

The Current Development of Open Election Data in Taiwan

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ABSTRACT

This study reviews election records and introduces the development of open election data in Taiwan over the past seven decades. The study reports the frequencies of each previous election and current data formats using a 5-star open data deployment scheme. Currently, the earliest open election data for Taiwan is the election data from 1990. This election data is composed of election data and electoral bulletins. The open electoral results were in CSV formatted files, which fitted the definition of 3-star open data. The open electoral bulletins were in the format of PDF files, which were considered only 1-star open data based on the open data format definition. Improvements to the open election data include the following aspects: raise the open data to a 4-star format for linkage to other databases; open more election data, especially for elections held before 1990. The improvement will increase the usage of the open election data in the future.

Keywords

open election data; electoral bulletin; electoral results; open data 5-star deployment scheme

1. INTRODUCTION

The government produces and collects a broad range of different types of data to do their duties. Opening this data collected by the government treats the data as a resource for increased public transparency and helps the public better understand what the government does [1]. Each election, the government collects a lot of data, including electoral bulletins, election results, and many others. Making key electoral data available can help stakeholders use that data to enhance the integrity of elections and hold electoral management authorities and other electoral actors accountable [2].

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The electoral system in Taiwan starts from the period of Japanese occupation. Two elections for city/county council spokespersons were held in 1935 and 1939. However, the Taiwan elections during the Japanese occupation period were not universal suffrage (general elections) since there were only as little as 28,000 (about 2% of the population) qualified voters (total population of about 5 million). Different electoral systems were held after the Chinese Nationalist Party (Kuomintang, KMT) took over Taiwan in 1945. Most elections held after 1945 were universal suffrage.

Election results are the realization of public opinion. The change of political democracy in Taiwan can be found in the historical development of elections. People pay attention to the electoral data, including electoral bulletins and electoral results, and have recently requested to open the election data recently. The electoral bulletins describe brief information about the candidates, such as name, birthday, photo, politics, and manifesto. These electoral bulletins can help citizens to realize the politics by elected government leaders and spokespersons, which could be useful when asking politicians to keep their promises. The election results help to realize public opinion to politicians as well as political parties.

The importance of open election data is evident, since providing detailed election data publicly is important for democracy supervision and the awaking of voters. Moreover, open election data also provides abundant data sources for researchers to study the development of democracy.

This study introduced the current situation of available election data in both hard copy and electronic file format. This election data is currently available in the Central Election Commission in Taiwan. This study adopts a 5-star open data deployment scheme that is presented by Tim Berners-Lee [1, 2] to exhibit how good the open election data is. The study also proposes further improvement directions for the open election data, including releasing all kinds of election data and let people to utilize it for creating useful and interesting applications, which is one major purpose for the open election data movement.

The remainder of this paper is organized as follows. Section 2 illustrates the election data, including electoral bulletin and electoral results, in Taiwan. Section 3 summarizes the election data based on the open data 5-star deployment scheme. Finally, Section 4 concludes findings in this study and gives future perspectives.

2. Election Data in Taiwan

In the past seven decades, elections in Taiwan have been routine political activities that were held each every several years. The current government systems in Taiwan are composed of the following levels: central government, province/municipality/city/country, and county-controlled city/township/rural township. Presidential elections and congressional elections are two major elections in the central government level. In the local government level, citizens can elect local civil servants. The following subsections briefly introduce the change in the elections over the past seven decades in Taiwan.

2.1 Central Government Election

2.1.1 President and Vice President Election

The president and vice president in Taiwan had been elected through two ways in the past several decades. First, the indirect election by the National Assembly Representatives were held seven times during the period between 1948 and 1990. In 1949, KMT lost control of Mainland China in the Chinese Civil War. The government was evacuated (or relocated) to Taiwan. In 1954, as the term of the first National Assembly Representatives were about to expire, the Judicial Yuan of Taiwan ruled that the tenure of the National Assembly Representative would continue until the respective delegate region elections could be held, which froze the election of most National Assembly Representatives. Only a small part of Representatives were periodically elected through by-elections. Presidents and vice presidents were elected by the National Assembly Representatives until the first general election (universal suffrage) in 1996. The presidential elections were held in 1996, 2000, 2004, 2008, 2012, and 2016. The term length of president and vice president was shortened from six to four years

in 1996. The president and vice president are nominated on a joint ticket.

