# Chapter 6
# Why Would Bond Referenda Ever Fail? Do They?

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**Abstract** Local bond referenda provide the best available information to test whether agenda setters prefer higher levels of public investment than do the voters. This study examines the entire population of local bond referenda in Ohio from 1963 through 1987. The results do tend to support the hypothesis that agenda setters attempt to raise expenditures above the level preferred by the median voter. Although about half of all referenda fail, most projects eventually pass–as is predicted by the hypothesis of expenditure maximization.

## 6.1 Introduction

The question of whether spending patterns of local governments reflect the preferences of median voters, or whether politicians and bureaucrats are able to extract more than the preferred amount of resources, has long attracted attention.[1] Politicians and bureaucrats may prefer larger budgets but, especially at the local level, citizens should be able to elect faithful representatives and can exit high tax communities if public spending does not correspond to individual preferences. Still, the power of politicians in setting the agenda may permit exploitation. The superior information of bureaucrats regarding costs and other consequences of budgets and the knowledge by politicians of their next move if a referendum is lost also may give them power to exploit.

Such a list of factors that may be influential suggests that the particular institutional framework within which the expenditure decisions are made will make a difference to the outcome. The case for the decisiveness of the median voter is strongest in Hotelling's (1929) linear model where voters choose between two parties on the basis of a single issue. In a different institutional setting; namely, direct voting on individual

[1] Holcombe (1989) provides a compact and incisive survey of the literature.

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issues, the case for the median voter is harder to make. Romer and Rosenthal (1978), in a famous study, found that a particular institutional structure enabled agenda setters to extract a school budget that exceeds the preferred spending of the median voter. Briefly, when voters in Oregon and some other states are presented with a referendum on school operating funds, the choice is to accept the level requested by the agenda setter or to reject it, in which case taxes and the operating budget revert to a historically determined level. Romer and Rosenthal (1978) do, indeed, find that spending is inversely related to reversion level.

Local bond referenda can be analyzed using an approach conceptually similar to the Romer and Rosenthal (1978) model. The reversion level is that the capital expenditure is not undertaken. Local bond referenda provide more specific and detailed information about the preferences of voters than can be obtained from any other source. Each referendum provides an exact count of those with strong enough preferences to vote for and against a particular issue, often quite narrowly defined. Votes on particular candidates never provide such specific information on desired expenditures because the elected official will participate in a variety of budgetary and non-budgetary issues - some of which are not even imagined at the time of the election-during his term in office. Even the votes on local tax levies are often not as clear cut because of the uncertainty about what the levy will pay for.

Despite the wealth of information, bond referenda have rarely been studied by specialists in public economics. Mikesell and Blair (1974) use an approach motivated by consumer demand for durable goods. With data from 36 school bond elections in West Virginia, they estimate a demand equation for school buildings and arrive at the favorable vote as a desired adjustment to the stock. DeBartolo and Fortune (1982) use data about the median voter to estimate the probability that a bond issue will pass. They use 205 bond referenda in Ohio between 1968 and 1972 to construct their model. Although the primary focus is on the elasticities of demand for public services, they also conclude that the existing stock of public goods corresponds to the preferences of the median voter. It appears that the main reason for that conclusion is that the probability of passage of a bond referendum is about 0.5.

McEachern (1978) did a cross-sectional analysis of local debt across the 50 states. He found no difference between states that required a referendum and states that allow politicians to contract the debt. This he interpreted as evidence that debt in both states is at the level preferred by the median voter. States that required a supermajority had lower debt levels.

Fort (1988) provides the closest parallel to this paper, but with some key differences. He looked at referenda for construction of rural hospitals and found no support for the hypothesis that the setter extracts the maximum possible expenditure. This study is noteworthy because it makes explicit use of the strength of the vote in favor of a project.[2] Rural hospital referenda generally passed by huge margins. This may be due to the peculiar characteristics of the issue, however. In particular, the rural areas

[2]Romer and Rosenthal (1983) discuss the relationship between the median voter model and the proportion voting for a proposal. It is surprising that this statistic is so widely ignored in the median voter literature.

were threatened with particularly dire consequences if the issues failed, but at the same time, the setters understood that they would have to return to the communities for operating funds to meet the predictable deficits.

