

Introduction to World Politics

Effective Number of Parties
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The Assignment

Calculate the ENP for each of your assigned states. Show your work in tabular form (as in the two examples). This is worth 15 points.

Back Story

One of the prerequisites to have a consolidated democracy is having more than one party contesting the election. Without multi-party elections, the winner of the election is known and the elections are unnecessary. Thus, measuring the number of parties in an election is necessary. However, how do we measure the number of parties in an election?

Should it merely be all parties contesting the vote? While this is very easy to measure, it does not really measure what we want to measure: competition. In states where one party is dominant, even if there is a second party, should the number of effective parties really be two? During much of the post-Reconstruction period, the elections in the South were won by Democrats. Even though the Republicans posted candidates, Democrats always won in the general election. In Mexico, eight political parties tended to contest the presidential votes. However, between 1929 and 2000, the only party holding the presidency was the PRI. Should we count Mexico as having eight effective parties, or something less?

To deal with these issues, two comparative political scientists (Laakso and Taagepera) created a way of measuring the number of effective political parties in a state. In theory, this measure should be close to 1 whenever one party receives a landslide vote, and close to the number of parties contesting the election when each party receives the same number of votes. The ENP measure does this.

$$ENP = \frac{1}{\sum (s_i)^2}$$

Here, s_i is the percent of the vote received by party i . But, how do we actually calculate the ENP? The first step is to find the results from the election in question. Both Wikipedia and the CIA World Factbook offer these numbers for most states in the world. Second, for each party in the election, square the proportion of votes cast for that party. Now, add up those squares. Finally, take the reciprocal of that last number (divide 1 by the number). This last number is the ENP. Two examples of the calculation are below.

Example 1

The 2004 US presidential election should have an ENP of very close to two. We expect this because the two main parties garnered approximately the same number of votes and

there was no serious third-party challenge. Using the turnout for the 2004 presidential election from the FEC, let us calculate the number of effective parties in the United States:

Party (<i>i</i>)	Share of Vote (s_i)	Square of Share of Vote (s_i^2)
Democratic	0.481	0.231361
Republican	0.509	0.259081
Independent	0.0038	0.00001444
Libertarian	0.0032	0.00001024
Constitution	0.0012	0.00000144
Green	0.00096	0.0000009216
Other	0.00084	0.0000007056
Sum of the squares of share of vote ($\sum (s_i)^2$)		0.4904697472
Reciprocal of sum of squares ($\frac{1}{\sum (s_i)^2}$)		2.03886173553

Thus, the effective number of political parties in the United States was just over two, which is as we would expect.

Example 2

In contrast, let us now look at the 1980 presidential election in the United States, an election in which a third-party candidate received a large proportion of the vote.

Party (<i>i</i>)	Share of Vote (s_i)	Square of Share of Vote (s_i^2)
Democratic	0.410	0.168100
Republican	0.507	0.257049
Independent	0.066	0.004356
Libertarian	0.011	0.000121
Citizens	0.003	0.000009
Other	0.003	0.000009
Sum of the squares of share of vote		0.429644
Reciprocal of sum of squares		2.327508

The effective number of political parties in 1980 was much higher, as expected.