Voting on Public Spending: 
Differences Between Public Employees, Transfer Recipients, and Private Workers

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Politicians who support higher public spending in the hope of gaining the support of transfer recipients, such as the aged, the unemployed, and those on welfare, have no reason to believe that the strategy will succeed; according to the evidence reviewed here, transfer recipients do not vote much differently on such issues from other voters. State and local employees have shown a clear preference for higher public spending, but their numbers are limited and the relative strength of their preference weak, so that their impact on voting outcomes has been only marginal.

The recent spate of tax limitation amendments has increased the importance of direct voting in determining the level of state and local spending. Before tax limitation amendments were first employed in 1976, voters could influence public spending by electing or defeating politicians with known positions on public spending or by passing or rejecting proposals to alter property tax rates. Since 1976 they have acquired a powerful new weapon in their attempt to control state and local government budgets: They now have the ability to impose binding limits on either taxes or public spending. These limits are not always effective, especially in the long term; but if they are carefully structured, they can constrain public spending significantly.

The increased importance of direct voting in determining public spending has coincided with the development of a number of theories about the relationship between the institutional surroundings of democratic governments and the spending patterns of these governments. In particular, several theoretical models have been developed that predict an inherent tendency toward overspending. That tendency has been variously attributed to logrolling, to the expansionary motives of bureaucrats or politicians, to the control of the voting agenda by bureaucrats, to

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monopolistic labor market bargaining, and to various other factors.¹ Tax limitation amendments are the voter’s way to contain the excessive government spending these factors were thought to be generating.²

But direct voting on fiscal matters provides no guarantee that an “efficient” level of public spending will be achieved. Efficiency, as the economist defines it, is realized when the social benefits derived from added public spending equal the added social cost.³ Direct voting based on the principle of majority rule, on the other hand, would lead to another level of public spending, namely, the level that is favored by the median voter. These two outcomes are not the same except under certain highly restrictive conditions.⁴ But even if one forgets the economist’s efficiency standard and accepts the median voter outcome as optimal, there are at least three factors to be considered.

One is the voting role of public employees. They can be expected to have more complex motives for voting than private workers. Public employees might be voting for increased government spending to raise their pay, improve their job security, or extend their bureaucratic empires⁵; they may also be more unionized than private employees and better able to get out the vote.⁶ Private workers are likely to view a vote on a fiscal issue as an extension of their consumption decisions—how much private consumption should be sacrificed in the form of higher taxes to pay for public goods.

Another group that may be voting from its pocketbook is composed of those who receive cash subsidies or low-cost social services from the government. (We shall call this group “transfer recipients.”) Like public employees, these individuals could be voting to raise their income. In fact, several models of excessive government spending have been developed that focus on alliances between politicians and transfer recipients.⁷

A third factor that can produce deviations from the efficient level of public spending involves all voters rather than a potential conflict of interest for a particular group. Voters may not always realize the full tax costs of the public spending levels they are favoring, especially when federal matching grants are being offered to supplement this spending. Consequently, voters may be led to overconsume public output.⁸

Of course, even if public employees and transfer recipients do vote in favor of higher government spending, one cannot say conclusively that the economist’s efficiency standard has been violated: The social benefits from the added spending may still equal or exceed the social costs. One reason is that those who supply public services (public employees) or who directly benefit from them (transfer recipients) might be better informed about the true marginal social benefits of such services than are private workers. Another is that those employed in the public sector may have a greater desire for public goods and would vote for high government spending even if they worked in the private sector.
Finally, their higher turnout rates may simply reflect the fact that their preferences are more intense.

For all these reasons, we are forced to sidestep the complex question of the relationship between the spending outcome as determined by majority rule and the efficient outcome as defined by the economist. We ask two narrower and more empirical questions: How do different groups of voters, with different economic interests in the size of government spending, vote on fiscal matters; and to what extent do these voting differences influence the overall outcome?

THE EXPERIMENT

The data used to try to answer this question come from a 1978 voter survey in the state of Michigan. In November of that year voters were presented with two well-publicized proposals to limit state and local taxes, and another proposal to institute a voucher system for the financing of elementary and secondary education. The first tax limitation proposal was called the Headlee Amendment, after its sponsor. This amendment imposed only a mild limitation on state and local taxing and spending. It limited the ratio of state tax revenues to state personal income, and it limited increases in the assessed valuation of existing properties to the proportionate increases recorded in the Consumer Price Index. Both limits contained flexible override provisions. The second tax proposal, the Tisch Amendment, was more draconian and would have caused large reductions in assessed property values.