By comparing Fort's article with the other attempts to study bond referenda, it is possible to see why such infrequent use has been made of such a rich source of information. In studying annual expenditures, it is easy to relate the annual flow of expenditures to the characteristics of the median voter in the jurisdiction. When dealing with the major capital expenditures financed by bond issues, however, the standard median voter approach is fatally flawed. The sporadic nature of the expenditures combines with the durable nature of the capital stock to complicate the analysis substantially. In particular, while a community with high current expenditure this year can be expected to have high current expenditure next year, the community that spends a lot on capital this year may have a large enough capital stock next year, in which case investment ceases. Alternatively, it may be a community with a strong preference for investing public capital, or high costs, so investment will continue at a high rate. At its best, a median-voter type study estimates a demand function for capital stock. The demand for new investment would depend on the deviation of demanded stock from actual stock. No outside observer, however, can estimate the adequacy of the existing quantity and quality of capital from the perspective of the median voter. In any event, one would not expect to find a close relationship between any one year's capital expenditures and the variables that are typically used to explain annual spending.

Nor should one expect a close relationship between the standard determinants of spending and the approval rate for bond issues. Bond issues are ordinarily proposed by politicians in the relevant community. Approval of a proposal means that the politicians projected correctly the preferences of their constituents. Rejection indicates that the politicians were out of touch with preferences of constituents. There does not seem to be any reason to suppose that politicians in rich or well educated communities are more attuned to the preferences of their constituents than are the politicians in the rural backwaters and slums of society.

Despite the richness of the bond-issue data, therefore, it is necessary to exercise some caution in framing the questions that one tires to answer with the data. For that reason, the next section will spell out a simple voting model in some detail in order to derive testable implications.

## 6.2 Theory

Figure 6.1 depicts the total cost (TC) and total benefit (TB) curves that a typical voter expects from a potential public project that might be presented as a bond issue. The horizontal axis shows the size of the project measured by the dollar amount of the bond issue. The vertical axis measures in dollars the total benefit and the total cost as perceived by the individual. The TC curve is drawn as a ray from the origin, reflecting the expectations that the bond issue will be financed by an increase in

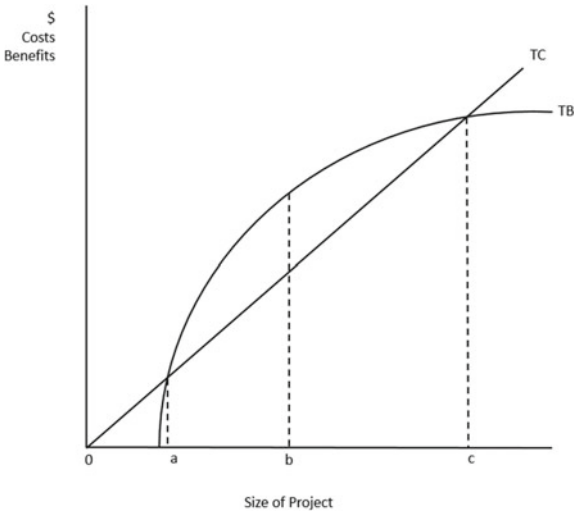


**Fig. 6.1** Individual evaluation of a bond proposal

the property tax and the individual voter pays a constant fraction of any increase in property taxes. The steepness of the TC curve reflects the tax share that the particular individual believes he pays. The TB curve is slightly more complex. As drawn, the curve begins at some minimum size, which can reflect indivisibilities in production (a bridge halfway across the river is useless) or the belief by the individual voter that a small project would benefit only some other people (the first street paved will by the one the mayor lives on, so a street-paving bond issue must be big before I get anything). Regardless of the starting point, the total benefit increases at a continually decreasing rate, reflecting decreasing marginal benefit of all but the strangest projects. The TB curve can even turn down, but this will be ignored.

Whether TB ever exceeds TC depends on the tastes and taxes of the individual. If cost always exceeds benefit, the individual will oppose the project, regardless of the size under consideration. In Fig. 6.1, the individual receives a large enough benefit to make him favorably disposed toward projects that are larger than a but smaller than c. This individual derives the net maximum benefit from size b. The bond referendum is such a blunt instrument, however, that the sophisticated behavior of rejecting something between a and c in the hope of moving closer to b in a later election is assumed to be rare.

