Apportionment of the U.S. House of Representatives: Will Indiana Lose a Seat After the 2000 Census?

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Article 1, Section 2 of the United States Constitution states that the primary reason for conducting the decennial census is to serve as a basis for determining how the seats in the House of Representatives should be allocated to the states. The Constitution provides that each state will have at least one member in the House. With the current size of the House set at 435 members, the apportionment process will reallocate the remaining 385 seats to the states, based on the results of Census 2000.

The U.S. Department of Commerce will deliver the results of the census to the President by December 31, 2000. Within a week of the opening of the next session of Congress, the President must report the census counts to the Clerk of the House of Representatives, along with the number of representatives to which each state is entitled. The Clerk will report the numbers to each state's governor. Individual state legislatures are then responsible for the redistricting process, which involves defining the geographic boundaries of the state's congressional districts.

How is the Apportionment Calculated?

Several different methods have been used to calculate the apportionment. It should be noted that absolute mathematical equality in terms of the number of persons per representative is impossible without assigning fractional seats, which has never been attempted in the U.S. House.

The method that has been used to apportion the seats in the House following the most recent five censuses is called the *method of equal proportions.* A priority value is calculated for each state and for each potential seat assigned to that state by dividing the state's population by the geometric mean of its current and next seat numbers. The state with the highest priority value is assigned the 51st seat in the House, thus becoming that state's second seat. The remaining seats are similarly assigned, giving the next seat to the state with the next largest priority value, until all 435 seats have been filled. (Note that the District of Columbia is not included in the apportionment calculations.) The numbers used in the apportionment process following the 1990 census included certain segments of the U.S. population residing overseas and allocated to their home states.

The Projected Apportionment of the House Following Census 2000

To try to discover who might gain and who might lose seats after the upcoming census, the method of equal proportions was applied to state population projections for the year 2000 to project what the apportionment of the next House of Representatives might look like. The results are reflected in the **Map** below. Specifically, the Series A population projections released in 1996 by the Census Bureau for the year 2000 were used as the base population for the 2000 apportionment calculation. In an attempt to capture the over-
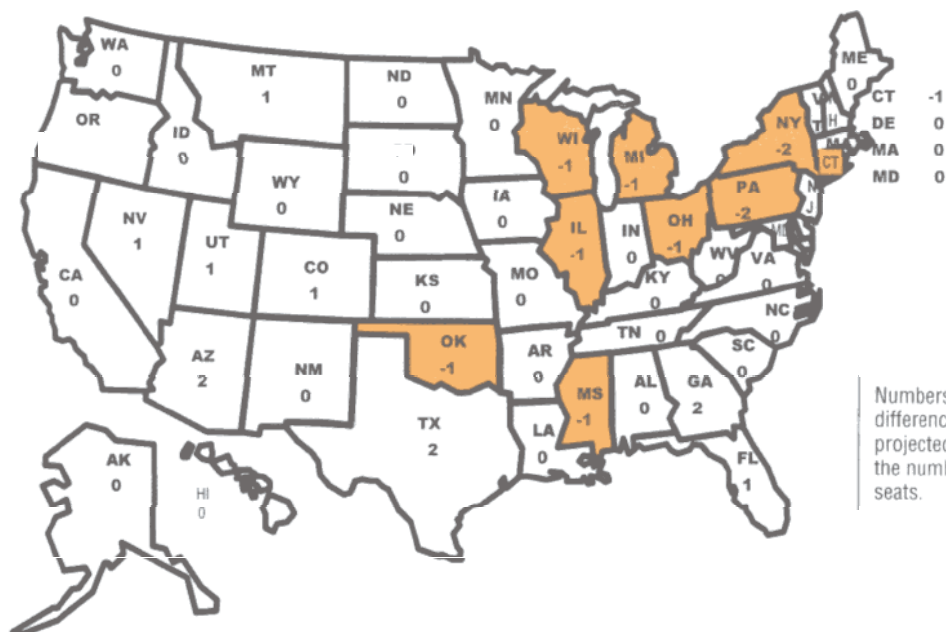
A Summary of Gains and Losses

Projected to gain seats
Arizona (2)
Colorado
Florida
Georgia (2)
Montana
Nevada
Texas (2)
Utah

Projected to lose seats
Connecticut
Illinois
Michigan
Mississippi
New York (2)
Ohio
Oklahoma
Pennsylvania (2)
Wisconsin

Possible Seat Gains and Losses by State in the U.S. House of Representatives After the 2000 Census

Numbers indicate the difference between the projected scenario and the number of current seats.