As is customary in elections of this kind, voters could vote for one, two, or three of the fiscal amendments. If more than one proposal had passed, and if those that passed contained contradictory provisions, any conflicts would have had to be resolved by the courts. But such difficulties did not arise. The Headlee Amendment passed by a narrow margin, and the Tisch and voucher proposals were defeated by fairly considerable margins. All measures were discussed extensively in the press and by political candidates. To the extent that Michigan citizens are ever informed on fiscal matters, 1978 should have been the time.

Just after the vote, the University of Michigan's Institute for Social Research took a telephone survey of a random sample of 2001 households in the state. Respondents were asked about their vote, their desire for more or less public spending, their sector of employment and sources of income, their tax payments, and their personal and family characteristics. Some of the results of an analysis of that survey have already been published. But the results presented here, based on breakdowns that shed some light on the questions posed above, cover new ground.

On the basis of the information collected in the telephone survey, respondents were divided into a number of different groups, each group reflecting a different potential for economic self-interest when voting on the level of government spending. The group breakdown, which is described more precisely in the section that follows, makes distinctions between state and local em-
employees, nonworkers, and various subsets of private workers. For each group, the rate of voting turnout was measured, as was the direction of the group’s vote on the Headlee Amendment. These ratios were then combined into a measure that gauged the group’s influence on the overall electoral outcome.

**THE GROUPS**

More precisely, the group breakdown that was used in analyzing voting behavior on the Headlee Amendment was as follows:

1. state and local employees;
2. nonworkers (retired, disabled, unemployed), a proxy for transfer recipients;
3. workers in the private sector
   a. who rent their homes;
   b. who own their homes, but whose tax payments are low relative to the benefits they perceive from state and local spending;
   c. who own their homes, and whose tax payments are high relative to the benefits they perceive from public spending.

This breakdown is not free of conceptual difficulties. For state and local employees, for example, some survey respondents work for state and local governments only part-time, and other respondents are married to spouses in the private sector, creating ambiguous economic interests. Still other respondents that work in the public sector earn no more than they would in comparable private sector jobs, and hence might not have an important motive for increasing the security of their tenure. Later on, as the results of the survey are presented, we shall be exploring the data in various ways to measure separately the influence of some of these ambiguous groups.

Similar problems arise for the other groups. Some nonworkers or transfer recipients live with others who work or who do not receive transfers. Some either rent or own their homes, and thus pay some of the tax cost of added public spending. Besides, some may receive their transfers from the federal government rather than the state or local government, a fact that could affect their response to proposals such as the Headlee Amendment.

The various distinctions made among private workers also carry certain ambiguities. Although we make an effort to distinguish between those whose tax payments are low relative to perceived benefits from those whose tax payments are high, the distinction is based on fragile measures. Besides, even when such a distinction is made, it does not reflect the impact that marginal changes in the budget may have on individuals in the various groups nor does it reflect the individuals’ own appreciation of the effects of such marginal changes. Again, however, we explore the behavior of our respondents by various categories in order to detect the possible influence of such factors.

Table 1 presents some of the key data for our first group, state and local employees, together with some selected figures for the 2001 respondents as a whole. For the respondents as a whole, the share
### Table 1. Voting data for sample of 2001 respondents by employment status and other characteristics.

<table>
<thead>
<tr>
<th>Michigan Voter Survey</th>
<th>Number in sample</th>
<th>Share of electorate</th>
<th>Share of group voting on Headlee Amendment</th>
<th>Share of voters in group for higher spending option</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. All respondents</td>
<td>2001</td>
<td>1.000</td>
<td>0.514</td>
<td>0.438</td>
</tr>
<tr>
<td>2. Others than state and local employees</td>
<td>1660</td>
<td>0.830</td>
<td>0.477</td>
<td>0.394</td>
</tr>
<tr>
<td>3. State and local employees</td>
<td>341</td>
<td>0.170</td>
<td>0.698</td>
<td>0.580</td>
</tr>
<tr>
<td><strong>By households</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. In households with mixed workers&lt;sup&gt;a&lt;/sup&gt;</td>
<td>155</td>
<td>0.077</td>
<td>0.716</td>
<td>0.496</td>
</tr>
<tr>
<td>5. In other households</td>
<td>186</td>
<td>0.093</td>
<td>0.683</td>
<td>0.654</td>
</tr>
<tr>
<td><strong>By employer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. State government</td>
<td>47</td>
<td>0.023</td>
<td>0.489</td>
<td>0.696</td>
</tr>
<tr>
<td>7. State universities</td>
<td>25</td>
<td>0.012</td>
<td>0.600</td>
<td>0.533</td>
</tr>
<tr>
<td>8. Local government</td>
<td>64</td>
<td>0.032</td>
<td>0.797</td>
<td>0.588</td>
</tr>
<tr>
<td>9. School districts</td>
<td>103</td>
<td>0.051</td>
<td>0.806</td>
<td>0.626</td>
</tr>
<tr>
<td><strong>By income level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. High-state&lt;sup&gt;c&lt;/sup&gt;</td>
<td>23</td>
<td>0.011</td>
<td>0.696</td>
<td>0.625</td>
</tr>
<tr>
<td>11. High-local&lt;sup&gt;d&lt;/sup&gt;</td>
<td>31</td>
<td>0.015</td>
<td>0.903</td>
<td>0.607</td>
</tr>
<tr>
<td>12. High by comparison with those in similar private jobs&lt;sup&gt;e&lt;/sup&gt;</td>
<td>109</td>
<td>0.054</td>
<td>0.734</td>
<td>0.700</td>
</tr>
</tbody>
</table>