Although the individual depicted in Fig. 6.1 is favorably disposed toward the project, he may not vote for the bond issue. The curve labeled TC is actually "tax cost" rather than the "total cost." If the cost of voting exceeds the net benefit from the program, the individual will stay home even though he is favorably disposed. This is shown in Fig. 6.2, where the cost of voting is such that the individual never bothers to vote de-spite the range where total benefits exceed the taxes that must be paid. Of course, the figure could have been drawn to leave some range in which the individual would obtain a large enough benefit to more than compensate for the effort of voting,

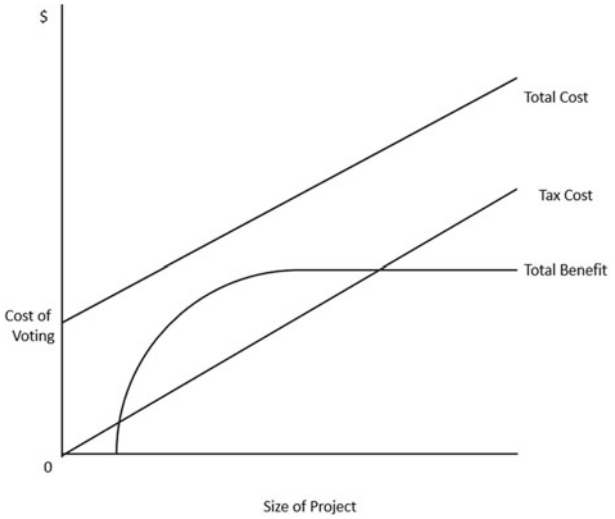


**Fig. 6.2** Evaluation of a bond proposal when voting costs are high

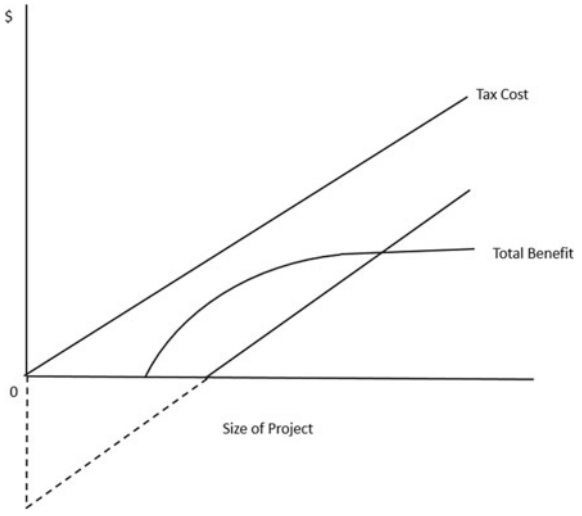


**Fig. 6.3** Negatively inclined voter with high voting costs

as well as taxes. Even in that case, however, it is a narrower range of proposals that will attract the individual to the polls.

The implications of the cost of voting for the negatively disposed voter are indicated in Fig. 6.3. Again, depending of the exact shape of the benefit and cost schedules, the individual may not think it worthwhile to register his opposition by voting.

The cost of voting is analyzed separately from the tax cost of the project for several reasons. First the decision to bear the voting cost is made by the individual voter, unlike tax cost, which depends almost entirely of the decisions of other. Second, the

cost to the individual of voting on a specified issue varies from time to time. Not only does it depend on the weather, which is often discussed by commentators on elections, but also it depends on the other issues on the ballot. If the individual is already at the polls because of a presidential election about which he feels strongly, the additional cost of voting on a bond issue is negligible. At the other extreme, if a special election is held for the bond issue, turnout will ordinarily be low because many people will believe that the gain or loss from the passage of the issue will be less than the cost of voting. A third reason for treating voting cost separately, which depends on the variability of costs by election, is that voting costs can be expected to have a greater effect on the negative than on the positive vote.

The reason for this expectation is found in the basic theory of public choice, as well as Figs. 6.1, 6.2, and 6.3. While projects have costs that are spread broadly over the entire population, the benefits tend to be narrowly focused on particular groups. Those with an intense interest in the project will not be deterred by voting cost, but the mildly opposed will stay home.