2.2 Congressional Election

In the beginning, the congress in Taiwan is composed of two institutions: The National Assembly and Legislative Yuan. Thus, two kinds of congressional elections, legislator elections and national assembly representative elections, were held.

2.2.1.1 Legislator Election

The legislator election was started in 1948. The tenure of the first legislators should have ended in 1951. However, KMT lost control of the Mainland, which made it impossible to hold new elections in China. The Judicial Yuan decided that the tenure of the first legislators would continue. The legislators came to be “the non-reelected congress.” Only a small amount of legislators were elected by six additional by-elections during 1969 and 1992. After 1992, the legislator election changed to a general election (universal suffrage).

2.2.1.2 National Assembly Representative Election

The National Assembly Representative election was a special system in the world and the system was founded from the supervisory system in ancient China. In the beginning, the National Assembly Representative election was performed like the legislator election. The National Assembly Representative election was first held in 1947. During 1947 to 1990, the National Assembly Representatives were voters for the presidential and vice presidential election. After having one by-election and three additional by-elections, the second election was held in 1991, and the third election was held in 1996. Nevertheless, voting for president was not the duty of National Assembly Representatives

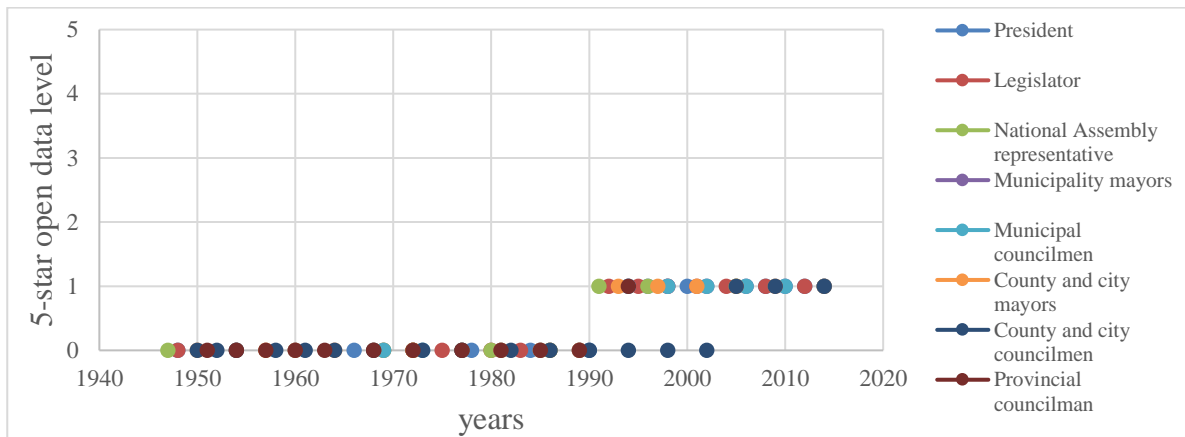


Figure 1. Level of open electoral bulletin.

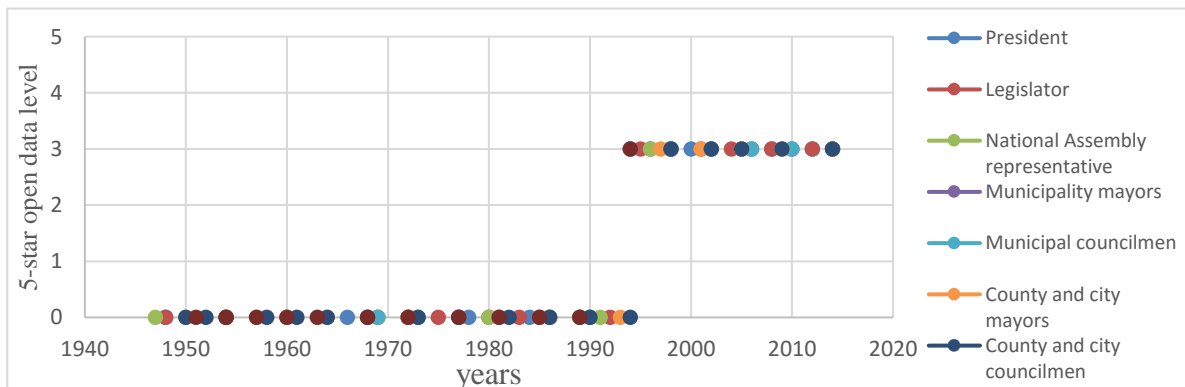


Figure 2. Level of open electoral results.

elected in 1991 and 1996. In 2005, the National Assembly Representative election was held again for only one task to amend constitutions. After that, the National Assembly Representative election would no longer be held.

