

# Comparative Study of Open Government Data Law towards Data Governance Legal Frameworks

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## Abstract

The objective of this research is to review the data governance aspects, especially the use of open data law in different countries including USA, Republic of Korea, and Thailand. Currently, a draft version of Thailand Open Government Data Law is based on Data Governance Framework and Components from Data Governance Institute (DGI). This comparative study could be a guideline for both legislators and government to refine some aspects of law suitable for the context of Thailand.

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*Keywords:* Open Data, Open Government Data, Data Governance.

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## 1. Introduction

**T**HE growth of social media trend in the present age is the evidence that there is a rapidly developing in the exchange of various information in different dimensions. Especially, the government website is the center of information which significant benefits to citizens for obtaining the amount of data in terms of welfare services, commonwealth and other support government services. If people go backwards in times for over 10 years ago, this information is restricted to access, non-public use and collect in the analogue data. The only way to acquire this information is that people must go to the relevant or specific agencies.

Nowadays, the new technologies step into people's lives more than the past; there are the devices which facilitate to access the data and more easily to obtain it. Data is the one significant factor that we use to develop our lives, our communities and life skills.

Consequently, the government agencies in many countries recognize the importance of public data access for transparency and efficiency of using data. Open Government Data (OGD) cites established by government agencies around the world, many different reasons for starting open data initiatives, including increasing government transparency and accountability [1]. From the annual global benchmark for publication of open government data or called The Global Open Data Index (GODI).

In 2017, there are 94 countries to be the partnership and categorized 15 titles in any topics, i.e. Government budget, Company Register, National Laws and so on for ranking the quantity of sharing information by the government in many countries [2]. Furthermore, the legislation of the data usage rights and right to disclosure are a highly significant part though. There are many countries around the world have prescribed the act which refers to this part and includes to other subjects that relate to open government data. For instance, the Open Government Data Act 2016 (USA) and Promotion of the Provision and Use of Public Data Act 2016 (South Korea) have stated to this part clearly and legible.

For Thailand, the definition of "Data governance" is still narrowly known for citizens even though the act that is relevant is

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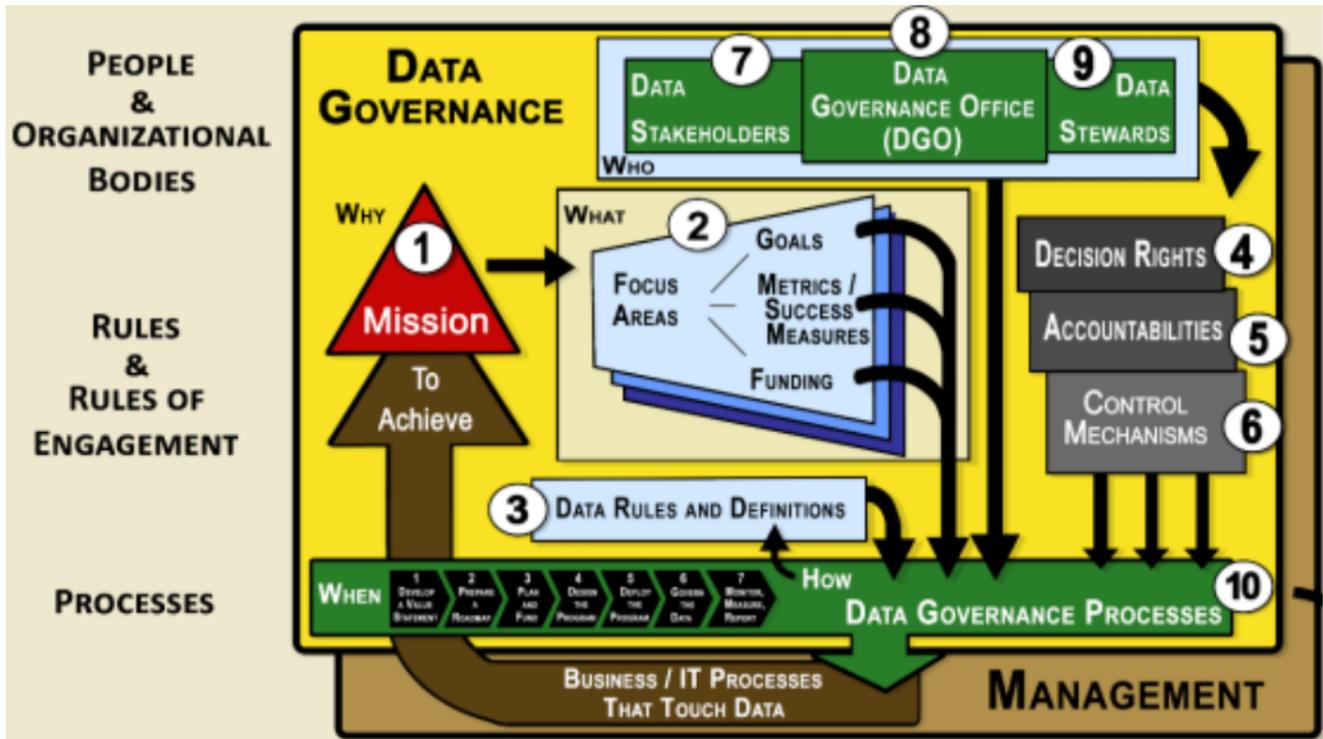