So far, the discussion has concentrated on the preferences of individuals for proposed projects of various sizes. The natural question, however, concerns the origin of such proposals. Without specifying further, let us state that bond issues are placed on the ballot by politicians in the relevant jurisdiction. Obviously, there is no end to the possible projects that might be presented to the voters. As a working hypothesis, let us assume that politicians prefer to increase the size of government but do not like to be associated with losing causes. As possible capital expenditures are not suggested, politicians look first for sources of financing not subject to referendum. If that attempt fails, the politician tries to estimate whether the voters are likely to accept any version of the project and, if so, the maximum amount that will be approved. This requires great political skill because projects can be designed in different ways to appeal to different people and voters may be persuaded to approve projects that they had never even though about prior to the campaign.

Figure 6.4 depicts a simplified version of the information that the politician tries to estimate. The horizontal axis gives the size of the project. The dollar amount must stand as a proxy for all the subtle variations in quality and quantity that can characterize a capital expenditure. The vertical axis shows the ratio of yes votes to no votes expected by the politician for each size of project.

Assuming that the politician is an expenditure maximizer but does not want to sponsor losing causes, he will want to place on the ballot the largest proposal that will command a yes/no ration greater than 1.0. The curve drawn in Fig. 6.4 could have multiple peaks, but that is irrelevant if the politician is interested only in the largest project the voters will accept. If the project were to be of the size favored by the median voter, a community of reasonably tolerant people with fairly homogeneous preferences would approve it by an overwhelming margin. The expenditure maximizing agenda setter would react to a forecast of overwhelming approval by increasing the size of a project.

Forecasting accurately the point at which the yes/no ration just exceeds 1.0 is very difficult. Some politicians are more successful than others, and the ones that dominate the meetings where bond issues are designed may not be the most accurate

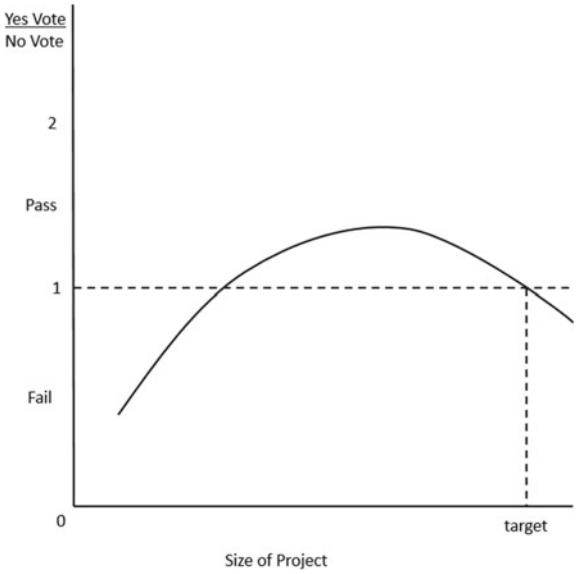


**Fig. 6.4** Aggregated preferences of voters

forecasters of voter behavior. Moreover, the yes/no ratio will vary with voter turnout, as well as with changes in the preferences or incomes of individual voters. It is possible that the politician will guess that the yes/no ratio will not exceed 1.0 for any project size. If he cannot suggest a way to modify the proposal so that it will pass, he will not support it at this time. Most ideas for spending fall in this category and most are such obvious losers that they are not even discussed seriously. Presumably, however, those that are placed on the ballot by politicians are expected to pass.

In a world where politicians had perfect knowledge of voter preferences, therefore, one could expect all referenda to pass. Failure means that the politicians guessed wrongly about the preferences of the voters. In the real world we observe that a significant fraction (about one-half) of bond referenda result in failure. This should be a measure of the lack of forecasting success of the politicians and perhaps of the politicians tradeoff between the goals of expenditure maximization and avoiding losing causes. In any event, one would not expect any relationship between the yes/no ration or the passage rate (number of issues passed/number of issues voted on) in a community and the variables that are typically used in expenditure studies such as average income, education, age, proportion of renters, etc. Skilled politicians take all such matters into account before proposing an issue.

Of course, rapid changes in any variables that influence voter behavior could lead to increased errors by politicians. Errors can be of two types: Type I is to propose an issue that fails because it is larger than the voters will accept. Type II is to propose an issue that obtains a yes/no ration much larger than 1.0; for this means that the politician "left money on the table" by not raising the amount requested to the maximum that would pass. Errors can be specific to a particular community that

is changing rapidly or can reflect general changes in the public mood that are not fully anticipated by politicians.

