it is necessary to initiate partnership with every sector to deal with the challenges, aiming towards open government that all agencies are engaging in enhancing transparency for public administration in digital era.

More interestingly, the Digital Government Development Agency or DGA was officially founded in May 2018 as central agency which operates under supervision of the Prime Minister's Office. By the Royal Decree, the agency is responsible for providing services and supporting to all government agencies with regard to digital government transformation. According to promoting open government function, the DGA has important roles to implement standards, measures, principles and approaches in the form of digital technology as well as the transaction process in order to connect

information and work systems among government agencies, and to promote the integration and exchange information among public sectors, the disclosure of government data through digital technology and appointing as an exchange center of government's digital information records in order to facilitate services to people and transactions of government agencies (Digital Government Development Agency, 2018).

Therefore, this research aims to study how the DGA applies digital technology for promoting and supporting open government in Thailand. The study was conducted under realization to importance of open government in digital era as well as the advancement of ICT. This is because open government can increase level of transparency in public administration, reduce corruption, strengthen trust to the public, encourage people at all level participate in policy-making process, and allow people to apply disclosed government data for creation of public values by the usage of digital technology. Then, results of the study will describe background and context of DGA as central agency as well as essential actor in promoting open government, present factors; both external and internal factors, which affect open government transformation, and also explain how these factors dominate the role of DGA in promoting open government in Thailand. Eventually, this research may beneficial for future study in promoting open government of other agencies or in related academic fields.

1.2 Objectives of the Study

This research was conducted under mindset of understanding to explain phenomena of the study, the role of central agency. The purposes of the research are as followed:

- 1) To study the role of Digital Government Development Agency (DGA), the central agency for supporting digital government transformation, in applying digital technology for promoting open government in Thailand.
- 2) To suggest key success factors for open government implementation in the country.

1.3 Research Questions

The study aims to answer the question “how the DGA applies digital technologies to promote open government in Thailand? And why?”

1.4 Scope of the Study

The study of the role of central agency in promoting open government in Thailand: the case study of Digital Government Development Agency (DGA) is concentrating on these following scopes.

1.4.1 Research contents: this study can illustrate only the role of the Digital Government Development Agency (DGA) as the central agency in applying digital technology for promoting open government in Thailand.

1.4.2 Populations: this research can explain only respondents who work in the Digital Government Development Agency (DGA). They were selected from persons who work at the DGA in five division; (1) division of information technology system, (2) division of data solutions, (3) division of digital standard, (4) division of corporate strategy, and (5) division of service operation.

1.4.3 Timing: this study can describe only information about the role of Digital Government Development Agency (DGA) which are collected during October, 2018 – March, 2019.

1.4.4 Areas: this research can explain only respondents who work in the Digital Government Development Agency (DGA) where is located in Bangkok Thai Tower building, Rangnam Road, Phayathai, Ratchathewi, Bangkok.

1.5 Operational Definitions

Central Agency (adapted from Sagarik, Chansukree, Cho, & Berman, 2018) is referred to public organization which is accountable for the formation as well as implementation of digital strategies and policies, and for providing leadership for the integration and exchange information among other government agencies as well as the openness of government information through digital technology, in order to facilitate digital services to people and operations of government agencies.

Digital Government (adapted from The Secretariat of the Cabinet (2019)) is referred to apply digital technology as instrument for public management and services by implementing the integration and exchange information among government agencies with security and governance method, in order to enhance public sector's efficiency, facilitate open government data's services to people, and promote public participation for all sectors in society.

Digital Governance (adapted from UNESCO (2005), Milakovich (2012, Welchman (2015), and Chen (2017)) is a regulatory framework of ICT management and regulation for the public administrator and manager to produce and deliver public



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services by using digital technologies, aiming towards the creation of public values; efficiency and effectiveness, transparency, sustainability, and inclusiveness.

Open Government (adapted from Orszag (2009), Scassa (2014), and World Justice Project (2015)) appeared on this research refers to the government having a high level of transparency and prudent mechanism for monitoring public sectors by the public. People are able to participate in policy-making process through digital technology. Open Government in this study is composing of three essential components; Open Data, Open Access, and Open Engagement.

Open Data (adapted from Ubaldi (2013) and Scassa (2014)) means to enable all information users such as people, private agencies, and other public sectors can search and access to high-valued government data comfortably, aiming to promote good governance, integration among government agencies, and public participation, and minimize corruption problems and deception. To study applying digital technology to promote open data is separated into three features as followed:

1.1) Digital platforms: to provide or publish government data (that is not personal information or restricted information) through online channels or electronic platforms.

1.2) Free to use: to facilitate information users to copy, distribute, transmit, adjust, or re-write the data without limitations of place and time as well as no authority requirement.

1.3) Information management mechanism: to accumulate and categorize massive information based on each type of data. All information is frequently up to date and dataset are regularly prioritized with level of disclosure before publication and distribution.

Open Access (adapted from Scassa (2014)) refers to building approaches to government data and facilitating information users at all level access to the data easily and comfortably, aiming to reduce the gap in ability and opportunity to access information between people who have information and those who do not. To study applying digital technology to promote open access is separated into two features as followed:

2.1) Digital access: to facilitate people at all level access to government data easily and comfortably without limitation of place and time by the usage of digital technology.

2.2) Reduce digital divide: to diminish digital gap problems by providing all citizens opportunities and equality to access internet network and digital technology, especially groups of people who may lack of digital access such as elderly people, disabled people, and people who living in distant areas.

Open Engagement (adapted from Scassa (2014) and Lorsuwannarat (2016)) means to encourage and support people, private agencies, and other sectors participate in policy-making process as well as providing public services in order to create public values. To study applying digital technology to promote open engagement is separated into three features as followed:

3.1) Public participation: to support people as well as communities to express their requirements in terms of public policy and administration in order to realize exactness of public needs and build good relationship between the government and other sectors.

3.2) Two-way communication: to support two-way communication between people or data users and public service providers by the usage of digital

technology in order to receive their feedback for improving quality of public services.

1.6 Research Methodology

The study of the role of central agency in promoting open government in Thailand: the case study of Digital Government Development Agency (DGA) applied qualitative method mainly using in-depth interview approaches along with documentary research method to analyze and process information received from key informants. The details are described as followed:

1. In-depth interview is method used for gathering primary information from key informants whom are experienced and well-versed in digital technology by face to face interview. This research applied a form of semi-structured interview composing of open-ended questions. The key respondents were able to provide further information or related comments in order to obtain deep information or unexpected perspectives.

2. Documentary Research is an approach used for obtaining secondary data from printing resources such as textbooks, theses, independent studies, academic documents, laws, and regulations related to conceptual framework and theories in order to analyze and process received information.

1.6.1 Populations and Samples

- 1.6.1.1 Population: due to objectives of the research, to study the role of the Digital Government Development Agency (DGA) in applying digital technology for promoting and supporting open government, therefore, populations in this study are persons who work at the DGA in five divisions; (1) division of information technology

system, (2) division of data solutions, (3) division of digital standard, (4) division of corporate strategy, and (5) division of service operation.

1.6.1.2 Samples: this research applied non-probability sampling method to select those key informants from population (appeared in 1.6.1.1) by using purposive sampling technique, along with simple random sampling technique.

1.6.2 Research Instrument

Research instrument used for gathering data in this study is a form of semi-structure interview, composing of open-ended questions in order to receive deep information related to the role of Digital Government Development Agency (DGA) in promoting open government from key informants.

1.6.3 Data Collecting Method

The student will gather information by making appointments with key informants in order to request for face to face interview by using prepared interview questions.

1.6.4 Data Analysis Method

Information received from documentary method as well as key informants interviewing will be analyzed with content interpretation and meaning by using component analysis technique according to conceptual framework of the study. Then, results of the study will be presented in terms of descriptive analysis.

1.7 Research Limitation

The study of the role of central agency in promoting open government in Thailand: the case study of Digital Government Development Agency (DGA) cannot use to explain the role of other public sectors as well as other agencies in promoting open government. This is because the scopes of this study focus only on the role of Digital Government Development Agency (DGA) as the central agency in promoting digital government in Thailand.

1.8 Expected Benefits

1.8.1 Academic benefits: due to the fact that the study of open government's concept had been studied limitedly in Thailand, this research expects to provide more understanding in open government as well as its importance by studying the role of DGA in promoting open government in practice. Also, the research can be applied to study open government implementation of another public sectors or other agencies in Thailand for future research.

1.8.2 Administrative benefits: the role of DGA in this study can be applied as role model for public administrators and managers to improve working performance or develop public services by increasing transparent management, reducing corruption and enhancing public trust, and encouraging people at all level participate in policy-making process for creation of public values and new innovations from open government data.

1.9 Organization of the Research

The remainder of this research composes of five chapters in total as the followings. To begin with, Chapter I presents background and significance of the study, research objectives, research question, scope of the study, operational definitions, research methodology, research limitation, and expected benefits of the research.

The next chapter, Chapter II provides the literature review as the fundamental to understand overview of this study such as concept of open government, definitions, background, development of open government and public administration approaches, and factors which affect open government transformation. The student also applied research articles, academic documents, related laws and policies to synthesize and summarize contents into conceptual framework of this research.

Chapter III explains research methodology components composing of populations and samples, research instrument, data collecting method, and data analysis method.

Chapter IV applies received information to analyze components, organize, categorize, and present research findings in terms of descriptive analysis. Results of data analysis method will be separated into three parts. Part I is for context of Digital Government Development Agency (DGA), Part II is for factors which affect open government transformation in Thailand, and Part III is for the role of DGA in applying digital technology for promoting and supporting open government according with three essential components; open data, open access, and open engagement.

The concluding chapter, Chapter V summarizes results of chapter IV and discusses results of the study under conceptual framework, and provides research recommendations for future study.

CHAPTER II LITERATURE REVIEW

According to the study of the role of central agency in promoting open government in Thailand: the case study of Digital Government Development Agency (DGA), this Chapter reviews concept, related policies and laws, and related documents as well as academic articles in order to form conceptual framework of the study. Chapter II are composed of the following topics.

2.1 Concepts of Open Government

2.1.1 Definitions of Open Government

2.1.2 Background of Promoting Open Government Concept

2.1.3 Development of Open Government Concept and Public Administration Approaches

2.1.4 Essential Components of Open Government in Practice

2.2 Related Plans and Laws

2.2.1 Digital Government Transformation Plans

2.2.2 Constitution of the Kingdom of Thailand B.E.2560 (2017)

2.2.3 Official Information Act, B.E.2540 (1997)

2.2.4 Public Administration and Government Services through Digital System Act, B.E.2562 (2019)

2.3 Related Documents and Articles

2.3.1 Implementation of Open Government in Foreign Context

2.3.2 The Role of Central Agencies in Thailand and e-Government 4.0

2.3.3 Data Governance Framework

2.3.4 The Study of Thai People's Behavior in Receiving Information

2.3.5 Challenges for Open Government Implementation in Thailand

2.4 Conceptual Framework of the Study



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2.1 Concept of Open Government

Open government data is highly important mechanism for building open government. This is because open government data can increase level of transparency in public administration in order to reduce corruption, and promote people at all level participate in political process for creation of public values (Yu and Robinson, 2012). International organization and various developed countries had realized to this importance, and attempted to promote open government concept in practice. Before studying concept of open government, therefore, it is essential to understand its definitions first. The definitions of open government are presented as followed.

2.1.1 Definitions of Open Government

The word ‘open government’ still lack of clear definition and its meaning (Yu & Robinson, 2012). According to the open government concept, to provide public service is not only function for public sectors and other governmental agencies, but also for stakeholders who engage in online operation. The government will play role as ‘platform’ to promote and support social innovations, and they also have to play as resource provider, rules regulator, and problem-solving center for those stakeholders (O’Reilly, 2011).

To begin, **the Organization for Economic Co-operation and Development (OECD) (2005)** suggested that open government relates to transparency in public sector performance, ability to access public service and information, and responsiveness of needs and requirements.

OECD (2010) revised its previous definition and proposed the new one that open government refers to the government who encourage citizens and society to create

‘public values’ which are transparency, civil participation, and stakeholders’ collaboration.

Orszag (2009) presented that open government mean to system composed of transparency, participation, and collaboration. He suggested collaboration is the pillar of open government, when digital technology should be taking parts in promoting transparency and participation because of reasons that people could real-time access to public information and monitor government operations. This triad could help the government increase public trust and reduce corruption in the country.

The World Justice Project (2015) advised that open government refers to the government which encouraging people to monitor its operations and promote participation in policy-making process by using information and communication technologies (ICTs).

To conclude, open government refers to the government having a high level of transparency and prudent mechanism for monitoring public sector operation. Also, open government supports public participation and stakeholders’ collaboration in policy-making process by promoting the use of digital technology, and the high objective of open government is public interests. According to this research, student reviews open government’s definitions provided by various scholars in order to make better understanding for the issue that may beneficial for quality of research formation.

2.1.2 Background of Promoting Open Government Concept

To make better understanding for open government concept is not only studying its definitions or meaning, but also comprehending background of promoting open government concept as the following.

The word 'open government' had been firstly used in the age of 1950s. In that time, governments of various countries began to promote the enactment of Freedom of Information Act (Yu and Robinson, 2012). In the United States, the social movement attempted to call the government for information disclosure. Interestingly, Wallace Parks (1957), an American newspaper editor, was the first person who described 'open government concept' in writing in article 'The Open Government Principle: Applying the Right to Know Under the Constitution.' (Yu and Robinson, 2012). The article was contributed to help promote the enactment of Freedom of Information Act in 1974. Therefore, concept of open government was realized to guarantee that the government will administrate for public interests under the law actually (Yu and Robinson, 2012).

Later, Aaron Swartz (1986-2013), a programmer and information activist, founded a website 'Watchdog.net' in order to gather information and monitor politician's behavior, make a campaign for freedom of information, and protest against limited access for internet data. According to his perspective, he addressed "information is power. But like all power, there are those who want to keep it for themselves" (Lathrop and Ruman, 2013). Therefore, he attempted to promote importance of open access of academic journals in order to facilitate people able to read all content within journals for free of charge. Consequently, Swartz is a person who have important role to promote open government concept in this age (Lathrop and Ruman, 2013).

Background of promoting open government concept points out effort of writer and activist in the past to promote open government in the country by different method according to the age. They began with writing the journals to promote the enactment of Freedom Information Act until the age that digital technology is applied as instrument for promoting open access. Therefore, this study applied this background to study how

the difference of the role of DGA in promoting open government between in the past and the present times.

2.1.3 Development of Open Government Concept and Public Administration Approaches

Concept of open government is mostly related to information and communication technology's (ICTs) field. As a result, there is some theoretical limitation to describe open government concept based on empirical theories. According to literature review in both foreign and Thai documents, there is no any theory concept or concept that directly support concept of open government. However, student found only the concept of Lorsuwannarat (2016) that describe the division of development of open government concept and public administration approaches, composed of four periods based on ICTs' development as the followings (Lorsuwannarat, 2016).

The first period: the Use of Information and Communication Technology in the Age of Traditional Public Administration

The traditional public administration approach was occurred in the period of 18th-19th century. The fundamental theories such as the political-administration dichotomy by Woodrow Wilson (1856-1924), the bureaucracy theory by Max Weber (1864-1920), and the principle of scientific management by Frederick Taylor (1856-1915) affected the role of government in that period to create policies and provide public service to people, and people were only as services' receiver (Lorsuwannarat, 2016). According to this age, government had a tendency to oppose against alteration and had limitation for new challenges. Even though personal computer (PC) was invented in 1970s in order to improve public operation, it is not

enough to increase efficiency in public administration because the ICTs in this age were used only for human resource control in public sector (Lorsuwannarat, 2016).