Fig. 1. The DGI data governance framework.

the Draft of Public Information Act B.E (2017). The government website that discloses open data (data.go.th) for searching in any fields but it still has not covered and been obvious since the government did not promote and publish to people the reliable sources and how to access the dataset for using in their business or other ways.

Thus, this research would like to study the gap of law relationship to open government data in Thailand and samples of countries which have prescribed on open government data act (USA and South Korea) by emphasizing on the aspect of data analysis, data collection and the right of data access to enhance data governance in terms of data analysis in the government agencies. The output from this study is beneficial for reform and promote data governance to be consistent with using open data in government agencies.

## 2. Related Theory

### 2.1. Open Data

Open data is data that anyone can be accessed freely used, reused, redistributed, modified and shared it [3]. The data must be in a format that is easy to use and can be modified using computer software. The cost of acquiring the data is no more than the cost of copying especially downloading from the internet [4]. Moreover, when governments or organizations release non-personal data, it

enables to develop resources which make crucial improvements to the public value [5].

### 2.2. Data Governance

Data governance [6] is a set of processes that assures that data, as assets, are formally and properly managed throughout the enterprise to be able to work with the trustable data and involved people can be made accountable for any adverse event that happens because of poor data quality. It is about putting people in charge of fixing and preventing issues with data so that the enterprise can become more efficient and stable. Data governance also describes an evolutionary process for a company, altering the company's way of thinking and setting up the processes to handle data so that it may be utilized by the entire enterprise.

Currently, there are a few of framework of data governance. Among of them, the popular one is proposed by the Data Governance Framework from the Data Governance Institute (DGI) or called (The DGI framework) [6], as shown in Figure 1. that can be effective data to support governments enhance the quality, availability and integrity by fostering cross-organizational collaboration and structured policy-making.

In brief, the DGI Framework consists of three sections which cover ten components. The section of Rules and Rules of Engagement defines the initial components which are required to begin the data governance program. It consists of 1) Mission