Although about half of all bond referenda result in failure, that does not mean that half of all proposals fail. If each proposal is aimed at the maximum amount that will pass, but the aim is disturbed by a symmetrically distributed random error, then the probability of passage is 0.5. If the same issue that failed in one election is resubmitted (assuming unchanged conditions), the probability of passage is again one half. More generally, in this simple model the probability that an issue would not have passed after n tries is the probability of failure on any one try raised to the $n^th$ power. If the probability of failure is really 0.5, after 3 attempts to pass a proposal only one proposal in eight would still stand rejected. Nevertheless, the aggregate data would show the voters turning down half of the issues at every election. This suggests the importance of following the sequences of votes by particular communities on particular issues.

The task of analyzing sequences of votes is made more difficult by the behavior of politicians in response to failure of a proposal. If the politician takes Fig. 6.4 at face value, he could improve the chances of passage by reducing the size of the proposal. Thus, a change in the dollar amount does not mean that it is a different issue. Indeed, even an increase in the dollar amount may occur, either as a result of price increases between elections or as a result of a reconsideration and redesign of the proposal so that it has special benefits for a larger share of the potential voters in the jurisdiction. Of course, the easiest response by the politician is just to wait until an off-election to submit the same proposal in the expectation that more of the negatively-inclined than of the positively-inclined would fail to vote.

## 6.3 Data and Empirical Analysis

The date used in this analysis are the "Bond Issue Election Results" collect by the Ohio Municipal Advisory Council (OMAC). The date cover all governments below the state level proposing bonds for voter approval in Ohio during the period from 1963 through 1987. Although some observations have been lost or are incomplete, the date comprise essentially the entire population of bond referenda submitted by cities, villages, school districts, and counties in Ohio.

Each observation includes the name of the issuer, the amount, duration, and purpose of the issue, the date of the election, and the number of votes for and against the issue.

### *6.3.1 Aggregate Data*

Table 6.1 shows a first breakdown of the data. Almost exactly half of the referenda, 1,732 approvals of the 3,515 votes, resulted in passage of the bond issue. School

**Table 6.1** Bond approval rates by purpose in Ohio, 1963–1997

| Purpose | Passed | Total | % passed |
|---|---|---|---|
| Total | 1,732 | 3,515 | 49 |
| School | 1,179 | 2,482 | 48 |
| Non-school | 548 | 1,033 | 53 |
| Library | 11 | 18 | 61 |
| Fire, police | 135 | 136 | 99 |
| Facility for old, young, handicapped | 34 | 37 | 92 |
| Water, sewer, electricity | 135 | 151 | 89 |
| Jail | 0 | 3 | 0 |
| Recreational | 24 | 41 | 58 |
| Hospitals, etc. | 32 | 33 | 97 |
| Roads, bridges | 36 | 43 | 84 |
| Real estate | 6 | 7 | 86 |
| Government buildings, etc. | 38 | 49 | 78 |
| Urban development, harbors, pollution control | 5 | 7 | 71 |
| Airport | 1 | 2 | 50 |
| No purposes indicated | 96 | 506 | 19 |

*Source* Ohio Municipal Advisory Council, "Bond Issue Election Results"

bonds constituted more than two-thirds of all issues (2,482) and they had an approval rate of 48 %. The total approval rate for the 1,033 non-school proposals was not greatly different at 53 %, but the components require closer analysis. As can be seen in Table 6.1, most of the specific categories had approval rates above 70 %. The exceptions were libraries (61 %), recreational facilities (58 %), airports (1 of 2), and jails (none of 3). The approval proportion for the non-school category was, however, drastically reduced by the low approval rate for bond issues for which no purpose is indicated in the data. Of the 506 such issues, only 96 (19 %) passed.

It is tempting to interpret that as an indication that voters will not approve a bond issue unless it promises some benefits, which an issues with no indicated purpose clearly does not. A bond referendum in Ohio, however, must state some purpose, so "no purpose indicated in the date" reflects a defect in the data, not a characteristic of the bond proposal. If, however, the purpose is stated so vaguely that is does not readily fit a standard category, it may be so vague that the voter rejects the proposal and the reporter fails to record the purpose. A more plausible explanation is that, in the haste to report results, OMAC is most concerned with the issues that have passed and hence is likely to skip over the "purpose" of the failed issues if higher priority activities are pressing.