The second period: New Public Management (NPM) and E-government

In 1990s, the concept New Public Management or NPM was occurred and popularized among worldwide countries because the effort to be free from bureaucratic paradigm and to response people's needs for public services more than the old public management (Osborne and Gaebler, 1992; Lorsuwannarat, 2016). The concept attempted to look for new public management such as privatization, collaboration between public and private sector, and technology implementation that lead to the concept of electronic government or e-government (Lorsuwannarat, 2008). E-government concept refers to managing or providing public services by the usage of information and communication technology. E-government concept could improve public operation as private sector do because NPM approach addressed that the usage of ICTs could help increase efficiency and effectiveness of policy-making, and promote democratic values (Lorsuwannarat, 2016).

The third period: E-government and Digital Governance

In 2000s, the concept of good governance was interested and applied among worldwide countries in order to solve problems of 'one best way method' which is a result from NPM concept. The one best way method could no longer apply in modern age because of high dynamic of society. Therefore, it is important to apply concept of good governance to improve public management in order to keep up with changeable time. Later, e-government concept was questioned how is it proper to apply in developing countries. Problem is that policy-making process under e-government is mostly one-way communication that people (as service's receiver) could not participate



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in the process to express their needs (Lorsuwannarat, 2016). In order to solve this issue, the concept of digital governance was promoted to support relationship between government and citizens as well as two-way communication by the usage of digital technology as intermediate factor. Digital governance concept is concentrated on citizenship and public engagement in policy-making process in order to ensure that government will apply digital technology for creation of public values (UNESCO, 2005; Lorsuwannarat, 2016).

The forth period: Open Government and Transparency

According to digital governance, one of the core values of the concept is transparency. Transparency can help people to monitor government operation and affect the government to has accountability to the public in the form of open government (Fountain, 2001; Lorsuwannarat, 2016). Open government is a result from development of e-government and digital governance concept. Open government definition is more extensive than e-government and similar to digital governance. This is because open government concentrates on transparency, accountability, and participation of people at all level supporting by the usage of digital technology (Lorsuwannarat, 2016).

According to conceptual review, open government concept is product from post-NPM approaches such as digital governance concept and e-government concept. In this research, student apply development of open government concept to study essential of open government's components in order to study the role of DGA in promoting open government in Thailand.



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2.1.4 Essential Components of Open Government in Practice

Open government concept supports people at all level as well as other sectors in society access to government data in order to participate in government operation monitoring and policy-making process, which aiming towards new innovations and proper decision for public interests. To study the role of central agency in promoting open government and to answer research questions, it is necessary to study what are essential components of open government.

Orszag (2009) provided that the three pillars of open government are transparency, participation, and collaboration according with the Obama Administration in the United States.

Harrison and Others (2011) proposed that objective of public sector is the creation of public values, and open government is composed of three important public values; transparent management, participation of people, and collaboration among stakeholders.

Yu and Robinson (2012) suggested that open government contains three important issues; (1) transparency can help people understand what government do, (2) Accountability is required from government to guarantee that the government will use power for public interest based on the law, and (3) participation refers to the public are able to engage in policy-making process, and can express their needs to the government.

The Government of Canada (2014) had implemented the concept of open government in practice. The government follows both national and international open government methods by promoting transparency and accountability policies, increasing public trust, and motivating economic innovations and opportunities via open information, open ICTs, and open dialogue.



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Scassa (2014) presented essential components of open government towards implementation are composed of three factors; open data, open access, and open engagement. The details are described as the followings.

1) Open Data: open data is the core factors of open government. Open data relates to concept of transparency which helps increase public participation in policy-making process and implementation as well as monitoring what the government do. Open data mechanisms also help reduce corruption problems and provide information to people in order to increase public trust and promote economic development for the country.

2) Open access: open access relevant to 'Rights to Information' which are one of the fundamental right of citizens. Open access will conduce to transparent and accountable government due to the reason that people or other stakeholders could access to public information provided by the government in order to monitor and observe overall governmental operations. Scassa finds this reasoning, nevertheless, may not correct especially in developing countries which having a high level of digital gap or digital divide. Therefore, to promote open access and to reduce digital gap in the country will guarantee that people and other stakeholders from all sectors are able to access public information as required.

3) Open Engagement: open engagement is an essential dimension of good governance. Internationally, citizens will have rights to participate in political activities and public administration provided by the government. The government will also promote and encourage overall sectors to engage in policy-making process and implementation as well as public service management. According to the fact that problems nowadays are linked with each other and be high complicated, it is difficult

for those governments to solve these problems alone. Therefore, the government should make partnership with both private sectors and civil society sectors in order to solve the problem together.

To conclude, essential components of open government mainly composed of three factors; transparency, participation, and collaboration. However, those components are referred to theoretical components which not identify practical approach. Therefore, student will apply concept of Scassa (2014) to form conceptual framework for the study of the role of central agency in promoting open government in practice based on each factor, and also create explanations for the role.

2.2 Related Plans and Laws

Policies and laws related to open government is a key factor affecting the role of central agency in promoting open government in the country. In fact, in case the country has a clearness of policies and laws that indicate promoting open government approaches, government agencies and other sectors will perform in the same direction and succeed in the objectives of open government. Policies and laws applied in this study are composed of digital government transformation plans, Constitution of the Kingdom of Thailand B.E.2560 (2017), Official Information Act, B.E.2540 (1997), and Public Administration and Government Services through Digital System Act, B.E.2562 (2019). The details are described as the followings.

2.2.1 Digital Government Transformation Plans

According to literature review, policies related to open government were found on digital government transformation plans such as Digital Economy Plan (Ministry of Digital Economy and Society, 2016), Digital Government Master Plan (Digital

Government Development Agency, 2016), and the Draft of Digital Government Development Plan (Digital Government Development Agency, 2017). Each detail is explained as followed.

2.2.1.1 Digital Economy Plan

In September 2015, the Ministry of Information and Communication Technology (ICT), associate with the Ministry of Science and Technology, created the digital economy plan, instead of the former Thailand ICT master plan (2014-2018), to use as a framework for following economy and digital society development policy of the government. The objectives of this plan are taking digital technology to reorganize business operation, improving public wellbeing, and enhancing government performance. Those will help increase economic wealthiness in world competition, and strengthen societal security for Thailand in the end. The digital economy plan composes of six strategies that each could be summarized as the followings.

(1) *Technological infrastructure development*: at the beginning, the government aim to set up digital infrastructure and develop high speed internet network to cover all areas in the country. Then they target to drive Thailand to become one of the connecting and exchange information hub in Southeast Asian Nations. Also, they will provide digital policies and management plans in order to utilize national resources as high efficiency.

(2) *Steering economy with digital technology*: the second strategy supports taking digital technology to initiate startup businesses which are the main mechanism of digital economy. Digital technology will help those business sectors reduce their costs of product and service manufacturing, and help increase

efficiency of management. In addition, digital technology also helps improve business competitiveness in a long term.

(3) *Building equal society*: the third strategy purposes to decrease digital divide in the country by providing all citizens opportunities and equality to access internet network and digital technology, especially groups of elderly people, disabled people, and people who living in distant areas. This strategy also aims to make a digital guideline and coach those citizens able to maximize benefits of using digital technology as much as possible.

(4) *Digital government transformation*: the fourth strategy plan to apply digital technology to enhance public administration in both central and provincial government. Under this strategy, citizens will be able to receive digital public services without any physical limitation, distance, or even language. Digitalized government will promote open government data and encourage public participation in policy-making process. Additionally, government service platforms will be developed to support mobile applications and other new digital services in advance.

(5) *Human resources development for digital economy and society*: this fifth strategy focusses on human resource development in all working ages, both government officer and business staff. Those will be trained to have abilities in digital innovations, and able to use such digital technology in daily life or even in work places as much as they can. So that digitalized human resources will help increase values of employment in the age of economy and society driven by digital technology.

(6) *Making trust for digital users*: the last strategy concentrates on high equality of law enforcement and the international standard of law regulation. Those will help decrease cyber risks, and facilitate citizens to make online-financial

transaction with safety. Moreover, effective law enforcement as well as regulation will strengthen cyber-security, help protect users' rights, and increase a trust for those digital users in overall sectors. This is to support the growth of digital technology and further usage in advance.

The purpose of this plan is to transform Thailand towards digital government step by step, beginning with (1) setting the digital foundation with massive investment, (2) building digital economy and society system with public participation, and (3) using digital technology to increase economic values, and to move Thailand forward to developed country in a long term sustainably. Therefore, the plan is applied in this research in order to study how digital economy's policy affect the role of central agencies in promoting open government.

2.2.1.2 The Digital Government Master Plan

Responding to the digital economy policy of the government, the Electronic Government Agency (EGA), currently known as the Digital Government Development Agency (DGA), created the three-year digital government master plan B.E.2559-2561 (2016-2018) to set direction for enhancing digital capabilities of Thailand equally with international standards, and also to make public hearing for practical policy implementation (EGA, 2016). One of main functions of the EGA following the government policies is to transform Thailand towards digital government. Digitalization is one of the strategies of digital economy plan (the 4th strategy), and it is an essential factor to enhance public services excellence.

Because of various changes in technology, public needs, world economic competition, and government functions at the present time, it is necessary for those public sectors in Thailand to be transformed towards digital government, which

are able to work as smart operation, integration of teamwork, and citizen-centric service. According to the digital government master plan (2016-2018), digital government capability of Thai public sector could be separated into 26 characteristics (EGA, 2016). Nevertheless, in the first phase of the plan will cover only a total of 18 capabilities as the followings: data integration, data authentication and verification, information service, public feedback, technological infrastructure, public personnel capabilities, social development, labour development, agriculture, tourism, trade, investment, SMEs, tax and revenue, public safety, border management, crisis management, and natural disaster management. So that the EGA (now is the DGA) will continue to revise and develop the digital government master plan to comprehend all major capabilities in the upcoming phase (EGA, 2016).

According to document review, the plan purposed to identify strategies for digital government transformation in practice based on international standard, and to response people's needs and private sector's necessity. Consequently, the plan is applied in this research in order to study how policy of digital government transformation affect the role of central agencies in promoting open government.

2.2.1.3 The Draft of Digital Government Development Plan

Due to the fact that the former three-year digital government master plan B.E.2559-2561 (2016-2018) is not covering all digital government capabilities, then the Digital Government Development Agency (DGA) has made the draft of digital government development plan B.E.2560-2564 (2017-2021) to complete another 8 capabilities in second phase, which are education, public health, utilities, transportation, finance and expenditures, asset management, procurement, and human resources and payroll. The draft will be used as a guideline for public sector to develop and apply



digital technology to improve public performance and provide public services high efficiently.

With the new plan, there are two main operations that could be summarized as follow (the DGA, 2017). The first is brainstorming with other public agencies. The DGA have made an in-depth interview with senior executives of related public organizations to collect data, interesting issues, challenges, and opinion for making a draft of digital government development plan in second phase. Furthermore, the DGA also organize meetings with the key agency players who carry on steering digital government task to gather information and opinions when the plan had been implemented for a period of time. Another operation is public hearing. The DGA organize a meeting to listen feedback from other public sector, private sector, and civil sector in regards of the draft making. After revisal for several times, the draft finally composes of five strategies as the followings: (1) enhancing public wellbeing, (2) enhancing business capabilities, (3) strengthening public safety and security, (4) enhancing public administration, and (5) integration of digital infrastructure.

According to document review, the plan purposed to identify strategies for public sector to apply digital technology in facilitating public services to people, improving public management, making policy, and solving challenges affect digital government development.

To conclude, these three digital government transformation plans indicate to necessity of Thailand to have policies and strategies for digital government transformation according to context of social change nowadays. These policies and strategies are key factors affect the role of central agency in digitalized government, especially the Digital Government Development Agency (DGA). In this research,

student apply these three plans to study how the plans affect the role of central agencies in promoting open government.

2.2.2 Constitution of the Kingdom of Thailand B.E.2560 (2017)

The constitutional law is the supreme law which defines the role, powers, and structure of different entitlement in Thailand. Essence of the law related to concept of open government is explained as followed.

The Constitution of the Kingdom of Thailand had approved ‘Right to Information’ of Thai citizens by defining that the government has to disclose information owned by public sector in order to facilitate people access to the data, but those must not relate to national security information or public confidential information (The Secretariat of the Cabinet, 2017). According to section 258 of the supreme law, all public sectors are required to integrate and exchange information among government agencies in order to facilitate services to people and government agencies’ transactions. This section is in accord with objectives of open government concept that require integrated information in order to apply the data comfortably, and formulate public organization which responsible for anti-restriction of information perception. Nevertheless, concept of open government had not been mentioned apparently within the supreme law (The Secretariat of the Cabinet, 2017).

According to law review, even though open government concept was not enacted evidently within the constitutional law, the law guarantee that people will have right to access government information. The law also regulates defensive measures for any action that may obstruct freedom of information of citizens.



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2.2.3 Official Information Act, B.E.2540 (1997)

In 1997, the government announced important law for open government data in contemporary age, which is the Official Information Act. Essence of the law related to concept of open government is explained as followed.

The law defined crucial principle ‘disclosure is first, avoid concealment’ which is a fundamental for open government data within Thailand nowadays. However, this law specified type of restricted information such as information that may affect to royal institution, national security, and international relations, and personal information (The Secretariat of the Cabinet, 1997). Essence of Official Information Act were mainly appeared in section 7 and section 9. Both sections defined types of information that public sector has to disclose or provide to people such as organizational structure and function, government agencies places, results of consideration, operation guideline, academic report, and fact report. In addition, this law set up ‘the official information commission’ which responsible to supervise or suggest to government agencies for facilitating information service to people. In case they disagree on rejection of information disclosure by public sector, the commission is also responsible to consider and make a final decision based on the law (The Secretariat of the Cabinet, 1997).

According to law review, the Official Information Act provides principle and mechanism for facilitating government information services to people comfortably. In Thailand, providing public data to citizens is very important because open government data allows people to express their opinions or perspectives in policy-making process, which is representing towards government of people. The reasons to enact the law is to enable people have rights to open government data except some sensitive or restricted

information, to strengthen democratic regime by promoting ‘rights to information’ to people, and to protect personal rights in accordance with government information.

2.2.4 Public Administration and Government Services through Digital System Act, B.E.2562 (2019)

The Constitution of the Kingdom of Thailand B.E.2560 (2017) defined public sectors have to apply digital technology for improvement of public administration in order to sustainably develop the country, reduce social divide, and promote public participation in country’s development. However, public administration in the past could not apply digital technology to improve public management efficiently, and facilitate services to people who available and skilled in digital technology literacy in digital age nowadays (The Secretariat of the Cabinet, 2019). Therefore, the government enacted the Public Administration and Government Services through Digital System Act, B.E.2562 (2019) in order to provide apparent approaches as well as practices for digital government transformation within the country. Essence of the law related to concept of open government (appeared in section 4, section 8, section 17, and section 18) is described as followed.

In section 4, the act defines public sector has to manage and provide services to people in the form of digital technology by integration and exchange information among government agencies with security and governance method, in order to disclose information, promote people participate in government operation’s monitoring, and utilize the data for service development and innovation within the country. Section 8 regulates public sector has to apply concept of data governance in order to complete information management and data security procedures, from data collection, categorization, processing, disclosure, check, and termination.. Apparently, section 17

defines public sectors have to supply and disclose government data in the form of digital technology according to the Official Information Act, B.E.2540 (1997). People are able to freely access to the data for free of charge, and also utilize or develop the information for creation of new innovations based on the Commission of Digital Government' regulation. To facilitate services to people and government agencies' transactions through digital system, Section 18 hereby provides the formation of 'Open Government Data Center' in order to liaise with government agencies for data distribution and information disclosure according to Section 17 (The Secretariat of the Cabinet, 2019).

According to the act review, this is the first law in Thailand that apparently defines approaches for promoting open government (appeared in section 17 and section 18). The law was enacted with objective that to provide a clear of policy and implementation in applying digital technology for improving public administration and facilitating services to people. To promote open government with digital technology will enhance data security, efficiency, quickness, disclosure, and transparency so that people are able to monitor government operations in real time (Digital Government Development Agency, 2015).