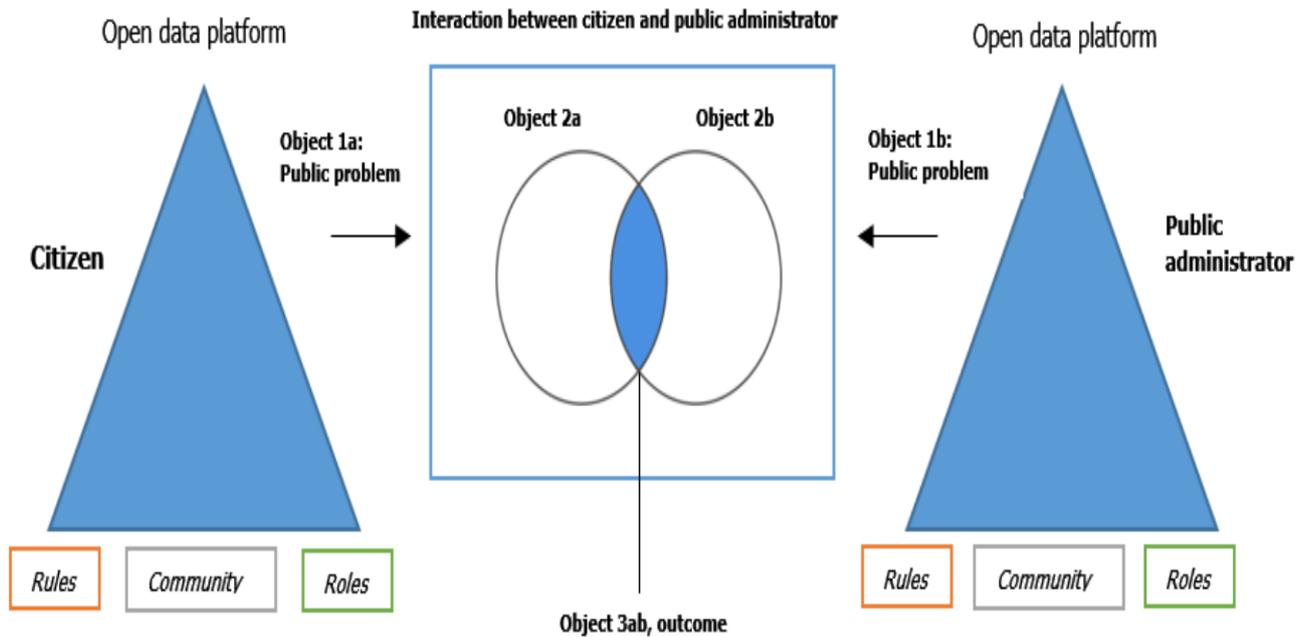


Fig. 2. Democratic activity model of open data use.

and Vision 2) Goals, Governance Metrics and Success Measures, and Funding Strategies 3) Data Rules and Definitions 4) Decision Rights 5) Accountabilities and 6) Controls. Another section, People and Organizational Bodies, defines the people and their roles in organization in data governance program which related to the components in the first section. This sections comprises of 7) Data Stakeholders 8) A Data Governance Office and 9) Data Stewards. Lastly the processes which will drive all activities are defined in the last section. The processes are sequential (and repeatable) from 1) Aligning Policies, Requirements, and Controls 2) Establishing Decision Rights 3) Establishing Accountability 4) Performing Stewardship 5) Managing Change 6) Defining Data 7) Resolving Issues 8) Specifying Data Quality Requirements 9) Building Governance Into Technology 10) Stakeholder Care 11) Communications and 12) Measuring and Reporting Value.

### 3. Related Research

#### 3.1. Research in Foreign Countries

Ruijter *et al.* [7] has studied how to developing a Democratic Activity Model of Open data (DAMODU) by representing the qualitative multiple case study through the three democratic processes, i.e. monitorial, deliberative and participatory. Figure 2 shows the concept of the model in the differences in information requirements. This study argued that the current open data platform does not take into account of this model process. Therefore, the concluding of this study was a context-sensitive open data design facilitates the transformation of raw data into meaningful in-

formation by public administrators and citizens. To confusion because equations do not balance dimensionally. If you must use mixed units, clearly state the units for each quantity that you use in an equation.