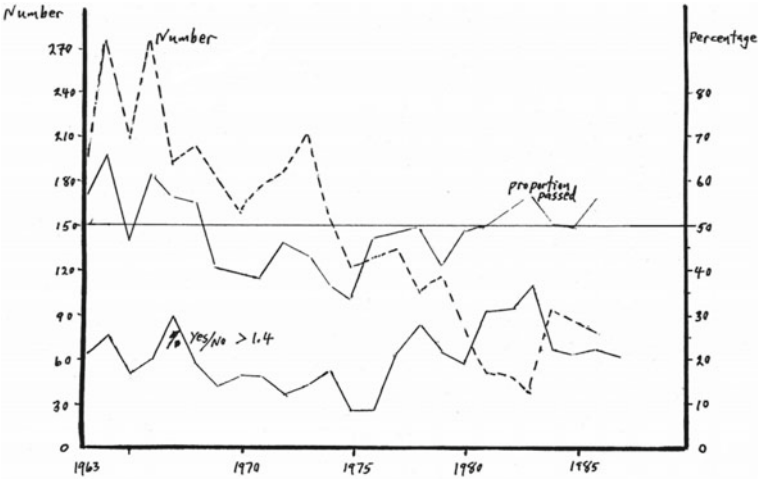


**Fig. 6.5** Number of referenda and proportion passed, 1963–1986

An examination of the approval rates by county reveals a range of 0 to 83 % for Ohio's 88 counties. The number of referenda in individual counties for the entire 25 years ranged from 1 to 353. Restricting the analysis to the seven counties in which at least 100 issues were presented, 607 of 1,101 issues were approved. This is a rate of 55 %, which is slightly higher than the overall rate. The difference is not remarkable enough to inspire any disparaging remarks about the forecasting skill of back-country politicians. The approval rates in the 7 most active counties ranged from 41 % to 73 %.

Figure 6.5 shows three annual time series: (1) the number of referenda in Ohio; (2) the percentage approved; and (3) the percentage in which the Yes/No ration exceed 1.4. The number of issues presented to the voters exceeded 250 in some years during the 1960 s and then decreased erratically to less than 50 in the early 1980 s before rising to 85 in the final period. Despite the decrease in the requests of the politicians, the voters rejected a higher proportion of the issues in the early 1970s. After 1975 the approval rate increased and the submission rate followed with a lag. Although one could explain the data in a variety of ways, it does not seem unreasonable to interpret them as evidence of a "taxpayers' revolt" that surprised the politicians, who subsequently reduced their requests for bond issues.

The lower percentage the proportion of issues in which the Yes/No ratio exceed 1.4 fluctuated wildly. The lowest observation was 8.42 % in 1975, while the highest was 36.84 % in 1983. I would interpret this percentage as an indication of the frequency with which setters left money on the table. Whether this reflects an attempt to satisfy the median voter, or whether the expenditure maximizer made a mistake, cannot be distinguished from the data.