Student already reviewed those acts and found that their essences are related to concept of open government. Therefore, student will apply those to study how the laws affect the role of Digital Government Development Agency in promoting open government in Thailand according to essential components.

2.3 Related Documents and Articles

2.3.1 Implementation of Open Government in Foreign Context

At the present, concept of open government is popularized among worldwide countries. Those countries have raised their efforts to implement open government concept within the states. Results of open government's implementation within each state were ranked into the report (appeared in figure 1.1) according to Open Data Barometer ODB Global Report Third Edition (World Wide Web Foundation, 2016).

Position	Country	Score	Readiness	Implementation	Impact
1	 UK	100	100	100	100
2	 USA	81.89	97	76	76
2	 France	81.65	97	76	74
4	 Canada	80.35	89	84	67
5	 Denmark	76.62	77	77	78
6	 New Zealand	76.35	87	62	87
7	 Netherlands	75.13	90	69	70
8	 Korea	71.19	95	64	58
9	 Sweden	69.26	88	60	64
10	 Australia	67.99	84	77	39
Average top 10		78.04	90.04	74.50	71.30

Figure 2.1: Open Data Barometer ODB Global Report Third Edition

(Source: adapted from <https://opendatabarometer.org>)

According to Figure 2.1, student will study implementation of open government in the United Kingdom and the United States due to the fact that both countries were ranked in the first and second position, and those countries enacted laws for promoting open government in 2015 and 2014 in turn. The details are described as the following.

2.3.1.1 United Kingdom

The Open Data Barometer ODB Global Report addressed that open government's implementation in the United Kingdom was begun when the government announced the Freedom of Information Act in 2000. The act affected various

government agencies to form their own open government's policies such as regulation for specific data disclosure, and methodology for open government data. Furthermore, results of this act also contributed to the following law enactment such as the Communication Act in 2003 which provides procedure for information disclosure according to the Freedom of Information Act, and the Budget Responsibility and National Audit Act in 2011 which defines disclosure of government spending information. Consequently, this indicates that the UK government attempted to increase level of promoting open government within the state more and more. Until in 2015, the government enacted 'the Re-use of Public Sector Information Regulation' which mostly related to open government data as well as open government concept due to the fact that this regulation reorganized former open government data services from various law into the form of digital technology that facilitate people able to access government data comfortably (World Wide Web Foundation, 2016).

In fact, the important factor contributing to enactment of open government data policies and regulations in the United Kingdom is 'the Re-use of Public Sector Information Directive (2003) and the additional amendment (2013) regulated by the Council of Europe by virtue of the European Communities (1972) (World Wide Web Foundation, 2016). The objective of this law is to promote government members of European Union provide government data based on transparency and impartially competition. However, the Re-use of Public Sector Information Regulation (2015) affected the UK government developed computer programs using to provide information services in the form of electronic platform such as messages, pictures, voices, and others. People were able to search and access to government data without any limitation. Additionally, in case people ask for information which required petition

documents before using, public sector are responsible to provide information to people in the form of electronic platform within 20 working days after acceptance of request in any case according to the law. It can indicate that the UK government is not only regulated laws and clear practices, but also initiated two-way communication between government and citizens for promoting open government in the country.

2.3.1.2 United States

The report of Open Data Barometer (World Wide Web Foundation, 2016) addressed that open government's implementation in the United States was initiated when the former president, Barack Obama, provided open government policies to heads of executive departments and agencies after his official ceremony in 2009 in order to build transparent government, promote public participation, and make collaboration among public sectors, and between government agencies and society. Later in 2012, people criticized about government budget corruption of General Service Administration or GSA for national conference in the city of Las Vegas held in 2010. They accused that the budget spend for the meeting is wasteful, and some government officer made the bribe. This occurrence was more intensified even though the government attempted to disclose budget expenditure information via website 'USASpending.gov' in order to allow citizens able to monitor government spending. The government, however, could not build effective transparency to solve the problem and explain budget expenditure in this scandal.

Due to the problem, social effort was raised in order to oppose against corruption in government budget expenditure in the United States. Afterwards, the government officially regulated the DATA Act in 2014 in order to reform procedure of government budget within the states, and create channels for monitoring government

budget expenditure by forming the independent commission who responsible to make report of government spending in order to provide budget expenditure information to people in the form of internet system. Results of the DATA act affected various government agencies had to promote and support the integration and exchange budget expenditure information among government agencies in the form of electronic pattern (World Wide Web Foundation, 2016). Then, citizens could effectively monitor government spending because all information appeared on the open website is entrusted and valid. The integrated budget expenditure information between the central government and other agencies according to the DATA act contributed to transparent budgeting management, improvement of data validity check before transmitting to website USASpending.gov. More interestingly, the government established central agencies which responsible to enhance validity and correctness of information, and allow people participate in data development in order to raise transparency and accountability to the public (World Wide Web Foundation, 2016).

According to these document reviews, student conclude that important factor affecting promoting open government in the United Kingdom and the United States is a clearness of policy and law in open government's implementation such as disclosure of specific information, method for open government data, or the formation of central agencies. Therefore, student will apply implementation of open government in foreign context to study how laws about open data affect the role of central agency in promoting open government in Thailand.



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2.3.2 The Role of Central Agencies in Thailand and e-Government 4.0

The latest study of Sagarik and others (2018) discusses efforts of digital transformation in Thailand concentrating on the leadership role of its central government agencies. Central agencies were established or reorganized under digital transformation strategies provided by the current government in order to improve private sector's competition, citizen wellbeing, and public sector performance. Essence of the study related to the role of central agency is described as followed.

According to the study, there are two primary digital-leading agencies in Thailand which are the Ministry of Digital Economy and Society and the Electronic Government Agency (Sagarik et al., 2018). For the ministry, it has fundamental roles to create digital development plans, promote digital organizations, develop technological innovations, and perform all functions relating with digital economy and society throughout meteorology and statistics (the Reorganization of Ministry, Sub-Ministry, and Department Act, 2016). The Electronic Government Agency called 'EGA' is an agency operating under supervision of the Ministry of Digital Economy and Society. The EGA by the law has responsibilities for developing ICT infrastructures and providing ICT services for other government agencies to improve performance and efficiency. The EGA also assists those public agencies with providing guidance, knowledge, and practices, increasing a number of accesses to digital services for the Thai people, and enhancing cyber-security of all online services. The agencies also responsible for human resource development in digital literacy (Sagarik et al., 2018).

Recently, the old Electronic Government Agency, however, was replaced with the newly established Digital Government Development Agency (public organization) on May 2018, as under the Office of the Prime Minister, instead of the Ministry of



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Digital Economy and Society (Digital Government Development Agency, 2018). This is due to the fact that the Thai government requires a central agency that specializes in utilizing digital technology to improve public performance and provide digital services efficiently. Digital technology also helps satisfy and facilitate the Thai people when receiving public services. In accordance with the law, the agency has major roles to provide digital technology infrastructure services, implement standards, principles, and approaches in terms of digital technology throughout the transaction process in order to connect information and work systems with other government agencies. The agency also responsible for promoting and supporting other public sectors to integrate and exchange information, enhancing those to provide digital services to concerned parties, and reinforcing ‘a one stop government’s digital service’ where people could access conveniently, promptly and securely (Sagarik et al., 2018).

The study concludes that central agencies are necessary for digital government policy-making and strategic implementation. The important roles of central agencies in digital government are to be a digital leadership institution for other public organizations to create visions and strategies, to provide leadership in digital coordination between the central agency and other sectors, and to increase and promote digital integration in public performance. Therefore, student review and apply the document in order to study context of Digital Government Development Agency (DGA) regarding to background of its formation, the commission and executive board, roles and function based on the law, and other related fields.



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2.3.3 Data Governance Framework

Public sectors nowadays still face problems and limitations in policy-making and implementation about information management such as data coincidence, data security and privacy, value of data, and open data which is the results from ineffective data management and vague organizational policy (Digital Government Development Agency, 2018). Thus, it is necessary for those government agencies to formulate measures, principles, and approaches of efficient and effective data governance. Data governance framework is a core of data management because this framework will steer towards clear direction, shape working process, and examine the data before publication (Digital Government Development Agency, 2018). As a result, the data will be enhanced more safety, efficiency, and more economic and social values. The Digital Government Development Agency or DGA provided concept of data governance framework composed of six issues; (1) the roles of executives, (2) the formation of working group, (3) data governance procedure, (4) policy and standard-making, (5) operations for managing data governance, and (6) data examination for evaluation. Each component is described as the following (Digital Government Development Agency, 2018).

2.3.3.1 The Role of Executives: the executive have played important roles to promote and support data governance within public sectors, so that they are suggested to concentrate on data governance strategies in order to produce valued information service to users by implementing these following roles.

(1) Communicate and make a realization of data governance such as background and signification, scope of content, clear policy and

implementation, and data governance's objective, among government officers as well as other staffs.

(2) Promote, support, and allocate adequate resources for data governance's implementation.

(3) Revise and check data governance's operations within public sector, and regularly promote data governance framework among government agencies.

2.3.3.2 The Formation of Working Group: working groups are core mechanisms for data governance's implementation within government agencies. The group should be formed based on each role and responsibility according to data governance framework such as chief data officer, database administrator, data analyst, data architect, technical data stewards, etc. The chief data officer or CDO plays important role in human resource management to define who is adequate for each function and responsibility. Consequently, clear roles and responsibilities of working group will contribute to success of data governance's implementation as well as efficiency and effectiveness of public agency performance.

2.3.3.3 Data Governance Procedure: public administrators and manager are required to define data governance process based on data governance framework by taking data selection, target positioning, policy and standard-making, and human resource into consideration. Basically, data governance procedure is starting from strategic planning, policy and strategy implementation, performance monitoring, evaluation and report, and continual improvement of operation.

2.3.3.4 Policy and Standard-Making: the formation of policy and standard is a part of fundamental of data governance concept. Policy and standard should regulate public sector to implement data governance framework for achieving

data governance's objective with regard to other related laws, regulations, and conditions. Additionally, those policies and standards should be promoted and communicated among stakeholders from both internal and external agencies in order to implement data governance framework towards the same direction.

2.3.3.5 Operations for Managing Data Governance: working groups (appeared in 2.3.3.2) are responsible to perform their tasks differently based on data governance procedure, starting from strategic planning, policy and strategy implementation, performance monitoring, evaluation and report, and continual improvement of operation in turn. Public sector should implement at least the following components to succeed in data governance's objective.

(1) To raise awareness of data governance among government officers and other staffs within organizations.

(2) Perform under data governance's policies and strategies as well as regulations of data usage.

(3) Develop Information management for creation of valued data.

(4) Promote and support the integration and exchange information among government agencies.

2.3.3.6 Data Examination for Evaluation: the final process of data governance framework purposes to examine results of data governance's implementation in order to evaluate overview of public performance for making decision in policy improvement or strategic development. This process will help public administrator and manager realize how the success of operation under data governance

framework is measured, set strategies for achieving objectives, and formulate approaches for future performance.

According to document review, student conclude that data governance framework is an approach to define mechanisms for data management in order to produce information services with quality and safety, enhance capabilities in data linkage, and utilize the data for future usages that will be beneficial for the country's competitiveness. Due to the fact that open government data is a part of data governance's concept, a clear data governance framework contributes to the success of open government's implementation. Therefore, student apply this framework to study how the framework affect the role of central agency in promoting open government, and study existing problems according to the framework's implementation.

2.3.4 The Study of Thai People's Behavior in Receiving Information

The advancement of information and communication technologies (ICTs) trends affects changes of economy, society, and public wellbeing, so that people are able to access and receive information increasingly. In addition, the change also affects the role of public sector to provide information services to people through various channels such as television, computer, smartphone, portable tablet, printing media, or other devices, and the role of those public sectors also cause to the change of Thai people's behavior in receiving information. Therefore, this research reviews the following documents in order to study how Thai people's behavior in receiving information affect to the role of central agency in promoting open government in the country.



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Office of the National Broadcasting and Telecommunications Commission

Commission or **NBTC (2015)** studied and surveyed Thai people's behavior in media consumption through various channels; television, smartphone, portable tablet, computer, and printing media (e.g. books, newspaper, journals, etc.). The findings are that the majority of people used smartphone to access information, followed by computer, portable tablet, television, and printing media in turn. People mostly used smartphone to access social network (e.g. Facebook, Instagram, Twitter, and Line) which is the most favorite online media among users. While receiving information from printing media is less popular because the NBTC (2015) indicate that people can access and follow information comfortably by using smartphone or computer in real-time which better than reading from printed documents. Therefore, they tend to read newspaper and follow news on smartphone, computer, and portable tablet via social media.

Adipon Euajarusphan (2018) studied media usage behavior by generation X and generation Y. His finding is that both generations mostly used smartphone to access information, followed by using computer, television, and printing media. For generation X, they favor to receive information from television (96.50%) and newspaper (91.25%), followed by website or web portal (61.25%) and social media (60.75%). Generation X tend to mostly trust information from traditional media, which are television (84%), newspaper (74%), radio (66.25%), and printing media (37.5%) while social network, which is contemporary media, was entrusted by generation X only 14 of percentage. According to generation Y, they favor to receive information from social media (91.25%), followed by television (76%) and website or web portal (73.25%). However, even though the most favorite media usage of generation Y is

social media, they tend to mostly trust information from television (85%) which similar with generation X, followed by newspaper (64%) and social media only at 19 of percentage. Therefore, this study reflects that both generations tend to trust information received from television. Even though generation Y mostly use smartphone to access data through social media, they have a tendency not to trust information received from social media.

Samoe Nim-Ngern (2018) studied information consumption behavior among generations (baby boomer, generation X, generation Y, and generation Z). The research finding is described as the following.

(1) Baby boomer or Generation B tend to receive information from resources they trust. They had entrusted in traditional media such as radio, television, and newspaper, but they open up to receive information from contemporary media such as Facebook and websites. Additionally, baby boomer favor to receive information from television, followed by newspaper, social media, websites, and radio.

(2) Generation X tend to receive information from official news agency and entrusted person. It is the fact that they increasingly follow information via social media such as Facebook and Line in order to keep social trends, but they not to trust those as mush. This is because they believe that information from social media could be fake news or just a rumor. Furthermore, generation X mostly receive information from television the same as baby boomer because they believe that television mainly provide formal information, when the following media are newspaper, and social media.

(3) Generation Y tend to receive information from social media (e.g. Facebook, Twitter, and Line), followed by television, websites, mobile application, and printing media. Even though generation Y favor to perceive contemporary media, they have a trust in information received from television and printing media than social media.

(4) Generation Z mostly tend to receive information from social media than generation Y because they born in the age of digital technology and facilities advancement, followed by television, websites, mobile application, and printing media. In addition, generation Z have a tendency to trust information received from social media than others because they believe that social media provided various point of view in social issues.

According to documents review, it indicates that information consumption behavior of people is different according to various generations. The advancement of ICTs nowadays causes to the change of people's behavior in receiving information from traditional media (e.g. television, radio, and newspaper) to social media (e.g. Facebook, Twitter, Line, etc.) which is increasingly popular after post-generation Y era. This change also affects government agencies to reform their public services. Therefore, student apply those documents to study how Thai people's behavior in receiving information affect the role of central agency in promoting open government in the country.

2.3.5 Challenges for Open Government Implementation in Thailand

The work of Lorsuwannarat (2016) studied in challenges of public administration in Thailand to promote open government in digital age. Her findings show that the Thai government nowadays is experiencing with five challenges and problems in implementing open government as the follow.