#### 3.2. Research in Thailand

Srimuang *et al.* [8] has studied and presented a public data of public sector assessment form by developing indicators in Thailand. There are steps to assess by examining the current status and the progress of public data appraisal in Thailand. This will focus on the public disclosure by following the principal of public disclosure. The assessment will be based on the public data assessment of the public sector in the context of Thailand and an empirical survey of in-depth interviews with five experts working in the public domain of government in Thai government agencies and then summarized and developed an evaluation model.

### 4. Research Methodology

A study of the conceptual framework for the use of open government data under the framework of data governance for Thailand. To study the legal gaps analysis that regarding the use of open data in the foreign countries and in Thailand by designed the process of study that divided into 6 by the following:

#### 4.1. Study on Laws Related to The Use of Public Data

- To define the sample countries where the law has published and applied to the use of public data. In this study selected

the laws of the United States and South Korea to be the sample countries due to these countries have initiated to use of public data by government agencies. To find out the difference of the legal perspective between the Western country and Eastern country in terms of comparative the similarities and differences.

- To study the laws and regulations related to the use of public data in Thailand. In this case, mainly focus on the draft of Public Information Act (B.E. 2560) to be used in this study.

4.2. Gap Analysis

By divided into four main areas, i.e. Privacy, Data Governance, Governance Framework and Data Science due to these subjects is the key components to consider in the conceptual framework.

4.2.1. Privacy

To study the composition of the law in terms of protection of personal data in the case of disclose to be an open government data. Moreover, to search for the case studies that occurred from actual events and decisions of Supreme Court that consider the causes and solutions including penalties.

4.2.2. Data Governance

To study the data governance for use in the sort of data analytics for analyzing the purpose of the use of open data in each type of data

4.2.3. Governance Framework

In the field of the governance framework, in this study will use the DGI framework for being a prototype of development in this part.

4.2.4. Data Science

In terms of doing business, Data science is used to analysis for business benefit purposes. Therefore, it is necessary to use this legal framework to conduct and control.

4.3. Legal Framework Refinement

After comparing the legal aspects of the three countries and found out the differences in each section, at this stage, the framework of the law on the use of public data will be set up to suit the context of Thailand by adjusting from the Public Information Act (B.E. 2560) of Thailand.

5. Comparative Results

By comparing the legal views on the use of public data from the three countries which are different and similar in each aspect that can be divided into the following main topics.

5.1. Definitions

5.1.1. USA

The definition of this law is divided into 14 words focusing on the meaning as shown in Table 1.

Table 1. Definition of Law in USA.

Agency	Data	Data Asset	Director
Enterprise Data Inventory	Information Resources Management	Information System	Information Technology
Machine-Readable	Metadata	Nonpublic Data Asset	Public Data Asset
Open License	Open Government Data Asset		

5.1.2. Korea

The definition of this law is divided into 4 words focusing on the meaning as shown in Table 2.

Table 2. Definition of Law in Korea.

Public Institution	Public Data	Machine-Readable Form	Provision
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5.1.3. Thailand

The definition of this law is divided into 7 words focusing on the meaning as shown in Table 3.

Table 3. Definition of Law in Thailand.

Public Data	Official Data	Personal Data	Government Sector
Public Data Commission	Office of the Public Data Commission	Secretary of Public Data Commission	

From the tables of the definition of the three countries. In general, all countries provide definitions of similar terminology but differ in some parts. The USA as Section 3 is provided the definitions cover all areas of the term that related to the use of public data as focus on the Public Data Storage, Information System, Open License and so on which are identical to the definition of Korea as Section 2 by refer to the Machine-Readable. For Thailand as Section 4, this part is not mentioned too but has only focused on the definition of the organization of public data sector that has a duty to provide public data services.

## 5.2. Purpose

### 5.2.1. USA

Referred to Section 2 mentioned the purpose of the Act that Federal Government data is to open, available, discoverable and usable to the general public and effectiveness in Government. To create economic opportunities promotes scientific discovery and strengthens in democracy.

