

## Analysis of 2012 Election Results (1) - Did Timing of Elections Affect Turnout?

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Voting in the 2012 elections was advanced to the week before the Lunar New Year holiday. Some hold the view that this lowered voters' readiness to cast their vote, because they wanted to avoid the trouble of traveling home twice in two weeks. Moreover, since the winter term final exams at colleges and universities were not over yet, many students were not able to return home to vote. For these two reasons, they argue, voter turnout in the south was quite low so that the Democratic Progressive Party (DPP) did not win enough votes there. Is this a reasonable assertion?

### Decline in Voter Turnout Greater in the North

If you want to analyze a certain measure with scientific methods, you do not just look at the result of its implementation, but at the changes that occurred before and after implementation. In other words, if we want to know whether the timing of the elections one week before the Lunar New Year holiday caused voter turnout in the south to drop, we cannot just look at the voter turnout in this election. It could be that voter turnout is originally somewhat lower in the south so that there can be no talk of a decline due to the timing of the elections. What we need to examine is whether voter turnout in the south has declined more markedly than in the previous election.

Graph 1 shows changes in voter turnout in a comparison between the 2008 county and city municipal elections and the 2012 presidential election (excluding the offshore isles of Kinmen and Matsu). Counties and cities are listed from left to right in declining order based on the percentage of votes won by the DPP in the 2012 presidential election. This means that the farther left a county or city is listed, the higher the DPP's share of the vote. As can easily be discerned from

the graph, in counties and cities where the DPP led the Kuomintang (KMT), including Tainan City, Yunlin, Pingdong and Ilan counties, voter turnout declined less than 2 percentage points. In Chiayi County voter turnout even increased. In contrast, in KMT strongholds such as New Taipei City, Taoyuan County, Taipei City, Hsinchu City, Keelung City, Miaoli County, Hsinchu County, and Hualien County voter turnout declined by more than 2 percentage points. This proves that the timing of the election one week before the holiday season is not the reason why voter turnout in the south has declined.



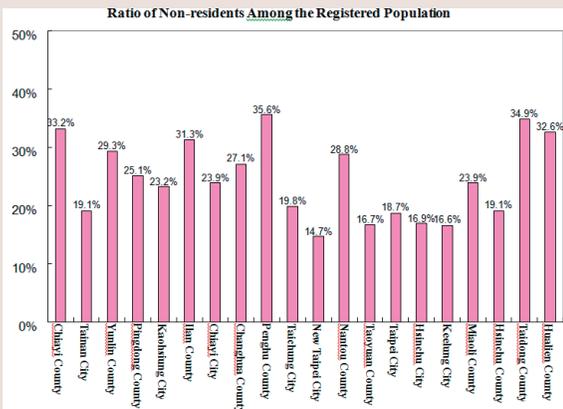
Graph 1:  
Changes in Voter Turnout Comparing the 2008 Municipal Elections and the 2012 Presidential Election

### The Reasons Behind Low Voter Turnout in the South

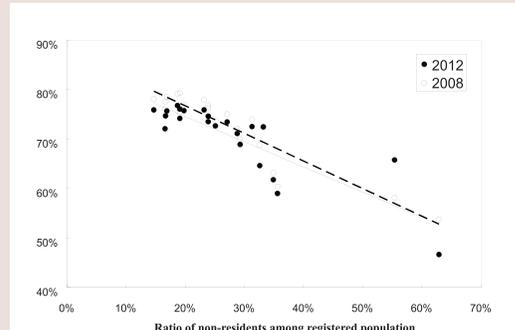
Under Taiwan's electoral system citizens are required to vote at their registered permanent address, which makes voting comparably troublesome for those who do not live at their registered address, thus weakening their willingness to go to the polls. Therefore voter

turnout is naturally lower in counties or cities with a high ratio of registered residents who do not actually live there. Graph 2 shows the ratio of non-residents among the registered population for counties and cities across Taiwan. The data are based on the 2010 census. Again, counties and cities are listed from left to right in declining order based on the percentage of votes won by the DPP in the 2012 presidential election. It is quite obvious that in places where the DPP fared better than the KMT more than 20 percent of the registered population were non-residents, including Chiayi, Yunlin and Pingdong counties, Kaohsiung City, Ilan County, and Chiayi City. On the other hand, less than 20 percent of the registered populations were non-residents in KMT strongholds such as New Taipei City, Taoyuan County, Taipei City, Hsinchu City, Keelung City, and Hsinchu County.

Graph 3 describes the correlation between voter turnout and ratio of non-residents among the registered population. It can be easily seen that voter turnout is lower the higher the ratio of non-residents among the registered population. Given that in DPP strongholds comparably more registered residents are non-residents, it should not come as a surprise that voter turnout is lower there.



Graph 2: Ratio of Non-residents Among the Registered Population



Graph 3  
Correlation Between Voter Turnout and Ratio of Non-residents Among the Registered Population

### Did Election Timing Affect Turnout?

As stated earlier, the main factor affecting voter turnout is the ratio of non-residents among registered residents. Supposing that the timing of the election one week before the holiday prevented many voters from returning to their registered address to vote, then the ratio of non-residents among the registered population should have an even greater effect on voter turnout. This means the regression line solid line for 2012 in Graph 3 should be steeper than the regression line dotted line for 2008. The following is a more precise regression equation:

$$voter\ turnout_{i,t} = \beta_0 + \beta_1 ratio\ non-residents_{i,t} + \beta_2 advanced\ elections_{i,t} + \beta_3 ratio\ non-residents * advanced\ elections_{i,t} + \epsilon_{i,t}$$

The observed values in the equation are data from all counties and cities for 2008 and 2012. In 2008 the value for “advanced elections” was 0. In 2012 the value of advanced elections was 1. Should it be the case that the election timing caused more voters to refrain from returning to registered address to vote, then should be smaller than 0.

Table 1 shows the estimated results for the regression equation. The adjusted coefficient of

determination adj. R<sup>2</sup> is 0.78, which shows that this regression equation has an explainability of 78 percent for variations in voter turnout.  $\beta_1$  is -0.558, meaning that for every 1 percentage point increase in the ratio of non-residents among the registered population voter turnout declines by 0.558 percentage points. However,  $\beta_1$ , the most important value for us, is not smaller than 0 at all. Therefore we do not have proof that holding the elections one week before a holiday prevented more voters from returning to their registered address to vote than in the 2008 elections.

the registered population is higher. Therefore, the introduction of absentee voting would work to the DPP's advantage. **BT**

**Table 1 Results of Regression Analysis**

$\beta_0$	0.879**	0.018
$\beta_1$	-0.558**	0.061
$\beta_2$	-0.031	0.026
$\beta_3$	0.049	0.087
adj. R <sup>2</sup>	0.78	
N	44	

Note: Value in parentheses is standard error

## Conclusion

That the DPP did not fare as well as expected in the elections this time deserves further examination from various aspects. But blaming the fact that the date of the election was advanced to one week before the Lunar New Year holiday is not worth the effort. We had better start pushing for absentee voting in Taiwan. Based on the analysis in this article the DPP is strong in places where the ratio of non-residents among