A Massive Election Fraud Revealed by Numbers

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Abstract. In this article, we are going to prove that there was massive election fraud in the Taiwan Presidential election on January 11, 2020 based on statistical data. The statistical anomalies show that the results are the results of human interferences instead of a natural pattern of human voter behavior.

Backgrounds. The two major political parties in Taiwan are KMT and DPP. These two parties share more than 90% of the votes in the elections for the past 16 years.

A presidential election is held every 4 years, and an election for local city and county officials are also held every 4 years. There is a two years gap between these two elections.

A presidential election was held in January 2016, where the ruling party KMT lost by a wide margin and DPP took power. Within two and a half years, the DPP's approval rating dropped significantly and the KMT regained controlled on most of the cities and counties.

Election fraud cannot be ruled out in Taiwan's electoral history. There were cases reported in 2000, 2004, and 2018.

Facts and data. On January 11th, 2020, DPP candidate, incumbent President Tsai Ying-Wen won by a landslide margin to the KMT candidate, Han Guo-Yu, the mayor of Kaohsiung City.

However, the statistics show that there is strong evidence of fraud suggesting that the DPP victory was a result of a massive election fraud.

Define the **relative support rate (RSR)** of a political party to be the votes one candidate gets divided by the votes the candidate nominated by the same party got in the previous election. In a political system dominated by two major parties, the RSR for each party should be **negatively correlated**.

Take the United States for example, if we define for each state, x = the support rate of the Democratic candidate in one election divided by the support rate of the Democratic candidate in the previous election, and y = the votes of the Republican candidate in one election divided by the votes of the Republican candidate in the previous election, based on the data of the Presidential elections for the last 40 years, the x's and y's for the 50 states plus DC can be calculated and shown in Fig. 1. As expected, the correlation coefficient for the set of 459 data is negative, or -0.134 to be exact. It's hard to imagine under any political atmosphere or voter behaviors could result in a positive correlation when the sample data is large enough.
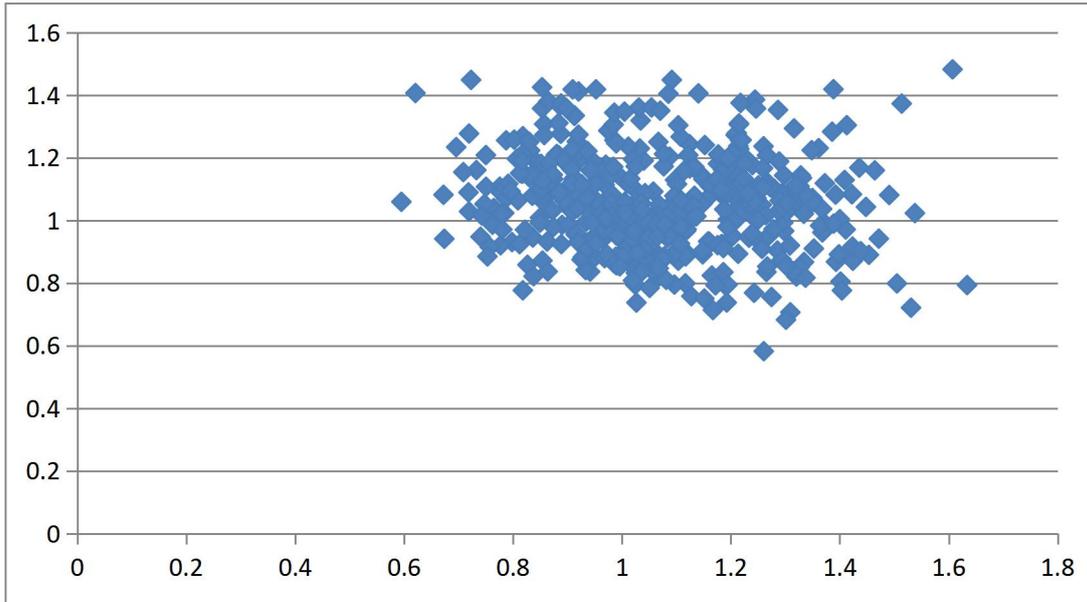
Fig 1. The x-axis shows the RSR for Democrat, the y-axis shows the RSR for Republican.

We use similar methods to mark the swing of votes in Taiwan. Define x = the votes of the KMT candidate in one election divided by the votes of the KMT candidate in the previous election, and y = the votes of the DPP candidate in one election divided by the votes of the DPP candidate in the previous election. The numbers are based on a neighborhood ("里", an administrative area that consists of around 3,000 households in average) .