The Federal Government has the responsibility to be transparent and accountable to the citizens for data controlled, collected or created that should be originated, transmitted and published in a modern, open and electronic format to be as readily accessible as possible, consistent with data standards under this Act or otherwise permitted by law. Furthermore, the Federal Government data should involve many types of data including data generated by applications, devices, networks and equipment which can be harnessed to improve operations, lower energy consumption, reduce costs and strengthen security.

### 5.2.2. Korea

Referred to Section 1 mentioned that the purpose of this Act is to guarantee citizens' right to access public data and contribute to improving the quality of life for developing the national economy through the utilization of such public data in the private sector by prescribing matters for promoting the provision and use of data held and managed by the public institutions.

### 5.2.3. Thailand

Referred to Section 6 mentioned that the purpose of this Act is to provide individuals and communities with information and access to information or public information in possession of government agencies include the complaints to government agencies and be informed of the results without delay. For government agencies have to disclose public information that is not related to public security or confidentiality of government information as prescribed by law. Moreover, to provide access to public information by properly, convenient, timely and free of undue expense. In order to local administrative organizations, local authorities and local administrations to disclose information and report to the public. To promote the exercise of civil rights. In particular, the right to know and access public information is important for learning and public participation in monitoring the use of government's power to be transparent and protect public rights to privacy of individuals for preventing fraud and misbehaviour.

From the difference of purpose in each country, the purpose of USA is represented by Federal Government, which is responsible for the disclosure of public data to the citizens for economic opportunity, scientific development and democratic consolidation for supporting to be transparent and accountable to citizens. For Korea, Public institutions will be overseen in access to public information by emphasizes on people who must have equal access to information in order to improve the quality of life and economy

in terms of public and private sectors by prescribed to strictly regulating of law. For Thailand, government agencies, local administrative organizations, local authorities and local administrations which are responsible for disclose information and report to the public including can inform complaints to government agencies.

## 5.3. Open Government Data

### 5.3.1. USA

Referred to Section 4 as Chapter 35 of title 44, United States Code mentioned Open Government data that be machine-readable data required, open by default (available in an open format and under open licenses), Worldwide Public Domain Dedication Required (to be published as part of the worldwide public domain) and Innovation (provide opportunities for innovation in the public and private sectors that engage with nongovernmental organizations, citizens, nonprofit organizations, colleges and universities with law and regulation).

### 5.3.2. Korea

Referred to Section 2, subparagraph 2 used "public data" instead of open government data and cited that be data or information, databases and electronic files (in optical or electronic form) which created or acquired and managed by any public institution.

### 5.3.3. Thailand

Referred to Section 7, for the disclosure or access to open government data by gather, produce, publish, store, the process when any person requests in accordance with the rules and procedures prescribed by the public data commission. To inform the list of documents or information to be disclosed as a result of performing the official service under the law on administration and can access through information systems, network or website of a government agency.

## 5.4. Public Data Commission

### 5.4.1. USA

Referred to Section 4 as Chapter 35 of title 44, United States Code mentioned §3564. Federal agency responsibilities and §3565 Addition Chief Information Officer responsibilities are responsible for information resources management in terms of improving the integrity, quality and utility of information to the users by using an open format. Information Dissemination, each agency will provide access to open government data assets online and maintain the publication of data assets which are directly related to activities that protect the safety of human life or property as identified by the open data plan of the agency. To collaborate with agency employees, the public and contractors in using open government data assets to improving data use.

#### 5.4.2. Korea

Referred to Section 5, the number of the member at least 35 including 2 chairpersons who prescribed and commissioned by the Prime Minister from expertise and experience in the provision use of public data. The term of office of the members commissioned shall be two years. A working committee on public data strategy will be established under the jurisdiction of the Strategy Committee. Like Section 6, the Strategy Committee will mainly be deliberated on a master plan for promoting the provision and use of public data.