<sup>a</sup>Both spouses are working, one works for state or local government and one is in private employment.

<sup>b</sup>Not all state and local employees reported their employer, so this total is less than 341.

<sup>c</sup>Above the median for state employees ($16,000).

<sup>d</sup>Above the median for local employees ($13,000).

<sup>e</sup>Based on procedure described in Appendix A.

Voting on the Headlee Amendment—that is, the turnout rate—is seen as 0.514; and the share of these voters who favored the higher spending option—that is, the share voting against the Headlee Amendment—is 0.438. State and local employees rank higher on both counts, however the group is defined. The entire group of state and local employees (row 3) has a turnout rate of 0.698 and a propensity to vote for the higher spending option of 0.580, both more than 0.200 above the corresponding entries for all other voters. Subsequent rows disaggregate the state and local sample by household, segregating households that contained workers from both the state and private sector from households all of whose
workers were state or local employees. Rows 4 and 5 show that high turnout rates existed in both cases, but that those households that contained only state and local employees registered a much higher proportion in favor of the higher-spending option. Indeed, the voting support for the higher-spending option from what might be termed mixed households with public and private workers was barely higher than the support from purely private households.

Rows 6 through 9 break down the state and local employee sample by type of employer. Relatively high turnout rates and high shares voting for the higher-spending option show up consistently for each of the various subgroups. But these subgroups do not have identical turnout rates or voting propensities. In particular, respondents in the employ of school districts and local governments turned out at a much higher rate than did other public employees, but employees of state governments were the ones most likely to vote for the higher-spending option.

As a further test, we consider whether the state and local employees who earned relatively high wages exhibited distinctive voting behavior. In some sense, those with more to lose from a contraction of public spending might be expected to vote differently than typical private sector voters. Rows 10 and 11 show the voting results for state or local employees with high wages, that is, those earning more than median amounts in the group of state and local employees. Both turnout rates and proportions voting for the higher-spending option are indeed high for these samples; in fact, for the high-wage employees of local governments, turnout rates are remarkably high.

Row 12 shows the results of a more complicated test which purports to be able to identify those state and local employees who earn more in their employment than they would in comparable private employment; the test, described in Appendix A, draws on educational and other characteristics of each respondent as a basis for the classification. Again, it can be seen that both turnout rates and support for the higher-spending option are substantial, even more than for the households with only state and local workers.

All told, then, there was some evidence that state and local employees were contributing to the vote that favored the higher-spending option; but how much they influenced the outcome is a question that we address below.

In the extensive literature that deals with the behavior of voters on the issue of government spending, the programs that benefit nonworkers and transfer recipients have occupied a prominent place. In California, Michigan, and Massachusetts, surveys have indicated that voters in general are reasonably content with the overall level of government spending, but not with the level of spending on public assistance programs. Voters have consistently singled out welfare payments as an item that has become excessive. This evidence suggests that taxpayers in general may feel that transfer recipients contribute to excessive levels of public spending by the way in which they vote. Our survey affords a basis
Voting on Public Spending

for analyzing the voting patterns of nonworkers and transfer recipients. The basic data are shown in Table 2.

In our sample, as it turns out, the voting behavior of nonworkers was not very different from that of groups which had a less direct stake in government spending, such as the workers in the private sector. Turning back to row 2 in Table 1, one can compare the turnout and voting patterns of the "other than state and local employees" group with the nonworkers portrayed in row 1 of Table 2; the differences are minor.

Another way to disaggregate the data in our sample is by the respondents whose households received transfer payments. Respondents in this group to some extent overlap those in the "not working category" but neither group fully contains the other. The relevant data appear in rows 4–8 of Table 2. Of the transfer programs listed there, all were financed by the federal government; the only state and local funds involved consisted of about half of the assistance extended to those classified as receiving Aid to Families with Dependent Children, a component of "public assistance." Inasmuch as federal funds for public assistance were being provided in this period on a matching basis, voters might

Table 2. Voting data for nonworkers and transfer recipients.