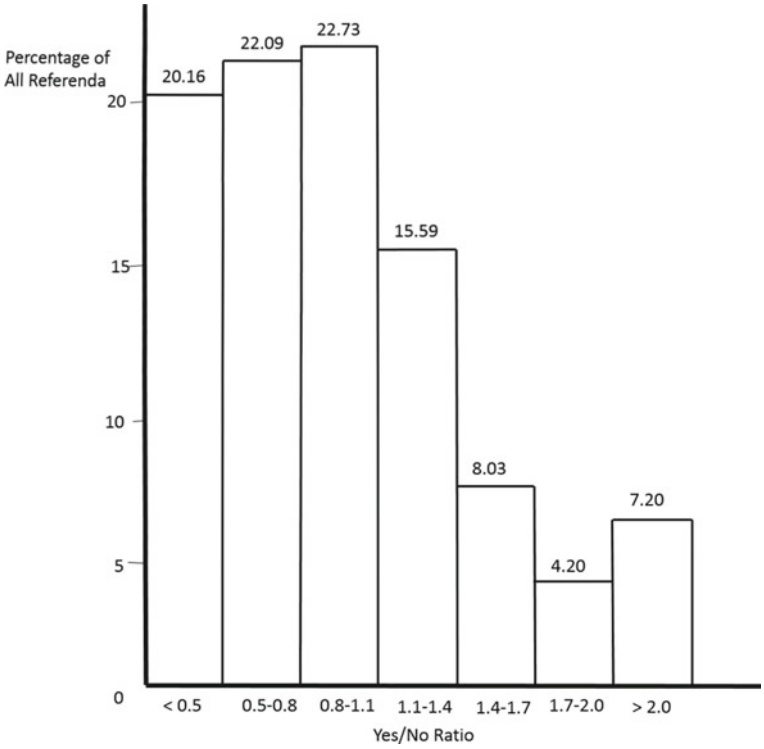


**Fig. 6.6** Distribution of votes

Figure 6.6 shows the frequency distribution of the yes/no ratio in the entire data set. In less than 20 % of the referenda did the ratio exceed 1.4. It appears that politicians generally do not leave money on the table, but rather ask for at least as much as they can get. Indeed, one would expect that a change in the proportion of very high or very low ratios would indicate an unexpected shift in voter preferences. In subsequent periods, politicians would react to their error in forecasting by adjusting either the number of size of bond proposals.

At the aggregate level, the data support the hypothesis that those who are negatively inclined have less intense preferences than those who favor a proposal. This is indicated in Table 6.2, which shows the approval rates by time of election. November elections, when turnout is greatest, have an approval rate of 47 %. Referenda presented at the May or June election, which often has interesting primary contests, are approved 49 % of the time. At the special elections held at unusual times, however, 66 % of the bond issues pass.

**Table 6.2** Passing proportions by date of election

| Date | Number of referenda | Number passed | Proportion passed |
|---|---|---|---|
| Total | 3,515 | 1,732 | 0.49 |
| November | 2,321 | 1,084 | 0.47 |
| May or June | 833 | 411 | 0.49 |
| Other | 361 | 237 | 0.66 |

### *6.3.2 Analysis of Sequences*

The most fundamental grouping of referenda for analysis is the sequence. A sequence is defined as one or more referenda on the same issue. A complete sequence ends with the passage of the issue, but a sequence may be abandoned after losing one or more times. The data also include sequences that are incomplete because they are still going on. The analysis of early sequences may be distorted because some were ongoing when the data began. If 0 is used to signify failure and 1 signifies passage, complete sequences will be (1), (0, 1), (0, 0, 1), and so on. Regardless of the number of failures, each complete sequence ends in passage. The jurisdiction may proceed to vote on a similar issue after passing a bond issue, but that is treat as a new sequence.

Empirical analysis of sequences is difficult because the amount and duration of the bond proposal may change with time. Indeed, reducing the amount or extending the duration of the proposed bonds may be ways to increase the probability of passage. Another empirical problem is the large number of failed referenda for which no purpose is indicated, which may be the failures that belong in some other sequences.

If passage is essentially random with some fixed probability of occurrence, then failure could lead to resubmission of the same proposal at a later election, with the same unchanged probability of passage. Alternatively, issues presented the first time may constitute two separate populations: good ones have a high probability of passage, while bad ones are likely to fail and then join a population of losers that fail repeatedly. Those speculations ignore the possible responses of politicians. In addition to presenting the same issue at every regular election until is passes, politicians might (1) modify a proposal to make it more appealing or cheaper, (2) try to slip it though at a special election, or (3) abandon the issue.

As a first step in the empirical analysis, Table 6.3 lists the expected frequencies of various sequences under the assumption that passage is totally random with a probability if 0.5. The table also lists the observed frequencies of various sequences in the entire set of bond issues. Proposals that pass on the first try are somewhat more common than expected (54.7 % vs. 50 %). More notable is the rapid drop in the observed frequency relative to the expected for longer sequences. The real surprise, however, is the large proportion of sequences that end in abandonment of the proposal, rather than passage. It seems appropriate to describe the set of issues presented for the first time as consisting of two types-those that will pass quickly and those that will never pass-rather than assuming that the probability is the same for all issues.