Table 1
Apportionment of the U.S. House of Representatives: Actual 1990 and Projected 2000 Calculations

	Apportionment Population in 1990 (Actual)	Apportionment Population in 2000 (Projected)	Number of Seats in 1990 (Actual)	Number of Seats in 2000 (Projected)
Alabama	4,062,608	4,473,021	7	7
Alaska	551,947	654,904	1	1
Arizona	3,677,985	4,810,757	6	8
Arkansas	2,362,239	2,642,514	4	4
California	29,839,250	32,600,229	52	52
Colorado	3,307,912	4,181,518	6	7
Connecticut	3,295,669	3,292,553	6	5
Delaware	668,696	770,528	1	1
Florida	13,003,362	15,298,436	23	24
Georgia	6,508,419	7,905,203	11	13
Hawaii	1,115,274	1,264,045	2	2
Idaho	1,011,986	1,352,237	2	2
Illinois	11,466,682	12,087,080	20	19
Indiana	**5,564,228**	**6,065,069**	**10**	**10**
Iowa	2,787,424	2,910,669	5	5
Kansas	2,485,600	2,676,026	4	4
Kentucky	3,698,969	4,008,673	6	6
Louisiana	4,238,216	4,443,243	7	7
Maine	1,233,223	1,264,295	2	2
Maryland	4,798,622	5,292,154	8	8
Massachusetts	6,029,051	6,211,626	10	10
Michigan	9,328,784	9,712,487	16	15
Minnesota	4,387,029	4,841,930	8	8
Mississippi	2,586,443	2,829,227	5	4
Missouri	5,137,804	5,560,731	9	9
Montana	803,655	954,590	1	2
Nebraska	1,584,617	1,711,232	3	3
Nevada	1,206,152	1,875,319	2	3
New Hampshire	1,113,915	1,228,663	2	2
New Jersey	7,748,634	8,196,446	13	13
New Mexico	1,521,779	1,866,710	3	3
New York	18,044,505	18,200,050	31	29
North Carolina	6,657,630	7,805,993	12	12
North Dakota	641,364	664,564	1	1
Ohio	10,887,325	11,359,210	19	18
Oklahoma	3,157,604	3,385,019	6	5
Oregon	2,853,733	3,408,412	5	5
Pennsylvania	11,924,710	12,245,067	21	19
Rhode Island	1,005,984	1,000,520	2	2
South Carolina	3,505,707	3,877,004	6	6
South Dakota	699,999	780,995	1	1
Tennessee	4,896,641	5,676,456	9	9
Texas	17,059,805	20,192,295	30	32
Utah	1,727,784	2,211,934	3	4
Vermont	564,964	619,206	1	1
Virginia	6,216,568	7,026,210	11	11
Washington	4,887,941	5,879,249	9	9
West Virginia	1,801,625	1,849,148	3	3
Wisconsin	4,906,745	5,340,976	9	8
Wyoming	455,975	527,387	1	1

seas population while keeping the process relatively simple, the overseas population that was included in the apportionment process following the 1990 census was added to the projections for each state.

Table 1 shows the actual House apportionment following the 1990 census, along with the projected apportionment for 2000. Eight states are projected to gain a total of 11 seats, which will be collectively lost by nine states. Those gaining seats are states that have experienced large amounts of population growth since 1990 and are located in the South and West. States projected to lose seats are located mainly in the East and Midwest. **Table 2** shows the states and seat numbers that are projected to be "on the bubble," including the last five seats assigned, followed by the first five states that just miss being assigned seats.