If we compare the results of the 2020 and the 2018 elections, the RSR's of two parties in 1,032 neighborhoods show a clear positive correlation in New Taipei City.
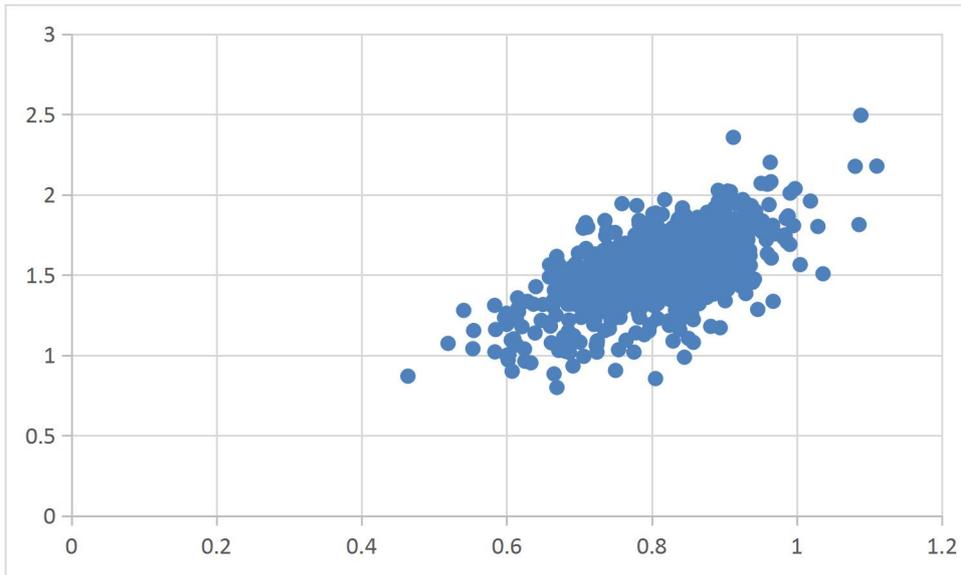

Fig. 2. The x-axis shows the KMT's RSR, the y-axis shows the RSR for DPP.

Since RSR is purely defined by arithmetic and should obey the principle of statistics, we do not believe that this pattern is a result of natural voting patterns, so there must have been massive election fraud.

Before analyzing more evidence, let's consider what kind of traces would be left behind if widespread and massive fraud is not executed in a uniform fashion.

There are two major acts in an election fraud: (1) ballot stuffing - adding pre-stamped votes for one candidate; and (2) ballot stealing – removing valid votes for another candidate.

Consider a data point on an RSR scatter chart, if there is ballot stuffing to increase the ballots of the candidate who's RSR is marked on the y-axis (DPP), this point will move up vertically. However, if we do ballot stealing on the opposing candidate (KMT), this point will move toward left. If we combine these two types of fraud, this point will move toward the upper-left. If there is widespread and massive election fraud, and these two actions are not carefully balanced, a positive correlated RSR scatter chart will be generated.
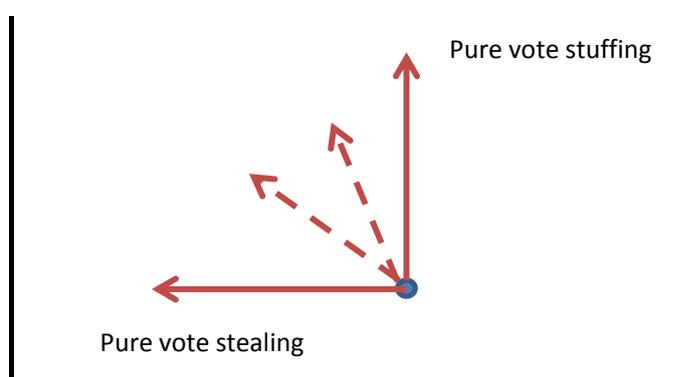

Fig.3 The effects on an RSR chart when ballot stuffing and/or ballot stealing is performed.

Ballot stuffing will have the effect of increasing the turnout rate, while ballot stealing will have the effect of decreasing the turnout rate. If these two acts are not balanced, the increase in voting rate will exhibit a positive correlation with the cheater's RSR's.

The voting rate in January 2020 increased 8% from the November 2018 election. Out of 1,032 neighborhoods in New Taipei City, only 70 or 6.8% of them have a decreased turnout rate.

