

Sarah Anderson  
Statistics Workshop  
April 1, 2004

Much has been made of the competing hypotheses regarding the impact of the median voter, parties, and legislative committees on policy outcomes. The appropriations process provides an opportunity, which has previously been unexploited due to the perceived complexity of the process, to examine the outcome of policy and to empirically test whether policy outcomes track changes in the position of the median voter or are influenced by parties and committees. In this paper, we test Krehbiel's (1996) *Pivotal Politics* model against the two alternative hypotheses of party and committee influence using appropriations in various policy areas between 1955 and 1996 as the policy outcome. We use the unique dataset of appropriations, also used by Brandice Canes-Wrone (2001), that reconstructs the federal budget to make budget categories comparable across time. To measure the location of the median voter, we use interest group scores that correspond to the policy areas, adjusted to be comparable across time and across chamber by the Groseclose, Levitt, and Snyder (1999) transformation.

Initial results from the area of agricultural subsidies demonstrate consistent support for the hypothesis that spending tracks with the ideal point of the median member of Congress, even given the location of the median voter on committees. We find some evidence that the ideological makeup of the committees matters to the amount of money that gets appropriated for agriculture, although these results are not consistent across all specifications. On the other hand, we find very little evidence of partisan effect, electoral cycle effects, or divided government effects.

To fit the unidimensional assumption of the model, I must assume that decisions on the budget occur independently on each dimension. Clearly, in evaluating only the agriculture

dimension, I maintain the assumption that policy areas are independent. Specifically, independence would imply that the level of funding for agriculture does not depend on the level of funding for the environment. At a minimum, this means that there cannot be a hard budget constraint that forces legislators to tradeoff spending in various policy areas. Additionally, independence implies that the median voters (or those near in ideology to the median voter) on the two policy areas are not trading votes with each other and thus making the levels of funding dependent on each other. In future work, I intend to analyze multiple policy areas. To treat the policy areas as independent, I must continue to maintain the assumption. But, it is a strong one. During this quarter, I would like to consider, first, whether policy areas can be considered independent and, second, what the implications for the analysis will be if they cannot be considered independent.

The issue of independence is not one for which there is an obvious answer. On one hand, each appropriations bill generally corresponds to a subcommittee of the Appropriations Committee and much of the budget is now decided outside of the Appropriations Committee in various authorizing committees. Cogan (1994) argues that spending authority has been divided among multiple committees, yielding virtually independent decisions on different policy areas. He argues that this can help to explain rising deficits, since no individual committee or subcommittee has an incentive to hold down spending. If his argument is correct, the budget constraint is not binding and the levels of funding among policy areas do not depend on each other via the overall budget. However, we must still consider whether the policy areas are independent in the sense that there is not vote trading going on between policy areas. The assumption is plausible if each committee or subcommittee has unidimensional jurisdiction or if individual funding decisions are made independently. Moreover, if we consider the universe of

possible trades to encompass all of the votes in a given Congress, the probability that two policy areas are linked by vote trading becomes very small.

On the other hand, a given appropriations bill always involves funding for more than one agency so Members of Congress can virtually never be said to be voting on only one dimension of the budget at a time. In particular, even if it is true that the median member of the legislature is what determines the amount of funding for a particular policy area, this median member on, for example, agriculture may simply be “bought” by members who are the median voter on other policy areas if those members have stronger preferences about their policy area than the agricultural median has about his. If we don’t consider policy decisions to be independent, the estimation becomes more complicated. Now, in order to understand the level of funding for agriculture, we must understand the preferences of the median voter on the environment and the other policy areas.

Basically, I’d like your input as to whether independence can be defended and if not, how I should proceed.

**Other questions:**

Groseclose, Levitt, Snyder transformation. They use MLE to estimate a mean and variance shift for each Congress (holding one Congress as the baseline Congress). Does this make sense for a way to make the scores comparable across time?