<table>
<thead>
<tr>
<th>Michigan Voter Survey</th>
<th>Number in sample</th>
<th>Share of electorate</th>
<th>Share of group voting on Headlee Amendment</th>
<th>Share of voters in group for higher spending option</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Not working</td>
<td>381</td>
<td>0.190</td>
<td>0.444</td>
<td>0.391</td>
</tr>
<tr>
<td>2. Retired and disabled</td>
<td>218</td>
<td>0.109</td>
<td>0.550</td>
<td>0.392</td>
</tr>
<tr>
<td>3. Unemployed and other</td>
<td>163</td>
<td>0.081</td>
<td>0.301</td>
<td>0.347</td>
</tr>
<tr>
<td>4. Transfer recipients*</td>
<td>657</td>
<td>0.328</td>
<td>0.461</td>
<td>0.449</td>
</tr>
<tr>
<td>5. Social security*</td>
<td>392</td>
<td>0.196</td>
<td>0.536</td>
<td>0.462</td>
</tr>
<tr>
<td>6. Unemployment insurance*</td>
<td>188</td>
<td>0.094</td>
<td>0.436</td>
<td>0.427</td>
</tr>
<tr>
<td>7. Food stamps</td>
<td>109</td>
<td>0.054</td>
<td>0.211</td>
<td>0.521</td>
</tr>
<tr>
<td>8. Public assistance*</td>
<td>181</td>
<td>0.090</td>
<td>0.320</td>
<td>0.431</td>
</tr>
<tr>
<td>9. Working poor*</td>
<td>300</td>
<td>0.150</td>
<td>0.340</td>
<td>0.392</td>
</tr>
</tbody>
</table>

\*Less than the sum of rows 5–8 because some households receive benefits from more than one program. More than row 1 because some working households receive transfers.
\*Greater than row 2 because many working respondents draw social security benefits, or have a spouse that does.
\*Greater than row 3 because those on temporary layoff at any time during the year are not included in row 3.
\*Consists of Aid to Families with Dependent Children and Supplemental Security Income.
\*Lowest quartile of a group composed of other than state and local employees who reported income data and who were workers; annual pretax income of this group was below $11,800.
conceivably have voted for more state and local spending because they saw the promise of greater federal transfers. But it is important to note that most transfer recipients who voted for an increase in state and local spending would not be voting for an increase in their own payments unless they had concluded that all governments tended to spend in parallel patterns.

The statistics indicate that the recipients of three transfer programs (unemployment insurance, food stamps, and public assistance) had only slightly different voting patterns from other respondents. Their votes for the high-spending option exceeded those for our reference group, that is, the workers other than those in the state and local sector, depicted in row 2 of Table 1; but, as we shall point out later, the turnout rates of the transfer recipients were so low that they barely influenced the overall vote. The only group in the table that has any weight at all in influencing the overall vote is social security recipients. This group was large to begin with; it had a turnout rate that exceeded that of our reference group; and it had a propensity to vote for the higher spending option that was higher than average. But the disparities from the reference group were small, much smaller than those of state and local employees. In any case, because very few social security recipients can be expected to receive transfers from state or local governments, it cannot be assumed that they were voting themselves higher incomes. A more reasonable interpretation is that, for whatever reason, social security recipients simply have a taste for more public goods.

In sum, the data described in this section provide very little evidence in support of the proposition that the voting power of transfer recipients is the cause of excessive government spending. In the Healdlee vote, transfer recipients and nonworking respondents did not behave much differently from others in their response to the higher-spending option. Politicians who hope to buy electoral support from these groups by supporting higher public spending have no reason to believe that such a strategy will succeed.

Private Workers Table 3 probes further into the behavior of the 1660 respondents who had served earlier as our relatively disinterested control group. Note that some of the 1660 respondents, namely the nonworkers, were already covered in Table 2; but that there was no reason to suppose that on issues of state and local spending they would behave any differently from others outside the state and local employee category.

Rows 2, 3, and 4 of Table 3 offer a breakdown of the 1660 respondents along the lines suggested earlier, separating renters from homeowners, and segregating homeowners with low taxes relative to benefits perceived from public spending from those
Table 3. Voting data for others than state and local employees.