However, in the 30 neighborhoods where KMT's RSR's decreased the most, 90% of them had a lower turnout rate. This coincides with the act of ballot stealing.

In the 400 neighborhoods where DPP's RSR's increased the most, none of them had a lower turnout rate. This coincides with the act of ballot stuffing.

Fig. 4 vividly shows how the increase in turnout rate favored the DPP candidate Tsai.
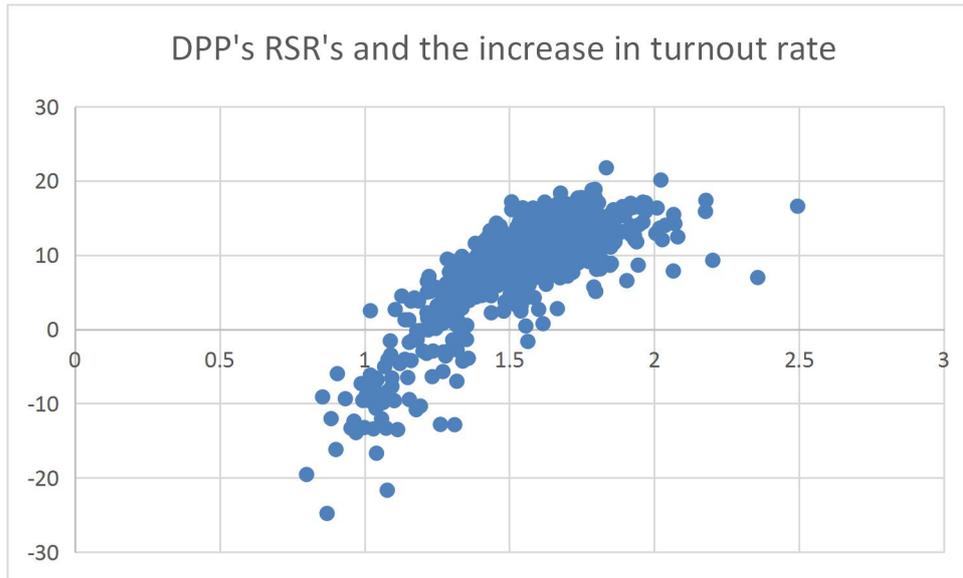
Fig. 4 The x-axis indicates the RSR of DPP, the y-axis indicates the difference in turnout rate by percentage.

After analyzing the data of New Taipei City, we expand our study on five major cities in Taiwan.

They contain 3,702 neighborhoods and more than 45% of the population of Taiwan. The RSR scatter chart of these five cities is shown in Fig. 5. The correlation coefficient is 0.2627.
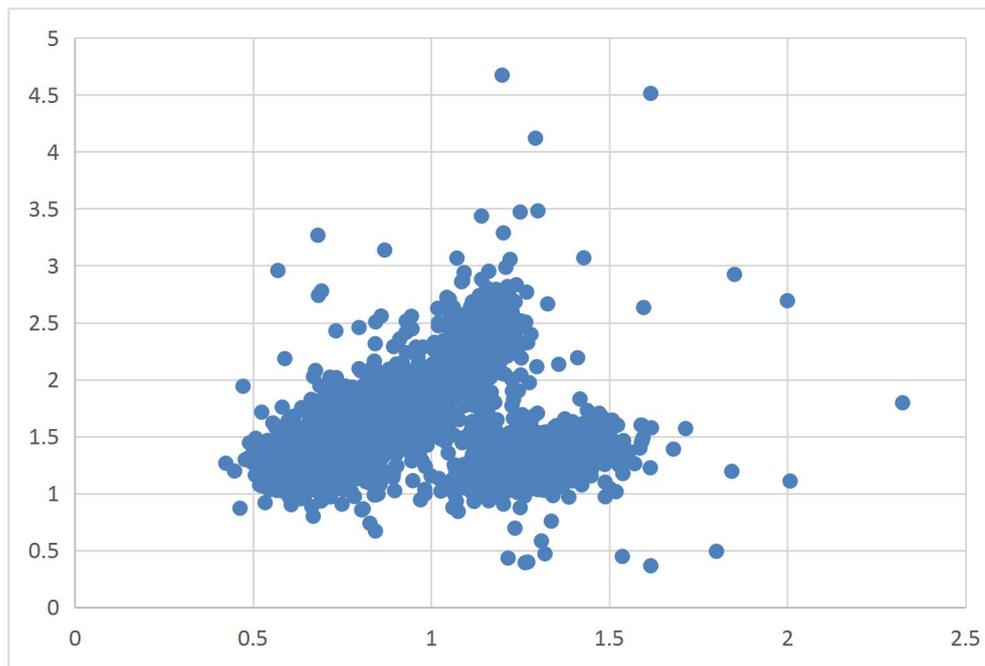

Fig. 5. The x-axis shows the KMT's RSR, the y-axis shows the RSR for DPP.