#### 5.4.3. Thailand

Referred to Section 28, the committee was formed of five persons who nominated by the King of Thailand and appointed to Undersecretary of Defense, Secretary-General of the Government Development Board, Secretary-General of the Council of State and Secretary-General of the National Security Council was the committee, and the committee will select one qualified member as chairman. The qualified members and the secretary-general will hold office for a term of four years. As Section 40, the committee is responsible for defining policies, measures, strategic plans guidelines for disclosure of information. To set issue rules, regulations, notifications, orders or other actions to comply with this Act.

From the public data commission of these countries, USA has not clearly defined the qualification of the member of the commission but specified the duty of the member including collaborating with another agency for support in using open government data. Korea and Thailand have clearly defined the number, the term of work and qualification of the member of the commission but the difference of the two countries are Korea will select the member from the outsiders who have an expert background in using public data. For Thailand is defined that select the member from the individuals within the government organization.

### 5.5. Technology Portal

#### 5.5.1. USA

Referred to Section 4 as Chapter 35 of title 44, United States Code mentioned §3566 Technology portal is defined that The Administrator of General Services will maintain a single public interface online as a point of entry dedicated to sharing open government data assets with the public and coordination with agencies to the method of accessing in any open government data assets published through the interface.

#### 5.5.2. Korea

Referred to Section 21, the operation of public data portal. The Minister of the Interior will be the person who builds, manage and promote the utilization of an integrated system for provision of public data by request the heads of public institutions to provide cooperation necessary for building and operating the public data portal, e.g. linking public data and provision of public data.

#### 5.5.3. Thailand

N/A

From the portal of access to public data, USA and Korea are adverted under this Act about operating the public data through the interface and method of accessing.

### 5.6. Quality and Standardization of Public Data

#### 5.6.1. USA

N/A

#### 5.6.2. Korea

Referred to Section 22 is defined to ensure the stable quality control and appropriate level of quality of the public data generated or acquired and managed by the public institution. To diagnose, evaluate, support, improve and maintain the quality of public data which may have substantial follow-on effects on society and the economy. As Section 23, in terms of standardization of public data has co-operated with the Minister of Science, ICT and provided Future Planning for promoting the provision and use of public data and manage as more efficiently. By the way, will not apply any public data standards are included in the Korean Industrial Standards under the Industrial Standardization Act:

#### 5.6.3. Thailand

N/A

From this part, Korea is the only country to define the appropriate level of quality and standard of public data.

### 5.7. Undisclosed Information

#### 5.7.1. USA

N/A

#### 5.7.2. Korea

Referred to Section 20, to exclude some public data from the list, the Strategy Committee will deliberate and exclude them from the list. After the Strategy Committee's decision on such exclusion must announce the data to be excluded from the list and the grounds for exclusion for the convenience of users.

#### 5.7.3. Thailand

Referred to Section 18, Information that may cause damage to the monarchy will not be disclosed. As Section 19, disclosure will cause damage to national security, international relations, the economic or fiscal stability of the country. Including to public data that be caused harm to the life or safety of any person, Medical report or personal information disclosure would be an intrusion of unreasonable personal rights. Information that is protected by law does not disclose information or information that is provided by the parties without the agency's disclosure to unrelated parties.

From this part, USA not mentioned too but find in Korea and Thailand which refer to these parts. Korea defined that if need to

exclude some information from disclosure list, it will be a duty of the Strategy Committee to consider and decide to exclude from the list but did not specify the categories of information that be an undisclosed list. For Thailand, the information that should not disclose to the public is related to be a damage towards the monarchy, economic, national security, and personal information including medical report and information that is protected by law. By the way, is not specified the person who is responsible for making decisions about these data.

## 6. Conclusions

This research presents the aspect of legal provision in terms of open government data between of the three countries: USA, Republic of Korea and Thailand. In order to Thailand has not been officially promulgating for this Act, has only draft of public information act which show the details of matter of law. This research aims to the conceptual of data governance in Thailand by comparison with foreign countries law. To be a guideline for the legislator or people that involved to refine or enhance some aspects of law which gain from foreign countries for adjusting to suit the context of Thailand.

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