<table>
<thead>
<tr>
<th>Michigan Voter Survey</th>
<th>Number in sample</th>
<th>Share of electorale</th>
<th>Share of group voting on Headlee Amendment</th>
<th>Share of voters in group for higher spending option</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Others than state and local employees, total</td>
<td>1660</td>
<td>0.830</td>
<td>0.477</td>
<td>0.394</td>
</tr>
<tr>
<td>2. Renters</td>
<td>758</td>
<td>0.379</td>
<td>0.342</td>
<td>0.429</td>
</tr>
<tr>
<td>3. Homeowners with low taxes relative to benefits perceived</td>
<td>451</td>
<td>0.225</td>
<td>0.608</td>
<td>0.365</td>
</tr>
<tr>
<td>4. Homeowners with high taxes relative to benefits perceived</td>
<td>451</td>
<td>0.225</td>
<td>0.570</td>
<td>0.401</td>
</tr>
<tr>
<td>5. Federal employees</td>
<td>48</td>
<td>0.024</td>
<td>0.526</td>
<td>0.322</td>
</tr>
<tr>
<td>6. Private workers, Lansing SMSA</td>
<td>70</td>
<td>0.035</td>
<td>0.386</td>
<td>0.333</td>
</tr>
</tbody>
</table>

with high taxes relative to benefits perceived. The distinction between the "low-tax" and "high-tax" respondents can only be indirectly determined, following a procedure set out in Appendix B. As explained there, the actual cardinal values for estimating benefits of homeowners may not be very accurate, but the ordinal ranking of homeowners seems reasonably reliable, thereby creating a basis for the distinction.

As with Table 2, the results in Table 3 are interesting principally for their failure to show much difference in the voting behavior of the various groups. The low turnout rate for renters, shown in row 2, is the only distinctive figure.

A plausible interpretation of the low turnout of renters is not immediately obvious. Renters may have had low turnout rates because they felt little stake in the community. When they did vote, however, they voted only a little more strongly in favor of the higher-spending option than did homeowners. Another puzzle is presented by the fact that low-tax homeowners appeared less inclined to vote for the higher-spending option than high-tax homeowners, even though they seemed less exposed to the consequences of an increase in public spending. Perhaps this group was even more reluctant to take on new tax burdens than their high-tax counterparts.

If these results can be used to make broader inferences, they tend to allay the fear that voters may fail to realize the full cost to them of state and local spending. In the past, the fear has been that
voters would treat such grants as free money. If that were a serious possibility, however, one might have expected the low-tax homeowners to support the higher-spending option more strongly than the high-tax homeowners, which was not the case.

The remainder of Table 3 provides some additional evidence on the impact of differential voting patterns. Row 5 gives the results for federal employees, indicating that federal employees voted less like the state and local employees than like others; a smaller proportion of federal employees voted for the higher spending than any other group identified in the analysis. Row 6 shows the results for another group that might be difficult to classify—private workers living in the Lansing SMSA. This group, which presumably contained a heavy representation of businessmen and their employees supplying services to the state government, might therefore have been expected to vote much like state employees. In fact, however, such was not the case, this group too gave very little support to the higher-spending option.

THE IMPACT OF VOTING DIFFERENCES

Although the data in Tables 1, 2, and 3 portray the differences in behavior of different groups, they do not answer the question of whether these differences were sufficient to influence the overall vote. It should be clear that the electoral influence of different groups will depend in a general way on three factors: (a) the size of the group; (b) the turnout rate of the group; and (c) the proportion of voters in the group voting for the higher-spending option. Below we derive mathematical expressions that incorporate these factors.

Consider an electorate divided into four different groups, somewhat along the lines suggested earlier, that is, (1) state and local employees, (2) others who are renters, (3) others who are low-tax homeowners, and (4) others who are high-tax homeowners. If all voters are presented with a tax limitation proposal, the proposal will be defeated, that is, the higher-spending option will win, if it receives 50% of the vote. (The analysis could easily be modified to reflect other required voting margins.) In mathematical terms, the condition for passage of the higher-spending option can then be written as:

$$\sum_{t=1}^{4} E_t Q_t V_t = 0.5 \sum_{t=1}^{4} E_t V_t$$

(1)

where subscript $i$ refers to the 4 groups, $E_i$ refers to the share of each group in the potential voting population ($\Sigma_{i=1}^{4} E_i = 1$), $V_i$ refers to the share voting on the Headlee Amendment or the turnout rate, and $Q_i$ refers to their propensity to vote for the higher spending option.\(^{12}\) In terms of Tables 1, 2, and 3, $E_i$ is given in the second column of each table, $V_i$ in the third column, and $Q_i$ in the fourth column. All $E_i$, $V_i$, and $Q_i$ lie in the interval 0–1.

In working with this identity, it is convenient to take one group
as a standard for comparison; in this case, it would be the group that had the least potential self-interest in higher government spending, namely, the high-tax homeowners. Manipulating (1) to express it in terms of this reference group yields

$$Q_4 + \frac{\sum_{i=1}^{4} (Q_i - Q_4) E_i V_i}{\sum_{i=1}^{4} E_i V_i} \geq 0.5. \quad (2)$$

Now it can be seen that the higher-spending option passes if the fourth group votes for it ($Q_4 \geq 0.5$) and the adjustment terms on the left-hand side are minor; or if the fourth group is against it ($Q_4 < 0.5$) but other groups are sufficiently in favor ($Q_i$ exceeds $Q_4$ for some groups) so that the adjustment terms put the overall sum above 0.5.