2.3 Local Civil Servants Election

Local civil servants elections in Taiwan include municipality mayors, municipal council spokespersons, county and city magistrates, county and city council spokespersons, township supervisors (mayors), township assembly representatives and chiefs of village, etc. Since there are too many different elections in Taiwan, this study only reports important elections, including for municipality mayors, municipal council spokespersons, county and city magistrates, and county and city council spokespersons. The Province administration system was built in Taiwan before 1994; therefore, this study also includes the abolished provincial council spokespersons.

3. Open Election Data

This section discusses the open election data in Taiwan. As Figure 1 revealed, electoral bulletin data was not open before 1990. The non-open election data is noted as 0-level in the figures. Since 1990, most of the electoral bulletin data is open. Furthermore, the open electoral bulletins were graph files, which only fitted 1-star in the 5-star deployment scheme for open data, as presented by Tim Berners-Lee [1, 2].

In 2010, Berners-Lee suggested a 5-star deployment scheme for open data, as shown in Table 1. For the 1-star level, the data is graph files, which is almost impossible to be used by others because a further recognition process should be performed. Therefore, open electoral bulletins in Taiwan need to be improved. For levels lower than 4-level, the open data cannot be accessed through URI for people to point to the data. Since all open election data in Taiwan is lower than 4-level, there is no doubt for the final goal to upgrade the open election data at a 5-star level so that the data can be further used.

Figure 2 shows levels of electoral results and the figure exhibits that all electoral results were not open before 1993. Since 1993, all of the electoral results have been opened using a CSV format. Since the CSV format is a non-proprietary open format, the open electoral results fit 3-star in the 5-star deployment scheme.

Table 1. 5-star deployment scheme for open data [1, 2].

Star-level	Definition
★	Make the data available on the Web (whatever format) under an open license
★★	Make the data available as structured data (e.g., Excel instead of image scan of a table)
★★★	Make the data available in a non-proprietary open format (e.g., CSV as well as of Excel)
★★★★	All the above-mentioned conditions should be fulfilled, and add to W3C. Use URIs to denote things, so that people can point at the data.
★★★★★	All the above-mentioned conditions should be fulfilled, plus link the data to other data to provide context.

4. Conclusion and Future Perspectives

This study analyzed election data in Taiwan for the past several decades. The Central Election Commission has not opened any election data before the election of 1990. The open election data includes open electoral bulletins and open electoral results. The open electoral bulletin needs improvement to its public announcement, which is in a PDF format and is defined as 1-level in the 5-star deployment scheme. The open electoral results are all opened as CVS format to satisfy the 3-level in the 5-star deployment scheme. The analysis finds that the following two suggestions can be applied for improving quality of the open election data. The first is to open more election data before the year 1990. The second is to upgrade the open election data to a 5-star level. Upgrading the open electoral bulletin and the open electoral results to a 4-star level merits the Central Election Commission to acquire a better and open society.

5. Acknowledgement

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6. REFERENCES

- [1] Ubaldi, B. (2013), "Open Government Data: Towards Empirical Analysis of Open Government Data Initiatives", OECD Working Papers on Public Governance, No. 22, OECD Publishing. <http://dx.doi.org/10.1787/5k46bj4f03s7-en>
- [2] National Democratic Institute Open Data Initiatives, Introduction - Unleashing the Potential of Election Data <http://www.openelectiondata.net/en/guide/introduction/>.
- [3] Tim Berners-Lee. "Putting Government Data online". June 2009. <http://www.w3.org/DesignIssues/GovData>
- [4] 5* Open Data. <http://5stardata.info/en/>