To get an idea of how unlikely this data could be positively correlated and generated by natural voting behavior, we ran a computer simulation by randomly selecting 3,702 data points (where both x and y were randomly selected between 0 to 100,000), and calculated the correlation coefficient.

The expected value is clearly 0.

After sufficient tests, we found the standard deviation of the generated correlation coefficient is close to 0.01637.

The actual correlation coefficient of 0.2627 is 16 times that of the standard deviation.

Although the actual RSR data from different election results might be different in nature from our simple model (they must surely be negatively correlated), we believe the standard deviation of 3,702 samples guarantees that it would not differ significantly from 0.01637.

Fig. 5 suggests that there seems to be two groups of data put into one chart.

When we line up the 3,702 neighborhood's RSR's for KMT city by city, we see a shocking contrast.

In two cities, the RSR's for KMT are clearly above 1 with almost no exception, while the vast majority of the RSR's for KMT in the other three cities are below 1 (marked in red).
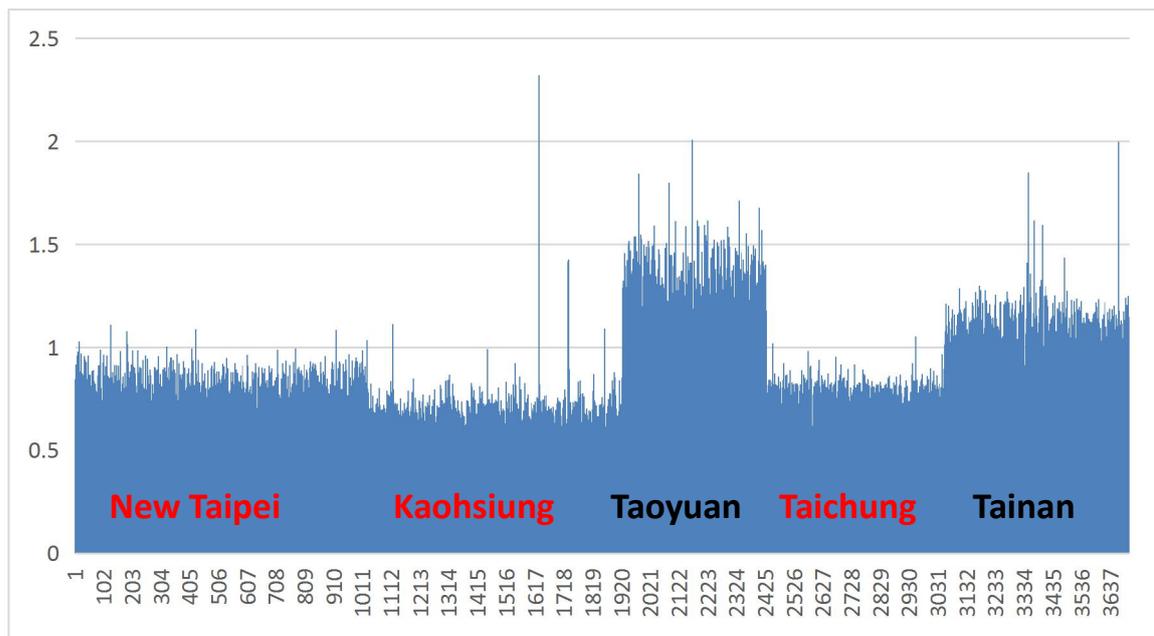

Fig. 6. The KMT's RSR's in five cities.