Our results can then be summarized by applying this model to the shares of the electorate, turnout rates, and shares voting for the higher-spending option already discussed. Row 4 of Table 3 indicates that the high-tax homeowners who voted were for the higher-spending option at a rate of 0.401. By applying eq. (2), it can be demonstrated that if the adjustments for the other groups had summed to 0.100, the high-spending option would have prevailed. But this option did not prevail; only 0.438 of the voters voted for it.

Table 4 presents in the extreme right-hand column the adjustment contributed by each group. Only the state and local employee group contributes much to the adjustment. Because they turned

<table>
<thead>
<tr>
<th>Michigan Voter Survey</th>
<th>Share of group voting on the Head-</th>
<th>Proportion of all respondents, $E_i V_i$</th>
<th>Differential vote for higher spending option, $Q_i - Q_4$</th>
<th>$\sum_{i=1}^{4} (Q_i - Q_4) E_i V_i / \sum_{i=1}^{4} E_i V_i$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. State and local employees</td>
<td>0.170</td>
<td>0.698</td>
<td>0.119</td>
<td>0.179</td>
</tr>
<tr>
<td>2. Renters</td>
<td>0.379</td>
<td>0.342</td>
<td>0.130</td>
<td>0.028</td>
</tr>
<tr>
<td>3. Low-tax homeowners</td>
<td>0.225</td>
<td>0.608</td>
<td>0.137</td>
<td>-0.036</td>
</tr>
<tr>
<td>4. High-tax homeowners</td>
<td>0.225</td>
<td>0.570</td>
<td>0.128</td>
<td>-</td>
</tr>
<tr>
<td>5. Sum</td>
<td>1.000</td>
<td>0.514</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
out in higher numbers and were more likely to vote for the higher-spending option, they did have a noticeable impact on the overall vote—though not enough to change its overall outcome. The other two groups, renters and low-tax homeowners, barely altered the outcome at all. Whether they turned out in higher numbers, their inclinations toward the Headlee Amendment were so similar to that of high-tax homeowners that they did not affect the outcome.

**Comparison with Other Studies**

Some other studies have also been undertaken that have attempted to measure the effects of the votes of economically interested groups upon decisions with regard to public spending. In general, these other studies support the proposition that such groups, more particularly, state and local employees, do not wield sufficient weight to affect the outcome. For the most part, these other studies are limited in such a way that among the groups with potential economic interests only the state and local employee group can be studied.

Table 5, row 1, presents once again the figures on the behavior of the state and local employees in the Headlee vote, first shown in row 3 of Table 1. The adjustment factor for the group, as defined in eq. (2), is 0.050; that is to say, the state and local employees raise the vote for the higher-spending option by the indicated share. But as row 2 of Table 1 shows, the others were sufficiently against the higher-spending option so that the state and local employee vote was not enough to have that option succeed. Although other Michigan constitutional votes on fiscal issues are not analyzed in this article, the fact is that an adjustment of 0.050 would not have altered the outcome in any of the nine such votes so far held in the state.

Row 2 of Table 5 repeats the data shown in row 12 of Table 1, describing the behavior of state and local employees whose wages were high by comparison with those in similar private jobs. Although this group was even more strongly disposed to the higher-spending option than state and local employees as a whole, its size was so small that its adjustment effect, 0.022, was of trivial importance in the final outcome.

Rows 3–5 of Table 5 present comparable results from the other studies. Rows 3 and 4 refer to electoral results from a school property tax millage vote in Troy, Michigan. Estimates of both sets of V's and Q's are higher in the millage elections than in the Headlee vote, but the size of adjustments is of the same order. The Troy millage vote was one of many such votes in the state of

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*Although the group covered in row 1 of Table 5 is exactly the same as that shown in row 1 of Table 4, the related adjustment factor of the group is slightly different in the two tables. The difference arises from the need to present results in Table 5 comparable to those of other studies in the table. For that calculation, the reference group in Table 5 consists of all others than state and local employees.*
Table 5. State and local employees’ vote on Headlee Amendment in comparison with other fiscal votes.