1) *Clear Policy and Open Government Implementation*: the Electronic Government Agency (EGA), currently known as the Digital Government Development Agency (DGA), created the four-year strategic plan (2016-2019) as a roadmap to enhance digital performance of overall public sectors. According to the second strategies, the EGA aims to increase more open government data but a problem is that the plan still lacks of clear open government in practices. There are several questions for this plan, for example, what is the direction of open government development in Thailand within four years? How to make consideration for the value of data set? How to encourage citizens and other stakeholders participate in policy- making process? And what is the responsive mechanism for public interests should be? (Lorsuwannarat, 2016)

2) *Digital Divide / Digital Gap*: it is the fact that Thailand still have a problem in digital divide as other developing countries (Lorsuwannarat, 2016). Digital divide refers to a digital gap between people who able to participate in the internet economy and those who do not have access to the internet which as a result of differences in economic and societal status. Moreover, digital divide also affects to ability to access information by using digital technology.

3) *Organizational Culture of Thai Public Sector*: organizational culture of Thai government agency is a problem for information sharing and public participation. It is

the fact that connecting government data will help both public sectors and citizens make two-way communication. People could directly contact to the government and express about their needs and problems, and the government could respond to those requests instantly via using web portals.

However, the work of Lorsuwannarat (2016) shows that the Thai government could not link database across other public agencies in terms of one portal. The key problem is not technical issues as we realized before, but it is 'the possessiveness of government data' that those agencies tend to keep their information with themselves more than to open or share with others. Moreover, building public participation in Thailand still have problems in value of patronage system and political culture which limiting equality and freedom to make cooperation between public, private, and civil sector.

4) *Privacy Rights*: in accordance with the survey of violation in privacy rights via internet in Thailand (Thai Netizen Network, 2013), the finding presents that awareness of privacy rights in Thailand is at a low level. As a result, some public agencies and practitioners lack of attention in data security, and then somebody could access to other personal information without owner permission.

5) *Linkage Information Formats*: there are several data or file formats that could be downloaded in web portals by internet users, such as .PDF, .DOCX, .XLSX, .CSV, .JPEG, .PNG, .TXT, .XML, .ZIP, etc. However, the most of information formats widely used in government database is portable document format (PDF) (Lorsuwannarat, 2016). The problem is that even though PDF files could be read by human directly, it couldn't be read, edited, or used across other formats. PDF file is non-machine readable, and requires converting tools or gadgets when it need to be changed to other formats

for diverse objectives. Thus, to make linkage information for every format is one of the important challenges for government agencies to promote open government.

According to article review, it indicates that Thailand had attempt to implement concept of electronic governance in order to improve public administration and reform public services in the form of digital technology, aiming to promote open government. However, the country still faces various problems and limitations. It seems that each problem could not be solved solely by only single organization. It is necessary to initiate partnership with every sector to deal with the challenges, aiming towards open government that all agencies are engaging in enhancing transparency for public administration in digital era. Therefore, student apply this article to study how these problems and limitations affect the role of central agency in promoting open government.

2.4 Conceptual Framework of the Study

According to review of concepts, related policies and laws, and related documents and articles, student define variable in this research which is ‘the role of central agency in promoting open government’ by studying the variable in terms of three essential components; open data, open access, and open engagement (appeared in figure 2.2).

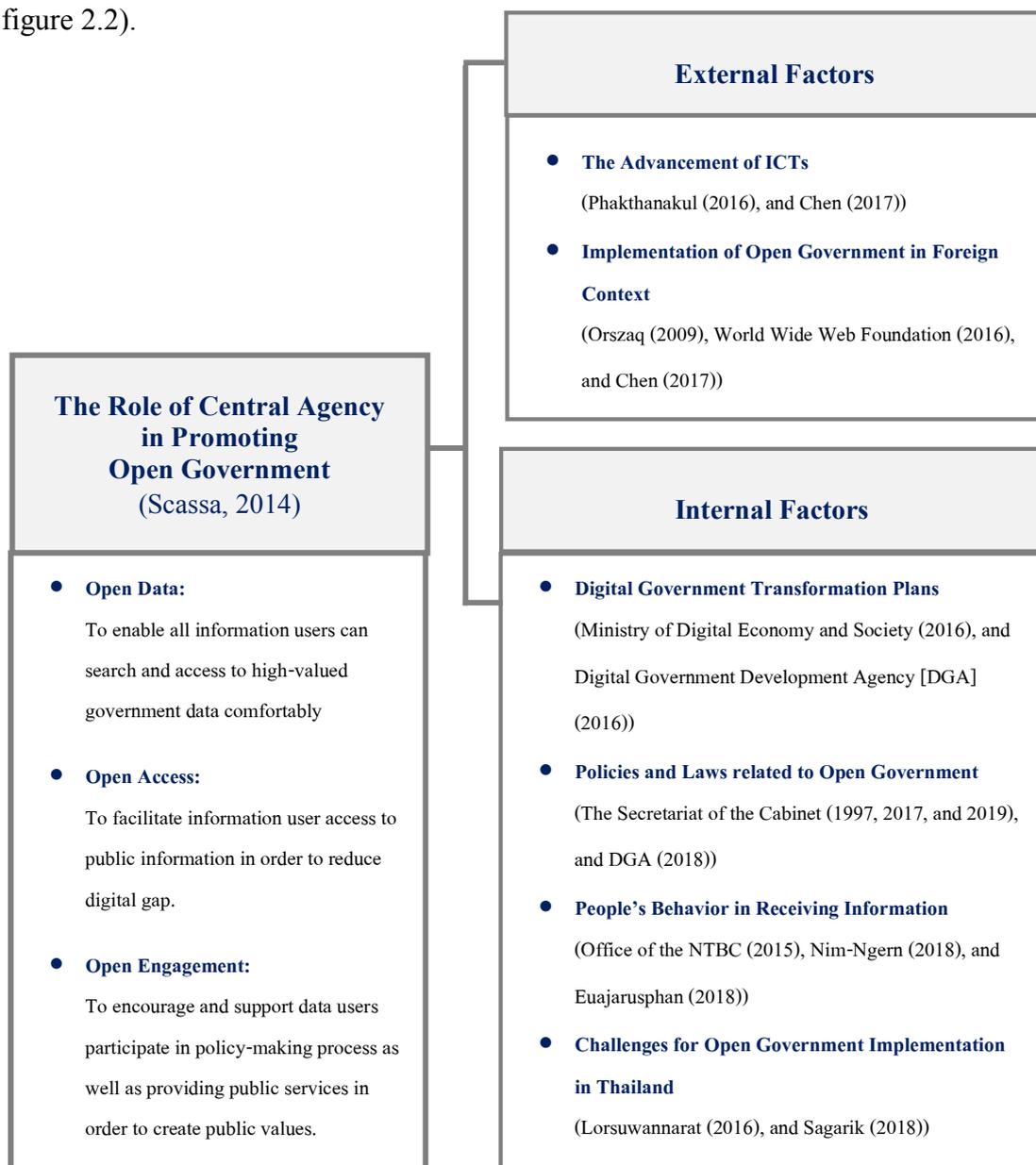


Figure 2.2: Conceptual framework of the study

According to figure 2.2, variable in this research is ‘the role of central agency in promoting open government.’ The variable will be studied in terms of three essential components of open government adapted from concept of Scassa (2014). This variable concentrates on factors affecting the role of central agency in promoting open government, composed of two factors; external and internal factors. For external factors, student will apply concepts of the advancement of ICTs and implementation of open government in foreign context, by using descriptive analysis technique to explain how these factors have an influence in the role of Digital Government Development Agency or DGA for promoting open government in Thailand. For internal factors, student mainly research from four factors; (1) digital government transformation plans, (2) policies and laws related to open government, (3) people’s behavior in receiving information, and (4) challenges for open government implementation in Thailand. These factors will be analyzed by using descriptive analysis technique to explain how they affect the role of DGA in promoting open government in the country, in terms of supportive or opposite effects.

Overall, Chapter II provides literature review as the fundamental to understand overview of this study such as concept of open government and its background, policies, laws, and documents as well as articles related to open government’s concept. The next chapter, Chapter III will explain research methodology components composing of populations and samples, research instrument, data collecting method, and data analysis method.



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CHAPTER III RESEARCH METHODOLOGY

The study of the role of central agency in promoting open government in Thailand: the case study of Digital Government Development Agency (DGA) applied qualitative method mainly using in-depth interview approaches along with documentary research method to analyze and process information received from key informants. The details are described as followed:

1. In-depth interview is method used for gathering primary information from key informants whom are experienced and well-versed in digital technology by face to face interview. This research applied a form of semi-structured interview composed of open-ended questions. The key respondents were able to provide further information or related comments in order to obtain deep information or unexpected perspectives.

2. Documentary Research is an approach used for obtaining secondary data from printing resources such as textbooks, theses, independent studies, academic documents, laws, and regulations related to conceptual framework and theories in order to analyze and process received information.

Therefore, in order to achieve objectives of the study, student defines overall research methodology as the followings.

- 3.1 Population and Samples
- 3.2 Research Instrument
- 3.3 Data Collecting Method
- 3.4 Data Analysis Method



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3.1 Populations and Samples

3.1.1 Populations

Due to objective of the research, to study the role of Digital Government Development Agency (DGA), the central agency for supporting digital government transformation, in applying digital technology for promoting open government in Thailand, therefore, populations in this study are persons who work at the DGA in five divisions; (1) division of information technology system, (2) division of data solutions, (3) division of digital standard, (4) division of corporate strategy, and (5) division of service operation.

3.1.2 Samples

To select samples in this study, student uses three steps as followed:

Step I: student applied purposive sampling technique to select central agencies which being digital leadership institutions for other public organizations to create visions and strategies, to provide leadership in digital coordination between the central agency and other sectors, and to increase and promote digital integration in public performance. In fact, the Digital Government Development Agency (DGA) is a central agency for digital government development function, directly performing under supervision of the Prime Minister of Thailand, and has main functions to promote and support public organizations as well as other agencies towards digital government. Therefore, result of selection in this step is the Digital Government Development Agency.

Step II: student applied purposive sampling technique to select divisions under the DGA according to result of selection from the first step, by selecting those divisions which are both directly and indirectly responsible for promoting open government function. Therefore, result of selection in this second step is composing of

five related divisions; (1) division of information technology system, (2) division of data solutions, (3) division of digital standard, (4) division of corporate strategy, and (5) division of service operation.

Step III: student applied purposive sampling technique along with simple random sampling technique to select key informants who work in five related divisions under the DGA according to results of selection from the first step and second step, by attempting to include all level of positions. Proportion of key informant are described in Table 3.1 as followed:

Table 3.1 : Proportion of key informants

Divisions under the DGA	Number of Key Informant
Division of Information Technology System	7
Division of Data Solutions	7
Division of Digital Standard	7
Division of Corporate Strategy	7
Division of Service Operation	7
total	35

(Source: adapted from <https://www.dga.or.th/en/profile/2132/>)

Table 3.1 provides information about proportion of key informants who are selected from five divisions under the DGA which are both directly and indirectly responsible for promoting open government function, including (1) division of information technology system, (2) division of data solutions, (3) division of digital standard, (4) division of corporate strategy, and (5) division of service operation.

3.2 Research Instruments

This research applied qualitative method that student mainly use in-depth interview approach to gather primary information from key informants, and use a form of semi-structured interview as research instrument composed of planned questions based on conceptual framework of the study. Even though the form is composed of planned questions, key informants were able to provide further information or related comments. This may benefit to student in order to obtain deep information or unexpected perspectives. The form of semi-structured interview contains two parts of questions as followed:

Part I: the information of key informants such as current position, division, and years' experience in digital technology.

Part II: (1) open-ended questions about facts and description of the role of DGA in promoting open government according to three essential components; open data, open access, and open engagement, containing 8 questions in total. Key informants are able to provide their experiences, opinions, or perspectives about how the DGA applies digital technology to promote open government in each component.

(2) open-ended questions about perspectives and giving reasoning of factors affecting the role of DGA in promoting open government classifying into two components; external factors and internal factors, containing 6 questions in total. Also, key informants are able to provide their experiences, opinions, or perspectives to the factors in each issue.

3.3 Data Collecting Method

For procedure of data collecting method, there are two approaches for gathering data from key informants. The details are described as followed:

1) Primary Data Collecting: to gather information by face to face interview after completing of samples selection process (appeared in 3.1.2) and interview questions formation (appeared in 3.2). Then, student accumulated the data with these following methods:

1.1 In-depth interview appointment: student created appointments with the key informants by submitting letter of interview request to the office of Digital Government Development Agency in order to receive interview permission from those key informants according to the regulation on the DGA site visit.

1.2 Face to face interview: when interview appointments were officially confirmed by the DGA, student applied one-on-one interviewing technique with key informants based on planned questions (appeared in 3.2). Those were able to provide further information or related comments in order to obtain deep information or unexpected perspectives. Interview time was approximately 50-60 minutes per each session. During interview process, student was permitted to take notes and take voice record to gather information from interviewees as much as possible in order to minimize error that may occur during interview.

1.3 Data paraphrasing: after finishing interview process, received information and recoded voices were paraphrased into wording forms, and were organized based on research questions towards data analysis process.

2) Secondary Data Collecting: to gather information, concepts, and related theories by using duplicated documents from textbooks, independent studies,



academic articles, laws and regulations, as well as internet resources in order to analyze and interpret the primary data received from in-depth interview process.

3.4 Data Analysis Method

Information received from documentary method as well as key informants interviewing will be analyzed with content interpretation and meaning by using component analysis technique according to conceptual framework of the study. Then, results of the study will be presented in terms of descriptive analysis. Primary data received from in-depth interviewing process will be interpreted and given meaning by the usage of component analysis technique based on conceptual framework of the study. The data will be analyzed to explain how experiences, opinions, perspectives, or answers of each key informant contain or include core contents according with conceptual framework of the study.

Overall, Chapter III explains research methodology components, composed of populations and samples, research instrument, data collecting method, and data analysis method. The next chapter, Chapter IV will present results of the study received from in-depth interviewing process by applying descriptive analysis technique to illustrate the data.

CHAPTER IV RESULT OF THE STUDY

The study of the role of central agency in promoting open government in Thailand: the case study of Digital Government Development Agency (DGA) applied qualitative method mainly using collected information from interview approaches. All received data were reorganized and categorized based on the objectives of the study and interview questions. Then, results of the study will be presented in terms of descriptive analysis. This chapter, Chapter IV, is separated into four parts as the following.

- 4.1 The Information of Key Informants
- 4.2 Context of Digital Government Development Agency (DGA)
- 4.3 Factors Affecting the Role of the DGA in Promoting Open Government
- 4.4 The Role of the DGA in Promoting Open Government in Thailand

4.1 The Information of Key Informants

Table 4.1 : The comparative number between planned key informants and actual key informants for in-depth interview process in the study

Divisions of Key Informant	Planned	Actual
Division of Information Technology System	7	6
Division of Data Solutions	7	7
Division of Digital Standard	7	5
Division of Corporate Strategy	7	5
Division of Service Operation	7	7
total	35	30

(Source: adapted from <https://www.dga.or.th/en/profile/2132/>)

According to the Table 4.1, it presented a number of target key informants for interview are 35 persons from five divisions under the Digital Government Development Agency (DGA). Each division is containing 7 interviewees. After making an appointment with those planned respondents, however, student could only receive information from 30 persons by interview. To categorize those key informants according to their divisions, student mostly received information from 7 persons in division of Data Solutions and division of Service Operation. Then, student received information from 6 persons in division of Information Technology System, and 5 persons in division of Digital Standard and division of Corporate Strategy.

Table 4.2: Job position and years' experience in digital technology of key informants

Job Position and Year's Experiences	Number
Job Positions of Key Informants	
The committee of DGA	2
The executive board of DGA	3
The head of division	7
Operational level staff	18
total	30
Years' experience in digital technology	
Less than 5 years' experience	12
5 – 7 years' experience	10
8 – 10 years' experience	5
More than 10 years' experience	3
Total	30

(Source: adapted from interview form)

According to Table 4.2, it showed the majority of key informants' job positions were operational level staffs, composed of 18 persons. Other 7 key informants were the head of division, 3 persons were the executive board of DGA, and another 2 persons was the committee of DGA.