Following the 1990 census, Indiana was allocated 10 seats, with the tenth seat being in position 424 out of 435. In this projection for 2000, Indiana is again assigned 10 seats, with its tenth seat falling to 431 out of 435. Hence, Indiana is projected to hold onto its tenth seat, despite experiencing population growth that is slower than the average growth for the nation.

The 1990 Census Undercount
The Bureau has estimated that the 1990 census resulted in a net undercount of approximately 4 million people, or about 1.6% of the nation's population. This net undercount is not distributed evenly among the 50 states. It ranges from a high in California of more than 837,000 people to a low in Rhode Island of some 1,350 people. Indiana's estimated undercount of 28,000 (0.5% of its population) is the nation's nineteenth smallest in terms of numbers, and the sixth lowest in terms of percentages.

The Effects of Including 1990 Undercounts in the Apportionment Process
If the apportionment of the House following the 1990 census had been calculated using the so-called adjusted population counts for each state (by adding in the net undercounts), only two states would have been allocated different numbers of seats. California would have been allocated an additional seat (its 53rd), and Wisconsin would have received one seat fewer (eight instead of nine).

If the net undercounts are added to the projected populations for 2000, again only two states are projected to receive different numbers of seats. Indiana would lose its tenth seat in this scenario, whereas Mississippi would hold onto its fifth seat, rather than only receive the four projected seats in the original 2000 scenario.

Table 3 shows the states and seat numbers that are projected to be on the bubble in this scenario for 2000. Indiana's tenth seat becomes the 436th seat in the House (the first seat that just misses assignment).

Conclusions

It is important to note that the accuracy of the projected House apportionment is directly related to the quality of the data used in its development. If a state's census count in 2000 varies widely from the population projection used in the calculation, it could obviously affect the allocation of seats to that and other states. In addition, if a state's overseas population or undercount in 2000 changes significantly from 1990 levels, this could also affect the apportionment process in 2000, if these data sets are used in the apportionment process in 2000. Despite these qualifications, the actual apportionment will likely result in the shift of some seats from states in the East and Midwest, where population increase is generally not keeping pace with the nation, to rapidly growing states in the West and South.

The second conclusion that can be drawn from comparing the results of the various scenarios is that few states will be affected by the decision to use or not use sampling in an attempt to improve coverage of the next census, if the levels of undercount are similar to those from 1990. However, Indiana is "on the bubble" regarding whether or not it can hold on to its tenth seat in the House. It is one of the small number of states whose level of representation in the House is apt to depend on whether or not adjusted census counts are used in the apportionment process.

Details of the method of equal proportions, along with more information regarding the apportionment of seats in the House of Representatives, can be found at the Census Bureau's Web site, www.census.gov/dmd/www/apportionment.html.

Table 2
Seats "On the Bubble": Projected House Apportionment after 2000 Census

House Seat	State	Population	State's Seat	Priority
431	Indiana	6,065,069	10	639,314
432	New York	18,200,050	29	638,697
433	Utah	2,211,934	4	638,530
434	California	32,600,229	52	633,044
435	Georgia	7,905,203	13	632,923
436	Mississippi	2,829,227	5	632,634
437	Wisconsin	5,340,976	9	629,440
438	Pennsylvania	12,245,067	20	628,159
439	Michigan	9,712,487	16	626,938
440	North Carolina	7,805,993	13	624,980

Table 3
Seats "On the Bubble": Projected House Apportionment for 2000, Including 1990 Undercount

House Seat	State	Population	State's Seat	Priority
431	California	33,437,786	52	649,308
432	New York	18,472,086	29	648,243
433	Utah	2,242,272	4	647,288
434	Mississippi	2,885,559	5	645,231
435	Georgia	8,047,628	13	644,326
436	Indiana	6,092,967	10	642,255
437	California	33,437,786	53	636,939
438	Texas	20,678,323	33	636,331
439	Maryland	5,393,138	9	635,587
440	Florida	15,558,265	25	635,164