<table>
<thead>
<tr>
<th>Election and group</th>
<th>Share of electorate, $E_i$</th>
<th>Share of group voting on fiscal issue, $V_i$</th>
<th>Share of voters in group for higher-spending option, $Q_i$</th>
<th>Adjustment $(Q_i - Q_0) E V_i / \sum_{i=1}^{4} E V_i$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headlee vote, all state and local employees*</td>
<td>0.170</td>
<td>0.698</td>
<td>0.580</td>
<td>0.050</td>
</tr>
<tr>
<td>Headlee vote, high-wage state and local employeesb</td>
<td>0.034</td>
<td>0.734</td>
<td>0.700</td>
<td>0.022</td>
</tr>
<tr>
<td>First millage vote, Troy, Michiganc</td>
<td>0.107</td>
<td>0.797</td>
<td>0.941</td>
<td>0.043</td>
</tr>
<tr>
<td>Second millage vote, Troy, Michigand</td>
<td>0.107</td>
<td>0.828</td>
<td>0.962</td>
<td>0.036</td>
</tr>
<tr>
<td>Massachusetts vote, Proposition 2½d</td>
<td>0.173</td>
<td>0.861</td>
<td>0.669</td>
<td>0.057</td>
</tr>
</tbody>
</table>

*Based on row 3, Table 1.
Based on row 12, Table 1.
Based on results from Rubinfeld, op. cit.
Based on results from Laud and Wilson, op. cit.

Michigan in which higher school millage taxes were being proposed. If all of these votes were influenced by state and local employees to the same degree as the Troy vote, then about 10% of the proposals were moved from defeat to victory by the adjustment associated with such employees.15

Finally, row 5 shows results from a similar voter survey in Massachusetts, taken after a recent vote on the state’s Proposition 2½.15 The overall adjustment associated with the state and local employee vote was slightly higher than the Headlee vote (though still not enough to defeat the proposition), mainly because the difference between the voting propensities of state and local employees and the propensities of others in the state was so large.

All told, there is some evidence in these data that state and local employees behaved differently from others in votes that related to the level of government expenditures. Turnout votes and voting shares in general differed by about 0.200. These produced adjustment factors in the range of 0.020–0.060, not a negligible number. But they reversed very few votes.

**Implications** To the extent that these voting results show up elsewhere, they would appear to limit the empirical force of some of the factors that are thought to contribute to excess government spending. Various models rest on the assumption that votes on fiscal mea-
sures depend on the potential economic self-interest of some groups. But we find only moderate differences among the various groups studied here, not enough to influence many outcomes.

There is only one case in which the potential economic interest of a group of voters could lead to changes in the outcome. Because state and local employees have high turnout rates and are more inclined than others to vote for higher spending, their presence in the electorate could influence some voting outcomes. Their influence might be significant in elections of political candidates, which are often decided by very small margins; but our studies suggest that their influence is relatively insignificant in direct votes on fiscal issues.

The authors are indebted to the National Science Foundation and the Department of Housing and Urban Development for financial support, to Deborah Swift Laren for her quality research assistance, and to Helen Ladd for comments and supplying some data from her Massachusetts study.

**APPENDIX A** We identified the subsample of state and local employees gaining wages higher than they would get for a comparable private job using a technique that is based on the work of Sharon Smith. For a sample of public and private workers, she estimates equations of the form:

\[
\ln W_{pi} = a_0 + \sum_i a_i X_{qi} + \mu_i, \quad (A1)
\]

\[
\ln W_{gi} = b_0 + \sum_i b_i Z_{qi} + \nu_i, \quad (A2)
\]

where \(W_{pi}\) and \(W_{gi}\) are the wages of the \(j\)th private and public employee, \(X_{qi}\) denotes a set of independent variables (experience, education, race, region, occupation, etc.) for the \(j\)th private sector worker, \(Z_{qi}\) denotes another set for the \(j\)th public sector worker, and \(\mu_i\) and \(\nu_i\) are the disturbances. Because of the larger private sector sample, Smith uses the \(a_i\) coefficients in (A1) and calls the average excess wage \(R\):

\[
R = \ln \bar{W}_e - \ln \bar{W}_p = h_0 - a_0 + \sum_i a_i (\bar{Z}_i - \bar{X}_i). \quad (A3)
\]

If all independent variables averaged the same for public and private employees \((Z_i = X_i)\), excess wages would be just the proportional difference between average wage levels \((\ln \bar{W}_e/\bar{W}_p)\). But if public sector workers had more of some \(Z_i\) that leads to higher wages in the private sector, this differential must be controlled for (with the coefficient \(a_i\)) to compute average public excess wages.

Due to constraints placed by the length of the interview, our survey does not contain reliable wage and hours data, so we cannot
easily replicate Smith's study. Also, we need more information than Smith computed about excess wages: she computed average excess wages between public and private workers, but we would like individual estimates of excess wages to compare with individual voting behavior. Hence, we substituted values of our independent variables into her equations to compute a predicted \( W_p \) and a predicted \( W_g \) for each public sector worker who was a survey respondent. The excess wage for the \( j \)th public sector worker is then defined as

\[
R_j = \ln \hat{W}_g - \ln \hat{W}_p = b_0 - a_0 + \sum_i (b_i Z_{ij} - a_i X_{ij}),
\]

or the difference between the public and private wage predicted for the worker in Smith-type equations. Tables 1–5 focus on the particular voting behavior of those where the excess wage \( R_i \) is positive.