To categorize those actual key informants based on years' experience in digital technology, it found that the most interviewees have experiences in digital performance less than 5 years, consisted of 12 persons. Other 10 interviewees have digital experiences between 5 – 7 years, 5 persons for having 8 – 10 years' experience, and another 3 key informants have experiences in digital performance more than 10 years.

Table 4.3: Education levels of the respondents

Level of Education	Number
Undergraduate	4
Bachelor's Degree	15
Master's Degree	9
Doctor's Degree	2
total	30

(Source: adapted from interview form)

According to Table 4.3, the majority of key informants received bachelor's degrees, composed of 15 persons. Other 9 interviewees received master's degrees, and 4 persons were undergraduate degrees. There were only 2 key informants who obtained the doctor's degree.

4.2 Context of Digital Government Development Agency (DGA)

4.2.1 Organizational Background

Digital Government Development Agency (DGA) was firstly originated from the Government Information Technology Services or GITS founded in 1997. The GITS is government agency operating under the supervision of National Science and Technology Development Agency, Ministry of Science and Technology. This agency played roles to manage and provide the government information network (or GINet), and develop other relevant activities that supported the usage of government information technology. However, public administration in this period did not much apply technology to improve performance and services due to lack of information and communication technology infrastructure, and lack of standard to integrate and exchange information among government agencies as well.

In February 2007, the government established Electronic Government Agency or EGA as public organization administrating under the supervision of Ministry of Digital Economy and Society (the new name of Ministry of Information and Communication Technology). This agency had important roles to provide and administrate information infrastructure that involved with Electronic Government such as Government Cloud and Government Information Network or GIN services. In addition, another role of the agency is to research and develop enterprise architecture (or EA) as well as standard for supporting electronic government. However, to apply technology in this period is only for improving government performance. Public services were provided in the form of one-way service that people were viewed as receivers. They were not able to participate in decision-making process with the government.

Later, the advancement of information and communication technology (ICT) affected people wellbeing and business administration. The effort of digital technology implementation was raised toward the digital economy policy of the government, but the attempt was not covered the function of the EGA to follow the policy. Digital technology have been implemented aiming to produce and create new innovation in order to satisfy people's needs and enhance quality of life. Then, in May 2018, the EGA was replaced with the newly established organization, Digital Government Development Agency or DGA. The DGA is central agency administrating under the supervision of the Prime Minister, the Office of Prime Minister, instead of Ministry of Digital Economy and Society. The agency has important roles to provide services and supports to all government agencies with regard to digital government transformation. Furthermore, the DGA is responsible to apply digital technology as a tool for facilitating services to people at all level. At the present, the DGA continually develop the form of digital technology implementation to enhance public performance and services, by proceeding function of the EGA which mainly focuses on public administration's improvement, promoting the integration and exchange information among government agencies with data governance framework, and encouraging public participation in government monitoring and the usage of open government data. More interestingly, one of key informant provided explanation about the DGA operation as followed.

“The DGA has followed functions of the EGA that mainly concentrating on applying digital technology for improving public performance and services, and implemented the integration as well as exchange information among government

agencies in order to create new innovation from the usage of open government data. More importantly, we allow people to participate in decision-making of public services in order to satisfy public's needs, and they are able to monitor government operation via open government data as well."

(Mr. Wiboon Phatrapiboon, Division of Digital Standard, Interview date Feb 8th, 2019)

To conclude, the DGA was firstly established from the GITS which responsible to manage and provide the government information network, and develop other relevant activities that supported the usage of government information technology. Then, the EGA was formed in order to provide and administrate information infrastructure that involved with Electronic Government for supporting e-government services in the future, and solve ineffectiveness problem of applying digital technology in the past. Later, the effort of digital technology implementation was raised to develop public administration and public services in order to facilitate services to people at all level, but the attempt was not covered the function of the EGA to follow digital economy policy of the government. Consequently, the DGA was established and appointed as the central agency which responsible to provide services and supports to all government agencies with regard to digital government transformation. The agency has to define policies and strategies in applying digital technology for improving government performance and services with regard to digital economy policy.

4.2.2 Reasons to the Formation

Digital Government Development Agency or DGA was originated with reason that authority and function scopes of Electronic Government Agency (the former name of the DGA) were not covered strategies and implementation according to digital economy policy and digital government transformation. Another reason is that the government could not manipulate massive information among government agencies in the form of unity effectively if the EGA is still under the supervision of Ministry of Digital Economy and Society. Interestingly, one of anonymous key informant provided his perception about the formation of the DGA as followed.

“The transformation from the EGA towards the DGA is a result of reason that the government wanted to extend authority scope of the EGA be able to apply digital technology as a tool for facilitating services to people at all level. Another concealed reason is that the government wanted to establish a central agency which administrating under its control directly in order to manipulate such big data of other government agencies towards integrity. ”

(Anonymous key informant, Interview date Feb 9th, 2019)

Basically, the EGA had the roles to (1) develop, manage, and provide information infrastructure that involved with Electronic Government, (2) promote and support human capabilities as well as skills about Electronic Government, and (3) provide related public information among government agencies. While digital government transformation plans required implementation of digital technology to change business administration, people wellbeing, and public performance towards economic wealth as well as national security. It can indicate that the role of the EGA as

before is only concentrating on using electronic management to improve public performance, but not mentioned to the usage of digital technology to facilitate public services to people. Therefore, the government established Digital Government Development Agency (DGA), instead of Electronic Government Agency (EGA), and appointed as central agency which mainly responsible to provide services and supports to all government agencies with regard to digital government transformation. In addition, it is possible that another confidential reason is the DGA was formed in order to become a representative actor of the government to manipulate big data of other government agencies by the use of data governance framework.

To conclude, the DGA was established instead of former organization, the EGA, because of two reasons. The first is about policy reason that the government want to expand authority and function scopes of the EGA be able to apply digital technology as a tool for public administration and providing services and information to people at all level. The second is administrative reason that the government want to form a central agency which administrating under its control directly and responsible to manipulate massive information among government agencies into the form of unity.

4.2.3 Objectives of the Formation

The DGA is central agency of digital government system which playing roles to provide services and supports to all government agencies with regard to digital government transformation. The agency was established according to the following objectives.

- (1) To develop, administrate, and provide digital technology infrastructure services and service systems or fundamental applications engaging with digital government.

(2) To define standards, measures, principles and approaches in the form of digital technology as well as the transaction procedure in order to connect information and operational systems among government agencies effectively and concordantly.

(3) To promote and support the integration and exchange information among government agencies, the open government data through digital technology, and appointing as an exchange center of government's digital information records in order to facilitate services to people and government agencies' transactions.

(4) To promote and support government agencies to provide digital services to related sectors and parties.

(5) To initiate and develop a one-stop public service via digital technology where people can access conveniently, promptly and securely.

(6) To advise and support other government agencies in terms of the project management and administration of the digital technology, and promote academic services and trainings in order to enhance digital competencies among government officers.

(7) To study, research, and promote academic works, researches, and innovations to enhance digital government development.

(8) To support other government agencies' operations which accountable for annual budget allocation framework involving with digital government, and promote the monitoring as well as evaluation of digital government's operations and plans.

(9) To proceed other issues with regard to digital government development according to the government policies, laws, and the Cabinet's orders.

To conclude, the DGA was established as a central agency playing roles to provide services and supports to all government agencies with regard to digital government transformation, by implementing standards, principles, and approaches in the form of digital technology to bridge information and working systems among government agencies effectively and concordantly, and applying the integration and exchange information in order to facilitate services to people and other public sectors. Moreover, the DGA concentrates on the formation of a one-stop public service where people are able to access conveniently, promptly and securely. The agency also provides suggestions to other government agencies about digital government transformation, and promote academic services and trainings in order to enhance digital competencies among government officers, based on digital government transformation plans and digital economy policy of the government.

4.2.4 Administrative Structure of the DGA

To administrate the DGA composed of three essential actors which are (1) the Commission of Digital Government Development Agency, (2) Board of Directors, and (3) Sub-Committee of the DGA. Each actor is described as followed.

(1) The Commission of the DGA

The commission composed of 1 chairperson who was appointed by the Prime Minister and selected from person who are highly experienced and well-versed in digital technology, and another eight committeemen. The commission is responsible to define administrative policies, approve and allow the formation of action plan within the organization, and enact regulations or announcement to manipulate organizational affairs in general in order to follow objectives and goals of the agency. Moreover, the commission has authority to suggest any solution with regard to administrative

operations of the agency to the Cabinet in order to enhance benefits to digital government development. The commission is an actor playing important roles to steer the agency towards the success.

(2) Board of Directors

The executive boards composed of 1 president who has authority to govern staffs as well as employees at all level within the organization. The president is mainly accountable for the commission of the DGA to administrate internal affairs, accompany with the assistance of vice president, composed of 3 persons. Another is head of division who responsible to manage organizational affairs within each division as per policies, strategies, and orders of the president, composed of 10 persons. Basically, board of directors has important roles to administrate the agency as per the government policies, the laws, objectives of the DGA, and the commission's orders. The executive boards have responsibilities, which are (1) offer targets, action plans, and projects to the commission in order to achieve the agency's objectives, (2) make an annual report involved with results of operations to the commission in order to make consideration, and (3) suggest any solution with regard to the agency's improvement effectively and successfully. Board of directors is the most essential actor to implement policies and strategies provided by the commission in practice. Organizational structure under the board of directors within the DGA is appeared in figure 4.1.

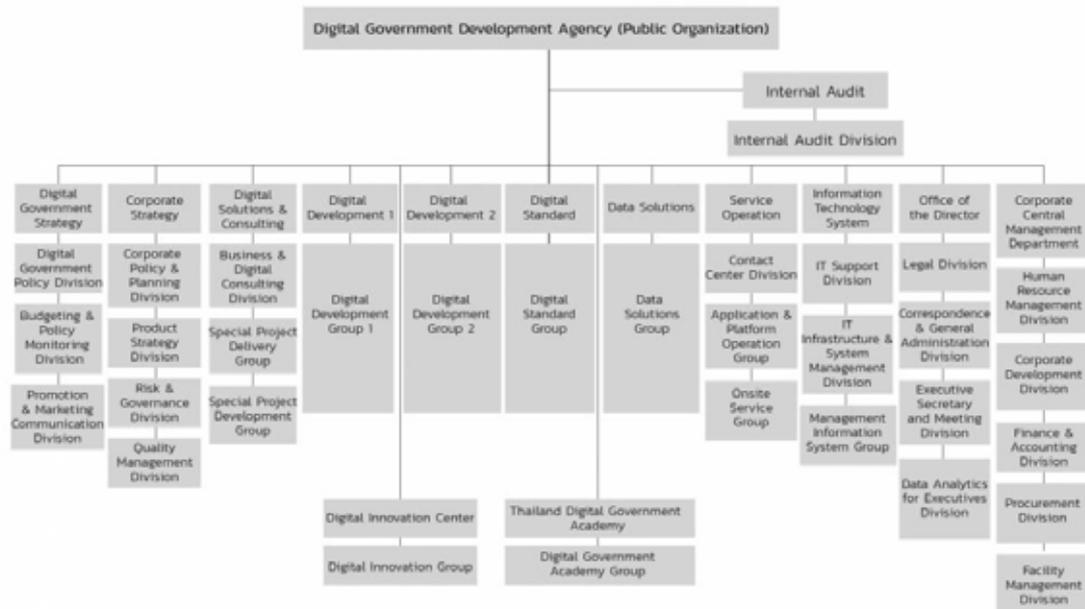


Figure 4.1: Organizational Structure under the Board of Directors within the DGA
(Source: adapted from <https://www.dga.or.th/en/profile/2132/>)

(3) Sub-Committee of the DGA

The sub-committee of the DGA composed of 1 chairperson and another committeemen. A number of committeemen are based on appropriate missions. The sub-committee has important role to administrate the agency's affairs only in specific issues, such as the recruitment of new president, risk management, internal audit, investment, etc. In fact, the sub-committee is another important actor which responsible to support the executive boards in the agency's administration effectively and concordantly.

To conclude, the administrative structure of the DGA composed of three essential actors in total. The first actor, the Commission of the DGA, plays important role to steer the agency's direction towards the success, by the formation of policies and strategies. Second actor, Board of Directors, is the most essential actor to implement policies and strategies provided by the commission in practice. Finally, the

Sub-Committee as the third actor is another important actor which responsible to support the executive boards in the agency's administration only in specific issues as per the commission's orders effectively and concordantly. An overview of administrative structure within Digital Government Development Agency (DGA) is appeared in figure 4.2.

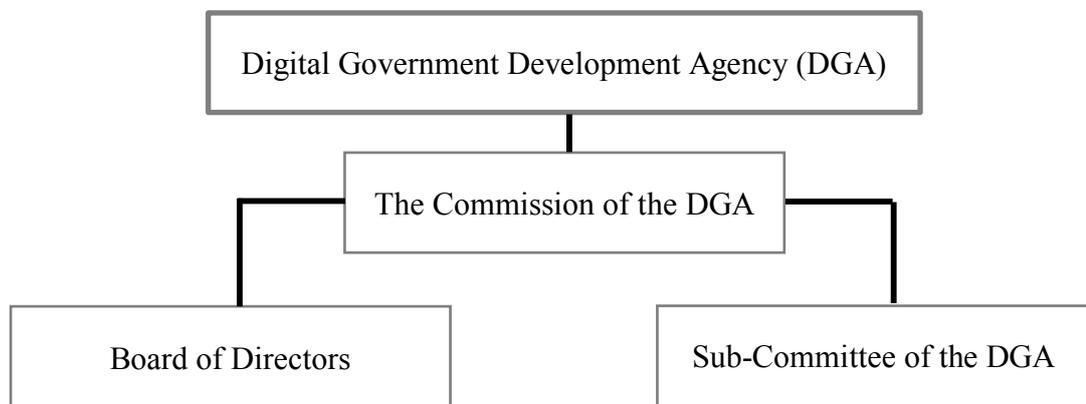


Figure 4.2: Administrative Structure within the DGA
(Source: adapted from <https://www.dga.or.th/th/profile/>)

5/4 Factors Affecting the Role of the DGA in Promoting Open Government

The study of the role of central agency in promoting open government in Thailand: the case study of Digital Government Development Agency (DGA) applied qualitative method. This research defines variable in this study which is ‘the role of central agency in promoting open government’ according to essential components; open data, open access, and open engagement, by studying through factors affecting the role of the DGA in promoting open government in terms of two components; external factor and internal factor. External factors which are (1) the advancement of ICTs, and (2) implementation of open government in foreign context. For internal factors, which

are (1) digital government transformation plans, (2) related policies and laws, (3) Thai people's behavior in receiving information, and (4) challenges for open government implementation in Thailand. Each factor is described as the followings.

4.3.1 External Factors

1) The Advancement of Information and Communication Technology (ICT)

The world has been changed to the digital age that information and communication technology (ICT) rapidly grow. The ICT plays important role to facilitate government agencies, business sectors, and people be able to communicate and exchange their information among each other without limitation of place and time. The change of technology began in the age of Web 1.0 that technology and internet were available to people to access information and service. Moving to Web 2.0 nowadays, the age of social networking platforms, that facilitate people to communicate with each other promptly and comfortably. As a result, this change causes to impact in two dimensions; impact on people, and impact on the government agencies.

(1) Impact on People

The shift from Web 1.0 to Web 2.0 affected people's behavior in receiving information significantly. In the age of Web 1.0, information was mainly presented on websites that data producer or information provider (such as the government) played role to define and produce the data one-sided. While data user or information receiver had roles to read or perceive information only. They could not react or respond to information provider as the same with mainstream media such as newspapers, radio, or television as well. Communication in this age is in the form of one-way communication. At present, social networking platforms in Web 2.0 facilitate

people to more participate in producing information on websites, not only as viewer like in the past. Website viewers nowadays are able to create their own content and tag content with regard to values of information, so that the data on websites are updated promptly. Communication in this age is becoming in the form of two-way communication. The result of interacted communication affected people require to participate in decision-making process with the government. They called the government and agencies for disclosing information in the form of digital technology, by allowing people to access government data and monitor public operation with less limitation. Interestingly, one of key informant provided his perception about impact of ICT on people as followed.