**Table 6.3** Expected and observed frequencies of sequences

| | Sequence | Expected frequency | Observed frequency | | |
|---|---|---|---|---|---|
| | | | Total | School | Non-school |
| 1 | 1 | 0.5 | 0.547 | 50.8 | 61.6 |
| 2 | 01 | 0.25 | 0.116 | 16.4 | 3.3 |
| 3 | 001 | 0.125 | 0.049 | 7.4 | 0.7 |
| 4 | 0001 | 0.0625 | 0.019 | 3.0 | 0.1 |
| 5 | 00001 | 0.03125 | 0.011 | 1.7 | |
| 6 | 000001 | | | 1.0 | 0.1 |
| 7 | | | | 0.3 | |
| 8 | | | | 0.4 | 0.1 |
| 9 | | | | 0.1 | |
| ... | | | | | |
| 17 | | | | 0.1 | |
| | Abandon | 0 | 0.244 | 18.9 | 34.0 |

This finding also suggest that politicians do not respond actively to the failure of a bond issue by searching for the modifications that will enable it to pass.

Further insights are available from a comparison of the frequency of various sequences for school and non-school issues. The data are presented in the last two columns of Table 6.3. Among non-school issues, 62 % pass on the first try and 34 % are abandoned. That does not leave much room for complete sequences of more than one presentation! School issues present some contrast because the initial passage rate is lower (51 %), the abandonment rate is lower (19 %), and issues are presented again and again until they pass. For example, of the 51 issues that passed after 4 or more tries, 49 were school is-sues. This difference probably reflects the fact that the conditions that lead a school district to place a bond issue on the ballot do not disappear with repeated rejection of the issue. In the non-school issues, a different type of capital expenditure, or even a tax decrease, may be useful to the politician in obtaining his goal of reelection. The politician is more careful to put what he thinks will be a winner on the ballot-and will abandon it if it fails. Boards of education, however, cannot ordinarily substitute a popular bridge for an unpopular high school.

Although the preceding results cast considerable doubt on the strength of the processes discussed in the theoretical section, it seemed useful to test directly some of the expected behavior. Specifically, the last two elections in complete sequences having two or more elections were examined. That means that the issue lost in the first election and won in the second. It was hypothesized that politicians would increase the probability of success of an issue by decreasing the amount, increasing the duration, and scheduling the election sometime other than November. Furthermore, it was assumed that the specially interested people voting yes would vote more consistently than those opposed.

In about 30 % of the sequences the proposal that passed was for a lower amount. A similar proportion showed an increase in duration. This it appears that some effort was made to adjust proposals in a way that would increase support. About 62 % of the sequences showed a decrease in the no vote, while about 64 % showed an increase in the yes vote. This is perhaps to be expected in moving from a lost election to a won election. A better test of the stability of the yes vote relative to the no vote is to compare the standard errors directly. Contrary to expectation, the standard error of the yes vote exceeded the standard error of the no vote in 465 of the 679 sequences examined.

## 6.4 Conclusion

Local bond referenda do offer a wealth of information, but to make the most of that information requires a more sophisticated modeling of the political process that results in referenda being placed on the ballot. The importance of this is revealed by the differences between the school and non-school issues, which have different origins. Although bond referenda do have their unpredictable aspects, it is probably not useful to apply the simple model of a random process. Politicians (other than, perhaps, boards of education) do not keep rolling the dice, waiting for a victory. Instead, they respond actively by either modifying the proposal or withdrawing from it.

As for the questions posed in the title, it is clear from the theory that in reasonably homogeneous communities of reasonably flexible voters, bond referenda would rarely fail if skilled politicians were trying to satisfy the median voter. The fact that about half of all referenda fail is strongly suggestive of an attempt to maximize project size. It is quite possible, however, that certain types of referenda are set by a political process that represents voters, rather than budget maximizers. Perhaps rural hospitals and the affairs of small communities, generally, fall into this category. Nevertheless, it is noteworthy that the school data, which are most numerous and most complete, fall more neatly into the expenditure maximizing model than do the non-school issues.

Do issues ever fail? The model of repeated presentation and modification until passage is overly simplistic, but it comes closer to describing the process than the casual leap from a 50 % passage rate of referenda to the unwarranted assumption that half of all issues fail.

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