In passing, we concede that if one of the independent variables, say education, has been used as a screening device to keep workers with little education out of the public sector and thereby restrict supply, our technique would erroneously consider education a requirement of the job, correct for it, and underestimate excess wages. We tried to adjust for this phenomenon by removing the occupational variables from the control set, as if occupational premiums should be a component of excess wages. The results for voting behavior were so little affected by the adjustment that we did not report them.

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**APPENDIX B**

Assume that the \( j \)th working or nonworking private sector homeowner in the sample has a demand for public goods that can be expressed as

\[
G(1 + a_i) = f(Y_j, P_i, D_i); \tag{B1}
\]

where \( G \) is the average per capita amount of public goods consumed in the county, \( Y_j \) is the homeowner's income, \( P_j \) is the tax price faced by the homeowner, and \( D_j \) is a vector of demographic variables (children in school, age, education, etc.). The variable \( a_i \) is an adjustment derived from the question asked in the survey about desired percentage changes in taxes and expenditures. Microeconomic theory predicts that when the voter's marginal valuation of additional public goods spending exactly equals \( P_i \), the adjustment variable will be zero and we can assume that \( P_i \) reflects the voter's marginal benefit from public spending. When the marginal valuation is greater than \( P_i \), \( a_i \) > 0 and vice versa when the marginal valuation is less than \( P_i \).

The adjustment factor then permits us to convert the demand function (B1) into a willingness-to-pay function for public goods:
\[ P_j = g[Y_j, D_j, G(1 + a_j)]. \] (B2)

When integrated between zero and \( G \), the actual per capita level of public goods spending in the county, this function yields the total benefits from public spending perceived by the \( j \)th homeowner. If this homeowner’s taxes paid per unit of \( G \) are designated by \( T_j \), the homeowner’s “fiscal residual,” or excess of tax payments over expenditure benefits perceived, is then

\[ FR_j = GT_j - \int_0^G P_j dG. \] (B3)

The notion of marginal willingness-to-pay then allows us to measure and rank private homeowners on the basis of their taxes to benefits, or fiscal residuals. We fitted both linear and logarithmic versions of eq. (B2). These equations are based on forms derived in Edward Gramlich and Daniel Rubinfeld, “Using Micro Data to Estimate Public Spending Demand Functions and Test the Tiebout and Median Voter Hypotheses,” forthcoming in the Journal of Political Economy. The only difference is that those equations have \( G(1 + a_j) \) as the dependent variable and \( P_j \) as one of the independent variables, while these have \( P_t \) as dependent and \( G(1 + a_j) \) as independent. We then used these equations to measure fiscal residuals according to eq. (B3). Depending on the slope of the demand curve (our preferred price elasticity of expenditure demand was -1.73, indicating that the slope was rather flat), the actual cardinal values of these residuals might not be very accurate, but their ordinal rankings among private homeowners should be. We then used the logarithmic version of the equation to group all 902 homeowners into high- and low-residual categories. We also checked the calculations to assure ourselves that dividing into other groups (quartiles, quintiles) would not change the conclusions, and also that different equations would not give different results. These checks proved reassuring.

We can provide more detail on the large number of calculations for both appendices on request.

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2. One such statement can be found in Brennan, Geoffrey, and Buchanan, James M., "The Logic of Tax Limits: Alternative Constitutional Constraints on the Power to Tax," *National Tax Journal*, 32(2) (June 1979): 11.


10. The notion of tax payments relative to benefits received from public spending was called the voter's fiscal residual by Buchanan, James M., "Federalism and Fiscal Equity," *American Economic Review*, 40(3) (September 1950): 583.


12. This expression is a generalization of that used by Borcherding, Bush, and Spann, *op. cit.* Their expression dealt only with shares of electorate and turnout differences ($E_i$ and $Y_i$) for a two-group model, while ours is broadened to consider voting differences ($Q_i$) for many groups.

13. Based on the work of Rubinfeld, Daniel L., "Voting in a Local School
Voting on Public Spending


14. From Neufeld, John, “Tax Rate Referenda and the Property Taxpayer's Revolt,” *National Tax Journal, 30*(4) (December 1977): 370, we can compute that in 513 millage elections held between 1959 and 1961, the mean proportion of yes votes was 0.59 with a standard deviation of 0.16. In 1083 millage elections held between 1969 and 1971, the mean proportion of yes votes was 0.52 with a standard deviation of 0.17. If these outcomes were normally distributed, an adjustment of 4.3% (row 3) would have changed 9.7% of the 1959–1961 millage failures to successes and 10.6% of the 1969–1971 failures to successes.

15. Ladd and Wilson, *op. cit.*