“The rapid growth of technology is important factor causing to the change of people’s behavior in information consumption. In the past, they could not participate in producing the data on website, but now we have social networking platforms like Facebook, Line, or even Twitter, so they can give opinions, comments, or suggestions about government operations through these platforms. Therefore, they want to engage in political issues increasingly.”

*(Data Scientist, Division of Information Technology System,
Interview date: Feb 8th, 2019)*

(2) Impact on the Government Agencies

Results of the growing ICT has affected the change of people’s behavior in information consumption. They have more frequently applied social networking platforms to receive information, communicate with others, and access to government data by using the internet. Approximately three-fifth of Thai people own smartphone and spend online times many hours per day using applications to

communicate, do business, or make any transaction. Therefore, it is important for government agencies to reform their administration and services according to the change, by applying digital technology in promoting transparent government with open government data in order to satisfy people's needs at the present time. One of key informant provided his perception about impact of ICT on the government agencies as followed.

“The change and growth of technology affect Thai people be familiar with using digital devices such as smartphone, mobile tablet, or laptop to access government data, so that the use of digital device is already becoming a part of human daily life. Therefore, the DGA has awareness of this issue, and purposes to develop and implement new pattern of public digital service to satisfy people's demand as much as possible.”

(Mr.Wiboon Phatrapiboon, Division of Digital Standard, Interview date Feb 9th, 2019)

To conclude, the advancement of ICT affects promoting open government in two dimensions; impact on people, and impact on the government agencies. For the first impact, modern technology encourages people to more interact with information and service provided by the government. So that they call the government for disclosing public information in order to monitor government operations. In terms of second impact, the growth of technology caused to the change of people's behavior in information consumption, and this change also contributed to the adaptation of the government to reform its operations as well as services towards the form of digital technology in order to promote transparent government and satisfy people's needs that change all the time.



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2) Implementation of Open Government in Foreign Context

Concept of open government implementation from foreign countries affected Thailand had awareness of open government data's importance, and attempted to apply the concept within the country. In general, open government refers to the government provides open data to public, facilitate people to access the data comfortably, and encourage people to participation in the formation of innovation by the use of data with less limitation. Concept of open government has been implemented for a while. For example, in case of the United States, the former president, Barack Obama, provided open government policies to heads of executive departments and agencies in order to build transparent government, promote public participation, and make collaboration among public sectors, and between government agencies and society. According to Obama's thought, open government data is not information used only for public relation, but also for the creation of new innovation for data developers. As a result, the mainstream of open government concept had been spreaded out among worldwide countries due to the fact that digital technology facilitates people to utilize open data for many benefits. In case of 'Tax Tree project' of Finland as well as 'Where Does My Money Go' of England help their citizens to monitor how their tax money was spent on each government's project. In addition, the website 'folketsting.dk' of Denmark help their citizens to monitor the movement within the national parliament that they can observe what the law is enacting. Thus, it can indicate that many countries have promote and support open government intentionally. According to Thailand, many government agencies begin to realize values and benefits of open government, especially the DGA. Therefore, the DGA has developed the center of open government data, GovChannel, in order to promote open government data to public in practice, and



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facilitate digital services to people, business sectors, and public agencies. GovChannel purposes to enhance good governance, promote collaboration among public agencies, encourage people participation in the use of data, and reduce corruption. One of key informant provided her perception about importance of open government data as followed.

“Open government data is very necessary for transparent government. The data is not only point out how the transparency within the government, but also indicate that the government allow you to make benefits from the data. It contributes to the following values. The DGA is now performing as developed countries do, but it has to spend more time actually. We will do it as the best.”

(Data Analysis, Division of Corporate Strategy, Interview date Feb 8th, 2019)

To conclude, Obama’s promoting open government policy caused to the mainstream of open government implementation among worldwide countries. This is because people have realized that open government provides many benefits such as transparent and accountable government, people participation in decision-making process, collaboration among government agencies, and the formation of innovation by the use of data. According to the mainstream, the DGA concentrates on open government’s importance, and then develop GovChannel to promote open government data to public in practice, increase transparency, and enhance public trust among people.

4.3.2 Internal Factors

1) Digital Government Transformation Plans

Digital government transformation plans, which are digital economy plan and digital government development plan, are factors directly affecting the role of Digital Government Development Agency (DGA) in terms of administrative scope and functional scope. For digital economy plan, the plan was initiated from digital economy policy of the government in 2016. This plan purposes to promote government agencies, which having important roles as policy makers and implementers, be able to implement digital technology to enhance social and economic capabilities of the country. Therefore, the government appointed the Ministry of Information and Communication Technology (the former name of the Ministry of Economy and Society), accompany with the Ministry of Science and Technology, to establish digital economy plan as framework to proceed any matter with regard to digital economy policy of the government in order to apply modern technology to reform business administration, people's wellbeing, and public performance towards security, wealthy, and sustainable development of the country. Impact of the plan affected Electronic Government Agency (the former name of the DGA) in terms of administrative scope that not covered applying digital technology to enhance social and economic capabilities of the country. Therefore, the EGA was replaced with the DGA as the central agency, and appointed to have responsibilities to implement digital technology to improve public performance and provide public services to people at all level according to the plan.

For digital government development plan, the plan is essential factor to define functional scope of the DGA with regard to open government, which are promoting open government data, and government officers' digital competency



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development. This plan is action plan that the DGA established for the formation of action framework involving with digital government development as well as digital economy policy. The plan defined the roles of the DGA to apply digital technology to promote open government data, by setting up the center of open government data in the form of one-stop service to facilitate people be able to access the data and service comfortably. In addition, the plan also defined the roles of the agency to educate government officers and employees at all level in digital literacy in order to support digital government transformation's tasks in the future. The government appointed the DGA to form digital training courses and academic seminars with regard to level of digital capability of each officer and employee.

To conclude, both digital economy plan and digital government development plan are important factors directly affecting the role of the DGA in terms of administrative scope and functional scope. According to digital economy plan, the plan caused to the transformation of the EGA towards the DGA due to the fact that the functional scope EGA was not covered responsibility in applying digital technology for digital government transformation. Therefore, the plan defined the DGA having the role to implement digital technology to improve public performance and provide public services to people at all level. For digital government development plan, this plan is essential factor to define functional scope of the DGA with regard to open government. With the plan, the DGA has responsibilities to establish the center of open government data in the form of one-stop service, and form digital training courses and seminars for government officers' development in digital literacy. Interestingly, both plans cause promoting open government data for open government become the essence of the



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formation of digital government in order to enhance social and economic capabilities of the country towards security, wealthy, and sustainable development.

2) Policy and Law Related to Open Government

In terms of policy, important policy affecting promoting open government is digital economy policy that the government concentrates on digital technology implementation to enhance social and economic capabilities of the country. The policy caused to the formation of digital economy plan and digital government transformation plan that defines government agencies including the DGA have to provide open government data to people with the integration and exchange information among government agencies, and enhance human capital with digital literacy as well as capabilities in order to support digital government transformation in the future.

The laws related with open government composed of Official Information Act, B.E.2540 (1997) and Public Administration and Government Services through Digital System Act, B.E.2562 (2019). The fundamental law for open government data is Official Information Act. The act defines important principle for open government data's foundation in Thailand that "disclosing is primary, concealing is avoidable." Public information that the government must disclose to public according to the act such as organizational structure, organizational functions, contacting places, results of consideration, decision affecting to private's right, operational guidebook, etc. However, there are some information excepting for disclosure, which are sensitive information that may jeopardize the royal institution, national security, international relation, and personal information. More importantly, the act also formed Official Information Board which responsible to supervise and give advice with regard to the performance of duties of government officials as well as agencies for the



implementation of this act, and to consider on people's complaints in case the government do not disclose the data. Therefore, it indicates that this act created principle and mechanism that allow people at all level access to government data obviously.

The newly enacted law, Public Administration and Government Services through Digital System Act, has essence that government agencies must disclose information in the form of digital technology. With this act, government agencies have to apply the integration and exchange information among public agencies, making data governance as a framework for information management, and provide information as well as services to people through electronic platforms. In addition, the exchange center of open government data shall be established in order to support connecting digital service in the form of one-stop service, facilitate information and service to people, and promote public participation in the formation of innovation by the usage of open government data. More importantly, the act defined the DGA as a central agency which responsible to support other government agencies for the implementation of this act as well.

To conclude, digital economy policy caused to the formation of digital economy plan and digital government development plan. Both plans cause promoting open government data for open government become the essence of the formation of digital government in order to enhance social and economic capabilities of the country towards security, wealthy, and sustainable development. In terms of the laws related with open government, Official Information Act and Public Administration and Government Services through Digital System Act are important factor defining that government agencies must disclose information to public. The Official Information Act

created principle and mechanism that allow people at all level access to government data obviously. While Public Administration and Government Services through Digital System Act causes huge change towards digital government in the country. The DGA was appointed to play important role to support other government agencies for the implementation of this act.

3) People's Behavior in Receiving Information

Behavior of ICT users in Thailand cause to the DGA's adaptation in providing public services and open government data. According to the survey of people's behavior in digital device access in Thailand Digital Government Status Report 2018 published by the DGA, the finding was that people have a tendency to use internet more frequently in every year. The most digital device using to access internet is smartphone, followed by mobile tablet, and laptop, while a number of computer users were slightly decreased. Furthermore, it is found that the most favorite place to access internet is public areas such as department store, food court, sky train stations, central park, and bus stop, followed by home and workplace. Those point out that people tend to access internet by mainly using smartphone in public areas. Interestingly, it is found that people who living in provincial areas have registered with mobile network (3G/4G) and high-speed internet service more frequently. This indicates that people increasingly begin to adapt themselves towards digital age, and they more familiarized with using digital devices to communicate and interact with each other. As a result, these behaviors affect the role of the DGA to reform public services into the form of digital technology in order to support people' demand involved with open government data. Interestingly, one of key informant provided her perception about people's behavior in receiving information as followed.

“Behavior of data users are frequently changed, as a result of the advancement of digital technology. People in the past could not access to open government data, but nowadays they can do it comfortably without limitation of place and time. Luckily, modern technology is very useful to us. Digital technology helps reduce limitations of communication among people and government agencies such as distance, place, time, or even cost. So that it is necessary for public sector to adapt itself by studying people’s behavior in order to facilitate services to people as per their actual demand and the digital age.”

(Mrs. Pimluck Klangwichit, Division of Digital Standard, Interview date Feb 8th, 2019)

To conclude, people’s behavior in receiving information affect the change as well as adaptation of government agency to provide public service. The growth of digital technology nowadays facilitates people be able to access information and service more comfortably than in the past, by using internet and digital devices more frequently. These are important factor causing the DGA begin to study people’s behavior in receiving information which is frequently changed at the present. The DGA purposes to create and provide the forms of public service which are concord with users’ behavior as per their actual demand and digital age in order to promote open government under digital government completely.

4) Challenges for Open Government Implementation in Thailand

Thailand still confronts with various problems and limitations in promoting open government such as a lack of policy and implementation clarity, a lack of data exchange network system, low values of information, refusal of inter-cooperation in data exchange, and digital divide. However, problems affecting the role of the DGA in promoting open government are composed of 3 important issues; (1) lacks of clear and appropriate model laws for open government implementation, (2)

digital divide among government staffs and people in general, and (3) lack of the integration and exchange information among government agencies. Each issue is described as followed.

Firstly, the country still lacks of clear and appropriate model laws for open government data implementation even though open government data for open government is the essence of the formation of digital government. Legal articles involving with open government data were scattered on various laws. Moreover, each law and regulation had different approaches for disclosing public information, and those imposed the government agency disclose information to public only some aspects. As a result, people were uncomfortable to access or monitor government information. When the government lacked of clear promoting open government's approach, government agencies had different implementation for data disclosure, and no suitable the integration and exchange information among each other. So that promoting open government in the country was not successful enough. Therefore, this problem is huge challenge for the DGA as a central agency in digital government to set action plan how to implement open government data's approach among other government agencies clearly, concordantly, and effectively. However, the government enacted Public Administration and Government Services through Digital System Act by imposing approaches for government agencies to apply digital technology in providing information and service, disclosing the data in the form of digital technology, and promoting digital governance framework for information management correctly, completely, timely, securely, and efficiently. The DGA has expectation that the newly enacted law will become the clear and appropriate model law for open government data's approach from now on.



Secondly, problem in digital divide composed of two levels; digital divide of government staffs and people in general. According to government officers, the majority of them still lack of digital literacy and technological capabilities. This is very big problem due to the fact that the government will lack of person who have enough digital competency to perform and supervise open government's implementation. Therefore, the formation of human capital in digital technology is a part of key success factor for applying open government concept in the country. This challenge is very important for the DGA as a central agency that how to enhance digital literacy and technological capabilities among government officers to support open government implementation and digital government transformation in the future. For digital divide of people in general, the majority of them are able to access digital technology more frequently than in the past. Additionally, a number of internet users in Thailand are more increasing. Consequently, these cause to the change of people's behavior in receiving information. They more frequently use smartphones and other digital devices to access internet service provided in all over the country. However, it is possible that some people who living in distant areas can not access to internet or even own digital device, so that this problem contributes to open government data's limitation. The problem is important for the DGA as a central agency that how to apply digital technology to support access of open government data among those inferior groups, or how to use technology to solve digital gap. The DGA have to take these challenges into consideration because if the agency had reduced digital gap successfully, people would have more participated in promoting open government with the agency.

Finally, the third issue is that each government agency discloses its information through various channels without the integration and exchange information among each other. Therefore, people have to contact many government agencies to receive complete information. The problem is very important for the DGA as a central agency that how to bridge massive information and work systems among government agencies into the form of one-stop service that facilitate people to access open government data conveniently, promptly and securely. The integration and exchange information among government agencies is very necessary because it is not only help facilitate information and service to people, but also promote open government as well as the formation of innovation by the usage of open government data.

To conclude, problems affecting the role of the DGA in promoting open government are composed of 3 important issues, which are (1) lacks of clear and appropriate model laws for open government implementation, (2) digital divide among government staffs and people in general, and (3) lack of the integration and exchange information among government agencies. These problems are huge challenges for the DGA such as how to implement open government data's approach among other government agencies clearly, concordantly, and effectively, how to apply digital technology to support access of open government data among the inferior groups, and how to bridge massive information and work systems among government agencies into the form of one-stop service that facilitate people to access open government data conveniently, promptly and securely. These challenges are necessary for the DGA to find suitable solutions in order to overcome the obstacles and move Thailand forwards to digital government efficiently and effectively.

4.4 The Role of the DGA in Promoting Open Government in Thailand

To present the role of the DGA in promoting open government in Thailand as a result of both external factors; the advancement of ICTs and implementation of open government in foreign context, and internal factors; digital government transformation plans, related policies and laws, Thai people's behavior in receiving information, and challenges for open government implementation in Thailand (appeared in 4.3), student separate results of the study into three parts as the following.

4.4.1. The Role of the DGA in Promoting Open Data

4.4.2. The Role of the DGA in Promoting Open Access

4.4.3. The Role of the DGA in Promoting Open Engagement

Each part is described as followed.

4.4.1 The Role of the DGA in Promoting Open Data

Open data (adapted from Ubaldi (2013) and Scassa (2014)) means to enable all information users such as people, private agencies, and other public sectors can search and access to high-valued government data comfortably, aiming to promote good governance, integration among government agencies, and public participation, and minimalize corruption problems and deception. Result of the role of the DGA to promote open data is described as followed.

4.4.1.1 GovChannel

GovChannel is the center of open government data for people provided by the collaboration between the DGA and other government agencies. GovChannel purposes to be the huge open government data resources in the form of digital technology in order to facilitate information and service to people conveniently and promptly with one stop government's digital service. People as well as information



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users are able to access and utilize open government data through three electronic channels, which are web portals on computer, mobile applications on smartphone, and other digital machines located in public areas.

