Expand the House

Posts linked from this page are part of my years-long project analyzing the budgetary impact of expanding the U.S. House of Representatives. There are currently 435 members. On average, each representative has 712, constituents. Advocates of expanding the house argue that there are far too many people for one person to represent. Some suggest 75,000 people per representative would be an improvement. That implies 4, representatives. A convenient approximation to this is ten times as many seats as are currently in place, 4,350. That implies 76,117 constituents per seat.

Before going further, here's a list of articles I've published here about this issue:

1. Is Your State Under- or Over-Represented in the House?
2. How Many People Does Your Representative Represent?
3. Oddities in the House Expenditure Report

[Correction and apology]

Thanks to Chris Maidment (@maid_cj) for pointing out my error.

Let's see. If we used two reps for every 30,000, that would exceed one per 30,000. And it implies one per 15,000. In other words, 30,000 is the minimum number of constituents per house seat. I had foolishly interpreted it as the maximum. My apologies for this error.

[Original text]

There's an interesting Constitutional issue here. Article 1 Section 2 includes this interesting clause:

> …The Number of Representatives shall not exceed one for every thirty Thousand, but each State shall have at Least one Representative …

Using 30,000 residents per house seat, the correct number of seats is 11,037 (rounded from 11,). If you like the idea of expanding the house, you might try to find a good

constitutional lawyer. Might as well have some fun with this!

U.S. Constitution Article 1 Sections 2 and 3. Emphasis added. Click for larger image.

[End of erroneous text]

Long-Term Plans

Eventually I want to address the impact on congressional budgets of expanding the House. This is not as simple as you might think. For one thing, the method of allocating seats to individual states is somewhat arcane (although, in my opinion, fair). There are two problems:

1. Each state gets one seat in the House. This is in the Constitution.
2. There can be no fractional seats (or, for that matter, constituents).

Thus the first step is to correctly allocate the seats to the states for any given size of the House. More on that in a forthcoming article.

Once the seats are allocated, the average cost of a seat in each state is next. In the

past, travel expenses were reimbursed based on mileage from Washington, D.C. to the representatives home state. Today the calculation is less transparent. But it seems likely that representatives from California and Hawaii are likely to have higher costs caused by travel and the high cost of maintaining offices in the state. This also implies geographically larger states with areas of low population density are likely to have higher costs because they need more field offices.

I wrote a long Excel Visual Basic script that solves the problem for any number of representatives between 50 (one per state) and 20,971 (the maximum number of rows in an Excel workbook with 50 states per seat calculated). For those interested, the maximum number of rows for any recent version of Excel (using the .xlsx format) is 1,048,576. Divide by 50 to get the maximum number of seats. Again, I will link to articles explaining this in more detail in the coming weeks.

The Census Bureau, especially Kristin D. Koslap, was very helpful in guiding me through the process. Also thanks to the members of [excel] [vba] at for guiding me to the answers to my numerous issues with Excel VBA.