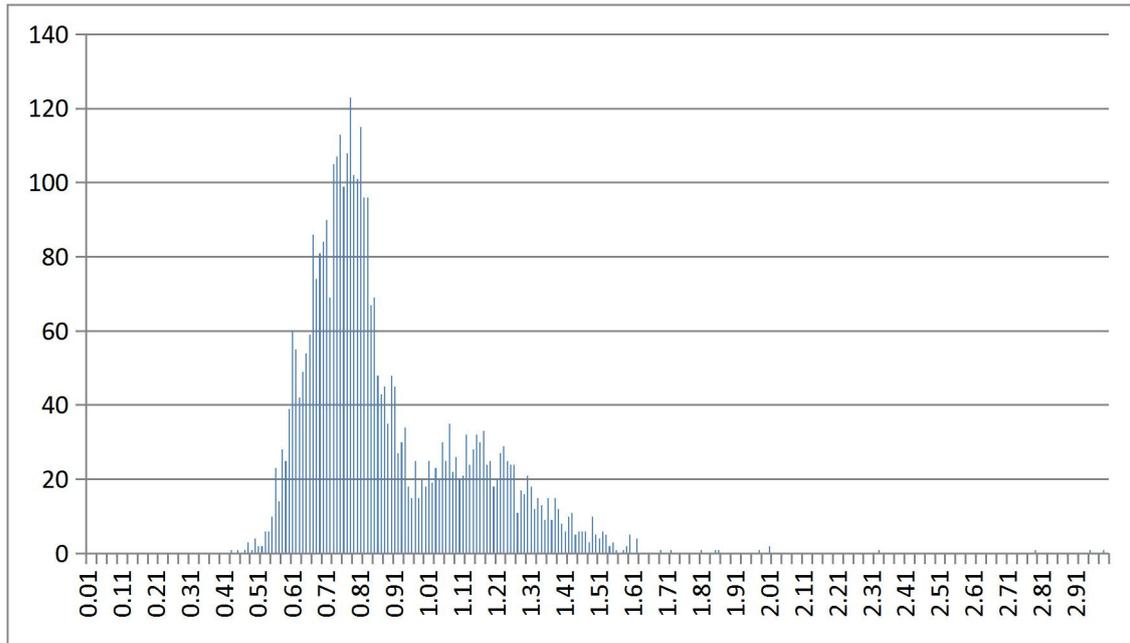If we draw a distribution chart of KMT's RSRs, two peaks emerged.

Fig. 7. The distribution chart of KMT's RSR's. The x-axis shows KMT's RSR, the y-axis shows the number of neighborhoods with corresponding RSR value.

This statistical anomaly cannot be easily explained with normal voting behavior or any other reasons we can think of. However, premediated widespread and massive election fraud is an easy explanation.

The two cities where KMT's RSR are above 1 are actually DPP controlled cities. Judging by the numbers, we conclude that there was little to no ballot stealing in these two cities. In contrast, the other three cities are controlled by the KMT, and we believe there was massive ballot stealing going on in these three cities.

The reason for employing two different strategies, is that the DPP has allegedly been planning to rig this election for a long time. They wanted to reduce the potential statistical anomalies. They want a result with normal voting rates in all areas, and they also wanted strong DPP support all over Taiwan.

Let's assume their goal is to have an election with a 75% turnout rate, and for the DPP to get 60% of the vote nationwide.

In the two cities of Tainan and Taoyuan, they found that the DPP support rate is high enough. They found that they didn't need to do any ballot stealing, so by just stuffing DPP ballots, this created an 8% increase in the turnout rate, and the DPP candidate can get 60% of the vote easily.

While in cities with more KMT supporters, if they simply do vote stuffing, the voting rate will soar to extremely high levels. Therefore, in these three cities, they must do ballot stealing and ballot stuffing at the same time.

Final remarks.

One might ask how fraud on this scale can be conducted without a whistleblower? There are tens of thousands of people working at the voting stations. Not even one whistleblower stood up to expose massive election fraud perpetrated by the ruling DPP party?

Unfortunately, the answer is Yes. There is no whistleblower in Taiwan.

There are other signs indicating that massive election fraud had been planned a long time.

The DPP put one of their own party members in charge of the Central Election Commission, which is unprecedented.

All the previous Commissioners were independent non-party members.

The Central Election Commission abolished the regulation which requires the election staff to announce the number of ballots that were handed out in the voting station before counting the ballots.

They replaced semi-transparent plastic ballot boxes for non-transparent cardboard boxes for no reason at all.

Notes.
(1) https://drive.google.com/open?id=1cdDlS8KZ0chMVKPVzAEVVCcaT7qzAYNZ contains all data we discussed in this paper.
(2) This is a working draft. The author is a computer scientist, not a statistician. Vast improvement is needed to generate a paper which meets the academic standard. Anyone who want to write an academic paper on this issue is welcomed. Feel free to contact the author at tzehengm@yahoo.com.