(1) The First Channel: Web Portals

Website www.govchannel.go.th is the main channel to access open government data and service for people. Within the website, government's digital services are described as the following.

- **www.egov.go.th** is a website that provides central electronic services (or e-Gov Portal), where people can feel free to search and select their preferred online services provided by the website such as social welfare, public utilities, passport and traveling, transformation and logistics information, disabled-people's privileges, social security, etc.

- **www.info.go.th** is a website gathering various government-based information, such as provisions and requirements of acts, licenses, and manuals, used when people contact a public organization. In case people confront with problems that occurring from improper public services, the website can also facilitate them with a modern complaint filing system.

- **www.data.go.th** is a website providing categorization of open government information that can be applied freely without any limitation or restriction. The received information can be utilized individually or shared to targeted receivers. However, for the proper usage of open government data, it is required to make reference to the source of information and follow the terms and conditions specified by the developers. More importantly, the objectives of disclosing open government data on this website is not only for the formation of transparent government



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and enhancing transparency within public administration, but also for supporting people in general be able to apply the open data for the formation of new innovation or even start-up business. Therefore, open government data appeared on the website is not only in the form of PDF files, but also in the form of DOCX, .XLSX, .CSV, .JPEG, .PNG, .TXT, .XML, .ZIP, etc. that can be open and read those files by various software without any licensed requirement.

- **www.apps.go.th** is a website collecting mobile application of government agencies that allow people to download preferred government applications in the form of both iOS and Android system. Data users can select those application as per their interest such as security and law, employment allocation and recruitment, finance, taxes, and business. This website was established in order to be another channel for supporting mobile communication device's users.

- **www.govspending.data.go.th** or 'where does my taxes go' is a website providing collection of information on government spending, particularly taxes paid by people. Obviously, the website is developed according to the resolutions approved by the National Anti-Corruption Committee, enhancing the development of transactional procurement issued by the Comptroller General's Department (CGD) in the form of Open Government Data through the center of open government information or data.go.th.

(2) The Second Channel: Government Mobile Application

Center

The center of government mobile application is new form of providing digital government service in order to support the increase of digital device's user. The center will gather government mobile application including all of digital services, and categorize those into a set of application, such as healthy set, traveling set, education set, and others, in order to facilitate people to search and select as per their interest. Those application can be downloaded conveniently via various mobile communication devices. Moreover, the DGA has produced 'Gnews' which is a newly developed application providing information on government services that can be received directly by the general public. This application can provide individual message alerts on specific transactions, such as notifications of tax payment or public utility payments. People are also allowed to search for their required information or specific locations where they want to visit or contact. The benefit of the government mobile application center is to support and encourage government agencies to produce and develop public digital services in the form of mobile application more efficiently and effectively.

(3) The Third Channel: Digital Machine

A number of internet and digital device's users are increasing more frequently. It indicates that digital infrastructures are more covered in areas all over the country. As a result, the majority of people more frequently use smartphones and other digital devices to access internet service. However, it is possible that some people who living in distant areas cannot access to internet or even own digital device, so that this problem contributes to open government data's limitation. Therefore, the



DGA has developed Government Smart Kiosk which located in several public areas such as department store and hospital in order to facilitate information and service to people at all areas, especially who living in distant areas. People can use the machine to access public information such as privileges and social welfare provided by the government by using only identity card.

According to the role of the DGA in promoting open data, GovChannel is a result from both external and internal factors. For external factor, the advancement of ICT caused people more frequently access to internet, and affected the change of people's behavior in receiving information. This change contributed to the adaptation of the DGA to reform its operations as well as services towards the form of digital technology in order to promote transparent government and satisfy people's needs that change all the time. In addition, the implementation of open government in foreign context, especially in the United States, caused to the mainstream of open government implementation among worldwide countries. According to the mainstream, the DGA concentrates on open government's importance, and then develop GovChannel to promote open government data in the form of web portals to public in practice, to increase transparency, and to enhance public trust among people. For internal factor, digital government transformation plans defined the DGA has the role to implement digital technology to provide public services to people at all level, and define the DGA has responsibilities to establish the center of open government data in the form of one-stop service as well. Moreover, Official Information Act and Public Administration and Government Services through Digital System Act are important factor defining that government agencies must disclose information to public into the form of electronic channels. Furthermore, problem in digital divide caused the DGA to apply digital

technology to support access of open government data among people especially who living in distant areas and who are unfamiliar with using technology. An overview of factors affecting the role of the DGA in promoting open data is appeared in figure 4.3.

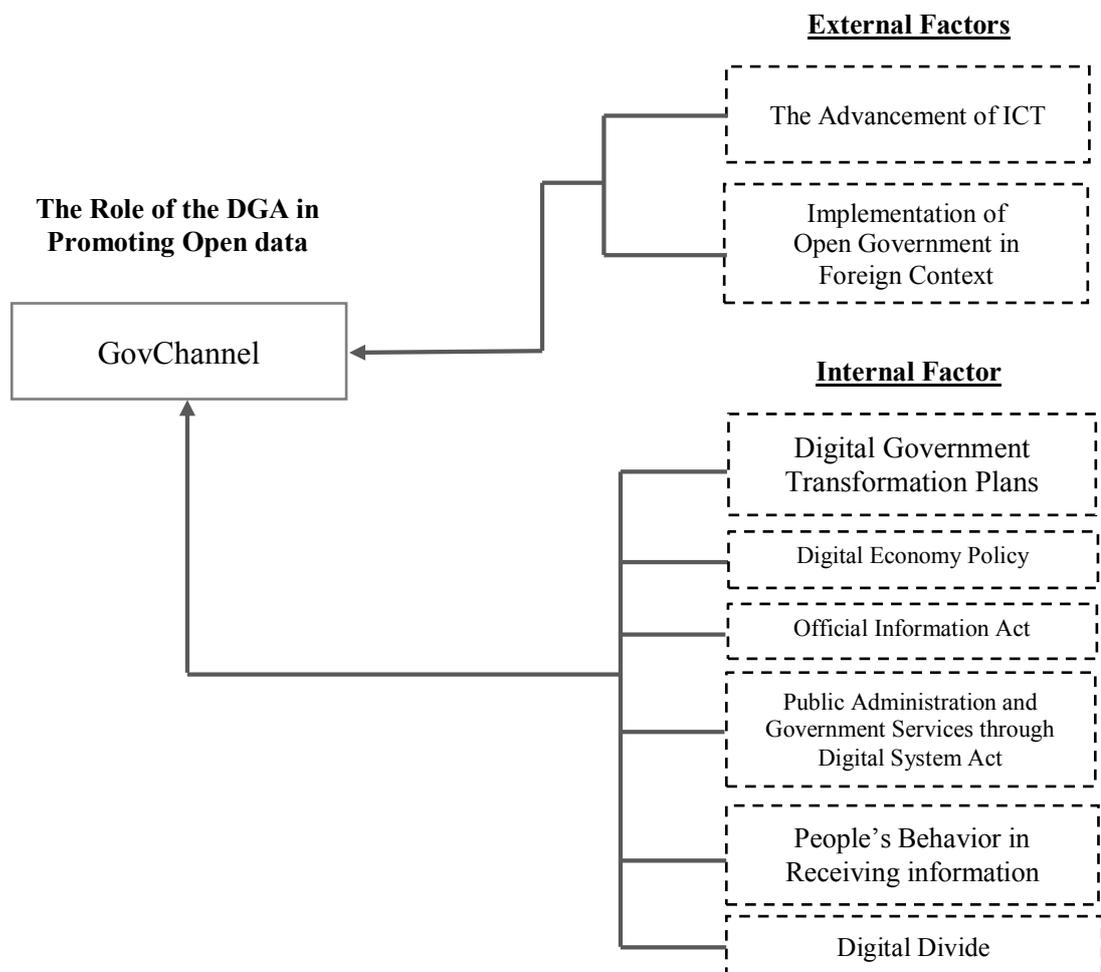


Figure 4.3: Factors affecting the role of the DGA in promoting open data

4.4.2 The Role of the DGA in Promoting Open Access

Open Access (adapted from Scassa (2014)) refers to building approaches to government data and facilitating information users at all level access to the data easily and comfortably, aiming to reduce the gap in ability and opportunity to access information between people who have information and those who do not. Result of the role of DGA to promote open access is described as the followings.

4.4.2.1 Government Smart Kiosk

Government Smart Kiosk is a part of digital public service under the project ‘GovChannel.’ The purpose of this digital machine is to facilitate information and service to people conveniently and promptly with regard to digital economy policy of the government. People are able to use the kiosk to check their personal information and privileges, and make government transactions (as available) within the kiosk service screen. Government Smart Kiosk is digital public service established for solving problem of digital divide among people, which is the important internal factor impeding open government implementation, and for increasing opportunities for people at all areas, especially who living in distant areas, be able to access government data via digital channel conveniently and securely. At present, digital services within Government Smart Kiosk are composed of 17 items appeared in table 4.4 as followed.

Table 4.4: Available Digital Services within Government Smart Kiosk

Available Digital Services	Government Agency
1. Rights to Health Insurance Information	National Health Security Office
2. Saving Deposit Information (for Elder)	Social Security Office
3. Rights to Social Security Information	Social Security Office
4. Rights to Pension Premiums for Disabled People Information	Office of Local Administration
5. Rehabilitation History Information	National Health Security Office
6. Material Disbursement History Information	National Health Security Office
7. Personal Information	Department of Provincial Administration
8. App Center Service Information	Digital Government Development Agency
9. A Summary of Credit Account in Credit Bureau Information	National Credit Bureau
10. Appointment of Ramathibodi Hospital Check	Ramathibodi Hospital

Available Digital Services	Government Agency
11. Health Information within Office of the Permanent Secretary Ministry of Public Health	Office of the Permanent Secretary Ministry of Public Health
12. Information for Educational Professional	The Secretariat Office of KHURUSAPHA
13. Water Consumption Information	Metropolitan Waterworks Authority
14. Complaint Monitoring System	Office of the Ombudsman
15. Information Center for Public Services (info.go.th)	Office of the Public Sector Development Commission
16. Personal Identification System (OpenID on Kiosk)	Digital Government Development Agency
17. Patient's Right Check within Rajjavithi Hospital	Rajjavithi Hospital

(Source: <https://library2.parliament.go.th/ebook/content-issue/2559/hi2559-096.pdf>)

Government Smart Kiosk was begun from two issues. Firstly, the kiosk was initiated from digital economy policy that defined the government agencies have to support the DGA's operation involving with the integration of information and service in the form of digital technology to facilitate people under the project of GovChannel. Another issue is that the DGA want to provide information and service to people at all level and areas, especially who living in distant areas, be able to access and receive public services conveniently, promptly and securely with regard to the Public Administration and Government Services through Digital System Act. Therefore, the DGA applied concept of the ATM positioning of various banks to establish digital service machine which able to provide information and service to people at any time, the same as using ATM services. So, the Government Smart Kiosk is digital public service established to reduce digital divide among people in order to allow them at all level and all areas be able to access information and service provided by the government. The kiosk machines are located in public areas such as department

store and hospital. In the future, the DGA attempt to produce other digital services in the form of digital technology as per demands of people in order to reduce limitations of communication among people and government agencies such as distance, place, time, or even cost. An overview of factors affecting the role of the DGA in promoting open access is appeared in figure 4.4.

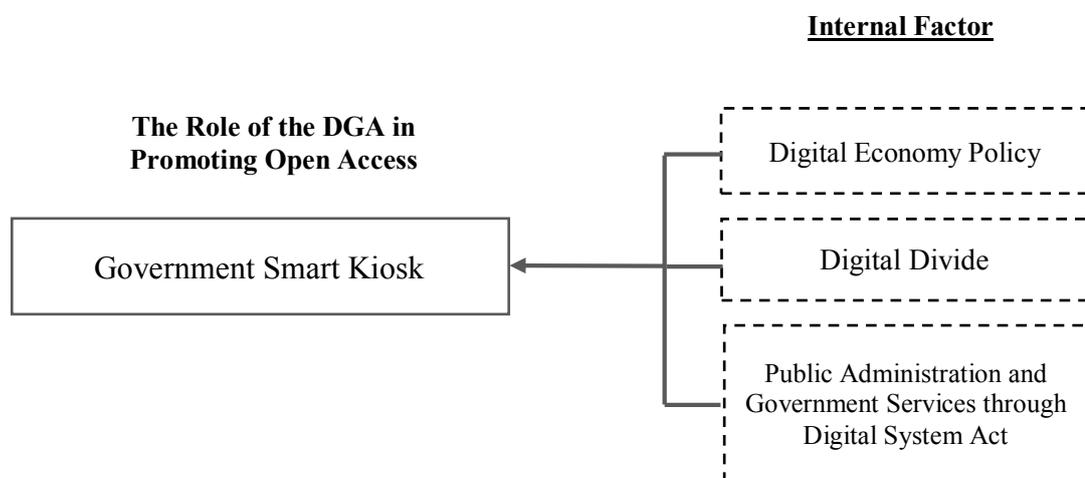


Figure 4.4: Factors affecting the role of the DGA in promoting open access

4.4.3 The Role of the DGA in Promoting Open Engagement

Open Engagement (adapted from Scassa (2014) and Lorsuwannarat (2016)) means to encourage and support people, private agencies, and other sectors participate in policy-making process as well as providing public services in order to create public values. Result of the role of DGA to promote open engagement is described as the followings.

4.4.3.1 International Open Data Day

The International Open Data Day was annually held under the project of ‘Thailand Data Innovation Awards’ organized by the DGA. The purpose of the event is to promote data community engagement continually aiming to encourage public

participation from all sectors to create new innovation by the use of open government data. The DGA concentrates on importance of information which is the most essential resource in the digital era, especially government information. This government data is an essential resource to help initiate the formation of new innovation and public service for the society. Therefore, the DGA raised the concept of ‘Open and Connected Government’ aiming to promote digital technology’s implementation for building transparent government and the integrated information among government agencies towards open and connected government. This is in order to satisfy people’s needs, enhance transparency with public participation as well as the connected open government information, and promote and support attentiveness among various sectors to create and develop public service that conform to the demand of people and other sectors. It indicates that International Open Data Day activity helps to promote open government data towards ‘data ecosystem’ which is the new form of economic system driven by information. Moreover, the objectives to disclose information, especially government data, are not only for building transparency within public administration, but also for promoting public participation from all sectors such as public sector, business sector, and civil society to use open government data for the creation of new innovation by the usage of the data as well.

4.4.3.2 Open Data Hackathon

The digital economy policy of the government intends to promote economic system of Thailand by setting the basis economy of the country towards digital economy that information and communication technology (ICT) is connected with all business sectors, from big enterprise to medium and small enterprise, by using digital system to enhance efficiency in organizational management. As a result, an

organization which implementing appropriate management with digital technology can satisfy their customers' needs promptly and efficiently. In 2014, the Electronic Government Agency or EGA (the former name of the DGA) established the government application center or GAC to gather government mobile applications provided in various platforms into the form of one-stop service web portal in order to facilitate people to access, search, and select their preferred mobile application services provided by the website. To promote this project, up until now, the DGA initiated collaborative project with Citizen-net Network, Changefusion Institute, Open dream Institute, Ma:D Co-working Space, and Good Factory to hold Open Data Hackathon activity as operational seminar to exchange open government data's experiences and academic knowledge in order to create and develop 'blueprint' of website and mobile application services. The activity also aims to promote and support digital economy policy in order to encourage various sectors to apply open government data into the creation of innovation for making public values within the society. This activity purposes to (1) promote application developer community engagement for the extension of open data works, (2) initiate new body of knowledge from open government data, and (3) create the blueprint of mobile application for developing new digital public service in practice. The most of seminar participants are people who interested in open government data including program developers, graphic designers, marketing personnel, and social activists.

To conclude, the International Open Data Day was annually held to promote data community engagement aiming to encourage public participation from all sectors to create new innovation by the use of open government data. When Open Data Hackathon, an operational seminar, was occasionally held to exchange academic

experiences in the use of open government data among interested audiences in order to initiate and develop model for digital services in the forms of website and mobile application which supporting open data policy of the government. Both activities are a result from internal factors; digital economy policy and digital government transformation plans of the government aiming to encourage all sectors participate in the formation of innovation for society by the use of open government data. An overview of factors affecting the role of the DGA in promoting open engagement is appeared in figure 4.5. In addition, a summary of factors affecting the role of the DGA in promoting open government in Thailand with regard to essential components; open data, open access, and open engagement is also appeared in figure 4.6.

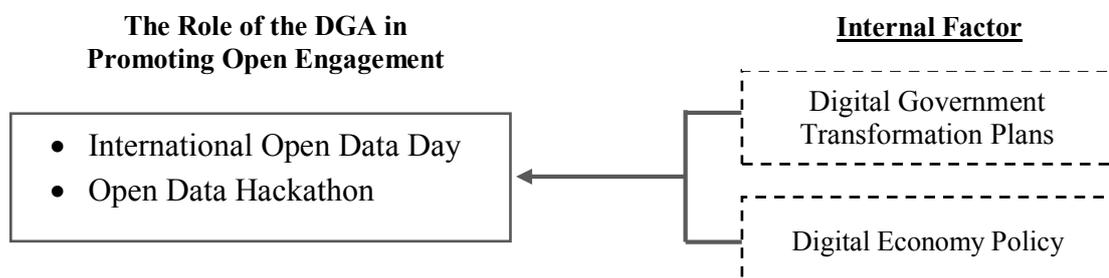


Figure 4.5: Factors affecting the role of the DGA in promoting open engagement

Overall, Chapter IV presents results of the study and research findings, composed of the information of key informants, context of Digital Government Development Agency (DGA), factors affecting the role of the DGA in promoting open government, and the role of the DGA in promoting open government in Thailand. Those results and findings were received from in-depth interview process and documentary research as well. The next chapter, Chapter V will summarize results of chapter IV and

discusses results of the study under conceptual framework, and provides research recommendations for future study.



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CHAPTER V CONCLUSION, DISCUSSION, AND RECOMMENDATION

The study of the role of central agency in promoting open government in Thailand: the case study of Digital Government Development Agency (DGA) applied qualitative method mainly using in-depth interview approaches along with documentary research method to analyze and process information received from key informants. The data was analyzed with content interpretation and meaning by using component analysis technique according to conceptual framework in order to answer the research question and objectives of the study. Details in this chapter, Chapter V, are composed of these following topics.

- 5.1 Conclusion
- 5.2 Discussion
- 5.3 Research Recommendation

5.1 Conclusions

The effort of digital technology implementation for developing public administration and public services in order to facilitate services to people at all level caused to the formation of Digital Government Development Agency (DGA) instead of the former central agency, Electronic Government Agency (EGA). The DGA was established because of two reasons. The first is about policy reason that the government want to expand scope of competence of the EGA (former name of the DGA) to apply digital technology to improve public management and services. Another is administrative reason that the government aimed for the formation of central agency

which is under control directly by itself, appointing as the center of information management among government agencies in order to manipulate government information towards the unity. As a result, the DGA was established and appointed as the central agency which responsible to provide services and supports to all government agencies with regard to digital government transformation.

The role of the DGA in promoting open government, such as the formation of GovChannel for promoting open data, Government Smart Kiosk for promoting open access, and International Open Data Day as well as Open Data Hackathon for promoting open engagement, were a result of both external factors; the advancement of ICTs and implementation of open government in foreign context, and internal factors; digital government transformation plans, related policies and laws, Thai people's behavior in receiving information, and challenges for open government implementation in Thailand. GovChannel is the open government data center that allow people as well as data users be able to access government information and services via electronic platforms which are web portals on computer, mobile applications on smartphone, and other digital machines located in public areas. GovChannel is mainly a result from external factor, implementation of open government from foreign countries that concentrates on web portal to provide open government data to people, and essential internal factors such as Digital Government Development Plan, Official Information Act, B.E.2540 (1997) and Public Administration and Government Services through Digital System Act, B.E.2562 (2019), which are important regulations for promoting open government data in the form of digital technology.

For Government Smart Kiosk, the machine box is a part of digital services under the project ‘GovChannel’ provided by the DGA in order to promote access of information and services to people. They are able to use the kiosk to check their personal information and privileges, and make government transactions (as available) within the kiosk service screen. Government Smart Kiosk is digital public service established for solving problem of digital divide among people, which is the important internal factor impeding open government implementation, and for increasing opportunities for people at all areas, especially who living in distant areas, be able to access government data via digital channel. For International Open Data Day, the event was annually held to promote data community engagement aiming to encourage public participation from all sectors to create new innovation by the use of open government data. When Open Data Hackathon, an operational seminar, was occasionally held to exchange academic experiences in the use of open government data among interested audiences in order to initiate and develop model for digital services in the forms of website and mobile application which supporting open data policy of the government. Both activities are a result from internal factors; digital economy policy and digital government transformation plans of the government aiming to encourage all sectors participate in the formation of innovation for society by the use of open government data.

Impact of the role of the DGA in applying digital technology for promoting open data in Thailand composes of three issues. In terms of open data, the country has the center of open government data for people, so that they are able to access information and services through electronic platforms with one-stop service. For open access, the advent of Government Smart Kiosk has facilitated people at all over the

country, especially who living in distant areas, to receive government data or do government transactions at the kiosk located in public areas. This is an attempt to reduce digital divide among people. Finally, for open engagement, International Open Data Day and Open Data Hackathon have caused to the exchange and sharing of ideas and concepts among interested audiences to apply open government data in the form of digital technology for public interests and social values. However, there is a notice that those activities are limited only for mobile application developers and technological scholars. People in general are not much participated in the event to comment or share their ideas about open government.

5.2 Discussion

The study of the role of central agency in promoting open government in Thailand: the case study of Digital Government Development Agency (DGA) mainly discusses two issues; (1) factors affecting the role of the DGA in promoting open government in Thailand, and (2) the role of the DGA in applying digital technology for promoting open government according to three essential components which are open data, open access, and open engagement. Eventually, student will suggest key success factors for promoting open government in the country in order to answer the objective of the research.

For the first issue, important factors obviously affecting the role of the DGA in promoting open government in Thailand is related policies and laws, which are Official Information Act, B.E.2540 (1997), and Public Administration and Government Services through Digital System Act, B.E.2562 (2019), as a result of digital economy policy of the government. The growth of ICT, as external factor, caused to the formation

of the policy as well as people's behavior. At the present time, Thai's people are more able to access internet network due to the expanded usage of smartphone and mobile device. These things caused to the change of people's behavior in information consumption. In the past, people received information in the form of one-way communication from television, radio, or newspapers, but nowadays they are able to interact with information providers, such as the government, by using digital technology in terms of two-way communication. In addition, the change affected people to call the government for disclosing government data to the public in order to monitor government operation, and promote the formation of innovation from the use of open government data. The research finding conforms to the study of Phakthanakul and others (2016) that the advancement of ICT encourages people to ask the government for open government data. However, to promote open government among public sectors in Thailand seems not to be successful enough, even though Official Information Act was officially enacted in 1997. The problem is a result of lack of clear and appropriate model laws for open government data implementation, digital divide among government staffs and people in general, and lack of the integration and exchange information among government agencies. The finding also conforms to the study of Lorsuwannarat (2016) that problems of applying open government concept in Thailand are lack of clear policy and regulation as well as lack of information linkage. Nevertheless, the newly enacted law, Public Administration and Government Services through Digital System Act, has been implemented for solving these problems, and promote open government data as well as the integration and exchange information among government agencies, but this act did not define approach for reducing digital gap problem.

The second issue is that the formation of GovChannel by the collaborative project between the DGA and other government agencies to promote open data as well as open access is mainly a result of open government implementation concept of developed countries, as an external factor. For internal factor such as digital economy policy, digital government development plan, and Thai people's behavior in receiving information, these factors support the DGA to establish open government data center in order to facilitate information and services to people. According to the role of the DGA, Thailand had the center of open government data for people. They are able to access and utilize the data in the form of digital technology comfortably at one-stop service, even though people who living in distant areas can access online data in real-time by using Government Smart Kiosk located at public areas such as local department stores and hospitals all over the country. It indicates that the GovChannel is a digital service managed by the DGA that not only provide open government data to people in order to promote transparency within public administration, but allow data users to use provided information to create innovation for society in the future. Therefore, the role of the DGA conforms to the concept of open government's components of Scassa (2014) that open government refers to disclosing high-valued open government data to people at all level including inferior groups able to access the data, and promoting public participation in decision-making process as well as the formation of new innovation by the use of data for society. However, there is a notice that the role of the DGA in promoting open engagement, such as International Open Data Day and Open Data Hackathon, is limited only for mobile application developers and technological scholars. People in general are not much participated in these activities to comment or share their ideas about open government. The important factor decreasing people's

attention in open government participation is the existence of digital divide. Some people did not have awareness of open government values and benefits. This research finding conforms to the study of Lorsuwannarat (2016) that problem of people participation in promoting open government would be occurred if digital divide still exists among people in the country, especially in developing country.

5.3 Research Recommendation

5.3.1 Recommendation for Success in Open Government Implementation

According to results of the study in Chapter IV and research discussions, student suggest key success factors for promoting open government in Thailand, composed of three issues as the followings.

(1) The government should have clear approaches for promoting open government in the country. Open government data, the integration and exchange information among government agencies, and data governance framework implementation are strongly supported by the law and valid regulation. Government officers as well as employees at all level are also fulfilled with digital literacy and technology skills.

(2) The intermediate mechanism bridging between the government policy and public needs to support open government should be implemented effectively, such as the center of open government data for people, inclusiveness of digital infrastructure, and internet network which facilitating people at all areas able to access open government data.

(3) People should have enough capabilities in digital technology as well as digital literacy. This is because enough digital capabilities and literacy will cause people able to access information. More interestingly, if people have awareness of open

government values and benefits, they will ready to participate in the formation of innovation from the usage of open government data.

To conclude, it is necessary that the success of promoting open government towards accountable government in Thailand requires the following factors; (1) the government have a clear approach for promoting open government, (2) the intermediate mechanism bridging between the government policy and public needs to support open government is implemented effectively, and (3) people have awareness of open government values and benefits, and ready to participate in the formation of innovation from the usage of open government data. If the three factors had been implemented completely, the success of promoting open government in Thailand would have occurred. On the other hand, in case some factor is missing, it is hardly to strengthen open government for the country.

5.3.2 Policy Recommendation

1) The government should conscientiously enact and enforce laws of public administration and providing public services via digital mechanism, in order to build clarity of promoting Open Government strategies in Thailand. A clearness of Open Government policy and implementation supported by the law will help government agencies and other sectors realize objectives, and ensure that those are on the same pace with strategies. Furthermore, the laws could encourage applying digital technologies to efficiently improve public services and database integration among government agencies. Those will be beneficial for public administration and facilitating digital services to people.

2) Due to the fact that the data governance framework which regulating rights, duties, and accountabilities of shareholders in managing information was newly established, the government ought to promote the concept to all government staffs inclusively by enlightening and raising awareness about this issue. Also, the government should provide handbooks or operational guidance to enhance digital capabilities and skills for those who are responsible for the Act of Digital Public Administration and Services Delivery.

5.3.3 Operational Recommendation

1) Top executives and leaders in government agencies and other sectors should enhance digital capabilities and skills by participating in training courses and digital seminars regularly held by Thailand Digital Government Academy (TDGA), in order to support Open Government policy and to be appropriate role model for their operational staffs as well as other employees.

2) Operational staffs and employees should have self-development habitually by taking online courses in DGA e-Learning services. They are able to improve in digital literacy, in addition, by learning from various channel; social network, video courses, or guide books, in order to be capable of digital capabilities, skills, and performance sufficiently and readily for digital government transformation in the short run.

5.3.4 Academic Recommendation

This research is a part of a dissertation in Degree of Master of Arts in Governance Program which mainly studying digital governance in terms of applying digital technologies to promote and support Open Government in Thailand. The Digital Government Development Agency (DGA) was purposefully selected as a case study



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due to the fact that this is an important central agency which is accountable for digital government transformation. Concept of digital governance, in fact, composes of various issues; management in digital divide, citizen-centric service, knowledge management, data privacy and digital security, etc. Therefore, those issues are noteworthy and should be further researched with collaboration from government sector, private sector and other related agencies, in order to raise awareness and enhance realization of digital governance study among academic field.

Overall, results of the study indicate that factors used to study open government in Thailand, which are external factors (the advancement of ICT and implementation of open government in foreign context) and internal factors (digital government transformation plans, related policies and laws, Thai people's behavior in receiving information, and challenges for open government implementation in Thailand) have an influence in the role of Digital Government Development Agency (DGA) in applying digital technology for promoting open government in the country. However, the study of open government is quite new to academic circle in Thai society. There are few researches and academic articles that study open government in the country. In addition, this research has limitations in scope of content as well as organization used in the study. Therefore, it is necessary to research other interesting issues or other agencies in order to create more the body of knowledge about open government in Thailand. The future studies may research in status or existence of open government in the country, readiness for open government data development, or public participation in the usage of information. Additionally, the forthcoming researches may select another agency which important to people or business sectors as a case study. It will help more understand and conceive an overview of open government in Thailand completely, and



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conduce towards the formation of policy and implementation of promoting open government in the country in practice.

APPENDICE



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APPENDIX A

Interview Form for Semi-Structured Research

Semi-Structured Interview Form

**Topic: The Role of Central Agency in Promoting Open Government in Thailand:
The Case Study of Digital Government Development Agency (DGA)**

Researcher Name: Mr. Thanadol Thongprakob, Graduate Student in Master of Arts in Governance Program, Faculty of Political Science, Chulalongkorn University

Research Advisor: Associate Professor Dr. Chanida Jittaruttha

Respondent Name.....

Interview Date.....

Interview started at.....A.M./P.M. and ended at.....A.M./P.M.

Part I: The Information of Key Informant

Current Position.....Division.....

Years' experience in digital technology.....Years

Level of Education: Undergraduate Bachelor's degree
 Master's degree Doctor's degree

Part II: Interview Questions

1. The role of DGA to promote Open Data

1.1 How does your agency aims to publish government information (that is not personal information or restricted information) via online and why?

.....

1.2 Can people freely use the information by publishing, re-publishing, or sharing without copyright and other restrictions, fees, or other forms of regulation? And how?

.....
.....
.....

1.3 How does your agency aim to store and update, or prioritize importance of the information set before publishing?

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.....
.....

2. The role of DGA to promote Open Access

2.1 How does your agency aim to support, encourage, or facilitate people’s access to government information via electronic or online channel?

.....
.....
.....

2.2 How does your agency aim to solve digital gap problem or help people who lack of access to government information via electronic channel?

.....
.....
.....

3. The role of DGA to promote Open Engagement

3.1 How does your agency aim to encourage public and private participation as well as other sectors in public policy making or electronic public services or e-participation?

.....
.....
.....
.....

3.2 Had the e-participation feedback been informed to the participants in regards of the results of such recommendations, critiques, or opinions?

.....
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.....
.....

4. Case study of your agency’s success in promoting open government in Thailand

4.1.....

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.....

4.2.....

.....
.....

5. Factors affecting the role of DGA in promoting open government

How about your perspectives in the following issues affecting the role of the DGA in promoting open government in Thailand? And why?

5.1 External Factors

(1) The advancement of information and communication technologies (ICTs)

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.....

(2) Implementation of open government in foreign context

.....
.....

5.2 Internal Factors

(1) Digital government transformation plans

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.....

(2) Policies and laws related to open government

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(3) People’s behavior in receiving information

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.....

(4) Challenges for open government implementation in Thailand

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.....

Thank you for your kind cooperation ☺

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